

PART II

ECONOMIC POLICIES, 1961-80

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3 The Development of Financial Institutions and the Role of Government in Credit Allocation

by Yung Chul Park

In 1961 Korea's financial institutions were largely composed of the Bank of Korea, the Korea Development Bank (KDB), the Korea Agricultural Bank (KAB), and a few nationwide commercial banks.

The KDB was established in 1954 with the primary mission of providing medium- and long-term loans to industry. It was placed directly under the authority of the Ministry of Finance and so was not subject to the control of the central bank, the Bank of Korea. However, because of its inability to attract funds from the public, the KDB had to rely heavily on the central bank for its supply of funds. The inflationary condition, small private savings, and low ceilings on interest rates discouraged the public from purchasing long-term debt instruments from the KDB.

The KAB was set up at about the same time, as a bank for the farmers' associations. Like the KDB, and for the same reasons, it had difficulty in raising funds from the public and thus had to rely for funds on the government and the central bank.

Until 1957 the commercial banks, with the exception of the Choheung Bank, were largely owned by the government. The government of Korea received the shares in the banks from the U.S. military government, which had confiscated them from Japanese owners at the end of World War II. In 1957 the government denationalized the banks by selling its shares to private individuals. A stigma was, however, attached to this denationalization as many of these individuals (mainly owners of conglomerates) had become wealthy by reaping high profits, tainted with corruption, in the importing business controlled by government licenses. This later provided a rationale for the military government in repossessing the shares held by large private investors in the commercial banks.

The financial market that existed in Korea just before the military takeover in 1961 was not, therefore, a single homogeneous market but contained a dual structure: the KDB and KAB, established and controlled directly by the government, and the commercial banks, most of which had been denationalized only a few years before. Of the two, the former exercised a dominant influence in the allocation of funds, accounting for 71 percent of total lending in 1960. The latter's share, which was 45 percent in 1955, declined to 29 percent in 1960. Thus, contrary to what one would have

expected, the denationalization expanded the influence of the government in the financial market. When the military government expropriated the privately held shares in the commercial banks in 1961, it was not, therefore, converting a free market into a controlled market but merely increasing the degree of control.

The military leaders who took over the government in May 1961 were committed to a mixed economy in which the government and the public sector would play a dominant role in economic development. They pledged themselves to powerful government programs aimed at overcoming the country's underdevelopment.

As a first step toward achieving financial control, the new leaders, within three months after their takeover of the government, reorganized the agricultural financing and marketing institutions by combining the agricultural cooperatives and the KAB into one entity known as the National Agricultural Cooperatives Federation (NACF). The NACF was responsible for providing credit to farmers, supplying them with agricultural inputs, and marketing their output, as well as purchasing grain on government account to help stabilize grain prices and ensure supplies for government needs.

The second major innovation of the military government was the establishment of the Medium Industry Bank (MIB), also in August 1961, for the purpose of providing loans to medium and small enterprises. The functions of the MIB (now the Small and Medium Industry Bank) were similar to those of the commercial banks in that it accepted deposits and made mainly short-term loans, but its loans had to go only to enterprises with fewer than a certain prescribed number of employees and whose total assets were less than a certain amount.

Both of these initial ventures—the NACF and the MIB—were manifestations of the government's desire and commitment to improve the lot of small farmers and businessmen. The rapid expansion of loans through these institutions in 1961 resulted in a significant shift in the allocation of credit. The share of these two banks in total bank credit jumped from 32 to 38 percent during 1961, largely at the expense of the commercial bank share, which dropped from 29 to 24 percent.

In October 1961 the government repossessed the shares of the commercial banks that were held by large stockholders on the grounds that these were illegally hoarded properties. Furthermore, the voting interest of any single stockholder was restricted, under the Temporary Act on Bank Administration, to no more than 10 percent of the total shares, regardless of actual holdings. As a result, the government became the dominant stockholder with comprehensive controls over the banks ranging from the appointment of senior officers to issuing directives on banking operations. The government was responding to concerns that the privately owned banks would contribute to the concentration of economic power along the lines experienced in Japan (B. Kim 1965:66).

The next step in the financial reform program of the military government was the revision of the KDB charter to increase its capital, authorize it to borrow funds from abroad, and guarantee foreign loans obtained by Korean enterprises. This guarantee procedure was subsequently extended to the other commercial and special banks and proved to be a major factor inducing the inflow of foreign capital.

These institutional changes culminated in May 1962 when the Bank of Korea Law was revised to bring the central bank unequivocally under the control of the minister of finance. The minister of finance had wielded de facto authority over the Bank of Korea from its inception, in part because of the need for financing the Korean War and postwar reconstruction. There was continual debate from 1950 to 1962 between those who supported the autonomy of the central bank as provided in its charter and those who believed that monetary policy should be one of several coordinated elements of economic policy with the minister of finance, as chairman of the Monetary Board, providing the focal point of that coordination (B. Kim 1965).

In late 1962 the government consolidated a number of small mutual financing companies into the Citizens National Bank, which was to concentrate on small loans to businesses and households. Also in 1962, the Central Federation of Fisheries Cooperatives was created to provide credit and marketing services to the fishing industry comparable to those the NACF provided to agriculture.

The legislative changes of 1962 were a manifestation of the orientation of the new government toward development of a core of centrally managed, powerful institutions and instruments for carrying out the First Five-Year Development Plan (1962-66).

MAIN FEATURES OF THE POLICY MEASURES

Guaranteeing Repayment of Foreign Loans: A New Role for Korean Banks

As the main instrument for promoting the inflow of foreign loans, the government devised, during the 1960s, a system of bank guarantees for the repayment of loans. The impetus for this appears to have come mainly from the prospective normalization of relations with Japan. The Korean government preferred to have the resulting capital inflow in the form of loans rather than equity shares so as to minimize Japanese ownership and control of Korean business. Furthermore, although the arrangement for a loan was to be worked out directly between the borrower and the lender, it required government approval. The government, therefore, had ultimate control over the volume of foreign financing and its allocation among competing sectors.

Korean enterprises wishing to borrow abroad first had to obtain the approval of the Economic Planning Board (EPB), which in turn sought approval of the National Assembly for the issuance of a guarantee covering

repayment of the foreign borrowings. Once the guarantee had been authorized, the Bank of Korea (and subsequently the Korean Exchange Bank) issued the guarantee to the foreign lender, while the KDB (and subsequently the commercial banks) issued guarantees to the Bank of Korea. The ultimate borrower was committed to repay the loan, but he had the backing of both the KDB and the Bank of Korea that, in the event of his default, the loan would be repaid. Thus the risk of default for the lender was negligible, and the Korean borrower had assurances of support not only from the domestic banking institutions but also from the central bank and the EPB.

The foreign loan guarantee operations became significant in 1963 when KDB acceptances (time drafts and bills of exchange) went up from 2.2 billion won in the previous year to 18.1 billion (Cole and Park 1983). Over the next two years, the total guarantees increased by over 25 billion won each year and then jumped by nearly 70 billion won in 1966, at which time they were nearly equal to the total of outstanding bank loans. Also in 1966 the commercial banks assumed a significant role in the guarantee activity, accounting for nearly 30 billion of the 70 billion increase in that year. Thus the Korean banking system, while not actually intermediating between foreign lenders and domestic borrowers, was facilitating such lending activity, without committing much of its own financial or human resources. From 1963 to 1966 foreign guaranteed loans were the major source of new financing for Korean businesses.

Because the banks played a very limited role in the decision-making process in regard to these loans and issued the guarantees on instruction from the government, they took little responsibility for evaluating either the economic or financial feasibility of a project. Eventually when some of the projects proved unsound, the government had little basis for holding the banks accountable and therefore had to take extraordinary measures to relieve the banks of the bad debts.

The Interest-Rate Reform

The interest-rate reform of September 1965 (see also chapter 6), though sometimes viewed as a revamping of the whole interest-rate structure, was essentially a major increase in the interest rate paid on time deposits designed to mobilize private savings through the nationalized financial institutions. There were some increases in the rates charged on loans, but these had little impact on the volume of lending or lending practices because the new rates were still not high enough to affect the demand for loans. The increase in the time-deposit rate from 15 to 30 percent per year, however, did result in a quantum jump in the financial resources of the commercial and special banks and substantially changed their institutional role. All the banks (except the KDB, which did not raise its deposit rate) became important mobilizers of financial savings and for the first time began to give some attention to this role. They were also partly relieved from

their total dependence on central bank credit or government budgetary allocations of aid counterpart funds as primary sources for their lending.

Between 1965 and 1969 total bank deposits rose from 10 percent to 30 percent of GNP. During this period, real GNP increased by 57 percent and nominal GNP by 158 percent, whereas total deposits rose by nearly 700 percent. Total bank loans increased by an amount almost exactly equal to the deposits between 1965 and 1969 (Cole and Park 1983). A substantial excess of deposits over loans in the commercial banks was offset by a loan surplus at the KDB.

The interest-rate reform contributed to mobilizing real private savings and put vast financial resources at the command of the government. Clearly the role of the banking system had changed dramatically from the early 1960s when it was mainly engaged in rationing a limited supply of credit. Although the banks had not acquired any greater degree of independence in decision making as to the allocation of credit—decisions on all the guarantees and many of the larger loans were made by the government—they did have a greatly expanded managerial role over a system that exerted a major influence on the allocation of resources.

New Banking Institutions in the Late 1960s

Specialized banking institutions were established in 1967 and the doors were opened to the creation of new private banking ventures. The Korea Exchange Bank (KEB) was created as a separate entity from the personnel, facilities, and financial resources of the foreign-exchange and foreign-operations departments of the Bank of Korea. The KEB's stock was wholly owned by the Bank of Korea, and it had functioned largely as an extension of the central bank since its inception. Thus the change was mainly one of form rather than substance.

Much the same can be said for the Korea Trust Bank, a consolidation of the trust departments of the five national commercial banks, also established in 1967. Trust accounts in Korea are fairly close substitutes for time deposits and the Korea Trust Bank had held substantial amounts of demand deposits since its inception. Thus it functioned much like a commercial bank and had been treated as such by both the central bank and the financial authorities until it was merged with the Seoul Bank in 1976 to become the Bank of Seoul and Trust Company.

The Korea Housing Bank was also created in 1967 "to finance housing funds for low-income families" (BOK, *Financial System*, 1983:47). Its purpose was to extend loans for construction and purchasing of houses and to firms producing housing construction materials. By 1978 the Korea Housing Bank was raising roughly one-third of its funds through the sale of debentures, and 55 percent through demand and time deposits. Depositors received preferential treatment in the granting of loans, which provided an incentive, in addition to the interest rate, for holding its deposits.

Nevertheless, in 1978 the Korea Housing Bank's share of total bank deposits was only about 4 percent.

Of greater significance was the action by the government in 1967 authorizing the chartering of *local banks* to conduct commercial banking business principally within limited geographic areas. The objectives of the government were to achieve greater dispersion of banking services and to see that the banks would concentrate on meeting the needs of local enterprises. The local banks engage in branch banking with their head offices in the provincial capitals and branches confined to the same province. Initially they were prohibited from engaging in foreign-exchange operations, but as they became better established that prohibition was relaxed. Also the local banks were authorized to charge interest rates on loans up to 2.5 percentage points higher than the national commercial banks and to pay higher interest rates on time deposits. These banks are privately owned and less closely regulated and controlled than the government-owned banks.

A final institutional innovation of 1967 was the granting of permission to a limited number of foreign banks to open branch offices in Korea. In the first year, five banks (three American and two Japanese) established branches; by the end of 1974, four more were permitted. Since then the number of foreign bank branches has risen rapidly, reflecting the growing volume of external transactions. The kinds of activities in which these branches can participate are, however, quite circumscribed, and they rely mainly on funds borrowed from their head offices to make loans in foreign currency, especially to importers.

Development of Nonbank Financial Institutions and the Capital Market

Banking and traditional financial institutions had accounted for most of the financial intermediation during the postwar years (1948-53). Throughout the 1950s and 1960s, life insurance, postal savings, and the trust business of commercial banks had a commanding share of the nonbanking financial sector, although money in trust was actually time and savings deposits at the deposit-money banks with longer maturities.

The restructuring of the financial system in the 1960s, which gave the control of financial institutions to the government, was followed by policy measures in the 1970s aimed at developing nonbank financial intermediaries and the capital market. This financial policy had its major objectives in diversifying financial assets and institutions and also creating financial intermediaries that could compete effectively with and eventually eliminate the unregulated money market. As a result of the government's efforts, a variety of new nonbanking institutions came into existence, and their assets and liabilities grew rapidly in the 1970s. Considering the nature of their operations, it also appears that some of these institutions, such as the investment finance companies and mutual savings and finance companies,

were instrumental in attracting private savings from the unregulated money markets into the regulated financial sector.

Most of the nonbank financial intermediaries are privately owned, major exceptions being the KDB and the Export-Import Bank of Korea. Although the government regulates their financial operations, these institutions, unlike deposit-money banks, have been left relatively free in their asset management.

The Export-Import Bank of Korea was created primarily for the promotion of exports of heavy and chemical products. It was legally established in 1969, but its operations were handled by the KEB for the next seven years. Since becoming a separate entity in 1976, the size of its loan portfolio has increased markedly. The bank provides medium- and long-term credit for foreign trade and overseas investment with its own resources and with funds borrowed from the government and the National Investment Fund.

A stock exchange was established in 1956, but for more than a decade thereafter the securities market was plagued by speculation and stock price manipulation. The "stock exchange" was really a market for government bonds and did not function as a stock market until the 1960s. By the mid-1960s it had become evident that heavy reliance on bank loans and foreign loans for the financing of corporate investment was leading to high debt-equity ratios dominated by short-term loans for many businesses. With this realization and the government's desire for greater diffusion of corporate ownership and diversification of financing sources, the government renewed its efforts to develop a modern capital market and began to implement a series of reform measures.

In September 1968 the Law for Fostering the Capital Market was enacted. This law was aimed at encouraging major corporations to go public. In December 1972 the government was entrusted with powers to designate a corporation as eligible to go public and to issue ordinances for it to do so. The Securities and Exchange Commission and its executive body, the Securities Supervisory Board, were established in February 1977 to carry out various functions related to the supervision of the securities market and institutions.

Efforts to improve the efficiency of the capital market continued into the 1980s. Repurchase agreements were introduced to enlarge the scope of the bond issue market. As a first step toward liberalizing the capital market to foreign investors, US \$30 million in beneficiary certificates were sold in the United States and Europe in January 1981.

The rapid growth of nonbank financial intermediaries and the capital market beginning in the early 1970s brought about a significant change in the role of the government in resource allocation. The expansion reduced the scope of government intervention in the allocation of resources. The numerous measures undertaken to develop the nonbank financial institutions and the capital market also reflected the government's desire to gradually liberalize the financial system in the 1970s.

Recent Liberalization Measures

By the mid-1970s it was apparent to both the government and the business community that the development strategy that relied on extensive government intervention was becoming increasingly counterproductive. After a decade of rapid growth fueled by the expansion of exports, Korea had developed a complex and sophisticated economy with a large external sector.

The sheer size and complexity of the economy inevitably reduced the scope of government control and diminished the government's ability to administer a system of rigid controls. Doubts were raised as to whether the government could effect an efficient allocation of real resources through the credit allocations it controlled.

Although the need for a greater reliance on market mechanisms as an alternative to the system of control was clearly recognized, government planners continued to resist relinquishing economic decision-making power to the private sector. They, in fact, intensified their interference with the allocation of resources in the process of promoting the heavy and chemical industries as the future export sector. To divert a large share of the nation's investment resources to these industries, the government tightened its grip on the financial system.

The government took further steps to divert more resources to the heavy and chemical industries as evidenced by the creation of the National Investment Fund (NIF) in 1974. The KDB had played a dominant role as the long-term credit bank in the 1950s and 1960s, though other special banks had increased in importance as suppliers of long-term funds in the 1960s. In the early 1970s, when the Third Five-Year Development Plan was prepared, it was clear that the deposit-money banks (including the KDB) could not be expected to provide sufficient financing for the development of heavy and chemical industries—one of the major objectives of the third plan. A new financing channel, the NIF, was established to augment the flow of domestic savings to investment in the heavy and chemical industries.

The major sources of NIF loanable funds consisted of: (1) the proceeds from the sales of NIF bonds; (2) contributions in the form of deposits made by the deposit-money banks (exclusive of foreign bank branches and fisheries cooperatives), the members of the National Savings Association, money in trust, insurance premiums of nonlife insurance companies, and various public funds managed by the central and local governments and other public entities; and (3) transfers (or deposits) from the various government budgetary accounts. As for the contributions, the deposit-money banks were, for instance, required to deposit 15 percent of the increase in their savings deposits at the NIF and the nonlife insurance companies had to deposit 50 percent of their insurance premiums and other revenues.

The Ministry of Finance was responsible for the administration of the fund, but its actual management was entrusted to the Bank of Korea. The NIF made loans for both fixed investment and working capital to the heavy,

chemical, and other major industries with the deposit-money banks, the KDB, and the Export-Import Bank of Korea acting as intermediaries.

The NIF loans were made at subsidized rates. In 1978 the lending rates varied from 6 percent for export suppliers credit to 16 percent for the loans to the heavy and chemical industries with three- to eight-year maturities, whereas the interest rates on NIF deposits ranged from 6 percent per annum (for three-month deposits) to 18.6 percent (for one year and over deposits and NIF bonds). The losses resulting from the negative margin between the deposit and lending rates were fully compensated for by the government.

Because of a lack of coordination in the development of the heavy and chemical industries, there was excessive investment and duplication of similar projects in many subsectors of these industries. The setback in the development of heavy and chemical industries and the associated drain on domestic resources, more than anything else, renewed the debate on the need for financial liberalization toward the end of the 1970s. Since then it has been frequently pointed out that such a misallocation of resources could have been avoided had the management of the financial system been left in the hands of the private sector.

Government planners and financial specialists agreed that government control of the financial institutions and interest rates should be relaxed and eventually eliminated in order to increase competition in the financial industry. What they disagreed on was the pace at which financial liberalization should be pursued and the proper role of the government in a liberalized financial regime.

The new regime that came into power in 1980 was strongly committed to financial liberalization as a major policy objective. The government divested itself of the ownership of one of the five commercial banks, the Hanil Bank, in June 1981. The denationalization was preceded and followed by abolishing various government directives that had regulated personnel management, budgets, and other operational matters of commercial banks. In the same month the monetary authorities established a commercial paper market that was not subject to government control. This market was expected to serve as a bridge between the curb market and the organized financial system and to provide a reference point for setting official interest rates. This move was widely regarded as a first step toward freeing the interest rates from government control. In line with this policy direction, the yields on new corporate debentures were allowed to fluctuate within an upper and lower limit of 1 percent of the banks' reference rate.

After the privatization of the Hanil Bank, the government also announced a plan to charter three joint-venture commercial banks with Korean and foreign partners to promote competition in the banking industry and to establish a linkage with international financial markets. One of these banks began operation in 1982, and another in 1983. In late 1981 two investment

funds worth US \$30 million were floated to let foreigners buy Korean shares.

At the end of November 1979, the average required reserves were 23 percent of deposits at the deposit-money banks. The ratio was gradually reduced to 3.5 percent in November 1981, before it was raised again to 5.5 percent in May 1982. The substantial reduction was aimed at giving more freedom to the banks in their management of lendable resources and easing the strain on bank profits.

In January 1982 the monetary authorities abolished the direct control over bank lending through credit ceilings and quotas in preference to an indirect reserve control. This change also signaled the government's intention to refrain from interfering with bank credit allocation.

These reform measures were significant and refreshing developments in a country that had long suffered from financial repression. Most of all, they reflected the government's determination to develop a freer financial system where the price mechanism reigns and to open the financial industry to foreign competition.

For almost a year after denationalization of the Hanil Bank, however, little visible progress toward financial liberalization had been made. For a while in the early months of 1982 there was a growing feeling that the government was stalling the reform. The lack of progress could largely be attributed to the disagreement among the policymakers on the pace of liberalization. On the one hand, there were those who believed that gradual liberalization was nothing but a code word for the continuation of financial repression and argued for an overhauling of the entire financial system within a short period of time. On the other hand, there were the moderates; they were concerned about the possible adverse effects of premature and swift reform. In particular, these "detractors" argued that financial liberalization conflicted with the government's overall as well as sectoral allocation of investment through the implementation of the consecutive five-year development plans. According to the moderates, financial control is a means for effecting the allocation of real resources. As long as the government attempts to influence resource allocation, it is argued, it cannot deprive itself of the most important means of control. More realistically, those who subscribed to gradual liberalization pointed out the extremely high leverage of Korean firms. Few could have survived the scrutiny of privatized commercial banks, and in the absence of the government's allocational interference in the form of relief financing, they believed, most of the firms that had borrowed heavily from the banks would have gone bankrupt. Until their balance sheets improved substantially, as the argument went, freeing the financial markets could not be implemented.

For a while, the gradualists appeared to have prevailed, but the curb market scandal that broke out in May 1982 changed the financial and political environment and eclipsed their influence. The swindle, ostensibly engineered by a couple extensively involved in curb-market lending, tarnished

the image of a regime committed to building a just society. It jolted an economy already deep in recession, clouding further the prospects of an early recovery. It paralyzed the financial markets, severely curtailing the availability of credit. Under the circumstances, the government had to do something quickly to stop any further hemorrhaging of the economy. The monetary authorities began an infusion of fresh credit (created by printing money) into the economy to supplement the informal credit that had dried up overnight. The government also had to find a scapegoat for the scandal, which it found conveniently in the curb market. The root cause of the scandal, however, was the structural deficiencies in Korea's financial system that provided room for the expansion of the informal credit market. Nonetheless, the swindle set the stage for a complete reversal of the government's macroeconomic policy, quickened the pace of financial reform, and led to two radical measures on June 28 and July 3, along with other reform actions. The measures lowered the bank deposit and lending rates by more than 4 percentage points (June 28) and introduced an identification system in which depositors at banks and holders of other financial assets were required to reveal their real names (July 3). The July 3 measure was strongly opposed and was subsequently indefinitely postponed.

THEORETICAL APPROPRIATENESS

Government Intervention

Allocation of credit is one of the key functions of finance. Whereas financial growth may not necessarily stimulate private savings and may take place even when private savings as a proportion of income remains unchanged or declines, it is widely believed to contribute to efficient allocation of physical resources. The underlying assumption is that financial intermediaries, because of their scale economies and specialization, are more efficient in resource allocation than individual savers. Financial intermediaries are often able to allocate more resources than they mobilize from private savers because a major share of funding from the government and foreign sector is channeled to borrowers through the financial institutions.

Few governments in developing countries seem to believe in the allocational efficiency of either the financial markets or the financial institutions. As documented by Shaw (1973) and McKinnon (1973), the financial sector is perhaps the most heavily regulated industry in developing countries. The governments of these countries intervene extensively in credit allocation in the belief that without their intervention credit allocation would not reflect social and economic priorities—priorities that are often set by these governments. The Korean government has been no exception in this regard. It has behaved as if in the absence of its interference some sectors would receive more credit than socially and economically desirable while other sectors would receive too little.

Government intervention in the allocation of credit is often justified when: (1) the financial markets are imperfect so that these markets cannot allocate resources to the sectors with the highest private rates of return, and (2) a market allocation of resources conflicts with government objectives and therefore does not achieve the greatest social benefits as perceived by the government. The latter case does not, however, necessarily call forth government intervention in the allocation of credit. If, for instance, greater output than a competitive market outcome is desired, a direct subsidy to production is superior to government allocation of credit as a policy instrument. But, on the grounds that a direct subsidy may be politically undesirable, government intervention in credit allocation instead of a subsidy may be justifiable as a second-best solution.

To allocate financial resources in a manner that is perceived to be desirable on social and economic grounds, the government authorities first have to control the interest rates on loans to keep them below a market-clearing level. Low interest rates generate an excess demand for credit supplied by the regulated financial institutions. The excess demand, in turn, requires either the government or the management of the financial institutions to ration the available supply of institutional credit to borrowers according to a set of loan allocation criteria. Second, the government authorities will have to exercise the credit-rationing power to effect a desired allocation of resources. This exercise often necessitates government ownership (or control over the management) of banks and nonbank financial institutions. Third, the government will have to institutionalize a system of credit rationing.

Pattern of Credit Allocation by the Government

If government intervention in credit allocation could be justified on economic and social grounds in the context of the Korean economy, what are the allocational criteria that have guided it? And how rational are they? In any economy, government allocational criteria will be influenced by economic and social objectives as well as by economic efficiency, and these factors will change over time. Governments also attempt to achieve multiple, often conflicting objectives. For these reasons, there are no simple standards for evaluating the rationality or optimality of government allocational criteria.

Guidelines on allocation of credit are set forth in the Regulations Pertaining to the Use of Funds in the Financial Sector. These regulations have been amended since their passage in 1958, and their scope and emphasis on the preferred industries and sectors modified from time to time by government directives (W. Hong 1980:110-45). When a set of allocational criteria is pieced together from the regulations, directives, annual financial stabilization plans, and five-year development plans, it becomes clear that economic efficiency has seldom been the major criterion in the allocation

of credit. Instead, government credit allocation policy was dictated by, and carried out to accommodate, the development strategies and investment policies set forth in the four successive five-year development plans. Thus, one sees that in the 1950s the thrust of government allocational policy was directed to channeling more resources to support import-substitution activities and for the production of daily necessities in order to stabilize the economy and to ease the burden of the balance-of-payment deficits.

Since the launching of an export-led development strategy in the mid-1960s, the basic allocational objective of the government was to support the development of export-oriented sectors in preference to the import-substitution and nontradable goods sectors, in particular the manufacturing sector. Throughout the 1960s and in the early 1970s (which encompasses the first two five-year development plans and part of the third), there was a clear emphasis on allocating more resources to labor-intensive, light manufacturing industries. During subsequent years, the allocational objective was shifted to the promotion of heavy and chemical industries as latent export sectors.

Financial needs will vary from industry to industry depending upon differences in factor intensity, capital-output ratio, investment-gestation period, and cash-flow requirements. For instance, agriculture will, in general, need less financing per unit of output than will the manufacturing industries. Given the possibility of credit fungibility—that is, the inability to track the flow of credit to a specific use—there is no reason to believe that credit rationing will necessarily influence real investment in different sectors in the intended directions. For these reasons, one could argue that information for previous periods on loan distribution primarily reflects differences in industrial characteristics with regard to financial requirements, rather than the consequences of government allocational policy. The ratio of bank loans to nominal output presented in Table 3.1, however, shows that the ratios of the manufacturing and social overhead sectors rose markedly between 1955 and 1960. This evidence, considered in conjunction with the strict credit rationing exercised by the government, suggests that a large portion of bank loans was, in fact, allocated according to a loan-priority ranking consistent with the policy direction of the 1950s with its emphasis on import substitution. It is difficult, however, to determine the extent to which credit rationing contributed to the realization of the changes in the industrial structure envisioned by the government.

During 1960–69, Korea's period of most rapid financial growth, the manufacturing sector, which accounted for the bulk of exports and registered the highest rate of growth, was accorded a growing share of bank loans. More than 70 percent (on average) of private foreign borrowings was allocated to the manufacturing sector during 1962–67 (Table 3.2; W. Hong 1980:168–69). Over the next five years, there was little change in this lopsided allocation.

Table 3.1. Ratios of bank loans to output by sector: 1955-80 (%)

Year	Total	Agriculture, forestry, hunting, and fishing	Mining and quarrying	Manufacturing		Social overhead	Services and other
				Light	Heavy and chemical		
1955	6	3	26	17	41	14	2
1960	16	14	33	34	90	23	5
1962	18	14	30	41	82	35	7
1965	13	6	18	25	48	25	6
1967	17	8	31	35	59	26	8
1970	30	14	51	54	90	36	17
1971	38	15	83	59	89	41	15
1972	34	15	96	58	101	59	12
1973	35	16	61	69	82	52	13
1974	38	15	51	98	68	59	13
1975	35	13	36	71	74	55	13
1976	33	13	43	63	70	52	11
1977	33	14	28	65	71	46	12
1978	34	13	30	56	81	44	15
1979	37	14	43	60	91	47	15
1980	43	19	32	63	101	53	17

Sources: BOK, *National Income* (1982); BOK, *Economic Statistics Yearbook* (1960-86).

Table 3.2. Commercial foreign loans, sector share as a percentage of total loans: 1962-80

Year	Total (10 ⁶ US \$)	Agriculture, forestry, hunting, and fishing (%)	Mining and quarrying (%)	Manufacturing		Social overhead (%)	Services (%)	Other (%)
				Heavy and chemical (%)	Light (%)			
1962	0.1				100			
1965	27.9	38		23	36	3		
1967	137.8	7	1	28	36	20		7
1970	283.2	2	3	38	21	34	3	
1972	306.6	3		64	11	18	5	
1974	614.7	4		28	39	22	5	2
1976	841.0	2		48	27	12	11	
1978	1,929.8	*		55	13	26	6	
1980	1,415.3	1	*	39	5	45	10	*

Source: BOK, *Financial System* (1983).

*Less than 1 percent.

Although self-sufficiency in grain (rice in particular) remained a major policy objective, agriculture's domestic loan share declined gradually from 35 percent in 1960 to about 12 percent at the end of 1969, reflecting the relative slowdown of growth in this sector. The social overhead sector remained one of the priority sectors in the 1960s and received a large share of bank loans relative to its output as it had in the 1950s, although less in terms of loans per unit of output (Table 3.1). The government also allocated a large share of its foreign borrowings to the social overhead sector during the period (Table 3.3). In the 1960s the total loan share of services and other industries almost doubled compared with the figure in the 1950s, mostly at the expense of agriculture (Table 3.4). This was not necessarily the result of relaxation of credit rationing by the government, but was due to the fact that more financial resources became available after the interest-rate reform.

Heavy industries in the manufacturing sector received a growing share of bank credit in the 1970s (Table 3.4). This development reflected the change in Korea's development strategy that promoted heavy and chemical industries for both import substitution and export production. Along with the investment expansion in heavy and chemical industries, there was a noticeable shift in the allocation of financial resources to them. As presented in Table 3.4, their proportion of total bank loans rose from less than 20 percent during 1970-74 to over 29 percent by 1980. Throughout the 1970s the majority of foreign loans whose payments were guaranteed by domestic banking institutions were channeled to the heavy and chemical industries. From 1977 to 1980 this sector accounted for more than 80 percent of the total foreign loans to manufacturing (Table 3.2; Table 3.3). Because a large portion of these loans were rationed by government authorities, the changes in the sectoral loan shares reflected the government's efforts to direct resources to the targeted industries. The decline in agriculture's loan share continued into the 1970s. This trend can be explained by the relative decline in the size of the agricultural sector together with the institution in 1969 of a price-support program in place of a credit-support program for agriculture.

Conflict with Stability and Long-Term Growth

Although government control of finance is often denounced as the cause of inefficient allocation of resources and as contributing to a high rate of inflation and discouraging private savings, none of these negative effects were visible in Korea during the 1960s. On the contrary, the performance of the economy was spectacular during the 1965-69 period. The economy grew by more than 10 percent per annum on average, while the average annual rate of inflation was moderate at less than 9 percent. Indeed, government intervention in the allocation of resources in favor of export-oriented sectors and other strategic industries appears to have been an appropriate policy.

Table 3.3. Public foreign loans, sector share as a percentage of total loans: 1962-80

Year	Total (10 ⁶ US \$)	Agriculture, forestry, hunting, and fishing (%)	Mining and quarrying (%)	Manufacturing		Social overhead (%)	Services (%)	Other (%)
				Heavy and chemical (%)	Light (%)			
1962	6.3				40	57	3	
1965	11.2		22			68	9	
1967	79.6		3	8	9	54	25	1
1970	147.1	29		19	1	31	21	*
1972	432.4	9		10		24	13	44
1974	373.6	22		6		40	33	*
1976	712.1	15		2		35	48	*
1978	817.7	20	*	3		47	30	
1980	1,518.4	11	*	3		74	12	*

Source: BOK, *Financial System* (1983).

*Less than 1 percent.

Table 3.4. Loans and discounts of deposit-money banks, sector share as a percentage of total loans: 1955-80

Year	Total (10 ⁹ won)	Agriculture, forestry, hunting, and fishing (%)	Mining and quarrying (%)	Manufacturing		Social overhead (%)	Services (%)	Other (%)
				Heavy and chemical (%)	Light (%)			
1955 ^a	3.8	25	7	13	33	7	13	2
1957	10.9	45	1	11	27	1	13	2
1960	24.3	49	1	10	20	3	14	3
1965	72.1	27	2	15	25	3	19	9
1967	178.0	17	2	19	27	8	20	7
1970	722.4	14	2	20	25	11	20	9
1971	919.5	14	2	18	28	13	16	9
1972	1,198.0	13	3	19	30	14	13	8
1973	1,587.5	13	1	20	34	13	11	8
1974	2,427.8	11	1	20	37	13	11	7
1975	2,905.3	10	1	23	34	13	11	7
1976	3,724.9	10	1	25	32	13	11	7
1977	4,709.0	11	1	26	31	13	11	8
1978	6,609.0	10	1	27	28	13	13	8
1979	8,977.8	9	1	28	27	15	11	9
1980	12,204.4	9	1	29	26	16	13	7

Source: BOK, *Economic Statistics Yearbook* (1960-86).

Note: Deposit-money banks are commercial and specialized banks. Rows may not sum to totals because of rounding.

a. Commercial banks and the KAB.

During the Third Five-Year Development Plan (1972-76), however, the negative effects associated with repressive financial policies began to surface and could no longer be ignored, as they increasingly undermined the government's ability to stabilize the economy and to mobilize domestic resources (Shaw 1973).

First, financial growth, which had begun increasing rapidly in the middle of the 1960s, slowed considerably, barely keeping up with economic growth. The slowdown was accompanied by an appreciable fall in the domestic savings ratio, adding a still greater burden to savings mobilization efforts and the nation's resource management problems.

Second, the problems of maintaining the internal and external stability of the economy were magnified and became more difficult to manage in the course of pursuing the export-led growth strategy, yet continued financial control left the economic authorities with no effective anticyclical policy instruments at their disposal. As the export sector expanded rapidly and accounted for an increasingly large share of output, domestic business fluctuations were influenced and often led by changes in world market conditions. Monetary policy loses much of its effectiveness as an anticyclical weapon in a small open economy under a fixed exchange-rate system. This would be the case even if the economy had a sophisticated financial system; however, such a system did not exist in Korea during the 1970s and adoption of a more flexible exchange-rate system was opposed because it was viewed as destabilizing, among other reasons. Therefore, with monetary and financial policies directed toward the growth objective, the authorities had no effective short-run stabilization policy instruments and the existing ones were largely inoperative.

Third, continued government domination of the financial system, from the viewpoint of the proper role of finance, was in the long-run likely to interfere with successful implementation of the outward-looking strategy. Repressive monetary and financial policies resulted in an increasingly rigid financial system and artificially segmented financial markets. Financial institutions grew large in number and variety, but had no incentives to improve or expand their role as intermediaries and became unresponsive to changing financial conditions and the needs of the economy. These institutions were cut off from the international financial community and, in their isolation, perpetuated financial practices that were outdated and suitable only to a closed economy. In contrast, private firms, in particular those that were export-oriented, aggressively penetrated world markets where they established a firm foothold and succeeded in enlarging their market share. The private firms upgraded their production processes and management practices to international standards and accumulated considerable marketing expertise.

Isolated from the international financial centers, however, domestic financial institutions were unable to provide adequate and efficient international

financial services to these world-market-oriented firms. Nor were they effective or active in channeling much needed foreign credit with favorable terms and conditions to these firms. This discrepancy between the real sector, which was rapidly opening up, and the closed financial sector was ultimately detrimental to the overall growth of the economy.

Finally, it became apparent that government control of finance was one of the major causes of the concentration of economic power and the worsening inequality in income distribution. According to SaKong (1980:2-13), preferential credit allocation that favored large and established borrowers with a subsidized rate was the major cause of the growth of business conglomerates during the 1970s in Korea.

Faced with these disturbing problems arising largely from continuing financial repression, many economists in Korea and abroad began to advocate a fundamental change in monetary and financial policies aimed toward gradually building a more liberalized financial system. That financial liberalization should be the ultimate goal of the authorities was generally accepted. Like any other economic policy, however, liberalization was not without problems. These problems produced strong opposition, in particular from policymakers and the business community. Financial liberalization was opposed because: (1) it could result in a very high and unstable interest-rate structure that would produce a cost-push effect on inflation and put an enormous burden on a large number of highly leveraged firms; (2) it was in conflict with what some economic authorities saw as the proper role of the government in a mixed economy; and most important, (3) liberalization would not allow for the successful implementation of the new industrial development strategy that emphasized the development of skill- and technology-intensive heavy and chemical industries.

The first problem was the least important. Liberalization would certainly result in high interest rates, but there was no evidence it would bring about an unstable interest-rate structure or accelerate inflation.

The second problem was related to the paradox that the Korean economy depended in a large measure on private enterprises operating under highly centralized government guidance, and it was therefore in part a political issue. With the rapid growth of the external sector, the sphere of government influence and scope of government control over the conduct of economic affairs had diminished. Export-oriented growth strategy, to be successful, also required gradual relaxation of import-control and foreign-exchange regulations. The economic authorities were aware of the need for such external liberalization and took steps to institute the required policy changes. At the same time, however, the government felt the need for (and attempted to obtain) a tighter grip on the economy for political, social, and to some extent economic reasons. The problem was not so much the government's direct involvement but rather the means by which it attempted to influence the economy, namely, through direct control over the financial

system. This would certainly necessitate and perpetuate financial repression.

The third problem did indeed pose a serious dilemma. As early as the preparation stage of the Third Five-Year Development Plan, it became apparent that the high-growth objective could not be achieved by following the same industrial development strategy pursued during the first and second plans. The third plan thus called for major shifts in production and export through the expansion of heavy and chemical industries. This shift in strategy, which signaled the entering of the secondary import substitution and export promotion stage of development, was made public in late 1972 and was fully reflected in the Fourth Five-Year Plan (1977-81).

Although the new strategy was viable and perhaps the only alternative consistent with the high-growth objective, it also presented a number of formidable problems. One of these problems was that the strategy would require the intensification, rather than relaxation, of government intervention in the financial system. The strategy required that enormous foreign as well as domestic resources be invested in industries with relatively high capital-output ratios, long investment-gestation periods, and uncertain rates of return on capital. Its success was dependent on unpredictable foreign demand at a time when trade protectionism was increasing and the prospects for any substantial increase in domestic savings were not favorable. It was, of course, theoretically possible to overcome the shortage of domestic savings by foreign borrowings over and above what was necessary to meet the need for foreign exchange. But Korea's external requirements were already large enough to preclude this as a viable option for any extended period of time.

Fungibility and the Effectiveness of Government Intervention

The ultimate objective of government controls over credit allocation is to bring about an allocation of physical resources that furthers the government's overall objectives for the country, even if the allocation is not the most efficient use of resources. To what extent has the Korean government since 1961 succeeded in attaining this objective? This is a difficult question to answer, even at a theoretical level, and one that requires reliable microdata for an empirical examination.

There is little or no reliable data on Korea that could be used to investigate the causal relationship between credit allocation and physical resource allocation. The task is further complicated by the unanswered question on the causality between finance and economic development. The key to the answer lies in the fungibility of credit. If credit fungibility is of a high degree, the government cannot expect to be successful in effecting what it considers to be an optimal allocation of physical resources.

It is often alleged that when the financial markets are imperfect and the financial sector is in an infant industry stage, government intervention may be warranted and effective. The effectiveness stems from the fact that finan-

cial market imperfections reduce credit fungibility. That is, when financial markets are fragmented among regions and different classes and groups of borrowers, funds do not flow freely from one separated and artificially segmented market to another. In such a financial regime, government intervention has a better chance of success in channeling bank credit to the ultimate use of physical resources.

Financial market fragmentation exists in Korea perhaps because the financial markets have not had enough time to develop into a unified national market. The financial markets are, however, segmented largely because of government controls over the interest rates and management of the financial institutions. Therefore, the fragmentation may be viewed as a result of a deliberate effort on the part of the government to facilitate its directed credit allocation. The growth of the unregulated money market could, in part, be attributed to the financial market fragmentation engineered by the government. One of the major functions of the unregulated money market has been to facilitate the flow of funds among markets that are geographically separated and artificially segmented by interest rates, sectors, and borrowers. The existence of the huge unregulated money market, therefore, suggests a strong possibility of credit fungibility in Korea, which would in turn reduce the effectiveness of government intervention in resource allocation.

The fungibility issue could be examined at the two stages of the credit allocation process. At the first stage, which is related to the lending behavior of the financial institutions, it is quite possible that the financial intermediaries may simply evade or ignore the credit guidelines and directives and, therefore, may themselves be guilty of credit diversion. This problem does not appear to have been serious in Korea because of the government's close supervision of the day-to-day operations of the deposit-money banks and other financial intermediaries. It is widely suspected, however, that the financial institutions have consistently evaded government guidelines for the allocation of credit to medium- and small-scale enterprises. For a period of time during the latter part of the 1970s, the deposit-money banks were required to make available a minimum of 30 percent of their total loans to small- and medium-scale industries. No one believed that the actual allocation of these institutions was anywhere close to the guideline quota. Because of the ambiguities in the definition of small and medium enterprises, the banks were easily able to meet the quota without necessarily lending the required amount to small-scale businesses. Given their traditional aversion to small borrowers, the banks may have taken advantage of the vagueness in the regulations and thereby facilitated credit diversion.

At the second stage of credit allocation, which is related to the behavior of borrowers, it is quite conceivable that a large part of bank credit was diverted to uses other than those predesignated by the government. This diversion would be possible because the deposit-money banks and the KDB

do not have an effective system of credit-use supervision. Even if they did have an effective system, the management of these financial institutions would not be much concerned about (and hence would not actively supervise) the actual use of bank credits, because the management is not responsible for the provision of directed and policy loans. The lack of autonomy in bank management may thus have aggravated credit diversion.

The fact that business firms invest heavily in real assets is evidence of credit fungibility. A special measure, issued in September 1980, required 1,217 large firms to report their holdings of land and buildings, classified into those used for business operations and others presumably held for real asset speculation. The responses showed that business groups and corporations held a large share of their total assets in the form of real assets such as land and buildings. According to the government, the holdings of these assets were far greater than the level normally required for the firms' business operations. The presumptions are that businesses invest in real assets as a hedge against inflation and as a source of collateral for bank loans and that the majority of their holdings were financed by bank loans in the first place. One large business group, formerly a ranking exporter, was so heavily involved in real estate speculation with export loans that it went bankrupt in 1978 when its export earnings fell sharply and the real estate boom cooled off. Undoubtedly, there have been numerous similar cases involving smaller businesses.

As noted before, a more important reason to suspect a considerable degree of credit fungibility was the existence of and the important role played by the unregulated money market, particularly prior to the curb-market freeze measure of 3 August 1972. These unregulated markets acted as a short-term money market for large business borrowers and as a retail credit market for consumers and small businesses. In so doing, they provided a linkage among the segmented markets and hence a channel for diverting government-controlled credit from the intended uses. As shown in Cole and Park (1983:119-20), large businesses often borrowed their working capital from and lent their idle funds through the unregulated money market. In doing so, the large businesses assumed the role of financial intermediaries, in addition to their normal business activities. They did so largely because there was no active short-term money market, and the government-dominated financial institutions could not provide adequate short-term credit facilities.

Financial requirements for investment and production activities and seasonality in the demand for loans will vary according to the industry and will change over time. The major requirement of some sectors is long-term external financing, whereas others need short-term loans. The processing of a bank loan, with the exception of overdrafts, takes a long time from application to an actual loan disbursement. No matter how sophisticated and detailed a credit-guideline system the government devises, it cannot

expect to account for all the factors that determine the sectoral demand for loans in formulating its control system. Indeed, if the credit-allocation guidelines and directives were enforced to the letter, the financial system would be paralyzed. The unregulated money markets have complemented an otherwise extremely rigid financial system and thereby facilitated smooth flows of funds between the different markets in Korea.

Inflationary Implication

Monetary accommodation—that is, easy credit to export industries resulting in a rapid expansion of the money supply—was a logical consequence of the government's use of the financial system and policy as a means of intervening in the allocation of resources. As a result, the scope of monetary policy as an instrument of anti-inflationary policy was severely restricted. The majority of subsidies to preferred industries had been financed by borrowings from the central bank, and these borrowings were immune to stabilization policy. In addition, a large fraction of bank credit had been earmarked in the form of "policy" or "directed" loans for strategic industries and uses. These loans thus escaped from monetary tightening.

Government control over financial institutions also complicated the effective management of monetary policy. With government control, deposit-money banks, which dominate Korea's financial system, have been no more than a banking bureau of the government. Their main role was to allocate deposits and new credit supplied by the central bank to the sectors and industries and often to individual borrowers designated by the government. Under these circumstances the portion of lendable resources the banks could allocate under their own discretion was greatly limited. In recent years more than 50 percent of the deposit-money banks total loans could be classified as "directed" policy loans whose volume and allocation were determined by the government itself, often independently of monetary stabilization. To the extent that the government attempts to mobilize domestic resources by means of excessive credit creation and inflation, it becomes logical and perhaps unavoidable to allow continuous rollovers of short-term loans and the accumulation of overdue loans when the deposit-money banks are confronted with a huge chronic excess demand for loans.

The large share of "directed" loans and the practice of rollovers have made deposit-money banks' portfolios extremely illiquid. This illiquidity has made it difficult for the banks to adjust their asset portfolios in response to changes in financial market conditions or monetary policy. Thus, credit tightening has elicited little response from the banks in the short run and has become ineffective as an anti-inflationary measure.

EFFECTS OF THE POLICY MEASURES

Before discussing the effects of the financial policies during 1961-80, we need first to address the issue of credit fungibility. If the degree of credit

fungibility were high, the pattern of real-resource allocation would not correspond to the pattern of credit allocation planned by the government. In the extreme case of perfect fungibility, the government would find itself incapable of influencing real-resource allocation with its control of credit allocation. Clearly, then, if the government's development strategy relying on credit allocation were to succeed, the degree of credit fungibility would have to be tolerably low.

What was the degree of credit fungibility in the two decades after the military takeover of the government in 1961? Our attempt at empirical estimation has led to a tentative finding that anywhere from 50 to 70 percent of each dollar of government funds allocated to a particular sector was diverted to other sectors. Although this seems to be a high degree of "slippage," it cannot be denied that in the case of Korea the government did have some influence on real-resource allocation through its control over credit.

Even though there is no firm evidence to support the hypothesis, it seems reasonable to argue that the degree of credit fungibility has increased over time in Korea. In the early 1960s it was probably low because the economy was simple, the financial market segmented and underdeveloped, and the number of enterprises receiving preferential credit small. In such a situation, the recipients of credit would have found few alternative ventures to divert funds to and also might have felt that they were under close scrutiny by the government.

With rapid economic growth, the degree of credit fungibility probably increased. There were now more enterprises and more alternative ventures to which funds could be diverted. To an individual recipient, the expected rate of return from diverting funds from their designated use may have increased, whereas the expected cost from being caught and penalized may have decreased. The increasing degree of credit fungibility must then have reduced the government's ability to control real-resource allocation via credit control.

A more fundamental issue relating to the use of financial policies as an instrument for economic development is the question of whether or not the real-resource allocation engineered through credit allocation has promoted Korea's economic development. This is not an easy question to answer and is part of the controversy over the use of industrial policy as an instrument for promoting economic development or a high rate of economic growth. Chalmers Johnson (1982), for instance, has argued in his *MITI and the Japanese Miracle* that the industrial policy of the Ministry of International Trade and Industry (MITI) had been critically instrumental in the rapid economic growth of postwar Japan. Despite his persuasive argument, supported with well-documented research, the question of the role of MITI has yet to be answered to the satisfaction of many economists.

If the positive effects of the financial policies on economic development

are in dispute, there seems to be no disagreement on their negative effects. As noted earlier, monetary accommodation and the control over financial institutions had reduced the scope and effectiveness of monetary policy as an anti-inflation instrument. Lacking monetary policy as a stabilization policy, the government had to rely on price controls and incomes policy. The distortionary effect on resource allocation resulting from these measures must, therefore, be ultimately traced back to the financial policies that rendered monetary policy ineffective as a stabilization policy.

Another negative effect is the socially and politically undesirable concentration of economic power and the resulting inequities in income distribution. As SaKong (1980) has shown, the preferential credit allocation favoring large and established borrowers contributed to the growth of business conglomerates during the 1970s. Even if these firms had the advantage of large-scale economies, there was no compelling reason for subsidizing their growth.

In the final analysis, if there is one lasting effect of the financial policies of 1961-80 that has been beneficial to Korea's economic development, it may be the growth and development of a variety of financial institutions. Their growth, which was initiated by the government, has gradually increased their role as true financial intermediaries, has reduced the scope of government intervention in the financial market, and thus has brought about its gradual liberalization.

CRITICISM AND LESSONS

In the early 1960s Korea's financial sector was dominated by a few nationwide commercial banks mostly supplying short-term working capital to large businesses. The securities market was moribund, and the financial needs of medium- and small-size firms and consumers were served by unregulated money markets or curb markets, which were fragmented and scattered throughout the country. Under these circumstances, the government probably had no alternative to controlling the financial institutions for mobilizing domestic savings and for guiding the resources in the desired directions.

Beginning in the early 1970s, the government moved toward diversifying financial assets and institutions. With the promulgation of the August 3rd (1972) measures, the government established several nonbank financial intermediaries and subsequently encouraged new types to come into the financial system to compete with commercial banks. The government was determined to develop a modern capital market, and this determination led to a series of measures that culminated in a partial opening of the market to foreign investors.

The growth of the nonbank financial intermediaries and the expansion of the securities market brought about a noticeable change in the role of the government in the allocation of the economy's investable resources. Be-

cause the government did not, or could not, intervene in the asset management of nonbank intermediaries and dictate the allocation of funds through the capital market, the share of domestic financial resources controllable by the government declined. More important, this development coincided with the realization of the need for gradual financial liberalization in the mid-1970s.

The government was indeed prepared to loosen its tight grip on financial institutions and conduct a more flexible interest-rate policy after the 1970-71 recession. These liberalization efforts were thwarted, however, by the first oil crisis and, more important, by the shift in development strategy toward the promotion of heavy and chemical industries. Given the high rate of inflation triggered by the first oil crisis and the subsequent investment and export boom, the government found it extremely difficult to pursue a flexible interest-rate policy. Also, given the enormous amount of resources required for the development of heavy and chemical industries, the government did not expect that the necessary funding could be raised in the private market without government intervention. The government decided it could not relinquish control of, or make any major changes in the financial system, though it was certainly in need of a serious reform.

For a number of reasons that include the second oil price increase in 1979 and the worldwide recession that followed, the promotion of heavy and chemical industries as the future export sector was far from successful. The promotion effort resulted in a considerable drain on the economy's investment resources, a slowdown in growth with rampant inflation, and a growing current-account deficit beginning in 1979. The worsening economic situation was further aggravated by the assassination of President Park in October 1979, followed by a renewed debate on the needs for greater reliance on price mechanisms and the private sector for the management of the economy. As a first step toward laying the foundation for a market- and private-sector oriented economy, many within and outside Korea began to advocate financial liberalization. Some people believed that the repressive financial system was primarily responsible for the massive investment in heavy and chemical industries.

The new government that came into power was strongly committed to a free-market economy and financial liberalization measures, including the transfer of the government-owned shares of four nationwide commercial banks to private owners. However, the government authorities have yet to show any indication of floating interest rates, which is the crucial prerequisite for liberalization. Although the five nationwide commercial banks are now fully owned by private shareholders, the government continues to appoint all the senior bank officials and to interfere with their asset management in the form of "relief financing" set up to bail out troubled firms. Despite the strong commitment and numerous liberalization measures, one cannot but feel that it is business as usual as far as Korea's finance is concerned.

Can we say, with the benefit of hindsight, that events warranted the interruption of the process of financial liberalization? If the survival of the established firms was at stake, why couldn't the government subsidize them directly? Also, if the government thought it necessary to promote heavy and chemical industries, why didn't it make direct subsidies to the production of output of these industries? Direct subsidies would have accomplished the same objectives, but without distorting relative prices as did credit control.

Some might argue that Korea's limited fiscal capacity would have made tax-cum-subsidy measures impracticable, if not impossible. Given the success in building financial institutions, it is, however, difficult to believe that the government would not have succeeded in building an effective fiscal system if it had tried to do so.

The answer to the questions above may lie in the characteristics inherent in the economic system. In a mixed economic system where the role of government is more direct than that of setting broad rules and policies, the government regards it as imperative to take quick administrative action in response to a disturbance to the system. To the government, then, credit control is an important policy instrument that is relatively easy to use administratively and highly visible in terms of its apparent effectiveness. In other words, credit control is a policy instrument that the government can ill afford to give up unless it is intent on changing the basic features of the system.

A fundamental reform that is needed, therefore, is a move toward an economic system where the role of government is less direct and is largely confined to setting broad rules and policies. To a government committed to carrying out such a reform, financial liberalization should be only one in a series of policy changes that need to be carried out to achieve its long-term objectives.

4 Price Control and Stabilization Measures

by Yung Chul Park

Growth and stability have been the two most important economic policy objectives in Korea since 1961. The nearly 9 percent annual economic growth rate that Korea experienced during 1961-80 was remarkable by international standards; the same could hardly be said about the stability record. The rate of inflation, as measured by the wholesale price index (WPI), was more than 16 percent per year on average for the same period—almost three times as high as the inflation rates of Korea's major trading partners (the United States and Japan)—and ranged from a low of 6.4 percent to a high of 42 percent. Calculated using the GNP deflator, the rate of inflation was higher still, at 18 percent per year on average for the 1961-80 period (Table 4.1). The high rate of inflation, coupled with an overvalued exchange rate, was largely responsible for the persistent balance-of-payments problem. Despite the rapid growth of exports, Korea consistently recorded a deficit in its current account throughout the period (except for 1965 and 1977). The deficit fluctuated between 1 and 11 percent of GNP.

To facilitate a better understanding of the environment in which the policies were designed and implemented, it will be instructive to first review the history and analyze the causes of inflation in Korea since 1961.

INFLATIONARY TRENDS IN KOREA

There were periods of relatively moderate annual rates of inflation (less than 10 percent) in the latter part of both the 1950s and the 1960s, alternating with periods of relatively high rates in the early 1960s and throughout the 1970s. For the purpose of this study, it is convenient to divide the period 1961-80 into three subperiods: (1) resurgence of inflation during 1961-64 (after a period of relative price stability in the latter part of the 1950s), which resulted from numerous government measures to stimulate economic growth and was exacerbated by poor agricultural harvests; (2) rapid growth and relative internal and external stability from 1965 to 1973; and (3) the period of 1974-80 during which abrupt swings in the external sector buffeted a more open economy, and attempts at maintaining high rates of growth resulted in high rates of inflation and external imbalances as part of the adjustment process.

Table 4.1. Price indexes: 1961-80

Year	Wholesale price index		GNP deflator	
	Index (1975=100)	Change (%)	Index (1975=100)	Change (%)
1961	14.8	13.8	9.8	14.0
1962	16.1	8.8	11.6	18.4
1963	19.4	20.5	15.0	29.3
1964	26.2	35.1	19.5	30.0
1965	28.8	9.9	20.7	6.2
1966	31.4	9.0	23.7	14.5
1967	33.4	6.4	27.4	15.6
1968	36.2	8.4	31.8	16.1
1969	38.5	6.4	36.5	14.8
1970	42.0	9.1	42.2	15.6
1971	45.7	8.8	47.3	12.1
1972	52.0	13.8	54.7	15.6
1973	55.6	6.9	61.9	13.1
1974	79.0	42.1	80.2	30.0
1975	100.0	26.6	100.0	24.7
1976	112.1	12.1	117.7	17.7
1977	122.2	9.0	136.9	16.3
1978	136.5	11.7	165.1	20.6
1979	162.1	18.8	197.0	19.3
1980	225.2	38.9	247.9	25.8

Sources: BOK, *National Income* (1982); BOK, *Economic Statistics Yearbook* (1965, 1970, 1980, 1982); EPB, ROK, *Major Statistics* (1982).

Development Financing and Inflation, 1961-64

One of the main reasons given by the military leaders for their coup d'état in May 1961 was the economic stagnation under the previous two regimes. It was, therefore, not surprising that the military government initiated a series of measures to stimulate economic growth. Finding meager tax revenues and declining foreign aid, the government had to run substantial budgetary deficits to carry out the stimulative measures. The deficits, which were financed by printing money, led to a rapid expansion of domestic liquidity. After a negative rate of expansion in 1960, the supply of money had grown by almost 58 percent by the end of 1961 (Table 4.2).

Concerned about the rapid liquidity expansion and believing that money-lenders and businessmen were hoarding their wealth in currency and deposits, the government undertook a currency reform in June 1962. The reform succeeded in slowing down the rate of growth of money to below 10 percent per year for the next two years, but failed to channel hoarded wealth into productive investment. Instead, its more pervasive effect was

Table 4.2. Money supply and reserve base: 1961-80

Year	Money (M_1)		Total money (M_2)		Total reserve base	
	Amount (10^9 won)	Change (%)	Amount (10^9 won)	Change (%)	Amount (10^9 won)	Change (%)
1961	35.8	57.7	41.3	60.7	25.4	51.2
1962	39.4	10.1	51.6	24.9	29.8	17.3
1963	41.9	6.3	55.4	7.4	27.9	-6.4
1964	48.5	16.7	63.6	14.8	32.7	17.2
1965	65.6	34.2	97.1	52.7	48.4	48.0
1966	85.1	29.7	157.0	61.7	80.2	65.7
1967	123.0	44.5	253.8	61.7	110.9	38.3
1968	177.9	44.6	436.6	72.0	156.2	40.8
1969	252.0	41.7	704.6	61.4	216.0	38.3
1970	307.6	22.1	897.8	27.4	299.7	38.8
1971	358.0	16.4	1,084.9	20.8	288.2	-3.8
1972	519.4	45.1	1,451.8	33.8	427.5	48.3
1973	730.3	40.6	1,980.5	36.4	624.1	46.0
1974	945.7	29.5	2,456.5	24.0	775.0	24.2
1975	1,181.7	25.0	3,150.0	28.2	1,077.0	39.0
1976	1,544.0	30.7	4,204.8	33.5	1,437.7	33.5
1977	2,172.6	40.7	5,874.3	39.7	2,071.6	44.1
1978	2,713.8	24.9	7,928.7	35.0	2,802.0	35.3
1979	3,274.5	20.7	9,877.8	24.6	3,468.0	23.8
1980	3,807.0	16.3	12,534.5	26.9	3,243.9	-6.5

Source: BOK, *Economic Statistics Yearbook* (1982).

Note: Total reserve base = currency issued + bankers' deposits.

to undermine confidence in financial institutions and assets, thus encouraging the holding of real assets and expansion of unregulated money-market transactions.

The 1962 financial debacle was aggravated by a rice crop failure in the same year and by a severe decline in the barley harvest the following spring. The liquidity expansion in 1962, caused by the currency reform and a poor grain harvest, built up strong inflationary pressures in the economy.

In 1964 the government devalued the won by almost 100 percent. Although that measure helped to improve Korea's export competitiveness, it had a devastating effect on prices. A sharp decline in imports, along with higher import prices, set off the a surge of inflation of over 35 percent in 1964.

The estimated effect of currency devaluation on prices in Korea varies from study to study. The simulation results of S. W. Nam (1981) and the Bank of Korea quarterly economic model (unpublished) show that a 1 percent devaluation in the won exchange rate to the U.S. dollar would raise domestic prices (WPI) by 0.3 to 0.4 percent in one year.

Rapid Growth and Relative Price Stability, 1965-73

The years between 1965 and 1973 were a period of outstanding performance for the Korean economy. Output grew at an average annual rate of 10 percent and price increases were relatively modest at an average of about 8 percent as measured by the WPI (15 percent on the GNP deflator). The current account was in deficit throughout the period, but the continuous expansion of exports and large inflows of foreign capital, induced by the monetary reform in 1965, helped to reduce anxiety over the growing current-account deficits. The deficit remained at a level of over 8 percent of GNP between 1968 and 1971 before falling to about 3 percent in 1972 and 1973. The stimulus for industrial growth came mainly from the export sector and the government's successful campaign to promote exports.

The period of 1965-73 was a kind of "golden age" in Korea's economy, characterized by relative price stability and high growth. What factors and developments could explain the exceptional performance? On the demand side, export expansion was undoubtedly the engine of growth. Exports, consisting mostly of labor-intensive manufactures, increased annually at a rate of 37 percent in real terms during the period, thereby increasing the exports-to-GNP ratio to 30 percent in 1973, compared with less than 6 percent in the early 1960s. The increase in fixed-capital formation was equally impressive. Between 1965 and 1973, fixed investments in real terms increased sevenfold. As a result the proportion of investment in GNP more than doubled, from 11 percent in 1964 to 24 percent in 1973. Largely because of an overall balance surplus caused by large capital inflows, the supply of money (M_1) expanded by 35.4 percent and M_2 (M_1 plus saving deposits with commercial banks) increased by 41.7 percent a year on average from 1965 to 1973 (Table 4.2).

These developments in aggregate expenditures and domestic liquidity would normally generate strong inflationary pressures. There were, however, other favorable developments on the demand side that moderated price increases. The financial reform in 1965 raised the interest-rate ceiling on bank time deposits from 15 percent to 30 percent per year. This readjustment increased the real interest rate (the nominal interest rate adjusted for inflation) to a positive 19 percent in 1966, from a negative 15 percent in 1964, and maintained the rates at a level of 12 to 22 percent for the following four years (Table 4.3). The sharp increase in interest rates induced savers to substitute financial assets for real assets such as real estate, household durables, and inventory. These portfolio substitutions dampened increases in land and housing prices and subsequently lowered housing rents. The interest-rate readjustment also encouraged households to save more. As a percentage of GNP, domestic savings more than tripled between 1965 and 1973 (Table 4.4). More important, the large interest-rate differential between the domestic and foreign capital markets, together with the government repayment guarantee (which eliminated any risk of default and

Table 4.3. Interest rates: 1961-80

Year	Nominal interest rate on time and savings deposits (%)	Real interest rates		Curb market interest rate (%)	Seoul land values	
		(A) ^a (%)	(B) ^b (%)		Index (1963=100)	Change (%)
1961	12.5	-1.1	-1.3	u	u	u
1962	15.0	5.7	-2.9	u	u	u
1963	15.0	-4.6	-11.1	52.4	100	u
1964	15.0	-14.9	-11.5	61.4	168	68.0
1965	18.8	8.1	11.9	58.8	225	33.9
1966	30.0	19.3	13.5	58.7	u	u
1967	30.0	22.2	12.5	56.4	495	u
1968	27.6	17.7	9.9	55.9	755	52.5
1969	24.0	16.6	8.0	51.2	1,390	84.1
1970	22.8	12.6	6.2	50.8	1,445	4.0
1971	22.2	12.3	9.0	46.3	1,860	28.7
1972	15.7	1.7	0.1	38.9	1,966	5.7
1973	12.6	5.3	0.5	39.2	1,997	1.6
1974	14.8	-19.2	-11.4	37.6	2,610	30.7
1975	15.0	-9.2	-7.8	41.3	3,315	27.0
1976	15.5	3.0	-1.9	40.5	4,196	26.6
1977	16.2	6.6	-0.1	38.1	5,606	33.6
1978	16.7	4.5	-3.2	41.7	8,354	49.0
1979	18.6	0.2	-0.6	42.4	9,740	16.6
1980	22.4	-11.9	-2.7	45.0	10,879	11.7

Sources: BOK, *Economic Statistics Yearbook* (1965, 1970, 1975, 1982); Mills and Song (1979); unpublished data obtained from the Ministry of Construction, ROK.

u—data unavailable.

$$a. (1 + \text{col. 1}) \frac{WPI_{t-1}}{WPI_t} - 1$$

$$b. (1 + \text{col. 1}) \frac{GNP \text{ deflator}_{t-1}}{GNP \text{ deflator}_t} - 1$$

exchange-rate depreciation on foreign loans), caused a massive inflow of foreign capital in the form of trade credits, cash loans, and direct investment, thereby enlarging Korea's capacity of importing much-needed capital goods and raw materials.

On the supply side, the high interest rates raised the cost of production. This cost-push effect was partially offset, however, by other developments. The unit labor cost (nominal wages adjusted for labor productivity) rose by less than 4 percent on average per year, though it displayed considerable year-to-year fluctuations (Table 4.5). Import prices of food grains,

Table 4.4. Savings, investment, and balance of payments as percentages of GNP: 1961-80 (current prices)

Year	National savings	Gross fixed investment	Current account
1961	2.8	11.7	1.4
1962	3.3	13.7	-2.0
1963	8.7	13.5	-3.7
1964	8.7	11.3	-0.7
1965	7.4	14.8	0.3
1966	11.8	20.2	-2.7
1967	11.4	21.4	-4.1
1968	15.1	25.0	-7.4
1969	18.8	25.8	-7.3
1970	17.3	24.4	-7.2
1971	15.4	22.5	-8.9
1972	15.7	20.6	-3.6
1973	23.5	24.0	-2.4
1974	20.5	25.5	-11.2
1975	18.6	26.0	-9.3
1976	23.1	23.8	-1.1
1977	25.1	26.0	0.0
1978	26.4	30.6	-2.3
1979	26.6	32.5	-6.9
1980	19.9	32.7	-9.4

Source: BOK, *National Income* (1982).

energy, and other raw materials remained virtually unchanged between 1966 and 1969, though thereafter they climbed sharply.

Despite these favorable demand and supply developments, the monetary authorities were concerned about the rapid growth of money supply and domestic credit and took measures to restrain liquidity growth. Reserve requirements were raised to unprecedented levels—a marginal rate of 50 percent on demand deposits from October 1966 through March 1967—but the credit expansion continued unabated. That it was possible to have such a rapid expansion of credit without causing inflation could be attributed in part to the lagged effect of monetary growth. But it was mostly the result of the matching growth in the demand for bank time deposits with the substantial increase in savings.

After five years of uninterrupted high growth it looked as though the economy was finally cooling off in 1970. Export growth declined from its previous high levels largely owing to the economic slowdown affecting Korea's major trading partners and rising trade protectionism. The rate of growth of exports fell for three consecutive years beginning in 1969. This

Table 4.5. Wages, productivity, and unit labor cost in manufacturing: 1961-80

Year	Nominal wages			Labor productivity			
	Amount (won)	Index (A) (1975=100)	Change (%)	Index (B) (1975=100)	Change (%)	Unit labor cost (A/B) (1975=100)	Change (%)
1961	2,840	8.7	9.2	23.2	12.1	37.5	-2.8
1962	2,990	9.2	5.3	24.0	3.4	38.3	2.1
1963	3,310	10.2	10.7	25.4	5.8	40.2	5.0
1964	4,010	12.3	21.1	27.6	8.7	44.6	0.9
1965	4,680	14.4	16.7	32.0	15.9	45.0	0.8
1966	5,480	16.9	17.1	33.3	4.1	50.8	12.8
1967	6,640	20.4	21.2	39.2	17.7	52.0	2.4
1968	8,400	25.8	26.5	46.2	17.6	55.8	7.3
1969	11,270	34.7	34.2	56.9	23.4	61.0	9.3
1970	11,515	35.4	2.2	64.4	13.2	55.0	-10.0
1971	15,040	46.2	30.6	70.1	8.9	66.0	20.0
1972	16,127	49.6	-7.2	75.5	7.7	62.0	-6.0
1973	18,994	58.4	17.8	81.8	8.3	71.4	15.0
1974	25,253	77.7	33.0	90.1	10.1	86.2	20.7
1975	32,521	100.0	28.8	100.0	11.0	100.0	16.0
1976	43,376	133.4	33.4	106.8	6.8	124.9	24.9
1977	54,340	167.1	25.3	117.7	10.2	142.0	13.7
1978	73,348	225.5	35.0	131.2	11.5	171.9	21.1
1979	94,565	290.8	28.9	151.5	15.5	191.9	11.6
1980	119,139	366.3	26.0	167.2	10.4	219.1	14.2

Source: Professor M. K. Bae of Seoul National University.

slowdown was accompanied by an appreciable drop in investment demand.

Tight monetary policy pursued over the preceding three years (1967-69) began to pay off. Together with a fall in export demand, which automatically reduced domestic credit expansion, the tightening managed to reduce the rate of expansion of M_1 from more than 40 percent in 1969 to 22 percent in 1970 and to 16 percent in 1971. That curtailment in domestic liquidity might have accounted in part for the sluggishness in investment demand. In 1970 the economy registered a relatively low rate of growth (7.3 percent), but the sharp deceleration was caused mainly by a poor rice harvest. The economic slowdown in manufacturing activities did not begin until the first quarter of 1971 and lasted less than a year. In retrospect, the downturn did not call for any expansionary measures, given the accelerating consumer-price increases. This was not, however, the course the policymakers took.

To revive export demand the government devalued the currency by 17 percent in June 1971. The devaluation raised the prices of imported goods and (with a lag) domestically produced goods. More important, it caused a corresponding increase in the cost of servicing foreign loans, which had grown dramatically since 1963. In the scramble for funds to meet foreign obligations, businesses had three major potential sources: domestic banks, foreign lenders, and the unregulated financial markets. The tight monetary policy markedly reduced the availability of bank credit. Foreign loan guarantees by government-owned banks went up sharply in 1971, but about half of the increase was a reflection of the devaluation. In 1972 the loan guarantees actually declined, and businesses were forced to turn to the unregulated money-market lenders.

After considering various measures to relieve the financial pressure on business, the government implemented the Presidential Decree for Economic Stability and Growth on 3 August 1972. The decree reduced official interest rates to the pre-1965 reform levels; more important, all the curb-market, high-interest, short-term loans were converted into low-interest, long-term loans with a grace period of several years. These measures relieved the financial burden of firms with large foreign borrowings, but they also resulted in a substantial expansion of M_1 . The rate of increase of M_1 jumped to 45 percent in 1972, then declined to 40 percent in 1973. As a result of the reduction in interest rates, real interest rates (adjusted in terms of the GNP deflator) fell to 0.1 in 1972 and rose to 0.7 percent in 1973.

The slowdown and financial distress of 1972 were moderated by the export and investment boom of 1973. Korea's devaluation, followed by Japan's appreciation of the yen in late 1972, resulted in a doubling of Korea's total exports. The spectacular growth of exports, the liquidity expansion by more than 40 percent for two years in row, and negative real interest rates all contributed to a large excess demand for goods and services. That excess demand, ignited by the oil price increase of late 1973, erupted into violent inflation.

Oil Crisis and Suppressed Inflation, 1974-80

The oil price increases of late 1973 dealt a severe blow to the Korean economy. The crisis suddenly dampened Korea's growth prospects and, together with the excessive credit expansion of the previous two years, provoked a steep increase in the rate of inflation for the next several years. Because Korea was (and still is) heavily dependent on imported oil, the oil price increases caused more than a 20 percent deterioration in Korea's terms of trade during the 1976-79 period (Table 4.6); and the subsequent world recession led to a sharp drop in world demand for Korea's exports.

Korea's response to the oil crisis was to impose heavy taxes on oil products to minimize their use, and to borrow heavily abroad to finance the imports needed to sustain production and investment. These measures were designed to mitigate the worst effects of the price increases and to maintain overall growth. Little effort was made, however, to hold down domestic price increases. Assuming that Korea's competitors (Taiwan, Hong Kong, and Singapore) would equally suffer the harshness of the oil crisis, the policymakers opted to fully accommodate the price increases. Bank credit

Table 4.6. Terms of trade: 1963-80

Year	Unit value index		Net barter term of trade (A/B) × 100
	Exports (A)	Imports (B)	
1963	54.4	45.0	121.0
1964	55.6	45.5	122.3
1965	57.7	46.3	124.7
1966	63.0	45.3	139.2
1967	65.9	45.7	144.2
1968	67.9	45.3	149.9
1969	64.5	44.6	144.7
1970	67.4	46.2	145.7
1971	66.5	46.0	144.5
1972	67.3	46.8	143.7
1973	85.2	62.5	136.4
1974	107.9	97.2	111.0
1975	100.0	100.0	100.0
1976	111.7	98.0	114.0
1977	122.3	100.2	122.0
1978	135.4	105.8	128.0
1979	161.8	129.2	125.3
1980	170.3	163.9	103.9

Source: BOK, *Economic Statistics Yearbook* (1965, 1970, 1975, 1982).

was expanded by nearly 50 percent to help finance needed imports. As a result of this accommodation policy, wholesale prices rose by 42 percent in 1974. About a year after the oil price increases, in an effort to improve Korea's export competitiveness, the policymakers undertook a 21.8 percent devaluation to stabilize the real exchange rate, which had been appreciating with the growing differential between domestic and foreign inflation rates (Table 4.7). This devaluation was partly responsible for another 26 percent in inflation in 1975. There was a sharp deterioration in the current account but, through heavy borrowing abroad, the government managed to produce a substantial overall balance surplus by 1975. On the positive side, GNP continued to grow by 8 percent in real terms during 1974 and 1975. This gambler's approach to the external shock seemed to have paid off handsomely as far as growth and employment were concerned, but at a high price. The growth-first response to the oil crisis seriously undermined economic stability and made it increasingly difficult to restore price stability in subsequent years. The task of restraining price inflation was further exacerbated by the upturn of the world economy, which contributed to another boom year for Korea's exports in 1976.

Alarmed by the two years of high inflation following the oil crisis, the authorities began to pay more attention to restoring price stability. Starting in 1976 they tightened the supply of credit and money, but given the automatic credit expansion associated with export growth, there was a limit on their ability to squeeze the credit supply. To complement the restrictive monetary policy, a comprehensive incomes policy was put into effect that included strong price-control measures covering a wide range of consumer and producer goods. In 1976 and 1977 inflation showed a sharp deceleration, but beginning in 1978 prices began to soar again and by the end of the year had risen by more than 20 percent in terms of the GNP deflator. This sudden upsurge was to be expected. In fact, a close examination of developments since the early 1970s indicated that several inflationary factors had been lurking behind the scene for some time.

In the midst of strong inflationary pressures, Korea was hit by the second oil crisis in 1979; as in 1974 the cost increase resulting from the external shock was accommodated by credit expansion. For the next three years prices measured by the WPI continued to climb at a high rate. The average annual rate of inflation during this period was close to 27 percent. Along with high rates of inflation, a substantial divergence between price increases of tradable and nontradable goods occurred. The inability of the government to control domestic credit was (as in earlier periods) one of the greatest contributors to rampant inflation after the second oil crisis.

On the demand side, the inflationary impact of the oil crisis was further aggravated by the promotion of heavy and chemical industries that began in the early 1970s. Low nominal interest rates, which drove down real interest rates to a negative level, induced savers to move out of financial

Table 4.7. Indexes of nominal and real exchange rates: 1969-80 (1975 = 100 won per US \$)

Index	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Nominal exchange rate ^a	167.8 (288.42) ^b	155.6 (311.13)	138.0 (350.80)	122.9 (393.97)	121.5 (398.32)	119.2 (405.97)	100.0 (484.00)	100.0 (484.00)	100.0 (484.00)	100.0 (484.00)	100.0 (484.00)	79.7 (607.43)
Effective nominal exchange rate ^c	60.2	72.0	79.5	83.5	79.4	83.4	100.0	101.1	96.6	86.6	87.0	110.0
Purchasing power parity ^d	113.3	117.1	107.0	104.9	122.5	118.2	100.0	90.4	90.0	91.8	84.1	74.6
Real effective exchange rate (REER) ^e	125.9 (384.49) ^b	132.9 (364.30)	128.9 (376.50)	117.1 (413.16)	99.2 (487.82)	100.9 (479.78)	100.0 (484.00)	110.7 (437.28)	111.1 (435.68)	108.9 (444.39)	118.9 (407.10)	106.8 (453.20)

Source: BOK, *Economic Statistics Yearbook* (1970, 1975, 1980, 1982).

a. Monthly average.

b. Figures in parentheses are the levels of nominal and real exchange rates.

c. Effective nominal exchange rate is calculated as a weighted average of the won prices of the currencies of Korea's four major trading partners, where the weights are given by the four countries' trade shares. The respective weights are: U.S. = 0.4569; Japan = 0.4281; West Germany = 0.0727; and U.K. = 0.0422.

d. Trade-weighted.

e. $REER = e_k \cdot \sum_{i=1} w_i \cdot WPI_i \cdot e_i / CPI_k$, where e_k is the won-dollar exchange rate, w_i is the trade weight for country i , WPI_i is the WPI for country i , e_i is the i th country currency-dollar exchange rate, and CPI_k is the CPI for Korea.

assets and into real assets. The subsequent real-estate speculation hiked the prices of housing and land and thereby raised inflationary expectations.

On the supply side, real wages shot up and so did unit labor costs. The rice price-support program, which had been in effect since 1968, added to the inflation problem. The price-control measures introduced in 1975 distorted the relative price structure and, as expected, resulted in black markets for a number of commodities. With the realization of the adverse consequences of price and wage controls, the government reduced the number of controlled goods from 148 to 35 in 1979. That relaxation led to a realignment of relative prices and a subsequent high rate of inflation. One favorable development was that prices of imported goods remained stable between 1976 and 1978, before rising again in 1979 with the second oil crisis.

CAUSES OF INFLATION

In Korea's inflation history, one can see that every inflationary upsurge, one way or another, had a monetary connection. The annual rate of money growth (M_1) averaged 31.7 percent in the 1960s and 29.6 percent in the 1970s. Given a real income elasticity of the demand for money (M_1) of less than 1.0, those rates were too high, even when the economy was growing at almost 10 percent a year on average, to achieve the government's annual target rate of inflation below 10 percent. The corresponding growth rates of M_2 were 46.4 percent and 30.3 percent respectively. Although much of the M_2 expansion was associated with the increase in real savings, this measure of money with its income elasticity of 1.2 also indicated a substantial excess supply of money (elasticity figures are from S. W. Nam 1981).

From an analytical point of view, such a monetary connection is neither surprising nor interesting. What is necessary, and in fact crucial, is to ascertain why monetary expansion was occurring. From 1945 through the mid-1960s, money growth was an autonomous policy instrument. Monetary expansion during that period resulted from the government's effort to reconstruct the war-ravaged economy and to develop industry by extracting savings from households through the inflation tax and channeling these resources to strategic industries.

Since the launching of the First Five-Year Development Plan in 1962, monetary expansion has by and large been accommodated to factors other than stabilization goals. For example, the government's response to the oil crisis was to accommodate fully the cost-push effects of the oil price increases through a monetary expansion. Other policy measures that rendered monetary policy passive and accommodating were the export-led growth strategy, the grain price-support program, and the promotion of heavy and chemical industries. This section focuses on these policies as the major causes of inflation in the 1970s.

Export Promotion and Inflation

From 1965 and throughout the 1970s, the deposit-money banks provided loans through the central bank rediscount facilities at very favorable interest rates to all exporters and to producers supplying intermediate goods to be used in export goods production. These loans were granted automatically on the basis of valid letters of credit or similar evidence of export orders. In the early years of the export-financing system, the loan amounts granted were set at 80 percent of the domestic costs of export production for terms ranging from 90 to 120 days at an annual interest rate of 6.5 percent. Through the use of a domestic letter of credit covering orders of exporters from their domestic suppliers, these suppliers also shared in the favorable bank loan schemes.

The main defect of the automatic credit system is that it results in considerable loss of control over credit expansion by the monetary authorities. This was not a serious problem when exports were a small fraction of GNP, but as they rose to over 40 percent of GNP, the importance of this continuing outflow of credit became more serious. Initially, the monetary authorities attempted to compensate for the expansion of export credit by restricting the supply of other types of bank lending, but that was not easy to do. Squeezing other types of credit meant that nonexporters and producers in the nontradable sector had to obtain financing through the unregulated financial markets at higher interest rates. This differential effect of tight monetary policy biased against nonexporters and its implications for inflation through the relative contraction of the nontradable sector clearly limited the extent to which the credit squeeze could be enforced.

In the 1970s actual exports frequently exceeded expected levels. When that happened, there was a double expansionary effect on money supply. Not only was there an automatic increase in bank credit, but there was also a related increase in foreign-exchange reserves through an improvement in the overall balance that added to the supply of money. An increase in export demand is expansionary and, other things being equal, generates inflationary pressure. In Korea this expansionary effect has been exacerbated by the monetary expansion associated with the export credit and a fixed or managed floating exchange-rate system.

The quantitative effects of the export-credit system on money supply and prices are difficult to measure, because the system directly affects the level of output and balance of payments, as well as prices. Using regression equations, S. Kim (1980) estimates that between 1962 and 1978 automatic export credit contributed to 6.2 percent of the outstanding reserve base each year on average. Although this figure was low, its variability was high. The contribution ratio, which is defined as the increment due to the export credit extension to the actual level of reserve base, ranged from a high of 27.5 percent to minus 9 percent in 1977. The standard deviation of this ratio for the

period was 9.23. The high variability may explain in part the equally high variability of the reserve base and money supply. Again using single regression equations, S. Kim (1980:122-25) shows that the additional reserve base increase was accountable on average for about 1 percentage point of the annual rate of increase of the gross domestic product (GDP) deflator during the sample period. The inflationary effect of the export credit was not important for any given year; its cumulative effect over time, however, was substantial. According to S. Kim (1980), termination of the export credit could have lowered the base-year rate of inflation by 2 to 3 percentage points within two or three years.

Grain Price-Support Program

After World War II the American military government in Korea imposed a rice price-control system that strictly enforced rice collections from farmers and a complete rationing system for urban consumers. The control system was partially relaxed by the new government established in 1948. In 1950 the government enacted the Grain Management Law, which remains to this day the basic legal authority for food grain policy. The primary objective of the system was to enable the government to secure sufficient grain from farmers so as to stabilize the rice price and the economy by exercising control over grain distribution and consumption through manipulation of government stocks (Ban, Moon, and Perkins 1980:234-59).

The grain market in Korea is characterized by a dualistic system that combines free market transactions and government control. Free market transactions exist by tacit assent of the government, which has the sole right to import and export grain. During the First Five-Year Development Plan (1962-66), the government pursued a low grain-price policy in an effort to stabilize prices and wages in the urban industrial sector. That policy discouraged grain production and encouraged rice consumption, widening the food gap and imposing a burden on the balance of payments. From 1952 through 1962 the government purchase price continued to be lower than the estimated cost of production (Ban, Moon, and Perkins 1980:240).

With the increasing food shortage and the growing income disparity between urban and rural households, the policymakers reversed the low grain-price policy and adopted a two-tier price system beginning with the 1968 crop. For the next seven years the terms of trade between agricultural products and nonfarm products improved considerably, although thereafter they deteriorated. The two-tier price system, which was intended to pay a higher price to farmers and charge a low price to urban wage earners, posed a serious problem for economic stability in Korea in the 1970s.

There are no strict formulas for determining the government purchase and selling prices, but these controlled prices have been influenced largely by price movements and grain market conditions. Past experience shows that determination of the rice purchase price (the most important grain price

with a CPI weight of more than 200) has taken into consideration increases in the general price level and prices paid by farmers to maintain a stable farm parity ratio. Setting the rice price has always been a political issue and as such has often been dictated by political considerations.

The selling price has also been determined in consideration of stability objectives and financial problems that arise when it is set below the purchase price plus handling costs. Free-market prices of rice have fluctuated depending upon supply availabilities and the government selling price; owing to the difficulties of estimating rice production, however, the manipulation of government stocks has not been effective in keeping the free-market prices in line with the government selling prices. Overall, it appears that under the two-tier price system the rice price has been partially indexed to the movements in the general price level. This indexation feature has contributed to high inflation in Korea. When the purchase and selling prices of rice are set toward the end of each year, the new prices cause an upward adjustment of prices of other goods and services and raise nominal wages. In a highly inflationary environment, purchase and selling prices have had to rise in step with other price increases, and then with a lag the announcement of new rice prices leads to high prices of other commodities. This process has been under way since the late 1960s.

Partial indexation has been only a part of the problem with the two-tier price system. Since 1970 the selling price plus intermediate handling costs has always been lower than the purchase price, with the exception of 1972. The difference, or deficit, arising from the grain-management program has been financed mostly by borrowing from the central bank. At the end of 1982 the accumulated deficit financed by printing money was 1.5 trillion won, equivalent to 26 percent of the money supply (M_1). The expansion of the grain management deficit has been one of the major sources of credit expansion and of reducing the scope and flexibility of monetary policy in Korea.

Dynamics of Development Strategy, Exchange-Rate Policy, and Inflation in the 1970s

After a decade of export promotion of labor-intensive manufactures, the Korean authorities began, in the early 1970s, to develop skill- and technology-intensive industries (known in Korea as "heavy and chemical industries") as the export sector of the future. A massive investment program in these industries, financed largely by foreign loans and central bank credit, was put into effect in 1973 and pursued vigorously until 1979. To the dismay of the policymakers who conceived this industrial restructuring, the development strategy ran into a host of financing, engineering, quality, and marketing difficulties. Except for shipbuilding and iron and steel, these industries have yet to become efficient exporters.

Much of the investment in the heavy and chemical industries, which

was by and large induced by distorted incentives, took place during the 1977-79 period, when the economy was already experiencing a high rate of inflation. As a result of the large investment, the ratio of fixed investment to GNP shot up from a historic average of about 25 percent to 33 percent in 1979. Given a stable domestic savings-to-GNP ratio, a high rate of investment expands aggregate demand (total spending for goods and services) and, other things being equal, causes the external position of the economy to deteriorate. To make matters worse, the investment program entailed serious supply-side problems that intensified inflationary pressures emanating from the demand side. During 1977-79 more than 70 percent of manufacturing investment was undertaken in heavy and chemical industries. This lopsided allocation of investment resources generated severe sectoral imbalances between the tradable and nontradable sectors and within the tradable sector. The lack of investment in light manufacturing—the traditional export sector—had an adverse effect on Korea's export performance, while the sluggish investment in the nontradable sector created a supply shortage and rapid price increases in this sector.

After the one-shot devaluation in 1974 the nominal exchange rate was kept at 480 won per U.S. dollar. The high rate of domestic inflation relative to the rates experienced by Korea's major trading partners resulted in an 18 percent real appreciation of the won between 1974 and 1979 (Table 4.7). Other things being equal, such a real appreciation results in a shift of national aggregate demand in favor of traded goods that include exportables and importables whose prices in a small open economy are greatly influenced by the conditions prevailing in the world markets. The real appreciation, on the supply side, induces a shift of domestic resources to the more profitable nontraded-goods sector. These demand and supply shifts would, in general, slow price increases and would be reflected in a deterioration in the current account. In Korea the expected resource shift did not, however, take place as a large share of resources was channeled to the tradable-goods sector (heavy and chemical industries, in particular) through the government's directed resource allocation. As a consequence, the excess demand for nontradables remained unabated and their prices went up further. To complicate matters even more, this forced allocation of resources to heavy and chemical industries did not help meet the domestic demand for tradables. One reason for this was that a large increase in the domestic demand for tradables consisted of consumer goods such as high-quality and processed food products and consumer durables. Because the majority of investment resources were allocated to the capital-goods producing sector, the excess demand for consumer tradables had to be satisfied by imports. Another reason was that Korean firms continued to import machinery and petrochemicals, because of suspected low quality and the difficulty of securing domestic finance for the purchase of the domestic import substitutes.

Although most of the heavy and chemical industries (shipbuilding, basic metals, and power-generating equipment, in particular) were from the beginning developed for export markets, the results were less than expected. Thus, while the tradable-goods sector was saddled with huge idle capacity, the import demand for tradables rose sharply. The combined effects of these developments were reflected in a widening trade deficit and rampant inflation. Available evidence bears out the causal relationship between inflation and a current account deficit. From 1975 to 1978 the price of imports increased on average less than 1 percent a year and export prices, about 8 percent; in contrast, the deflator for social overhead capital and services (which may be used as a proxy for a price index for nontradables) rose by 23 percent on average per annum. The current account deficit rose to 9.4 percent of GNP in 1980 from a small surplus in 1977.

The heavy and chemical industry investment program also produced a cost-push effect. The production inefficiencies and underutilized capacities considerably reduced labor productivity. Despite declining productivity, nominal wages (and hence the unit labor cost) soared as skilled workers, who were in short supply, were bid up by firms in heavy and chemical industries and as construction workers were sent to the Middle East. This cost-push effect was accommodated through money expansion and subsequently undermined Korea's international competitiveness.

Finally, the inflationary environment built up high price expectations, which in turn began to accelerate the rate of price increases. At the same time, the official interest rates, which were adjusted downward in 1972, were kept well below a market-clearing level. The negative real interest rates induced household savers to shift out of financial assets and into real assets and commodity inventories. The surge in the demand for houses, land, jewelry, antiques, and art objects pushed up prices of these assets markedly. As shown in Table 4.3, the land-price index almost quadrupled over the five-year period of 1974-79.

Although the data do not show it, partly because of price control and estimation problems, such a steep rise in land prices must have increased housing rents. It certainly brought about a housing and construction boom. Under normal circumstances, the speculation would have been moderated through an increase in housing supply; the export of construction services and materials, however, reduced the supply capacity of new housing and commercial buildings. Real-asset speculation in the latter part of the 1970s provoked a further increase in expected inflation, which in turn added to the inflationary pressure.¹

1. It is not surprising, therefore, that S. W. Nam (1981) finds that the coefficient of the expected rate of inflation is close to 1 in an expectation-augmented Phillips curve estimated by using quarterly data for 1972-81 in Korea.

Ineffectiveness of Demand-Management Policy

The poor stability record in Korea has been largely the result of the combination of the lack of effective policy instruments and the unwillingness of government to sacrifice growth for price stability. Among the various demand-management policy instruments, monetary policy stands out as the most effective and flexible in developing economies. Monetary policy has been extensively relied upon in Korea and has served as almost the sole tool for controlling aggregate demand. The annual financial stabilization program, which focuses on monetary management, specifies year-end money supply targets and coordinates short-run stabilization policies. The targets of M_1 and M_2 growth rates have been the most publicized aspects of the stabilization programs, but have seldom been attained.

Monetary policy cannot be blamed entirely for the poor stability record. After all, it is no more than one of many instruments that must be coordinated in any serious effort to control inflation. There has been a glaring lack of such coordination as evidenced by mounting fiscal deficits when a contractionary credit policy was pursued.

On the institutional side, some traditional instruments such as open-market operations (buying and selling of government securities on the open market) could not be utilized because of the absence of well-developed money and capital markets in which the price mechanism functions. For that reason, the monetary authorities have had to rely on direct control measures—control of ceilings and quotas on these banks' loan expansion, changes in required reserve ratios, manipulation of the deposit-money banks' stabilization accounts with the central bank, and forced sales of stabilization bonds to these banks and institutional investors. These direct control measures have been affected and to some extent offset by Korea's growing access to international financial markets and a large unregulated financial market that has met a considerable portion of business needs for working-capital finance. With the growth of the external sector in both size and importance, the increased foreign-capital transactions have weakened the effectiveness of monetary policy. Despite supposedly strict government control of capital movements, businesses somehow have managed to borrow from abroad when domestic financial markets have become tight, though the reverse phenomenon of lending abroad has been rather rare.

The control over official interest rates resulted in fragmented and artificially segmented markets for a large number of financial assets and an uneven flow of funds among these markets. As long as the prices of these assets were controlled by the government, an equilibrium in these markets could be maintained only through quantity rather than price adjustments. As a result, exogenous changes in the rates of return to any assets, or the expectation of change, triggered sizable asset substitutions in the aggregate wealth portfolios, thereby making financial-asset markets highly unstable. In the absence of price adjustments that could abate the large and frequent

movements of funds between asset markets, the effects of monetary policy were unpredictable.

The absence of well-functioning financial markets and the lack of policy coordination were only part of the monetary policy dilemma in Korea. Monetary accommodation severely restricted the scope of monetary policy as an anti-inflationary instrument. The main cause of monetary accommodation was the government's use of the financial system and policy as a means of intervening in the allocation of resources. The bulk of subsidies to preferred industries and fiscal deficits were financed by borrowing from the central bank. These borrowings were relatively immune to stabilization policy. The export-credit system, with its automatic credit expansion feature, and the grain price-support program, whose deficits were almost entirely financed by printing money, in fact worked as built-in destabilizers in the Korean economy and made monetary policy procyclical rather than anticyclical (Cole and Park 1983:248-52). Together with the grain-management deficits and export subsidies, the types of central bank credit that could not be controlled through the manipulation of traditional policy instruments accounted for anywhere from 30 percent to 45 percent of the reserve base in the 1970s (Table 4.8). In addition, a large fraction of bank credit was earmarked in the form of "policy" or "directed" loans for strategic industries and uses. These loans always escaped monetary tightening.

MAIN FEATURES OF PRICE CONTROL MEASURES

Complete Freeze and Relaxation, 1960-63

One of the first economic policy measures announced by the military council that succeeded the Chang Myon government in May 1961 was an across-the-board freeze on prices of goods and services. Ever since, some type of price control has been maintained as a means of slowing inflation in Korea. The various control programs have differed mainly in the number of commodities subject to price control.

Two months later, the complete freeze was lifted with the exclusion of the prices of the main staples—rice and barley. The relaxation in July was followed by the enactment of a law on price controls in November of the same year. The law, which provided the legal basis for direct price controls, gave the government the authority to select the commodities to be controlled and to determine the maximum level of their prices.

For the next two years the government managed a limited system in which five commodities—rice, barley, coal briquettes, coal, and fertilizer—were subject to price controls. Subsequently 13 additional major commodities and raw materials including flour, soybeans, beef, pork, steel plates and bars, cotton fiber, and cloth were added to the list.

It was not long before the authorities realized that the control system was not working. Shortages of some controlled items (and inevitably black

Table 4.8. Bank of Korea lending: Selected years, 1975-81

Type of lending	1975	1978	1980	1981
Directed loans (10 ⁹ won)				
Export financing	3,797	7,751	12,915	16,279
Energy conservation loans			5	711
Long-term export financing				1,266
Agriculture loans	260		711	661
Fisheries loans	55	284	500	619
Defense industry support loans		90	167	119
Other	41	1,140	253	4
Subtotal (A)	4,153	9,265	14,511	19,659
Total BOK lending (B) (10 ⁹ won)	7,961	11,785	24,450	33,711
(A/B) (%)	52.2	78.6	59.3	58.3
Reserve base (C) (10 ⁹ won)	10,770	28,020	32,439	28,016
(A/C) (%)	38.6	33.1	44.7	70.2

Source: BOK, *Economic Statistics Yearbook* (1985).

markets for them) developed. Even the prices of those products whose supplies were adequate went up along with other prices because of hoarding and the spread of inflationary expectations.

With the realization of these classical problems associated with price controls, the government shifted the thrust of its stabilization policy to demand management in June 1963, confining direct intervention to those items whose prices could be controlled administratively. In addition, to complement monetary and fiscal policy, the government began to manage the supply of and demand for daily necessities and important raw materials, instead of controlling their prices directly. This change in stabilization policy was reflected in an overall policy measure issued in January 1964.

As noted before, the period from 1965 to 1969 witnessed spectacular growth in a stable environment and a clear movement away from market intervention and toward greater reliance on price mechanisms. Beginning with the adoption of a unified and floating exchange-rate system in March 1965, the government took a number of measures for raising interest rates to a more realistic level and liberalizing imports. Aided by these policies, which stimulated domestic savings, supported export expansion, and brought in a large amount of foreign capital, the economy could grow without provoking another round of inflation. As a result, the need and political demand for price controls greatly diminished.

Imposition of a Comprehensive Control System, 1972-73

Toward the latter part of the 1960s, several symptoms appeared that indicated a rapid build-up of inflationary pressure. The most noticeable was the acceleration of liquidity expansion. The rates of price increases during

the first two years of the 1970s were moderate in retrospect, but higher than the target rates and thus a serious policy issue. The relatively high rate of inflation was accompanied by a mild recession. The setback in the performance of the economy was attributed to "structural problems" accumulated during the period of rapid growth and led to the enactment of the Presidential Decree for Economic Stability and Growth on 3 August 1972. The decree signaled an end to liberalization efforts and a return to control-oriented economic management.

One of the policy objectives specified by the decree was to reduce the rate of inflation to 3 percent per annum. To attain this target rate of inflation, the government announced, in February 1973, a comprehensive policy package for stabilization that included 16 measures. The most important element of this package was the imposition of a rather comprehensive price-control system that had been discarded in the mid-1960s. The system was geared to control nearly all prices that mattered. To administer the control program, the Economic Planning Board (EPB) revived the functions of the governmental committee for price stability, which had been dormant since its inception in 1963. The committee reviewed price developments for major product items monthly and issued specific measures for restraining price increases product by product.

A month later the government promulgated the Law of Price Stability, which was designed to strengthen the government's ability to control prices. Before the enactment of this law, the concerned ministries primarily had relied on the cooperation of business in following government guidelines, because they did not have the legal authority to set and alter prices directly. If a firm did not comply with the government's guidelines, it was threatened with an audit of its tax return or a revocation of its business license. Under the new law the government could control practically all prices including rents, real estate, and services, and could prosecute those engaged in unfair trading activities (for instance, charging a price higher than the ceiling) for excessive profit taking. For essential products such as foodstuffs, medical supplies, and building materials, the law required businesses to post their prices.

The onset of the first oil crisis produced insistent demands for controls and administrative solutions as inflation erupted with new force, and under pressure the government issued its third special measure of the year for price stability in December. The measure was aimed at minimizing the impact of oil price increases on domestic prices. Predictably, the main feature of the special measure was the direct control of prices of about 60 products consisting mostly of daily necessities and important raw materials.

The hope of achieving the 3 percent price-increase target was shattered toward the end of 1973 as the prices of oil and other primary commodities began to skyrocket. The target was raised to a more realistic level of 10 percent. Together with this change, the EPB (which was in charge of price-

control administration) allowed some prices—in particular those of petroleum products—to be adjusted upward to reflect the sharp oil price increase in December 1973.

Back to Partial Relaxation

In a country that depends entirely on imported oil, the quadrupling of oil prices was bound to inflict severe damage on the economy. It was also realized that the stabilization attempt through price controls in the face of rapidly rising prices of imported commodities was simply not possible. Nor was it efficient from the standpoint of resource allocation. The selective price controls also produced supply shortages and black markets in the controlled items.

In recognition of these problems and to lessen the adverse impact of the oil crisis, the government issued an emergency measure in January 1974 for restoring economic stability. This measure was followed by a comprehensive policy package for price stability three weeks later (5 February 1974). One of the significant aspects of the package was the introduction of a mild form of wage control.

The new stability measures emphasized increased reliance on demand management and a relaxation of price-control measures. In an effort to improve the archaic distribution system, which was one of the causes of supply shortages, higher prices, and black markets for many important products, the government implemented a number of measures designed to encourage the establishment of corporate retail chains, stores specializing in daily necessities, and distribution outlets for the goods produced by small and medium-size firms.

Most of all, the two stability measures issued early in 1974 recognized that external-supply shocks could not be depreciated away and had to be reflected in domestic prices to whatever extent possible. While there was a clear departure in anti-inflation policy from direct intervention in commodity markets to classical demand management and building up of the distribution infrastructure, price controls continued to be imposed during the latter part of the 1970s, though somewhat less stringently than before.

Antitrust Legislation

Government efforts to legislate antitrust laws in Korea date back to 1963, when excess profits amassed by a monopoly firm erupted into a political issue. The government continued to press its case for the legislation during subsequent years, but on each occasion the government proposals were opposed and postponed. In December 1975 the government finally succeeded in pushing through the National Assembly its Law on Price Stability and Fair Trade, the forerunner of the Fair Trade Law promulgated in 1981.

The major objective of the legislation was twofold. First, it attempted to regulate unjustifiable price-setting practices by monopolies and oligopolies. Second, it aimed at developing an environment for orderly and fair competition among businesses, which is generally the spirit of any antitrust law. But in Korea the legislation was primarily motivated by the desire to establish a more effective and stronger administrative authority for price controls.

According to the law, a firm was classified as a monopoly if its market share was greater than 30 percent in an industry and it had total annual sales of 2 billion won or more. Three firms could be regarded as forming an oligopolistic market structure if, together, they accounted for more than 60 percent of the market as a whole and if each firm had a 20 percent market share or more. Even when their market shares were not dominant, firms could be placed in the category of either monopoly or oligopoly if they were powerful enough to set prices. In implementing the law, the EPB identified 127 products and 203 business concerns and placed them under the regulation of monopoly and oligopoly.

Real-Asset Price Regulation and Value-Added Tax

Inflation showed little sign of abating during 1977-78. High and continuing inflation inevitably induced the public to form high inflationary expectations, which in turn led to rampant speculation in real assets as a hedge against inflation. For a while it seemed that prices of land sites, housing, antiques, and even consumer durables would rise without limit. Price controls on building materials, electronics, and other products were aggravating the situation further. To worsen an already serious situation, the government introduced a value-added tax (VAT) system in July 1977, which necessitated an across-the-board adjustment of the entire price structure. The adjustment, it was feared, could accelerate inflation further. Consequently, the number of products subjected to the fair trade law increased, maximum prices of many products were set, and fees and charges of various services had to be posted. In general, the range of administrative price controls was greatly expanded.

Despite the reinforcement of the administrative price controls, the implementation of the VAT raised many prices. Real-asset speculation intensified further and was getting out of control. Something had to be done to reverse the dangerous trend, and in August 1978 comprehensive measures for stabilizing land prices and curbing real estate speculation were put into effect. One of the measures required that all future land transactions be reported to and approved by the government. Another measure expanded the areas subject to the government standard land price. These measures were complemented by heavier taxes on capital gains realized through land transactions and on idle land sites.

Greater Relaxation of Price Controls

Inflation continued to be the most serious economic problem and understandably became the focus of intense policy discussions within the government. These discussions, together with public concern, led to the formulation and implementation of various measures for economic stability in April 1979. The measures marked an important change in economic policy management, signaling a move toward overall economic liberalization. First, the comprehensive policy package left little doubt that economic stability was placed ahead of growth as a policy objective. Second, it emphasized the need to restore market mechanisms to guide the allocation of resources and the need for a greater private-sector role in the management of the economy. In line with this market-oriented economic philosophy, the government relaxed price controls and reduced the number of products regulated under the Law of Price Stability and Fair Trade. To lessen the burden on low-income families caused by the high rate of inflation, the government identified 25 products whose prices were to be monitored and kept stable by augmenting their supplies through imports and provision of tax incentives to the producers.

THEORETICAL APPROPRIATENESS AND EFFECTS

Price Controls as an Anti-inflation Measure

In its attempt to achieve and maintain price stability, the Korean government has, since 1961, administered price controls extensively and intensively—oscillating between a comprehensive and a limited system of controls and guidelines. The “permanency” and oscillation of the administrative price controls make it difficult to analyze their effectiveness empirically.

Were price controls effective in slowing inflation? Were they a theoretically appropriate instrument for controlling inflation in a Korea bent on rapid economic development? These questions are difficult to answer in a rigorous manner, and little help is available from the theoretical and empirical studies that have been carried out for other countries.

Proponents of incomes policy argue that “temporary” wage-price controls could speed up the decline in inflationary expectations by providing a period of relative price stability and indicating to the public that the government was serious about pursuing an anti-inflationary program. This argument essentially rests on the assumption that price controls could induce economic agents to adjust their inflationary expectations downward. If inflationary expectations are adaptive in formation and hence depend on past rates of inflation, price controls would break expectations. If, however, expectations are formed rationally, price controls would have no effect on inflationary expectations as long as other policies affecting the rate of inflation remained the same. To the extent that the controls were keeping prices below the equilibrium level, business firms and workers would surely expect

renewed inflation at the end of the control period. In such a case the termination of controls would cause a rebound in the price level.

Korea's experience with incomes policy as an anti-inflation instrument casts serious doubt on whether price controls indeed lowered the rate of inflation below what it might have been in the absence of the controls. Several reasons can be suggested for this skepticism. Some prices have been controlled consistently since 1961; the numerous special, emergency, and regular measures aimed at combating inflation have always included price controls. These measures have differed, as far as the controls are concerned, mainly in their coverage of controlled-price products. Since price controls have become a way of life in Korea, an announcement of new ones could not have produced a strong effect. After so many impositions of price controls, people have become callous about what the government has been saying about the control measures.

Another reason to doubt the effectiveness of price controls as a stabilization instrument is that enforcement has been uneven. Despite the efforts of a strong government, price controls have frequently been evaded by business firms and have created black-market prices, lowered quality, and led to shortages of the controlled products. As a result, people have seldom sensed any actual decline in the rate of inflation and have begun to distrust official price statistics that dutifully record official prices. Under these circumstances, it is difficult to believe that people would adjust their inflation expectations downward in response to an imposition of price controls.

There is another reason why expectations have failed to adjust. As noted before, in administering incomes policy the government has moved back and forth between a comprehensive and a limited control system. On each occasion a comprehensive system has been discontinued and replaced by a relatively limited one. As a consequence people have come to expect failure from comprehensive controls because of the harm they inflict on the economy by interfering with the allocative function of the market.

The fourth factor responsible for the ineffectiveness of the control measures may have been that expansionary aggregate demand policies have been used to sustain rapid growth while price controls have been imposed to stabilize prices. Experiences of other countries clearly show that incomes policies cannot be a substitute for restrictive aggregate demand policies as a cure for inflation.

Price Controls as a Distributional Device

Although the primary objective of price controls may have been to lower the rate of inflation, price controls have also served other purposes, such as the redistribution of income. The goods and services that have been selected for price control are what may be called basic necessities and their prices have a significant effect on the real income of low-income households. By controlling those prices the government has been able to raise

the real income of this group. The price of rice, for instance, has been controlled, regardless of the size of harvest, in order to supply it at low prices to urban consumers whose welfare is critical for political stability. It has been controlled also to provide favorable terms of trade to rice farmers.

During the 1960s and 1970s the government relied more or less on credit control and on credit expansion by the central bank to mobilize domestic resources for rapid economic development. This development strategy led to inflation, with an inordinate share of the inflationary tax burden falling on low-income wage earners. Price controls may be viewed as the government's attempt to attenuate the burden by providing basic necessities to this group. If and when the resulting shortages were acute enough, they could easily be blamed on profiteering businesses. Price controls have thus served the government well by helping maintain political stability and allowing it to stay with its development strategy.

Were price controls necessary as a distributional device? In the case of rice, for example, the price could have been freely determined in the market, and people below a certain level of income, whether farmers or urban wage-earners, could have received an income subsidy. Whether or not the Korean economy had the fiscal capability to carry out such a scheme is a difficult question to answer.

Whatever the situation may have been in the past, there seems to be no reason for continuing with price controls as a distributional device. Their adverse effects on allocative efficiency and equity are too well known to be repeated here. In their place the government should find measures that would bring about an equitable distribution of income but would not at the same time load the economy with an excess burden from price distortion.

Price Controls as an Antimonopoly Measure

As noted earlier, price controls have been used as an antimonopoly or anti-oligopoly measure. If price controls are used as a bona fide measure for regulating monopoly because of its anticompetitive conduct, they should be judged by their effect on allocative efficiency and not by their effect on inflation.

Whatever merit there may be in regulating monopolies with price controls, it is hard to overlook the fact that monopolies are to a large extent the products of government policies. Credit control, for example, has favored large, established firms at the expense of small, new ones. It is ironic that having created monopolies with one set of policies the government is now compelled to regulate them with another set of policies.

With the exception of those in the nontraded-goods sector, monopolies or oligopolies can operate as such in a small open economy because of government protection from import competition. Their protection may be warranted in their "infant" stage, but if the government is concerned with

their monopoly conduct, they are no longer in need of protection from import competition. Instead of regulating monopolies with price control, the government should go directly to the root cause of the problem and eliminate protection from import competition and government-created barriers to entry.

CRITICISM AND LESSONS

During 1945–80 Korea experienced erratic and relatively high inflation (in comparison, that is, with its export competitors and major trading partners). Until 1964 the inflation was attributable to war, political instability, periodic mismanagement of a shallow and small financial system, and printing money as an expedient to mobilize resources for growth and employment. During that period monetary factors certainly played an initiative role.

In the 1965–80 period, which was characterized by successful export promotion and rapid growth, the role of monetary factors was more accommodative than initiative. The efforts to allocate a large share of the nation's limited resources to the sectors producing exports (intensive in labor beginning in the mid-1960s and in skill and technology after the first oil crisis) and to the farm price-support system contributed to excessive monetary expansion. The oil price increases were largely accommodated to minimize their disruptive effects on growth and employment.

During the period under review, Korean planners might have felt that the cost of reducing inflation through a restrictive aggregate-demand policy, when measured in terms of foregone output and a higher unemployment rate, was too large for a labor-abundant developing economy like Korea's to bear. So long as rapid growth was the prime objective, restrictive aggregate-demand policies predictably ran into strong resistance from the most affected group—the business community that had grown in power and influence—and were soon reversed, even if the prevailing economic conditions called for a continuation of restrictive policies. Thus, when the economy was sluggish, an expansionary credit policy could be implemented with little objection. Unfortunately, the converse has not been the case, and inevitably monetary policy has become procyclical.

With aggregate-demand policies directed to promoting growth and employment, the planners have had no choice but to rely extensively and continuously on incomes policy—mostly in the form of price controls—to stabilize inflation. That is, the government has assigned incomes policy to combating inflation and aggregate-demand policy to sustaining rapid growth.

Price controls do not have any measurable effect on the long-run rate of inflation. Even in the short-run, unless employed as a means of buying time to prepare a more flexible policy, price controls do not seem to work because they do not induce people to lower their inflationary expectations, especially in an economy where price controls have become a permanent fixture.

One more lesson from Korea's experience with price controls is that incomes policy cannot be used to control inflation while expansionary demand policies are used to stimulate employment. As a tool for controlling inflation, price controls cannot be a substitute for restrictive demand-management policies.

The Korean planners must have been aware of the nonsubstitutability between the two policy instruments. An important question, then, is why the government made monetary policy accommodating and procyclical. One answer may be that the government chose a development strategy that necessitated continuation of repressive financial policies—mobilization of domestic resources through printing money and allocating these resources through credit rationing based on a set of criteria that made monetary policy passive and accommodating. Another answer may be that, given the choice between stagnation and inflation, the government saw inflation as the lesser evil.

5 The 1964–65 Exchange Rate Reform, Export-Promotion Measures, and Import-Liberalization Program

by Kwang Suk Kim

Industrial policy during the postwar reconstruction period (1953–60) was inward-looking. The government controlled imports not only for balance-of-payments reasons but also to promote import-substitution industries. The government used both high tariffs and various quantitative restrictions to control imports, while maintaining an overvalued exchange rate in the face of rapid domestic inflation. A complex structure of multiple exchange rates was also developed to avoid balance-of-payments difficulties. These measures, in effect, encouraged import substitution mainly in the consumer-goods industries. Although some minor attempts were made to increase exports, the structure of incentives during the period was, on balance, biased against exports.

After the frustrating economic performance in the late 1950s and the collapse in 1961 of the Chang Myon government, the military government began to shift economic policy from reconstruction and inward-looking industrialization to a program of rapid industrialization based on exports. Since this shift in industrialization policy called for changes in many existing policies, the government committed itself to a variety of reforms. The military government first attempted to complete the task of unifying the exchange rate begun by the preceding civilian government. In 1962 the government undertook reforms of the exchange controls, the national currency, the government budget system, and the tax system. It also took necessary measures to encourage the introduction of foreign capital in the face of declining foreign assistance. Some of these measures, however, turned out to be ineffective or detrimental to economic growth due mainly to the expansionary policy of the government.

The military government devised several measures to promote exports during 1961–63. It made direct subsidy payments to selected categories of export commodities. Preferential loans for exports became an important instrument of export promotion beginning in 1963 because the interest rate on such export credit was gradually reduced from nearly 14 percent per annum in 1961 to 8 percent in 1963 while other loan rates were unchanged at the 14 percent level. In addition to tariff exemptions on imports of raw materials for exports, which had been instituted in 1959, the government formalized the exemptions of domestic indirect taxes on exports and inter-

mediate inputs used in export production by making the necessary legal provisions in 1961. The government also granted a 50 percent reduction in income tax on earnings from exports and sales to United Nations forces in Korea and from tourism in 1962. In addition, the Export Promotion Law enacted in 1962 included a provision that licenses for imports using Korea's foreign exchange should be limited in any year to those traders who, during the previous year, had achieved a certain export minimum. This export minimum-value requirement for obtaining an import license was set at US \$10,000 in 1962 and then gradually raised to \$30,000 in 1964.

What was really important for export promotion during this period, however, was the export-import link system adopted in 1963, under which exporters could use the import rights linked to their export earnings for importing or could sell them on the free market at a premium rate of exchange. This indicates that most of the export promotion measures adopted during 1961-63 had the characteristic of ad hoc measures to offset the disincentive effect of an overvalued official exchange rate on exports. Even on the import side, the export-import link system played an important role in restricting imports, since the value of non-aid commercial imports for any year could be automatically limited to the amount of Korea's annual export proceeds. In addition, the government tightened import controls by means of quantitative restrictions in 1963, while maintaining the structure of highly differentiated tariffs by commodity groups that had been established originally in 1949 and revised in 1957.

As a result of the ad hoc export-promotion measures, commodity exports increased rapidly during 1961-63 from a very low base. However, imports also increased rapidly, despite government measures to control them. Although commercial imports were effectively controlled by the export-import link system as well as by quantitative restriction, total imports increased fairly rapidly during the same period, due mainly to increased imports of food grain and capital goods as separately recommended by the government. For this reason, Korea's foreign exchange reserves declined rapidly from US \$207 million at the end of 1961 to \$132 million by the end of 1963 (at which time foreign reserves were not even adequate to cover import requirements for three months on the basis of actual imports for that year). A rapid decline in foreign assistance also contributed to creating foreign exchange shortages. In any case, due to this foreign exchange shortage, the new civilian government that succeeded the military government around the end of 1963 had to focus its attention increasingly on the problems of foreign exchange shortages and inflation.

The 1964-65 exchange-rate reform, export-promotion measures, and import-liberalization program were designed and implemented as a package of reform measures to unify the exchange rate and to establish a system of incentives consistent with an export-oriented industrialization strategy for growth. In the process of formulating and implementing the

reform package, there was much opposition from interested business groups, particularly against the exchange-rate reform and import liberalization. Despite the internal opposition, the government did implement the reform measures, some of which were considered drastic by many observers. It seems, in retrospect, that the government was able to resist opposition to the reform measures and to follow through on their implementation because it considered them indispensable for achievement of high economic growth through export-oriented industrialization.

MAIN FEATURES AND IMPLEMENTATION OF THE POLICY MEASURES

The Exchange-Rate Reform (1964-65)

For over a decade, from the end of the Korean War until early 1964, Korea maintained a system of multiple exchange rates. Under the regime of multiple exchange rates, the official exchange rate was almost always overvalued despite large periodic devaluations to offset the progressive inflation of the won. The official exchange rate was not really important, however, because practically all trade and other commercial activities were conducted at exchange rates that were significantly higher than the official rate in terms of won per U.S. dollar. For instance, during the late 1950s the official exchange rate was fixed at 50 won to the dollar (Table 5.1). Because exporters and others with foreign exchange earnings were generally given transferable rights to use their foreign exchange earnings (or proceeds) for importing, free-market exchange rates on export dollars, differentiated according to the source of earnings, developed in Korea. In the 1950s and the early 1960s, the free-market exchange rates on export dollars from Japan were in general much higher than the rates on export dollars from other countries, mainly because the foreign exchange earnings from exports to Japan could be used only for importing from that particular country. Separate exchange rates also applied to foreign exchange obtained by remittances from religious organizations and by selling services to United Nations forces in Korea between September 1954 and January 1961. In addition, the U.S. military payment certificate was transacted at market-exchange rates that differed from those for the U.S. greenback.

Multiple rates were also applied in the allocation of both government-owned foreign exchange and U.S. aid dollars because government allocations of such foreign exchange were made under a system of foreign exchange bidding, by imposing a foreign exchange tax, or other methods to increase the de facto exchange rate to a level higher than the official rate (Frank, Kim, and Westphal 1975:29-36).

After the large devaluation in early 1961, the government attempted to unify the exchange rate. That attempt failed, mainly owing to high inflation caused by the expansionary policy of the military government. A

Table 5.1. Nominal exchange rate movements, won to U.S. dollar: August 1955 to March 1965

Time period	Official exchange rate	Free-market exchange rates ^a				U.S. MPC	Korean WPI (1965=100)
		Export earnings from Japan	Earnings from other countries	Other import dollars ^b	U.S. greenback		
8/15/55	50.0	95.0	82.0	75.0	80.2	66.2	32.3
1956 ^c	50.0	107.0	100.8	84.7	96.6	81.0	36.6
1957 ^c	50.0	112.3	105.7	84.5	103.3	84.5	42.5
1958 ^c	50.0	122.5	101.5	89.3	118.1	102.9	39.9
1959 ^c	50.0	139.9	124.7	113.5	125.5	114.9	40.8
2/23/60	65.0	171.8	138.7	129.3	144.9	129.2	43.2
1/01/61	100.0	156.3	141.6	132.0	139.8	120.6	48.2
2/01/61	130.0	147.9	145.4		148.3	128.9	50.6
1962 ^c	130.0	nt	nt		134.0	126.5	56.0
1963 ^c	130.0		169.8 ^d		174.5	147.8	67.5
5/03/64	256.53		314.0 ^d		285.6	236.2	95.0
3/22/65	256.53		279.0 ^d		316.0	263.0	97.0

Source: Kim and Westphal (1976:35-36).

MPC—military payment certificate.

nt—no transaction.

a. Except for the annual averages, free-market rates normally represent the average rate for the months indicated, not the rate for the date indicated.

b. Separate rates on religious dollars (remittances) and services earnings, which existed between September 1954 and January 1961.

c. Annual average for year.

d. Indicates an effective exchange rate—the official rate plus market premium per export dollar.

system of multiple exchange rates reappeared in early 1963 due to the adoption in that year of the export-import link system under which exporters were given the right to use their export earnings for imports. In 1963 the average market premium on foreign exchange earned by exporting was about 30 percent of the official exchange rate (Table 5.1).

A significant step in the unification of the foreign exchange rate as well as in the transition to an export-oriented industrialization policy was the exchange-rate reform of 1964-65. In May 1964 the government devalued the official exchange rate from 130 to 256 won per U.S. dollar and announced that the existing fixed exchange-rate system would be changed to a unitary floating exchange-rate system. According to Gilbert Brown, who participated in the Korean exchange-rate reform as a USAID (United States Agency for International Development) adviser, the new exchange rate was based on a median value of the purchasing-power-parity (PPP) ratio calculated at the end of 1963 (Brown 1973:139). Because there was no reliable benchmark with which to work, the PPP ratio was calculated for those domestic goods for which the prices of comparable foreign goods were available.

It was not until March 1965, however, that the government allowed the actual floating of foreign exchange. It feared that the floating might set off foreign exchange speculation, resulting in further devaluation of the won and higher inflation. The first stage of the exchange-rate reform was, therefore, nothing more than a simple, large devaluation. The new exchange rate based on the PPP ratio was considered by many to have undervalued the won slightly at the time of devaluation. As a result, Korean exports of goods and services increased rapidly in 1964 while the absolute level of imports declined. Contrary to the situation in the early 1960s, the government continued the tight fiscal and monetary policy it had started during the latter part of 1963. Thanks to that effort, the domestic price level was relatively stabilized beginning in the second half of 1964, despite the large devaluation.

Following the exchange-rate reform, the government gradually abolished the full-scale export-import link system and lessened nontariff barriers on imports by increasing the number of importable items in the Ministry of Commerce and Industry's semiannual trade programs. The government, however, announced the implementation of special tariffs beginning in 1964 for the restriction of nonessential imports. The special tariffs, which were to be levied on top of the regular tariffs, were introduced to soak up excess profits accruing to importers of selected commodities. The tariffs were levied at the rate of either 70 or 90 percent of any profit in excess of the normal profit, or the spread (assumed to be 30 percent) between the c.i.f. import price¹ of goods plus regular tariffs, domestic indirect taxes, and the estimated resale price of the same goods. These tariffs were actually imposed on the basis of market surveys on domestic wholesale prices of imported

1. The c.i.f. import price includes cost of merchandise, shipping insurance, and freight charges.

items, as well as the import prices. Initially about 2,200 commodity items were selected for the imposition of these special tariffs.

The government also suspended direct subsidy payments to exporters immediately following the devaluation but reintroduced the system in the fourth quarter of 1964. Export dollars were still transacted on the gray market at premium rates of exchange. The premium rates showed some fluctuation but generally declined after May 1964 because the government gradually increased the proportion of export earnings that traders could use for commercial imports.² During the first quarter of 1965 (until March 22), premiums on export dollars ranged from 23 to 29 won per dollar, or from about 9 to 11 percent of the official exchange rate.

On 22 March 1965 the government announced that the unitary floating exchange-rate system was being put into effect from that date. Domestic price levels were becoming relatively stabilized beginning in the latter half of 1964 owing to the strong implementation of financial stabilization programs during the previous year. The International Monetary Fund (IMF) provided a stand-by credit in the amount of US \$9.3 million for the purpose of exchange-rate stabilization. That enabled the Korean government to feel more confident about maintaining a stable rate of foreign exchange. The unitary floating exchange rate system was to operate in the following manner:

1. All foreign exchange earned by exporting and by sales to United Nations forces in Korea were supposed to be converted into foreign exchange certificates to be issued by foreign exchange banks (except in cases of amounts less than US \$50). The foreign exchange certificates were to be effective for 45 days after the date of issuance³, and could be freely transacted on exchange markets during that period. When the certificates expired, they were to be surrendered to the exchange bank for conversion into domestic currency.

2. All those who required foreign exchange for imports, including imports financed by USAID (but excluding PL 480 funds), were to submit exchange certificates at the time of issuance of import licenses by the exchange banks.

3. The Bank of Korea (the central bank) was to announce the daily foreign exchange buying and selling rates of both the central bank and the foreign exchange banks on the basis of free-market prices on exchange certificates during the previous day.

2. Although the full-scale export-import link system was abolished in May 1964, the premium on export dollars existed because the traders whose export record did not meet the minimum requirement had to buy export dollars on the gray market to maintain the status of licensed traders and to maintain their imports for commercial activities.

3. The exchange certificates were originally (from March 1965) effective only for 15 days, but the effective period was gradually extended to 45 days by June of the same year (Kim and Westphal 1976:82).

4. The foreign exchange department of each commercial bank was to play an exchange bank role by buying and selling the exchange certificates.

5. The Bank of Korea was given the right to intervene in the exchange market for prevention of any large fluctuations in exchange certificate prices that could result from seasonal and speculative factors.

Following the adoption of the new system, the market price on the exchange certificates was first formed at 270 won per U.S. dollar. The market-exchange rate then gradually declined to 256 won to the dollar in April. Beginning in early May, however, the market-exchange rate gradually increased to reach 280 won per dollar by the end of the same month, as demand for imports increased. In June the central bank began to intervene in the exchange markets by increasing the supply of exchange certificates. From 22 August 1965 until 1967 the central bank could actually peg the market-exchange rate at around 270 won to the dollar by continuously increasing the supply of exchange certificates. That indicates that the Korean monetary authorities (the Ministry of Finance and the central bank) actually transformed the system of the unitary floating exchange rate into a fixed-rate system, after some initial floating.

When the exchange-rate reform was announced in 1964, some in the business community, particularly powerful, large business groups, expressed opposition to the reform. Although both export and import-substitute industries could gain by the devaluation, the large business groups opposed it because they preferred to operate under extensive controls rather than under a realistic exchange rate and relatively free-market situation. Some of the business groups that were highly dependent on imported raw materials also opposed the devaluation. The business groups' opposition to devaluation was, however, not so strong during 1964-65, mainly because the business sector's foreign debts were still relatively small.

It seems, therefore, that the exchange-rate peg at around 270 won to the dollar in 1966 and 1967 was more attributable to the rapid accumulation of foreign reserves than to the business community's opposition to further depreciation of the won. The increase in foreign reserves during this period was mainly the result of the rapid increase in foreign borrowing after the interest-rate reform of 1965, which widened the interest-rate gap between domestic and foreign financial markets. The rapid expansion of exports might also have contributed to the accumulation of foreign reserves. In any case, the Korean monetary authorities were faced with the difficult job of sterilizing the monetary expansion caused by the accumulation of foreign reserves. Because further depreciation of the won would make it more difficult to control the money supply, the Korean monetary authorities left the exchange rate pegged for over two years.

Between 1968 and 1974, a gradual depreciation of the won was allowed by the government, mainly to offset a widening inflation-rate gap between Korea and its major trading partners. In many cases the government used

the method of periodic devaluation rather than allowing a clean floating on the foreign exchange markets. Although most exporters were urging more rapid depreciation, at least to maintain a PPP-adjusted exchange rate constant at the 1965 level, the depreciation of the won proceeded more slowly, mainly because of strong pressure from the huge business firms that had borrowed heavily from abroad. The business firms with large foreign debts opposed devaluation because it would increase the won cost of the foreign debt-service burden proportionately. These firms had become an influential group opposing devaluation in Korea by the late 1960s.

After December 1974 Korea actually maintained a fixed exchange rate of 484 won to the dollar until the early 1980s, despite the gradual overvaluation of the won and the resulting deterioration in the country's balance of payments. The delay in devaluing the currency in the late 1970s was partly attributable to political instability, in addition to the usual opposition from the business group with large foreign debts. The government of the late President Park could not take the unpopular policy of devaluation in 1978 and 1979, although the need for some devaluation was well understood by many policymakers.

Export-Promotion Measures

The Korean government employed various ad hoc measures to promote exports, even before the exchange reform of 1964-65. The price competitiveness of Korean exports was greatly enhanced after the devaluation in 1964, which was proportionally quite substantial. For that reason, the government reduced the direct subsidy payments to exporters in 1964 and abolished such payments beginning in 1965. The export-import link system was also gradually eliminated except for a small number of unprofitable export items. At the same time, however, the government not only maintained many of the export-incentive measures that had been adopted before 1964, but also introduced new schemes resulting in an overall increase in export incentives after the exchange-rate reform.

Immediately following the announcement of the exchange-rate reform in May 1964, the Ministry of Commerce and Industry (MCI) was asked to prepare a comprehensive plan for export promotion, consistent with the new exchange-rate system. The ministry drew up a list of export-promotion incentives for discussion with the business community, as well as with other government agencies. The MCI's list included tax concessions, preferential loans for exports, local letters of credit, wastage allowances, minimum export requirements for licensed traders, and government support for overseas marketing activities. In addition, the MCI recommended an increase in the amount of preferential export credit per dollar value of exports to match the increased need for domestic funds for exports under the new, realistic exchange rate. The MCI's list also included some new recommen-

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dations, such as subsidies for export firms suffering losses, assigning commercial attachés to Korean embassies abroad, sending other export promotion teams abroad, and removing restrictions on foreign travel related to the export business. The additional recommendations were formally adopted by the government in 1964-65, although the incentive effects of those measures appear not to have been as important as those discussed below.

Tax concessions. The 50 percent reduction in income tax on earnings from exports and other foreign-exchange earning activities was continued in 1964-66, as was the exemption of domestic indirect taxes on export products and intermediate inputs into export production. Accelerated depreciation was allowed in 1966 for export industries. The government extended the scope of tariff exemptions to the import of machinery and equipment for export industries in 1966, in addition to the tariff exemptions on imports of raw materials for exports (which had been granted since 1959).

Preferential loans for exports. The preferential interest rate on export loans was further reduced from 8 percent per annum to 6.5 percent in early 1965. Because the interest-rate reform of 1965 sharply raised the interest rate on ordinary bank loans from 16 percent per annum to 26 percent, while leaving the preferential rate on export credit unchanged, the subsidies implicit in the preferential loans for exports increased greatly beginning in 1965. These preferential loans were mostly financed by the rediscount of export bills at the central bank.

Local letter of credit and standby credit. Two credit systems to support export industries were put into effect in 1965 through a revision of the foreign exchange control regulation. Under the local letter of credit system, an exporter who had received an export letter of credit from a foreign buyer could issue a "local letter of credit" to the domestic producers of export products and raw materials for export on the basis of the export letter of credit. The local letter of credit issued by the domestic exporter was to be settled by foreign exchange certificates when the export shipment was made. That indicates that all production activities supported by the local letter of credit could be subject to preferential export credit, and to the tax and tariff concessions usually granted to export activities. The system was, in fact, meant to encourage the use of domestic raw materials for export production. At the same time, the standby credit system was intended to assist in the overseas marketing activities of Korean exporters. Standby credit, a type of clean letter of credit, was normally issued by the Bank of Korea for an exporter on the basis of a foreign exchange payment guarantee from any foreign exchange bank. The credit could be used as guarantee money for the overseas branch's opening of an export letter of credit to the head company and for other contracts related to foreign exchange earning activities.

Wastage allowances. Beginning in 1965, the government formally introduced a system of wastage allowances on raw materials imported for the manufacture of exports. The system allowed for technical and other handling losses of imported raw materials, in addition to the actual requirements for export production. The ratios of wastage allowances to total imports, which varied by type of export commodity, were determined by the MCI on the basis of technologically set requirements. However, because neither tariffs nor indirect taxes were levied on imports of such raw materials, those exporters who were able to conserve on raw materials could greatly profit by using them for production for the home market or by selling them in the market. In fact, the government gave generous wastage allowances to exporters in the latter half of the 1960s to increase export incentives.

Minimum export requirement to maintain the status of licensed trader. The minimum export requirement for licensed traders, established in 1962, was continued simply by gradually increasing the minimum export performance from US \$30,000 in 1964 to \$100,000 by late 1966.

Government support for overseas marketing activities. The government intensified its support for overseas marketing activities of Korean exporters through the expansion of the overseas network of the Korea Trade Promotion Corporation (KOTRA) beginning in 1964.

From this summary, it becomes clear that the system of export incentives was well established by the end of 1965, with some minor exceptions. The system that remained in effect into the early 1980s was generally established by 1965. Although some modifications to the system have been made since then, they were mainly to accommodate changing economic conditions in Korea. Probably one exception was the scheme of discounted prices for such overhead inputs as electricity and railway transport, which was authorized for bulky mineral and other exports during the late 1960s and the first half of the 1970s. The value of overhead price reduction was, however, quite small in relative terms.

The government abolished direct tax reduction on income earned from export and other foreign exchange earning activities effective from 1973, partly because of pressure from such international organizations as the General Agreement on Tariffs and Trade (GATT) and the IMF and partly because such a measure was no longer required for export promotion. The government did, however, provide some tax concessions to facilitate the overseas activities of Korean exporters in the same year. In 1975 the system of outright tariff exemptions on imports of raw materials for exports was changed to a drawback system, under which exporters were, in principle, required to pay tariffs on imports but refunded the payments when exports were actually shipped out. This drawback system was intended primarily

to improve tariff administration because the annual volume of such imports for the manufacture of export commodities had, by the mid-1970s, increased substantially.

Turning to the implementation aspect of the measures, it should be emphasized that each of the export-promotion measures was actually implemented to meet its purpose and was applied indiscriminately to all exporters who could satisfy the criteria specified in the regulations. In other words, the government agencies did not, in general, have much discretionary power in the implementation of export-promotion measures. For instance, preferential export credit could be obtained by any exporter who could present to a foreign exchange bank an export letter of credit from foreign importers. It seems that this aspect of the export-promotion measures has been very important in increasing exports since the mid-1960s.

Finally, in the formulation and implementation of Korea's export-promotion policies, we should not overlook the important role played by the export-targeting system and the Monthly Export Promotion Conference. The export-targeting system in early 1962 was originally used to set the annual target of total commodity exports. But by the latter half of the 1960s, the export-targeting system was well instituted in the government as a regular instrument of export promotion. The annual export target was broken down by major commodity group and by destination (major countries and regions). The target was usually established in the early part of each year by accepting the MCI's export projections, which were based on past performance and the forecasts of related industrial associations for the year. The targets by major commodity group were allocated to related industrial associations, while the targets by destination were allocated to Korean embassies in respective countries or regions for implementation. The MCI maintained a "situation room" to monitor export performance, comparing it with the annual targets, which were broken down by quarters. The status of export performance was then reported to the Monthly Export Promotion Conference, which was regularly attended by the president.

The Monthly Export Promotion Conference, initiated in early 1966, was renamed the Monthly Trade Promotion Conference in the early 1970s to avoid any friction with countries that were export competitors. The conference was usually attended by all cabinet members, heads of major financial institutions, business association leaders, and representatives of major export firms. The people attending the conference were asked to give their opinions on the MCI's report on the status of export performance and its recommendations to solve any expected shortfall from the targets. Businessmen, in particular, were asked to present their problems, difficulties, and opportunities. Government officials had to respond to businessmen's criticisms of past government performance and their recommendations for improvement in the presence of the president. In essence, the conference served to disseminate the president's emphasis on export promotion and

also contributed to quickly solving many problems encountered by exporters, particularly in the early stages of export expansion, through the final decisions of the president. Most of the export-incentive measures described above actually took their final form through deliberations of this conference.

Import-Liberalization Program

Although tariff barriers against imports were, in effect, increased by the enforcement of special tariffs after the 1964 devaluation, nontariff trade barriers were gradually lessened. The main instrument of import control, other than tariffs, has been the semiannual trade program of the MCI. The program usually classified and listed the commodity items by automatically approved items, restricted items, and prohibited items until the first half of 1967, although there were some additional classifications from time to time (Table 5.2). The automatic approval items could be imported without prior approval from the MCI or other ministries, whereas the import of restricted items required prior approval from the government ministries. The prohibited items were not, of course, eligible for import licenses. There was a gradual lessening of import restriction by the semiannual trade program between 1964 and 1967 (Table 5.2), as evidenced by the gradual increase

Table 5.2. Import restrictions by semiannual trade program: 1961-67

Period	Automatic approval (A)	Restricted (B)	Import permissible (C=A+B)	Prohibited (D)	Total (E=C+D)
1961 I	1,546 ^a	35	1,581	305	1,886
II	1,015	117	1,132	355	1,487
1962 I	1,195	119	1,314	366	1,680
II	1,377	121	1,498	433	1,931
1963 I	776	713	1,489	442	1,931
II	109	924	1,033	414	1,447
1964 I	u	u	1,124	617	1,741
II	u	u	496	631	1,127
1965 I	1,447	111 ^b	1,558	624	2,182
II	1,495	138 ^b	1,633	620	2,253
1966 I	2,104	136 ^b	2,240	583	2,823
II	2,307	139 ^b	2,446	386	2,832
1967 I	2,950	132	3,082	362	3,444

Source: Kim and Westphal (1976:72, 89).

u—unavailable.

a. Includes the 309 items that could be imported only with export earnings.

b. Includes both the "partially restricted" and "restricted" items that were distinguished in the trade programs for these periods.

in the number of automatic approval items as well as the decline in the number of prohibited items.

In 1967 an important step was taken in the direction of import liberalization. Between 1964 and 1967, Korea's foreign reserves accumulated rapidly due to several factors: a rapid expansion of exports, an increase in foreign exchange remittances from Korean workers in Vietnam and West Germany, and the increased inflow of foreign capital (including cash loans), which was strongly attracted by high interest rates in Korea. For those reasons, the government initiated a program of import liberalization in the middle of 1967.

An ad hoc working committee was created within the MCI in early July 1967 to prepare an import-liberalization program. The committee, which consisted mainly of officials of division-chief level from related government ministries, was chaired by a director-general level official from MCI. The committee agreed to adopt a negative-list system for future trade control, instead of the positive-list system that had been in use until that time. Under the new system, the trade program listed only those commodity items whose import was prohibited or restricted—implying that all items not listed were automatic approval items.

The committee agreed that commodity items to be prohibited or restricted would include: (1) items already under import restriction in accordance with existing laws, (2) items hazardous to public health, (3) items considered harmful to national security and public safety, (4) items deleterious to sound public morals or violating social norms, and (5) items considered too luxurious in proportion to the country's current stage of economic growth. In addition, the committee decided that the import items to be liberalized would include: (1) items that had already been liberalized, (2) items on which basic tariffs exceeded 50 percent, and (3) items with a ratio of domestic wholesale price to c.i.f. import price exceeding 500 won to the dollar.

On the basis of those criteria, the committee examined each of the 30,000 commodity items classified in the 1963 edition of the United Nations *Standard Industrial Trade Classification (SITC) Manual*. The criteria could not, however, be strictly observed due mainly to strong pressure from related industrial associations and the government organizations dealing with the problems of industrial development. The number of automatic approval items was increased substantially by the import-liberalization program of 1967. The real effect of that program on domestic industries was, however, considered very small because it did not liberalize items for which imports were expected to increase rapidly. For this reason, the effect of the program on imports was not very significant.

Table 5.3 compares the old and new programs in terms of the number of commodity items by control category. The number of automatic approval items for imports increased considerably with the adoption of the negative-list system. For instance, more than half of the total 30,000 commodity items

Table 5.3. Comparison of the old and new trade programs, by number of export and import items and control category: 1967

Control category	Trade program effective until July 24, 1967	New program effective from July 25, 1967 ^a
Export items		
Prohibited	57	579
Restricted		2,465
Automatic approval	610	26,956
Total	667	30,000
Import items		
Prohibited	244	2,617
Restricted	92	10,255
Automatic approval	3,760	17,128
Total	4,096	30,000

Source: Kim and Westphal (1976:96).

a. The classification of commodity items is based on the highest digit classification given in the 1963 edition of the United Nations *Standard International Trade Classification (SITC) Manual*. This classification is roughly equivalent to the level of commodity classification used in the old trade program.

classified in the *SITC Manual* could be considered automatic approval items, because they were not listed in the new trade program. It is not, however, actually possible to compare the numbers of restricted and prohibited items in the new program with those in the old program, because under the old system those items not listed in the trade program were the restricted or prohibited items. In any case, we can say that the adoption of the negative-list system in the second half of 1967 was an important mark of progress toward import liberalization in Korea.

Together with the adoption of the negative-list system for nontariff import restrictions, the government worked out a tariff-reform proposal in the second half of 1967, which was to be effective from early 1968. The main purpose of the tariff reform was to reduce the import tariff barriers in compliance with the basic direction of trade liberalization. Ronald McKinnon, who was invited to Korea to advise on the tariff reform, recommended that a uniform tariff rate of 20 percent be applied across the board to most commodities, and an exceptionally high tariff rate of 90 percent be applied to the limited number of industrial products that Korea wanted to protect as infant industries and on other grounds (McKinnon 1967). Although some initial work was done by the Ministry of Finance along the lines suggested by McKinnon, the basic structure of the new tariff rates finally approved by the National Assembly turned out to be not much different from the original. This reflects the fact that the original reform proposal prepared

by the ministry underwent many changes because of pressure from various industrial associations and strong opposition from other ministries. The tariff reform actually reduced the maximum rate from 250 to 150 percent but raised the simple average of tariffs for a majority of the commodity groups classified by the two-digit Brussels Tariff Nomenclature (BTN) groups (Kim and Westphal 1976:101).

Although the government had originally announced in mid-1967 that it would continue to promote import liberalization, it was not able to increase the rate of import liberalization after the first half of 1968, measured in terms of the ratio of automatic approval items to total tradable commodities (Table 5.4). As the balance of payments situation deteriorated due to accelerating domestic inflation and to an increase in foreign debt service burdens beginning in that year, the government generally tightened import controls. For that reason, the rate of import liberalization showed a declining trend from 62 percent in the first half of 1968 to 49 percent by the second half of 1975. The rate of import liberalization gradually increased thereafter, but it was still around 69 percent in 1980. Although the rate increased to 77 and 80 percent in 1982 and 1983, respectively, it seems that these increases were partly attributable to the change in the system of commodity classification (Table 5.4).

Similarly, the government was not able to make much progress in effectively reducing the level of tariff protection on domestic industries after 1967, although tariff reforms have taken place a few times since then. At the time of the 1973 tariff reform, the government abolished the special tariffs that had been imposed on top of the regular tariffs since 1964. The government reduced the tariff rates on 1,067 items, while increasing the rates on 440 items, thus resulting in a reduction of average tariff rates from 38.8 to 31.3 percent. A far-reaching tariff reform, effective from early 1977, increased the number of commodity items subject to the (approximately) 20 percent tariff from 35.7 percent of total tradable items to 52.8 percent, while the number of high-tariff items was reduced (MOF, ROK, 1978:297-98). Despite these reforms, the basic structure of tariffs remained a "cascade" type throughout the period, because tariff rates generally escalated from a lowest level on unprocessed raw materials to the highest level on consumer luxuries until 1983. A new reform was undertaken to revise the tariffs effective from 1984.

THEORETICAL APPROPRIATENESS

It seems clear that the package of policy reform measures was undertaken by the Korean government with the following basic objectives: (1) to unify the exchange rate through a large devaluation and then to maintain a realistic rate by floating on the foreign exchange market; (2) to adjust the system of export incentives so as to make it consistent with the new exchange-rate system; and finally, (3) to liberalize imports and thereby reduce various

Table 5.4. Import restrictions by semiannual trade program: 1967-83

Period	Number of commodity items			Total (B)	Rate of import liberalization (A/B) (%)
	Prohibited	Restricted	Automatic approval (A)		
1967 II	118	402	792	1,312	60.4
1968 I	116	386	810	1,312	61.7
II	71	479	756	1,312	57.6
1969 I	71	508	728	1,312	55.5
II	75	514	723	1,312	55.1
1970 I	74	530	708	1,312	54.0
II	73	526	713	1,312	54.3
1971 I	73	524	715	1,312	54.5
II	73	518	721	1,312	55.0
1972 I	73	570	669	1,312	51.0
II	73	571	668	1,312	50.9
1973 I	73	569	670	1,312	51.1
II	73	556	683	1,312	52.1
1974 I	73	570	669	1,312	51.0
II	73	574	665	1,312	50.7
1975 I	71	592	649	1,312	49.5
II	66	602	644	1,312	49.1
1976 I	66	584	662	1,312	50.5
II	64	579	669	1,312	51.0
1977 I	63	580	669	1,312	51.0
II	54	496	547	1,097	49.9
1978 I	50	458	589	1,097	53.7
II		424	673	1,097	61.3
1979 II		327	683	1,010	67.6
1980 II		312	693	1,010	68.6
1981 II		1,886	5,579	7,465	74.7
1982 II		1,769	5,791	7,560	76.6
1983 II		1,482	6,078	7,560	80.4

Source: MCI, ROK (1967-83).

Note: The classification of import items is based on the four-digit SITC codes through the first half of 1977, on the four-digit codes of the Customs Cooperation Council's Nomenclature (CCCN) from the second half of 1977 to the same period of 1980, and on the eight-digit CCCN codes thereafter.

domestic distortions arising from high tariffs and quantitative restrictions. As already suggested, the government attained the first two objectives to a certain extent but was not quite successful in attaining the third one. This indicates that the actual achievements of the policy measures did not in fact reach the levels necessary to meet all the basic objectives of the measures. We are, however, attempting to examine the theoretical appropriateness of the policy measures in terms of the intended objectives, rather than in terms of actual achievements.

We will first consider whether or not it was theoretically appropriate for Korea to shift its industrialization strategy from import substitution to export promotion in the early 1960s. The industrialization experiences of other developing countries generally support the policy shift made by the Korean government, particularly in view of that country's small land size and limited natural resources.

Many developing countries in the postwar period adopted a policy of import substitution as an industrialization strategy. In countries where this policy was emphasized, the domestic production of manufactured goods was protected by high tariffs, quantitative restrictions of imports, and other controls. Exports were usually discouraged by an overvalued exchange rate, the prevalence of inefficient industries, and the higher profitability of domestic sales relative to exports. The countries that emphasized import substitution made rapid progress in industrialization during the early stage of easy import substitution when domestic production replaced the imports of nondurable consumer goods and intermediate goods used in their manufacture. Once the stage of easy import substitution was over, however, the production of nondurable consumer goods and their inputs could not be expanded rapidly because of the limited domestic market. These countries then turned to import substitution in durable consumer goods and machinery and in the intermediate inputs used in their production. Because the industries producing these types of goods are generally more capital- and technology-intensive than the nondurable consumer goods industries, and usually require high levels of output for efficient operation, many countries encountered difficulties in this stage because of the small size of the domestic market and the technological and capital requirements of such industries (Balassa and Associates 1982; Balassa 1971; Little, Scitovsky, and Scott 1970).

By the early 1960s Korea had completed the stage of easy import substitution and was faced with slow growth of output due to the limitations of the domestic market. Instead of emphasizing further import substitution in durable consumer goods, machinery, and their intermediate inputs, Korea started to promote the export of consumer goods and other light industry products that could be more efficiently produced by labor-intensive methods. Because Korea had been one of the typical developing countries following the path of import-substitution-oriented industrialization, it might

have encountered the same difficulties experienced by other countries had it pursued further import substitution in durable consumer goods and machinery. Korea not only lacked economically important natural resources but also faced shortages of capital and high-level technologies in the early 1960s. It was a poor country with only an abundant supply of relatively well-educated labor. For this reason, the shift to an export-oriented strategy in the early 1960s was an appropriate policy choice and led to the rapid growth of the labor-intensive exports for which Korea had comparative advantages.

It is generally understood that export-oriented industrialization brings economic efficiency and increased resource productivity to a small economy that could not be expected under a regime of import-substitution-oriented industrialization. First, increased productivity of resources can result from economies of scale in production, which can be realized by expanding production for exports. If a small developing country pursues an import-substitution-oriented policy, economies of large-scale production cannot be expected, because the protected domestic market is usually limited, and inefficient domestic industries cannot expand their production beyond that market. Second, increased efficiency and productivity of resources may come about because export-oriented industries generally undertake more rapid technological innovation for improving product quality to meet international standards, and usually face greater pressure to find ways to lower costs than do firms producing for protected domestic markets. Finally, increased efficiency and productivity can be realized through import liberalization and the increased availability of imports, which are usually possible only in a country following an export-oriented strategy.

Once it is accepted that the shift to an export-oriented industrialization strategy in the early 1960s was the right policy choice for Korea, the theoretical appropriateness of the package of policy measures can be dealt with in terms of international trade theory. If a country is pursuing an export-oriented strategy, a free-trade regime will provide an ideal or optimal situation, as conventional trade theory teaches us. An assumption in the static theory of trade and development is that world prices of tradable commodities reflect the true opportunity costs of production of those commodities. Thus the tariffs, import controls, and multiple exchange rates that distort world-market prices are considered to result in economic inefficiencies and loss of welfare for the country in question, as well as for the world. To achieve external balance under this situation, a country has to maintain a unified exchange rate at an equilibrium level so that the demand for and supply of foreign exchange can be equated, without any price-distorting policy.

There are only two exceptional cases where we may justify some divergence between world-market prices and domestic prices. One is the case of an infant industry requiring protection for a limited period of time. The

other is the case of optimal tariffs that can improve the terms of trade for the country imposing the tariffs. The latter case is, however, relevant only for those products in which a country can enjoy some monopoly in world trade and is applicable only on the assumption that there is no retaliation by other countries.

This kind of free-trade situation does not actually exist in the real world. Practically all national states use tariffs and other price-distorting measures to protect their industries from imports and to attain an equilibrium in their balance of payments, although the degree of price distortion from the norm of world market prices may vary widely by country. We cannot, therefore, expect that any country will, in the near future, dismantle all the price-distorting measures that have been in use. Likewise, it is quite unrealistic to expect that Korea will abolish all tariffs and nontariff barriers to trade and maintain its external balance only on the basis of a unified exchange rate. The theoretical appropriateness of the Korean reform package should be considered in this perspective. That is, although the reform package did not remove much of the price distortion that had existed prior to the reforms, it did represent an advance in the direction of removing various price-distorting measures.

The exchange-rate reform of 1964-65 was able to eliminate the multiple exchange rates that had existed prior to the reform and succeeded in unifying the exchange rate, thereby reducing the deviations of exchange rates from a unified equilibrium rate. The adjustment of export-promotion measures following the exchange-rate reform and the program of import liberalization were carried out for the purpose of reducing the divergence between world prices and domestic prices resulting from various government interventions.

Regarding the export promotion measures, it was thought that Korean exporters deserved government subsidies even under the unified floating exchange-rate system. The main reason was that they were new entrants to the international markets and would not be well accepted there unless they could trim their prices below quoted world prices—in addition to the fact that many other countries were giving direct and indirect subsidies to exporters. The subsidies implicit in the government promotion measures for exports have therefore been gradually reduced since the mid-1960s.

EFFECTS OF THE POLICY MEASURES

The exchange-rate reform of 1964-65, the export-promotion measures, and the import-liberalization program were designed and implemented as a package over a four-year period. Because the three policy measures are all interrelated, the effect of an individual reform or policy measure on the economy cannot be easily isolated from that of the other individual measures. For this reason, we will consider the effects of the entire package of policy measures on the economy rather than dealing with the measures separately.

Effects on Relative Incentives

A quantitative assessment of the effects of the policy package is attempted here by making time-series estimates of three indicators of relative incentives: (1) export subsidies per U.S. dollar export, (2) tariffs and tariff equivalents per dollar import, and (3) effective exchange rates for exports and imports.

Table 5.5 presents estimates of net and gross export subsidies per U.S. dollar export for Korea during the period 1962-80. The net export subsidies include direct cash subsidies, the export dollar premium, direct tax reduction, and interest-rate preferences, whereas the gross export subsidies include the exemptions of both domestic indirect taxes and tariffs on top of the net export subsidies.⁴

The net export subsidies can be called genuine subsidies in the sense that they directly affect the profitability of exporting. Since domestic indirect tax and tariff exemptions do not add to exporters' revenues and do not affect the profit rate on export sales, these are included not in the net export subsidies but only in the gross subsidies. These indirect tax and tariff exemptions, however, make domestic production for exports using existing capacity more attractive than production for domestic sales, because they reduce production costs of exports below those for domestic markets. In this sense, we suggest that the gross export subsidies give the level of incentive to exporting, relative to selling domestically, while the net subsidies indicate the level of export incentives compared with a free-trade situation (Westphal and Kim 1982).

The net and gross export subsidies per dollar of export are examined in terms of their ratios to the official exchange rates. As shown in Table 5.5, both the net and gross export subsidies per dollar accounted for a much higher percentage of the official exchange rate in 1963-64 than in later years. A major reason was that the export dollar premium was quite substantial during 1963-64 because of the use of the export-import link system, whereas the official exchange rate was still quite unrealistic. In 1965, the year in which the exchange rate was completely adjusted by the reform, net export subsidies per dollar dropped to 3.7 percent of the new official exchange rate but gradually increased to around 6.4-7.4 percent of the exchange rate during 1966-71. After 1971, however, the ratio of net export subsidies to the exchange rate further declined to a range of 1.9-3.2 percent, owing to the abolishment of direct tax reduction beginning in early 1973 and to the reduction of the gap in interest rates between preferential export credit and

4. Because of the lack of consistency in time-series data, it was not possible to estimate subsidies implicit in excessive wastage allowances for export production, accelerated depreciation allowances, discounts on the prices of overhead inputs, or the effect of the limited export-import bank system in use after 1964. According to Westphal and Kim (1982), the subsidy implicit in the wastage allowance alone was equivalent to 2.4 percent of total merchandise exports in 1968, but subsidies resulting from other measures were much smaller in relative terms.

Table 5.5. Estimates of net and gross export subsidies per dollar of export, annual averages: 1962-80

Year	Official exchange rate (won to US \$) (A)	Various export subsidies per U.S. dollar of export (won)							Ratio to exchange rate (%)		
		Direct cash subsidies (B)	Export dollar premium (C)	Direct tax reduction (D)	Interest rate preference (E)	Net export subsidies ^a (F = B + C + D + E)	Indirect tax exemption (G)	Tariff exemption (H)	Gross export subsidies ^a (I = F + G + H)	Net export subsidies (J = F/A)	Gross export subsidies (K = I/A)
1962	130.0	10.3		0.6	0.9	11.8	5.1	4.7	21.6	9.1	16.6
1963	130.0	4.1	39.8	0.8	2.9	47.6	5.3	6.6	59.5	36.6	45.8
1964	214.3	2.9	39.7	0.7	6.0	49.3	7.6	10.1	67.0	23.0	31.3
1965	265.4			2.3	7.6	9.9	13.9	15.4	39.2	3.7	14.8
1966	271.3			2.3	10.3	12.5	17.8	21.3	51.6	4.6	19.0
1967	270.7			5.2	14.7	20.0	17.8	24.6	62.4	7.4	23.1
1968	276.6			3.0	15.2	18.2	19.9	39.6	77.7	6.6	28.1
1969	288.2			3.7	14.7	18.4	27.4	34.3	80.1	6.4	27.8
1970	310.7			3.5	17.3	20.8	27.0	40.4	88.1	6.7	28.4
1971	347.7			4.8	18.1	22.8	32.2	48.0	103.0	6.6	29.6
1972	391.8			1.9	10.5	12.5	26.4	66.3	105.2	3.2	26.9
1973	398.3			1.4	7.4	8.7	21.0	64.4	94.2	2.2	23.7
1974	407.0				8.6	8.6	22.5	55.1	86.3	2.1	21.2
1975	484.0				12.9	12.9	33.8	34.3	81.0	2.7	16.7
1976	484.0				12.3	12.3	33.6	35.9	81.8	2.5	16.9
1977	484.0				9.4	9.4	53.1	30.6	93.1	1.9	19.2
1978	484.0				11.0	11.0	53.6	30.0	94.6	2.3	19.5
1979	484.0				11.0	11.0	56.6	30.3	97.9	2.3	20.2
1980	618.5				20.6	20.6	74.6	36.4	131.6	3.3	21.3

Source: Westphal and Kim (1977) for 1962-77 data; C. H. Nam (1981) for 1976-78 data; and the author's estimates for 1979-80.

a. Totals may not sum due to rounding errors.

ordinary bank loans beginning in 1972. The gross export subsidies per dollar showed a similar pattern of change over time, but maintained a much greater percentage of the exchange rate than the case of net export subsidies, implying that the relative incentive to export vis-à-vis domestic sales was much greater than the net export incentives.

Table 5.6 shows the estimates of actual and legal tariffs and tariff equivalents per dollar of imports for the period 1962–80. The actual tariffs and tariff equivalents are much lower than the legal tariffs and tariff equivalents, reflecting the fact that significant tariff exemptions were granted for export and other purposes during the period. If we calculate the ratio of these tariffs and tariff equivalents per dollar of imports to the official exchange rate, as in the case of export subsidies, the results are the average actual and legal tariff rates weighted by the amount of imports. According to the data (Table 5.6), the average actual tariff rate generally showed a gradual decline from about 14–15 percent in 1963–64 to the 5–6 percent range in the first half of the 1970s. The average legal tariff rate generally remained over 20 percent until 1973, although there were a few exceptions. Beginning in 1974, however, the legal tariff rate declined significantly, owing mainly to the reduction to a zero rate of legal tariffs on oil imports which had increased rapidly in nominal terms after the first world oil crisis (1973–74). In any case, the actual and legal tariff rates do not really reflect changes in the degree of domestic protection over time because they do not include the impact of quantitative restrictions on imports. This is even truer for the period after 1964 during which time the quantitative restrictions were significantly lessened compared with earlier years.

Despite the limitations in the estimated export subsidies per dollar of export, and the estimated tariffs and tariff equivalents per dollar of import, some of these estimates are used to derive the nominal effective exchange rates for exports and imports, as shown in Table 5.7. In other words, the net export subsidies per dollar were added to the official exchange rate to obtain the nominal effective exchange rate for exports, while the actual tariffs and tariff equivalents per dollar were added to obtain the effective rate for imports. This implies that the effective exchange rate for exports gives an index of net export incentives compared with a free-trade situation, whereas the effective rate for imports gives an index of actual trade protection on domestic industries. These estimates of nominal effective exchange rates are then adjusted by a PPP index to correct for changes in domestic prices and in the prices of Korea's major trading partners. The results are the PPP-adjusted effective exchange rates for exports and imports shown in Table 5.7.

The PPP-adjusted (real) effective exchange rate for exports increased in terms of the number of won per dollar between 1962 and 1964, indicating that the exchange-rate reform of 1964–65 increased the net incentive to export. Another important point was that the exchange-rate reform substantially reduced the gap between the official and the effective exchange rates

Table 5.6. Estimates of actual and legal tariffs and tariff equivalents per dollar of import, annual averages: 1962-80

Year	Official exchange rate (won to US \$) (A)	Tariffs and tariff equivalents per U.S. dollar of import (won)					Ratio to exchange rate (%)	
		Actual tariffs (B)	Export dollar premium (C)	Sub-total (D=B+C)	Tariff exemptions (E)	Legal tariffs (F=D+E)	Actual tariff rate (G=D/A)	Legal tariff rate (H=F/A)
1962	130.0	16.4 ^a	0.0	16.4	6.9	23.3	12.6	17.9
1963	130.0	12.0	6.2	18.2	9.7	27.9	14.0	21.5
1964	214.3	21.0	11.7	32.7	17.9	50.6	15.3	23.6
1965	265.4	27.7		27.7	20.9	48.6	10.4	18.3
1966	271.3	25.1		25.1	28.3	53.5	9.3	19.7
1967	270.7	25.5		25.5	32.5	58.0	9.4	21.4
1968	276.6	25.9		25.9	45.4	71.3	9.4	25.8
1969	288.2	24.5		24.5	47.3	71.8	8.5	24.9
1970	310.7	25.7		25.7	54.1	79.8	8.3	25.7
1971	347.7	21.8		21.8	59.7	81.5	6.3	23.4
1972	391.8	23.4		23.4	85.1	108.5	6.0	27.7
1973	398.3	19.4		19.4	75.4	94.8	4.9	23.8
1974	407.0	18.5		18.5	44.2	62.7	4.5	15.4
1975	484.0	24.9		24.9	30.6	55.5	5.1	11.5
1976	484.0	31.4		31.4	37.6	69.0	6.5	14.3
1977	484.0	35.7		35.7	38.2	73.9	7.4	15.3
1978	484.0	42.9		42.9	37.0	79.9	8.9	16.5
1979	484.0	36.0		36.0	33.5	69.5	7.4	14.4
1980	618.5	34.4		34.4	34.7	69.1	5.6	11.2

Source: Westphal and Kim (1977) for 1962-75 data; C. H. Nam (1981) for 1976-78 data; and the author's estimates for 1979-80.

a. 1962 figure includes a small amount of foreign exchange tax collected from U.S. aid imports.

Table 5.7. Nominal and PPP-adjusted effective exchange rates for exports and imports, annual average basis: 1962–80

Year	Nominal exchange rate (won to US \$)			WPI and PPP index (1965=100)			PPP-adjusted exchange rate (won to US \$)		
	Official rate (A)	Effective rate for		WPI, Korea (D)	WPI, major trade partners ^c (E)	PPP index (F=E/D)	Official rate (G=A×F)	Effective rate for	
		Exports ^a (B)	Imports ^b (C)					Exports (H=B×F)	Imports (I=C×F)
1962	130.0	141.8	146.4	56.0	97.7	174.5	226.9	247.4	255.5
1963	130.0	177.6	148.2	67.5	98.4	145.8	189.5	258.9	216.1
1964	214.3	263.6	247.0	90.9	98.6	108.5	232.5	286.0	268.0
1965	265.4	275.3	293.1	100.0	100.0	100.0	265.4	275.3	293.1
1966	271.3	283.8	296.4	108.8	102.8	94.5	256.4	268.2	280.1
1967	270.7	290.7	296.2	115.8	103.9	89.7	242.8	260.8	265.7
1968	276.6	294.8	302.5	125.2	105.6	84.3	233.2	248.5	255.0
1969	288.2	306.6	312.7	133.7	108.7	81.3	234.3	249.3	254.2
1970	310.7	331.5	336.4	145.9	112.8	77.3	240.2	256.2	260.0
1971	347.7	370.5	369.5	158.5	115.4	72.8	253.1	269.7	269.0
1972	391.8	404.3	415.2	180.7	126.8	70.2	275.0	283.8	291.5
1973	398.3	407.0	417.7	193.3	155.6	80.5	320.6	327.6	336.2
1974	407.0	415.6	425.5	274.7	188.4	68.6	279.2	285.1	291.9
1975	484.0	496.9	508.9	347.4	197.0	56.7	274.4	281.7	288.5
1976	484.0	496.3	515.4	389.4	206.7	53.1	257.0	263.5	273.7
1977	484.0	493.4	519.7	424.5	226.8	53.4	258.5	263.5	277.5
1978	484.0	495.0	526.9	473.4	266.1	56.2	272.0	278.2	296.1
1979	484.0	495.0	520.0	562.5	284.1	50.5	244.4	250.0	262.6
1980	618.5	639.1	652.9	781.3	323.7	41.4	256.1	264.6	270.3

Sources: Tables 5.5 and 5.6; EPB, ROK, *Major Statistics* (1983).

- Official exchange rate plus the net export subsidies per U.S. dollar of export given under column (F) of Table 5.5.
- Official exchange rate plus the actual tariffs and tariff equivalents per U.S. dollar of import given under column (D) of Table 5.6.
- An average of WPIs for the U.S. and Japan, weighted by the average shares of the U.S. and Japan in Korea's total trade volumes (exports and imports) with the two countries during 1963–80. The Japanese WPI was, however, adjusted by the index of exchange rate of yen to the dollar.

by largely replacing the market premium on foreign exchange earned by exporting with the official devaluation of the won. The reform, therefore, stabilized export incentives by superseding the ad hoc administrative measures that had been frequently changed by the government. The real effective exchange rate for export, however, gradually declined in the latter half of the 1960s mainly because the government failed to maintain the real official rate constant in the face of domestic inflation. For this reason, the 1965 level of the real export rate could not be regained until 1972. Between 1972 and 1975, Korea was able to maintain a realistic real effective rate for export, despite a decline in net export subsidies during the period. That accomplishment was partly attributable to the readjustment of the dollar value in relation to other major currencies that took place in 1972-73 and partly to the more rapid adjustment of the exchange rate in Korea during the period. In the second half of the 1970s, some overvaluation of the won was again allowed by the government.

The real effective exchange rate for imports, which was also increased by the exchange-rate reform, generally moved in parallel with the export rate between 1965 and 1980, although the former was slightly higher than the latter throughout the period. That indicates that the real effective rate for imports could have been somewhat unrealistic in the second half of the 1960s and again during the same period of the 1970s, as in the case of the export rate.

In summary, the package of reform measures that was undertaken during 1964-67 did bring about some increases in the measurable incentive to export, as well as in the level of protection for domestic industry. What was more important than these increases was that the reform package replaced a complicated, largely ad hoc system of export incentives based on multiple exchange rates and direct cash subsidies with a simplified and more stable system. The reform package may therefore be credited with having laid the foundation for continued rapid growth of exports by ensuring more stable profit margins for exporters than in the past (Westphal and Kim 1977:120). The government could not, however, completely succeed in maintaining the stable levels of incentives to export and import substitution after 1965, as evidenced by the won overvaluation in the latter half of both the 1960s and 1970s.

Effects on Export Growth and the Balance of Payments

The package of policy reforms discussed above should have had a great impact on Korea's export growth and balance of payments. In fact, Korea's rapid export growth began in the early 1960s starting from a very small base. Between 1960 and 1965 the nominal value of commodity exports increased by an average annual rate of about 40 percent from US \$33 million to \$175 million. Even after 1965 the rapid rate of export growth continued despite the expansion of the base figures, thanks to the effect of the reform package.

During the following 15 years, the nominal value of exports grew by about 35 percent annually to reach approximately \$17.5 billion, or 35 percent of nominal GNP, by 1980. The total value of exports for 1980 was roughly equivalent to 1 percent of world exports.

The rapid growth of exports was accompanied by a substantial change in the commodity composition of exports. Korean exports in the early 1960s were mostly primary products, such as tungsten, iron ore, raw silk, agar-agar, and fish. Manufactured exports accounted for a small fraction of total exports in the early 1960s but increased more rapidly than the exports of primary products thereafter. Manufactured goods—principally clothing, electrical machinery, textile yarns and fabrics, footwear, transport equipment (mainly ships), iron and steel sheets, and plywood—accounted for about 90 percent of total exports by 1980. Accompanying this structural change in export commodities was significant diversification of export markets. In 1965 about 60 percent of Korean exports went to two countries—the United States and Japan. By 1980 the percentage declined to about 44 percent as sales to the Middle East, Europe, and other areas outside Asia expanded. The diversification of export markets can also be shown by the number of countries to which Korea exported: 163 countries in 1980, compared with only 24 countries in 1965 (BOK, *Economic Statistics Yearbook*, 1960–80).

The reform package of 1964–67 also brought about a rapid increase in imports, although the direct impact of the import-liberalization program was relatively small. The nominal values of commodity imports, which had remained almost constant during the period 1953–60, increased by an average annual rate of 6 percent during the following five years, despite a gradual reduction in foreign assistance. Between 1965 and 1980 the nominal value of imports increased at an average annual rate of about 30 percent to reach US \$21.6 billion by 1980. Thus the ratio of imports to GNP rose from about 15 to 39 percent during the same period. The increase in imports directly caused by the import-liberalization program of 1967 was estimated by the MCI to have amounted to only US \$27 million in the final five months of 1967 and \$68 million in 1968, therefore, most of the import growth cannot be explained by import liberalization alone. The rapid growth of imports depended upon several other factors as well.

First, the rapid expansion of exports during 1965–80 not only increased the availability of foreign exchange for imports but also necessitated a corresponding increase of imports for export production. Second, external finance, such as foreign loans, direct investment, and properties and claims funds from Japan, increased continuously during the same period, more than offsetting the decline in U.S. assistance. Third, the world-market prices of important resources, including crude oil, increased rapidly in the 1970s and the early 1980s. Fourth, the rapid export-oriented industrialization and growth created an ever-increasing real demand for imports. Finally, it should

be emphasized that the won was overvalued from time to time due to the more rapid rise in domestic prices than in the prices of Korea's major trading partners.

Because the rapid growth of exports was matched by growth in imports, Korea could not significantly improve its trade balance during 1965–80. The trade deficits actually increased in absolute level between 1965 and 1980, although there were some fluctuations in the interim years (Table 5.8). The net balance on goods and services in the country's balance of payments also showed a similar trend during the period. The current balance in the balance-of-payments account, which is equivalent to the net balance in goods and services plus net transfer receipts from abroad, also showed a deficit in most of the years under observation, implying that Korea's external debts should have accumulated to a considerable magnitude by 1980.⁵

To explain some basic causes of these continuous balance-of-payments deficits, an attempt was made to correlate the current balance with both the PPP-adjusted official exchange rate and the index of net barter terms of trade for Korea (Figure 5.1). The figure presents the ratio of the current balance to total imports of goods and services, so that the relative magnitudes (rather than absolute levels) of the current-account deficits can be shown for respective years. The real exchange rate is shown in an index with the base year 1965 equal to 100, as in the case of the terms of trade index.

What we can observe from Figure 5.1 is that the relative size of the current balance is generally positively correlated with the index of the PPP-adjusted official exchange rate (measured in terms of won to the U.S. dollar), except for a few years (1974–75 and 1980) during which the terms of trade index for Korea declined sharply because of the world oil shocks. That observation seems to indicate that Korea could have avoided the continuous large deficits in its current balance, had it maintained the 1965 level of the real exchange rate unchanged throughout the whole period 1965 to 1980. Maintaining the real exchange rate at the 1965 constant level, however, was made difficult by Korea's high rate of domestic inflation as compared to that in major industrialized countries throughout the period. It is suggested therefore that domestic demand management, which allowed high inflation in the economy during the period, was ultimately responsible for the chronic deficits in the balance of payments.

Effects on Industrialization

The package of policy reforms had a significant impact on the pattern and sources of industrialization in Korea. Because the reform package resulted

5. Korea's foreign debt outstanding actually increased to US \$37.3 billion by the end of 1982 and to approximately \$40 billion by the end of 1983.

Table 5.8. Major trends in Korea's balance of payments: 1960-80

Year	Trade balance (10 ⁶ US \$)			Total imports of goods and services (10 ⁶ US \$)	Net goods and services (10 ⁶ US \$)	Current balance (10 ⁶ US \$)	Ratio to total imports of goods and services	
	Exports	Imports	Balance				Net goods and services (%)	Current balance (%)
1960	33	365	-332	379	-262	14	-69.1	3.7
1965	175	416	-240	484	-194	9	-40.1	1.9
1966	250	680	-430	777	-323	-103	-41.6	-13.3
1967	335	909	-574	1,060	-417	-192	-39.3	-18.1
1968	486	1,322	-836	1,547	-670	-440	-43.3	-28.4
1969	658	1,650	-992	1,945	-794	-549	-40.8	-28.2
1970	882	1,804	-922	2,182	-803	-623	-36.8	-28.6
1971	1,132	2,178	-1,046	2,634	-1,018	-848	-38.6	-32.2
1972	1,676	2,250	-574	2,768	-541	-371	-19.5	-13.4
1973	3,271	3,837	-566	4,620	-499	-309	-10.8	-6.7
1974	4,515	6,452	-1,937	7,598	-2,305	-2,023	-30.3	-26.6
1975	5,003	6,674	-1,671	7,997	-2,114	-1,887	-26.4	-23.6
1976	7,815	8,405	-591	10,120	-663	-314	-6.6	-3.1
1977	10,047	10,523	-477	13,284	-211	12	-1.6	0.1
1978	12,711	14,491	-1,781	18,718	-1,557	-1,085	-8.3	-5.8
1979	14,705	19,100	-4,396	24,121	-4,590	-4,151	-19.0	-17.2
1980	17,214	21,598	-4,384	28,347	-5,770	-5,321	-20.4	-18.8

Source: BOK, *Economic Statistics Yearbook* (1960-80).

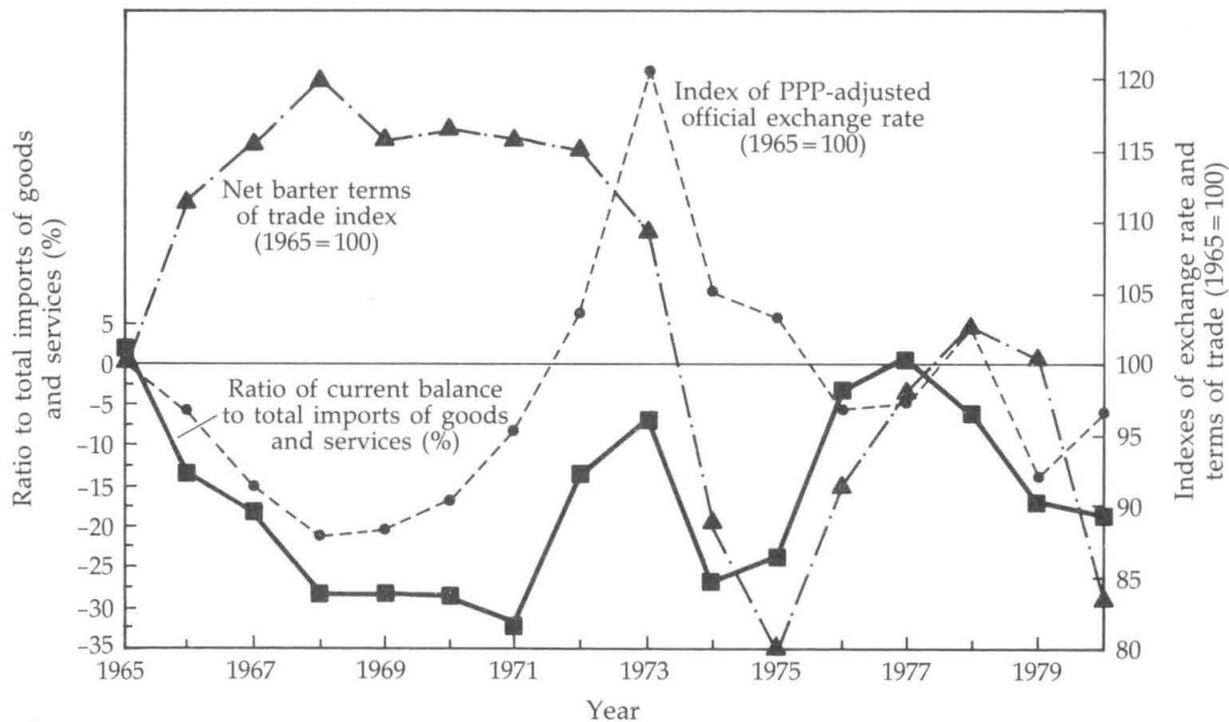


Figure 5.1. Relationship between the PPP-adjusted official exchange rate and the ratio of the current balance to total imports of goods and services: 1965-80

Source: Tables 5.7 and 5.8; EPB, ROK, *Major Statistics* (1983).

in rapid growth of manufactured exports as described above, value added in the manufacturing sector grew very rapidly after the early 1960s. For instance, the growth rate of the manufacturing sector, which had averaged about 11 percent annually during 1953–62, accelerated to 16 percent in the following two decades. Although the growth rate of GNP also accelerated from 3.6 percent during the earlier period to 8.4 percent during the later period, the share of the manufacturing sector in GNP more than doubled from about 14 percent in the early 1960s to 29 percent by 1980.

This rapid growth of manufacturing was accompanied by a considerable structural change within the same sector. The light industries, mainly food processing and textile industries, which had accounted for 70 percent of total value added in manufacturing until 1963, gradually declined to 47 percent by 1980. During the same period, however, the share of heavy and chemical industries in total manufacturing value added rose rapidly from 30 to 53 percent.

How did the major sources of industrialization shift because of the reform package undertaken in the mid-1960s? To deal with this question, we compare the sources of growth of manufacturing output between the two periods, 1955–63 and 1963–75, on the basis of the author's previous work (Kim and Roemer 1979:99–124; Mason et al. 1980:149–54). In contrast to the usual method of decomposing the sources of growth in terms of changes in the amount and productivity of broadly defined primary factors, the sources of manufacturing output growth are analyzed here in terms of the relative contributions of domestic demand expansion, export expansion, import substitution, and technological change to the output growth.⁶

The analysis of the sources of industrialization is based on the input-output tables for 1955, 1963, 1970, and 1975, which have been consistently deflated into 1968 constant world prices to eliminate the effects of domestic price distortions arising from tariffs, domestic indirect taxes, and quantitative restrictions on imports. The tables were also adjusted to make them consistent for comparison. The sources of industrial growth were decomposed for three time intervals (1955–63, 1963–70, and 1970–75), and then the results for the last two periods were linked to give a single estimate for the period from 1963 to 1975. Although the decompositions were made for the whole economy, including the primary and the social overhead and services sectors, only the result for manufacturing is summarized in Table 5.9. It should also be noted that the table presents both direct and total measures of the sources of growth; the difference should be taken to reflect the backward linkage effects of direct change in various autonomous factors on the expansion of output.

6. The analysis of sources of industrial growth was made by using the Syrquin method (Syrquin 1976), which is a modification to the pioneering work of Chenery, Shishido, and Watanabe (1962). This approach essentially starts from the basic demand-supply balance and attributes change in the structure of production to various demand factors.

Table 5.9. Sources of manufacturing output growth: 1955-63 and 1963-75 (%)

Sources of growth	1955-63	1963-75
Domestic demand expansion		
Direct	68.3	71.1
Total	57.9	51.5
Export expansion		
Direct	6.1	24.7
Total	8.7	38.8
Import substitution		
Direct	25.6	4.2
Total	34.9	7.0
Technological change		
Direct		
Total	-1.5	2.7
Total output increase	100.0	100.0
Total output increase in billion won	241.2	3,283.3

Source: Mason et al. (1980:152-53).

Note: By Syrquin's method—first difference (Syrquin 1976).

The relative sizes of both the direct and total contributions of various autonomous factors to total manufacturing output growth varied considerably from 1955-63 to 1963-75 (Table 5.9). The direct contribution of export expansion (EE), for instance, was about 6 percent of total manufacturing output growth in the earlier period, but it increased to 25 percent in the later period, while the direct contribution of import substitution (IS) declined from 26 to 4 percent between the two periods. Similarly, the total contribution of EE increased sharply from around 9 percent in 1955-63 to 39 percent during the later period, while the total IS contribution declined from 38 to 7 percent. The direct contribution of domestic demand expansion (DDE) increased between the two periods, while the total contribution (including indirect effects) of the same factor showed a decline. The contribution of technological change (TC), or more specifically changes in input-output coefficients, showed a small increase during the later period.

This indicates that the growth of manufacturing output was mainly attributable to DDE and IS in the early period and to DDE and EE in the later period. DDE was the most important factor for the growth of manufacturing output in both periods, as would usually be expected. Trade effects, however, shifted significantly between the two periods. These results support the conclusion that import substitution was much more important to Korea's industrialization during the period 1955-63 than was export growth, but that situation reversed itself during the later period. This conclusion partially corroborates the hypothesis that the reform package of the mid-1960s was quite effective in altering the pattern of industrialization in Korea.

CRITICISM AND LESSONS

The objectives of the reform package could not all be accomplished owing partly to the unsatisfactory implementation of the policy measures by the government and partly to changes in the economic environment after the initiation of the policy measures. For instance, the government was able to succeed in completely unifying the exchange rate but was not quite able to maintain the realistic 1965 level of the PPP-adjusted exchange rate after the exchange rate unification in 1965. We can say that the government succeeded in almost completely institutionalizing the system of export incentives, consistent with the new exchange rate and the export-oriented industrialization strategy. With regard to the import-liberalization program, however, no significant progress could be observed after the initiation of that program in 1967. It seems that this failure to make progress in import liberalization was at least partially attributable to the unsatisfactory performance of exchange-rate management by the government.

The limited success in the implementation of the reform package is reflected in the effects of that package on the economy. The reform package, on the whole, greatly increased the relative incentive to export vis-à-vis domestic sales, although the level of net export incentives compared with a free-trade situation was relatively low and was gradually reduced after the reform. As a result, commodity exports continued to increase rapidly in the late 1960s and 1970s, thereby making possible a rapid industrialization and growth of GNP during that period. The reform package was also effective in changing the pattern of industrialization in Korea. That is, it made the major sources of manufacturing output growth shift from domestic demand expansion and import substitution to domestic demand expansion and export expansion. Despite the rapid growth of exports and the rapid progress in industrialization, however, Korea could not significantly improve her balance of payments following the reform package. The main reason is that imports also expanded very rapidly after the reform measures, not because of progress in import liberalization but for other reasons. Although one can give many reasons why the imports expanded so rapidly as to cause a chronic deficit in the trade balance, the overvaluation of the won from time to time was certainly a major factor.

The first lesson we can draw from the Korean experience seems rather obvious. That is, it is critical to maintain a realistic effective exchange rate if a country is to achieve rapid export growth and an external balance simultaneously. Korea was able to achieve a rapid growth of exports by increasing direct and indirect subsidies to exports whenever the exchange rate became unrealistic, because of the higher inflation in Korea than in its major trading partners, but failed to attain an equilibrium in its balance of payments. Consequently Korea's external debts accumulated to a high of US \$40 billion by the end of 1983, equivalent to nearly 50 percent of GNP. If Korea had maintained the 1965 level of the PPP-adjusted exchange rate

through the 1970s, the country could have avoided the chronic deficits in its current balance on external transactions.

The second lesson is that although maintaining a realistic exchange rate is as critical as suggested above, it is not easy to succeed in the face of chronic high domestic inflation. Because devaluation usually raises the relative prices of imports, it causes a further increase in the rate of domestic inflation. For this reason, policymakers tend to delay devaluation for fear of its effects on domestic price levels. Once they have started to delay, the Korean experience indicates that it becomes more difficult to change the exchange rate because the margin of change would be much greater than the adjustment originally avoided. The adjustment then waits until the adverse effects of the currency overvaluation become intolerable in light of the country's balance of payments. I would therefore suggest that domestic price stabilization is very important in maintaining a realistic effective exchange rate.

The third lesson is that in the early stage of export promotion by a developing country, a big push by the government may be helpful for export expansion since products of new entrants into the world market are not well accepted and have to be offered at prices lower than prevailing world prices. The level of net export incentives, however, should be gradually reduced so that domestic industry becomes efficient and able to compete with foreign industries without much government support. Because the continuous expansion of exports and national product depends upon the development of efficient and competitive domestic industry, technological innovations should be promoted to enhance industrial productivity, mainly by means of gradual reductions in protection and government subsidies after a certain stage.

Fourth, the Korean experience suggests that it is a difficult task for a small, open developing country to attain its internal and external balances simultaneously. When world market conditions are favorable for Korean exports, Korea's external balance may be improved by the rapid expansion of exports. This improvement, however, causes rapid expansion of the money supply from the foreign-exchange sector, thereby creating a new problem in the country's demand management. During a period of recession in advanced industrial countries, however, the country experiences a recession and a deterioration in its balance of payments, caused not only by a decline in foreign demand for the country's exports but also by the contraction of liquidity by the foreign sector. The small, open developing country is also vulnerable to external shocks, as shown by the experience of Korea during the two worldwide oil shocks (1974-75 and 1979-80). In those circumstances the effects of external disturbances on the balance of payments could be reduced if the country had adopted a fluctuating exchange rate. But then the country's policymakers lose their ability to control domestic prices by means of fiscal and monetary policy. Any small developing country adopt-

ing an export-oriented development strategy should, therefore, take into account the problem of increasing vulnerability to external disturbances and prepare appropriate countermeasures.

Finally, it is suggested that devaluation becomes increasingly difficult to undertake as a country's external debts increase. Development theory suggests that the introduction of foreign capital is desirable for a capital-scarce developing country with a relatively high rate of return on capital. The inflow of foreign capital then augments the shortage of domestic capital and contributes to an acceleration of economic growth rate in the country. Although this theory might be correct, we should not neglect the fact that once the external debts accumulate to a substantial level, the government may lose its ability to adjust the exchange rate freely when required for attainment of an external equilibrium, because of strong pressure from large business groups with foreign debts. There is a danger, when a country cannot devalue its currency to achieve an external balance, that external debts may continuously increase to a level unmanageable by the economy. It is therefore emphasized that a developing country should first try to increase domestic saving before trying to borrow from abroad. In this way, the level of foreign debt could be restricted to a manageable level to retain the country's ability to freely adjust its exchange rate.

6 The Interest-Rate Reform of 1965 and Domestic Saving

by Kwang Suk Kim

During 1960–65 the level of gross domestic investment was less than 15 percent of GNP, except in 1963 when it was 18.1 percent. Inasmuch as gross domestic savings ranged only from 0.8 to 8.7 percent of GNP during that period, the larger part of the gross domestic investment still had to be financed by foreign grants and loans. Despite the low ratio of investment to GNP, the growth rate of GNP started to accelerate in 1963. The average annual growth rate of GNP during 1963–65 was about 8.2 percent, which was more than double the 3.6 percent average annual growth rate of the preceding nine years (1954–62). The high growth during 1963–65 seems to have resulted from both increased utilization of existing industrial capacity to meet rapidly increasing demand, and increased agricultural production because of favorable weather conditions (ROK 1966:22).

To make up for the shortage of domestic capital and to activate the sluggish domestic economy, the government resorted to fiscal deficit financing and monetary expansion in 1961–63. The result was a return to high inflation after a period of price stability in 1958–60, which had been attained by strong implementation of the financial stabilization program. A new stabilization program had to be instituted in late 1963. The rate of price inflation measured by the national WPI declined from an annual average of about 20 percent during 1960–64 to about 10 percent a year beginning in 1965. However, because Korea had experienced a long period of inflation, a general expectation of price inflation still existed.

The economic environment that existed in 1965 was not favorable for the country's financial development. Korea's organized financial market as of 1965 consisted mainly of the central bank, five commercial banks, and four special banks—the National Agricultural Cooperatives Federation (NACF), the Medium Industry Bank, the Korea Development Bank (KDB), and the Citizens National Bank. Each of the commercial banks maintained a large network of branches throughout the country, and offered not only checking accounts but also various savings deposits with different terms. Special banks, excluding the KDB, offered similar savings accounts. The general public, however, avoided depositing their savings in these financial institutions; time and savings deposits did not increase in real terms between 1962 and September 1965, despite strong savings campaigns by both the government and the financial institutions (Table 6.1 and Table 6.2).

Table 6.1. Trend in financial savings before and after the interest-rate reform: 1962-72 (in 10⁹ current won)

Month/year	Time deposits	Installment savings	Mutual installments	Notice deposits	Saving associations	Other savings ^a	Money in trust	Total ^b
12/62	6.7	2.2	0.9	2.2	0.2	0.0	2.3	14.5
12/63	4.9	3.7	1.6	2.3	0.3	0.0	5.0	17.8
12/64	4.4	4.2	2.2	3.2	0.4	0.0	5.6	20.1
06/65	5.4	4.6	2.8	3.9	0.5	0.0	6.6	23.8
09/65	5.9	4.9	3.1	4.4	0.6	0.0	7.3	26.2
10/65	12.9	5.1	3.2	3.7	0.6	0.0	7.3	32.8
11/65	15.2	5.4	3.3	3.9	0.6	0.1	7.3	35.7
12/65	17.5	5.9	3.5	2.9	0.7	0.1	7.6	38.2
03/66	21.8	8.0	3.8	4.3	0.7	0.1	9.2	47.9
06/66	27.5	11.0	4.3	4.5	0.8	0.1	10.7	58.8
09/66	34.7	15.3	4.8	4.7	1.0	0.1	13.6	74.1
12/66	37.0	19.9	5.3	6.7	1.0	0.1	15.5	85.6
06/67	54.2	28.6	5.8	9.5	1.2	0.1	22.0	121.3
12/67	72.4	36.0	7.0	11.2	1.4	0.8	30.0	158.9
12/68	147.6	71.8	11.1	11.8	2.0	11.3	51.7	307.2
12/69	249.8	144.2	17.1	12.5	2.9	25.1	67.2	518.7
12/70	318.0	176.3	25.1	17.5	4.1	35.3	79.3	655.6
12/71	395.8	221.3	31.5	11.1	5.8	43.2	124.8	833.5
12/72	486.4	294.5	36.6	20.1	7.4	66.5	158.4	1,070.0

Source: BOK, *Economic Statistics Yearbook* (1962-73).

a. Includes the new household deposits and the housing installment deposits established in 1967.

b. Amounts may not sum to totals because of rounding errors.

The deposit rates offered by the financial institutions were unfavorable in the light of people's price expectations. Interest rates on bank deposits and loans were maintained at low levels owing to the artificial ceiling rates imposed by the monetary authorities (the Ministry of Finance and the central bank). For many years during the period 1960-65, the highest bank deposit rate (equal to a ceiling rate) was actually negative in real terms, if the annual rate of inflation is taken into account. It was natural, therefore, to expect that demand for loans from the financial institutions would chronically exceed the supply of loanable funds generated by deposits into the financial institutions. The government or the monetary authorities had to intervene directly in the allocation of scarce loanable funds, because the rate of interest could not bring about an equilibrium in the financial market. Although the government well understood the need to increase saving through financial institutions, it was more concerned about the negative effect of high interest rates on investment and, as a result, was slow in moving toward raising the interest rates on bank deposits and loans.

Under such conditions, investment in equities would be attractive to individual savers. There was, however, little opportunity for average individual savers to invest in such equities in an economy where the predominant form of enterprise was a closely held or family corporation. As of 1965 the stocks of only 17 corporations were listed in the Korea Stock Exchange, and most of these stocks were actually issued by public corporations. It is not surprising that the lack of financial investment opportunities resulted in reduced personal savings and the use of savings for real estate speculation and for lending out in the unorganized financial markets that operated outside the domain of the monetary authorities' regulations.

The unregulated or unorganized financial markets flourished notoriously in Korea during 1960-65. One estimate put outstanding assets and liabilities in the unorganized markets on the order of 40-45 billion won in 1964 (Gurley, Patrick, and Shaw 1965:81). That figure was equivalent to almost one-quarter of private-sector liabilities in primary securities and one-third of the private sector's portfolio assets in primary securities. The size of outstanding assets and liabilities in the unorganized market ranged from 56 to 63 percent of total domestic credit at the end of 1964. Interest rates on loans from the unorganized money markets varied widely, depending upon the credit standing of borrowers and the amount of the loans involved. The interest rate most frequently quoted in the unorganized market was about 48-60 percent per annum in 1964-65 (before the reform), whereas the highest bank rates on time deposits and loans were only 15 and 16 percent, respectively.

MAIN FEATURES OF THE REFORM

The Democratic Republican government that came into power in December 1963, succeeding the military government, started in early 1964 to

Table 6.2. Trends in money supply, quasi-money loans of deposit-money (in 10⁹ won, unless otherwise stated)

End of year	In current prices				GNP deflator ^b (1975=100) (E)
	Money supply (M_1) (A)	Quasi-money (B)	Money supply (M_2) (C=A+B)	Loans of DMB ^a (D)	
1962	39	13	52	43	11.6 (18.4)
1963	42	13	55	49	15.0 (29.3)
1964	49	15	64	53	19.5 (30.0)
1965	66	31	97	72	20.7 (6.2)
1966	85	72	157	103	23.7 (14.5)
1967	123	131	254	178	27.4 (15.6)
1968	178	259	437	331	31.8 (16.1)
1969	252	453	705	563	36.5 (14.8)
1970	308	590	898	722	42.2 (15.6)
1971	358	727	1,085	920	47.3 (12.1)
1972	519	933	1,452	1,198	54.7 (15.6)
1973	730	1,251	1,981	1,588	61.9 (13.2)
1974	946	1,511	2,457	2,428	80.2 (29.6)
1975	1,182	1,968	3,150	2,906	100.0 (24.7)
1976	1,544	2,661	4,205	3,725	117.7 (17.7)
1977	2,173	3,703	5,874	4,709	136.9 (16.3)
1978	2,714	5,215	7,929	6,609	165.1 (20.6)
1979	3,275	6,604	9,878	8,978	197.0 (19.3)
1980	3,807	8,728	12,535	12,204	247.9 (25.8)

Source: BOK, *Economic Statistics Yearbook* (1962-81).

a. Deposit-money banks (DMB) include all commercial and special banks except the Korean Development Bank.

b. Figures in parentheses indicate annual percentage change in the GNP deflator.

promote various economic policy reforms for attaining the basic goal of export-oriented industrialization and growth. The exchange-rate reform was carried out in May 1964. The second target of the policy reform was to change the structure of bank interest rates. Tax reform and trade liberalization were on the agenda for future action.

To prepare for the interest-rate reform, the Korean government and the Bank of Korea began, in early 1965, to study the complicated structure of interest rates. At that time, interest rates in the organized financial market were not only unrealistically low compared with the average market yield on national bonds and interest rates in unorganized markets, but also showed wide variation by source of funds and by lending institution. On the basis of their study, the government prepared a reform proposal recom-

banks, and ceiling deposit rate, in both nominal and real values: 1962-80

In 1975 constant prices				Ceiling deposit rate (%)	
Money supply (M_1) ($F=A/E$)	Quasi-money ($G=B/E$)	Money supply (M_2) ($H=C/E$)	Loans of DMB ^a ($I=D/E$)	Nominal ^c (J)	Real ^d (K)
336	112	448	371	15.0	1.0
280	86	366	327	15.0	-3.4
251	77	328	272	15.0	-14.3
319	149	468	348	18.8	-11.2
359	303	662	435	30.0	23.8
448	478	927	650	30.8	15.5
560	814	1,374	1,040	27.6	12.0
690	1,241	1,931	1,542	23.8	7.7
729	1,398	2,127	1,711	22.8	8.0
757	1,536	2,293	1,945	22.1	6.5
949	1,705	2,654	2,190	15.8	3.7
1,179	2,021	3,200	2,565	12.6	-3.0
1,179	1,884	3,063	3,027	15.0	1.8
1,182	1,968	3,150	2,906	15.0	-14.6
1,312	2,260	3,572	3,165	15.5	-9.2
1,587	2,705	4,290	3,440	15.8	-1.9
1,644	3,158	4,802	4,003	16.5	0.2
1,662	3,352	5,014	4,557	18.6	-2.0
1,536	3,520	5,056	4,923	22.9	3.6

c. Average nominal rate for each year estimated, weighting by the number of months.

d. Column (J) minus the annual percentage increase in column (E) lagged one year.

mending that the high interest-rate strategy be implemented by the second quarter of the same year. The actual implementation of the reform proposal was delayed, however, until the end of September owing partly to some opposition within the government and partly to the National Assembly's slow action in amending the Interest Rate Limitation Law, which prescribed the upper ceiling on interest rates at 20 percent per annum. The National Assembly amended the law on 14 September, raising the upper ceiling from 20 to 40 percent per annum. The interest-rate reform was finally announced and put into effect on 30 September 1965. Cole and Park (1983:201) suggest that the interest-rate reform was announced on that date because there was a provision in the annual stabilization program for 1965, jointly agreed upon by the Korean and American governments as the basis for the annual U.S. aid program to Korea, that such reform would be implemented by the third quarter of that year.

It seems that the monetary authorities designed the high interest-rate strategy for Korea mainly on the basis of the successful experience of Taiwan's high interest-rate policy during 1950–58. The Bank of Korea had sent its research staff to Taiwan in early 1965 to study the design, implementation, and results of Taiwan's high interest-rate policy. (For details on the Taiwanese experience, see Irvine and Emery 1966.) In addition, recommendations made by John Gurley, Hugh Patrick, and Edward Shaw—renowned experts on money and finance—provided valuable guidance to Korean policymakers. These American professors collaborated on a study of the Korean financial system, commissioned by the USAID program. Recommendations in their report of July 1965 covered a wide range of necessary policy measures for improvement of the Korean financial system, including the suggestion that the interest rates on both bank deposits and loans be raised by removing artificial ceilings (Cole and Park 1983: 298–303). It seems that the authors played an important role in the formulation of the reform package, not only because they provided technical advice but also because they were influential in persuading high-level government officials and politicians who had been reluctant to accept the high interest-rate policy.

When the government announced the reform measure, the Korean business sector, particularly large enterprises, expressed considerable displeasure. The reason for their complaints was the expected increase in the cost of bank loans, and therefore that the high interest-rate strategy would lead to a high rate of domestic inflation due to the cost-push effect of the higher interest rates on the price level. Some business leaders also expressed concern that the high interest rates might reduce domestic investment and consequently result in a recession. The government responded with an advertisement campaign for the reform. It seems, however, that the government considered the complaints of large businesses when it raised the interest rates on special bank loans financed from government funds in October 1965.

The purpose of the reform was to sharply raise both deposit and loan rates of financial institutions in order to attract private savings into the organized financial markets and at the same time to discourage bank loans for unproductive purposes. The Monetary Board of Korea, a committee within the central bank, announced that the ceiling rate on saving deposits was being raised from 15 percent per annum to a high 30 percent, while the ceiling rate on ordinary bank loans (unspecified short-term loans) was being raised from 16 to 26 percent per annum (Table 6.3).

The Monetary Board set the maximum interest rate on savings deposits at 2.5 percent per month so that each bank could adjust its deposit rates by term structure within the ceiling rate. All banking institutions, however, adopted a uniform schedule of deposit and loan rates (Table 6.3), by an agreement of the Korean Bankers' Association, thus avoiding severe inter-bank competition. The reform measure not only sharply raised the interest

Table 6.3. Changes in principal interest rates of banking institutions as of 30 September 1965 (% per annum)

Interest rates	Old rate	New rate ^a
Rates on deposits		
Time deposits		
3 months maturity	9.0	18.0 (1.4)
6 months maturity	12.0	24.0 (1.8)
12 months maturity	15.0	26.4 (2.0)
18 months maturity		30.0 (2.2)
Notice deposits	3.65	5.0
Savings deposits	3.6	7.2
Installment savings deposits	10.0	30.0
Passbook deposits	1.8	1.8
Demand deposits	0.0	0.0
Rates on loans		
Discount on commercial bills	14.0	24.0
Loans on other bills (unspecified)	15.0	26.0
Overdraft	18.5	26.0
Overdue loans	20.0	36.5
Call loans	12.0	22.0
Credits for exports and supply of goods to U.S. armed forces ^b	6.5	6.5

Source: BOK, *Economic Statistics Yearbook* (1967).

a. Indicates the actual rates agreed upon by the Korean Bankers Association. The rates given in parentheses are the monthly interest rates corresponding to the annual rates indicated. (No compounding of the monthly rate is formally permitted by financial institutions.)

b. In the case of unperformed export or supply of U.S. offshore procurement, the rate on other bills is applied.

rate on time deposits but also set the interest rate on a monthly basis, following the general practice in unorganized money markets during the period. That meant that, for time deposits, depositors could take interest earnings at the end of each month. An automatic compounding of interest earning by month was not permitted by the banking institutions, but depositors could have the interest earning compounded monthly by contracting to deposit it into installment savings accounts.

Interest rates on various types of bank loans were also raised after the ceiling rate set by the monetary authorities was raised to 26 percent. But one of the special features of the reform was that the ceiling loan rate was set lower than the maximum deposit rate. The purpose of this "reverse margin" between the deposit and loan rates was, of course, to place emphasis on increasing financial saving, while not raising the cost of loans so high as to discourage sound business borrowing. To make up the possible

reduction of bank earnings resulting from the reverse margin between the deposit and loan rates, a new system of subsidizing deposit banks was introduced. That system required the central bank to pay interest on the bank reserves against time and savings deposits deposited at the central bank. The interest rate that the central bank would pay on bank reserves was not fixed, but was to be adjusted according to the size of reduction in bank earnings.¹ A higher rate of 36.5 percent was set, however, for overdue loans to prevent loans from being overdue because of the deposit rate being higher than the loan rate.

To determine how realistic the new interest rates on deposits and loans were in the Korean context, it might be helpful to give some indications of the market rate of interest and the rate of return on capital in the country. As already suggested, the interest rates in unorganized money markets generally ranged between 4 and 5 percent per month. This unorganized market rate could not be accepted as the market rate of interest that would bring about an equilibrium in the organized financial markets, because, as Bottomley (1963:637-47) suggested, it included an additional premium for risk. An average yield on national bonds floated in the market was around 1.9 to 2.0 percent in 1964 and during the first nine months of 1965. The monthly yield on national bonds provided an important indicator of the market rate of interest because it was generally determined by market demand for and supply of such bonds without much intervention by the monetary authorities. Therefore, even though the ceiling deposit rate of 2.5 percent per month was about half the interest rate in unorganized money markets, it was much more attractive than the market yield on public bonds.

As regards the bank loan rate, the government originally announced that even if it were sharply raised to 26 percent, the average interest burden of industries might not increase. The government announcement indicated that if business borrowing from unorganized markets at a higher interest rate were reduced by the increased supply of bank loans at an annual interest rate of 26 percent, a weighted average interest burden on industries might be unaffected or reduced in the long run. In any case, the new ceiling loan rate was not considered too high to discourage business borrowing from the financial institutions, in view of the rate of return on capital in Korea, and also the lending rate in unorganized markets. A study of capital costs based on the survey of selected industrial establishments suggested that an average annual rate of return in Korean manufacturing industries was 13.5 percent in real terms in the mid-1960s (KEDI 1967:79). The Bank of Korea's analysis, however, disclosed that the ratios of net profit to net worth in Korean manufacturing in 1963 and 1964 were 19 and 15 percent,

1. This system of paying interest on reserves was originally suggested by Gurley, Patrick, and Shaw (1965:30-36), as was the establishment of a stabilization account in the central bank as a monetary control technique.

respectively. The same source also indicated that the ratio of payable interest and net profit to gross capital was about 12 to 13 percent in 1963-64 (BOK, *Economic Statistics Yearbook*, 1966:210-11). Because of the general practice of statistical underreporting on profits during this period, however, it was generally believed that the marginal product of capital in Korea was as high as 20 percent in real terms.²

There was no explicit aim to set the real rate of interest equal to the average rate of return on capital. The government, however, tended to compare the implicit real rate of bank loans with the various indicators of capital profitability, assuming an annual inflation rate of about 10 percent as in 1965. Inasmuch as the interest elasticity of investment demand was unknown in Korea, the maximum loan rate that would not discourage investment could be found by such a comparison.

It must be made clear that the loan rates described above were to be applied only to loans from banking funds. Although rates on loans from government funds were also raised, they were much lower than those for bank funds. The rates on long-term, government-fund loans generally ranged from 7.5 to 12.0 percent per annum depending upon the government budgetary source, with the exception of long-term loans for irrigation and housing, which ranged only from 3.5 to 4.0 percent per year. These government-fund loans at lower interest rates were supplied mainly through the KDB and the NACF for long-term investment in key industries and in the agricultural sector.

Because the changes in interest rates on government-fund loans were small, the interest-rate reform resulted in a widening of the gap between the loan rate on banking funds and that on government funds. This was a major point of criticism at the time of reform. The government, however, argued that the preferential rate on loans from government funds was needed to attract private investment in certain sectors or industries that the government wanted to promote. Another argument was that the rate on long-term loans should be based on a long-run expectation of interest-rate movements. That argument shows that the Korean policymakers who had designed the reform considered the high interest-rate strategy to be a temporary measure to cope with the problems of low savings and high demand for investable funds under inflationary conditions. The Korean policymakers seemed to have thought that price stability could be attained in the near future and that the interest rates would decline in the long run.

The interest rate on export credit was maintained at its pre-reform level of 6.5 percent per annum (Table 6.3), thus widening the interest-rate gap between export credit and other commercial loans. As a result, the lower

2. Brown (1973:203-06) attempted to estimate the real rate of return on capital in Korea using national income account data for 1962-67. His results indicate that the real rate of return on new investment was somewhat higher than 20 percent during that period.

rate on export credit further intensified incentives to exporters. This favorable export credit was made available to all exporters who could present export letters of credit as collateral. Despite the lower interest rate on their export credit, it was quite profitable for the banking institutions that extended such credit, because they could obtain financial resources through the central bank's rediscount of export bills at an annual interest rate of only 3.5 percent.

The interest-rate reform of 1965 was accompanied by a shift in monetary control techniques from the previous reliance on a direct method to the use of indirect instruments. Before the interest-rate reform, domestic credit had been controlled by imposing ceilings on bank loans. During the reform these ceilings were removed, thereby allowing the banking institutions to expand loans within the limits of their excess reserves. At the same time, the Bank of Korea introduced the stabilization account proposed by Gurley, Patrick, and Shaw (1965) and also decided to use the method of forced sales of the central bank's stabilization bonds to the financial institutions for the purpose of monetary control through manipulation of bank reserves. These two instruments were to be used to complement the instrument of legal reserve requirements.

The interest-rate reform resulted in a rapid increase in bank savings deposits beginning in the fourth quarter of 1965. Bank loans also expanded rapidly as savings deposits increased, because the loan ceilings that had been imposed by the government before the reform were completely abolished. In addition, the inflow of foreign capital started to increase rapidly in 1966, partly because of the signing of a diplomatic normalization agreement between Korea and Japan in 1965 and partly owing to the increased differential between domestic and foreign interest rates. The system of bank guarantees for the repayment of foreign loans, instituted in 1962, began to be actively used immediately after the interest-rate reform as an instrument to facilitate borrowing from abroad by Korean enterprises.³ In any case, the rapid increase in foreign capital inflow, together with the continued expansion of Korean exports, caused a sudden jump in the growth of foreign exchange reserves, thereby creating a new source of excessive monetary expansion. The main issue of the monetary policy was, therefore, how to control excessive liquidity arising from the increased foreign capital inflow, as well as the expansion of domestic bank loans.

To control the money supply for price stabilization, the monetary authorities had to raise the legal reserve requirements for loans drastically in February 1966. Between October 1966 and March 1967 a high marginal reserve requirement of 45-50 percent was imposed on incremental deposits on top

3. The system of bank guarantees for repayment of foreign loans might have increased the interest rate differential between domestic and foreign loans by lowering interest rates on foreign loans more than would have been the case without such a system.

of the basic reserve requirements, which were 35 percent for demand deposits, 20 percent for short-term savings deposits, and 15 percent for long-term savings deposits. In addition to this method of increasing reserve requirements, the Bank of Korea attempted to sterilize the excess reserves of deposit-money banks by forcing the banks to purchase its stabilization bonds and to deposit bank reserves in the central bank's stabilization account. That action indicates that the sharp increase in banks' time and savings deposits that was made possible by the higher interest rate was used largely for sterilizing the excessive expansion of bank reserves coming mainly from the explosive inflows of foreign capital, including cash loans. These developments contradicted the original purpose of the interest-rate reform.

Under the situation, the government could adopt one of three policies, consistent with the basic goal of export-oriented industrialization and growth. The first policy option was to restrict foreign capital inflows by means of direct control or by the imposition of an interest-equalization tax on imported foreign capital. This policy option was suggested by many economists but was not accepted by the government, out of fear that such action might shut off foreign finance, which had just begun to increase. The second alternative was to increase imports through trade liberalization so that foreign exchange reserves would not accumulate too rapidly. That policy alternative could not be undertaken because of strong business pressure to protect domestic industries. The third option was to accumulate foreign reserves, squeeze the supply of domestic credit, and gradually reduce domestic interest rates, particularly bank deposit rates. The third option was the one the government adopted. (These points are also discussed in Cole and Park 1983:208-09.)

The high deposit and loan rates of banking institutions, which became effective in September 1965, were maintained without change until April 1968, when the monetary authorities started gradually to reduce the bank rates (Table 6.4). By June 1969 the maximum interest rates on deposits and loans were reduced to 22.8 and 24 percent, respectively, thereby completely eliminating the reverse margin between the deposit and loan rates that had been hurting the profitability of financial institutions. The high interest-rate strategy ended on 3 August 1972, when the government announced the Presidential Emergency Decree for Stabilization and Growth, which included a drastic reduction in interest rates of banking institutions among other important policy measures. After the August 3rd measure of 1972, the high interest-rate strategy was not adopted again except for a short period in the early 1980s when the economy was under a high inflationary condition due to a sharp rise in world oil prices and to a domestic excess demand situation. Thus, the high interest-rate strategy was applied in Korea for about seven years after its adoption in late 1965.

Table 6.4. Changes in the ceiling deposit and loan interest rates of banking institutions: 30 September 1965 to 28 June 1982 (% per annum)

Effective from	Ceiling deposit rate	Ceiling loan rate ^a
09/30/65	30.0	26.0
04/01/68	27.6	26.0
10/01/68	25.2	25.2 ^b
06/01/69	22.8	24.0
06/28/71	21.3	22.0
01/17/72	17.4	19.0
08/03/72	12.6	15.5
01/24/74	15.0	15.5
08/02/76	16.2	18.0
10/04/77	14.4	16.0
06/13/78	18.6	19.0
01/12/80	24.0	25.0
09/16/80	21.9	22.0
11/08/80	19.5	20.0
11/09/81	18.6	19.0
11/30/81	17.4	18.0
12/29/81	16.2	17.0
01/14/82	15.0	16.0
03/29/82	12.6	14.0
06/28/82	8.0	10.0

Source: BOK, *Economic Statistics Yearbook* (1965-83).

a. Indicates short-term rate on ordinary loans (loans on other bills) for other than "superior enterprises." Local banks, however, could charge a slightly higher rate than the rate reported here.

b. End of reverse margin.

THEORETICAL APPROPRIATENESS OF THE REFORM

The primary objective of the 1965 reform was to increase private saving through financial institutions, and the secondary objective was to enhance the role of interest rates in resource allocation and monetary control. Here I consider only the theoretical appropriateness of the reform in relation to its primary objective. The theoretical appropriateness is expected to be more controversial in relation to the primary objective than to the secondary objective.

As previously stated, financial saving in the form of bank deposits were not increasing in real terms during the first half of the 1960s, but the demand for such saving was growing rapidly for financing domestic investment. The most probable reason for the sluggish growth of financial saving during that period was the low real interest rates offered by financial insti-

tutions, which were, in fact, negative in some years when the annual rate of inflation was taken into account. In that respect, the interest-rate reform of 1965 was an appropriate policy choice of the government for an increase in financial saving.

It is generally believed that economic development is accompanied by rapid growth of financial assets, because the financing of economic development in a market economy necessitates the accumulation of debt and financial assets, as explained by Gurley and Shaw (1956:257-76; 1955:515-38; 1967:257-68). The process of financing economic development through the accumulation of debt and financial assets is generally divided into two types—direct finance and indirect finance. In the mid-1960s, when the interest-rate reform was undertaken, the technique of direct finance was still underdeveloped in Korea. Indirect finance, therefore, played a far greater role in mobilizing savings and directing them to productive investment in Korea than it did in developed countries where the technique of direct finance was well developed.

In economies where the capital markets are highly developed, saving deposits in banking institutions is only one of the saving instruments available to individuals. An increase in the bank savings deposits may therefore represent only a shift between savings deposits and other financial assets. In that case, raising the interest rate on bank time deposits may not contribute to increasing financial saving even if the higher interest rate brings about an increase in bank savings deposits. The situation of Korea in 1965, however, was quite different from that of developed countries. In Korea, where the bond and equities market was still underdeveloped, financial saving through banking institutions was the most important savings instrument available to the majority of the population, if savings through unorganized money markets were excluded. Life insurance and postal savings could be important in attracting small savers, although savings through such nonbank financial intermediaries had been relatively small until 1965. The interest rates applied in such savings schemes were usually adjusted in response to the change in the bank interest rates, without much time lag.

The rate adjustments indicate that a sharp increase in bank deposit rates, which could increase savings deposits, may contribute to increasing the flow of savings into the organized financial market of Korea. An important question, then, is whether this increase in financial saving will ultimately contribute to increasing aggregate domestic saving. This question is actually equivalent to asking whether the high interest rates of banking institutions contribute to increasing aggregate real saving and investment.

Conventional theory does not seem to support the hypothesis that higher interest rates will increase aggregate domestic saving. According to the Keynesian view, aggregate saving is a function of income level in an economy. Some development economists have taught that aggregate saving is determined primarily by the growth of a modern business sector in an

economy. For that reason, the saving strategies suggested for developing countries during the 1960s usually emphasized forced saving through taxation and credit expansion while often neglecting the possible strategies for increasing voluntary saving. As pointed out in a report published by the Economic Commission for Asia and the Far East (ECAFE 1962), many developing countries in Asia deliberately designed monetary and fiscal policies to maintain interest rates in organized money markets at low levels. An immediate objective of such policies was the reduction of the interest burden on government borrowing. Aside from that purpose, the policies were based on the Keynesian view that aggregate saving is a function of income and that there is a strong inverse relationship between the level of the interest rate and the volume of investment (ECAFE 1962:22).⁴ That kind of low interest-rate policy was not a unique case for developing countries in the Asian region but a general phenomenon for most developing countries in all regions, as suggested by Tun Wai (1956:249-78). That it was so indicates that there were no strong theoretical and empirical supports for adopting the high interest-rate strategy as a means of mobilizing voluntary private savings. Despite the weak support on both theoretical and empirical grounds, Korean policymakers announced that the high interest-rate policy would greatly contribute to increasing aggregate domestic saving. Justifications for this view were not made clear at the time of the reform. Nevertheless, the high interest-rate policy was an appropriate policy choice for increasing domestic savings in Korea.

First, bank deposits in Korea played a far greater role in the mobilization of savings than in many developed countries. The higher interest rate on bank time deposits may have resulted in some shift of savings from other forms to bank deposits. But, because the capital market was still underdeveloped, it was not expected that any substantial amount of savings could be shifted from the capital market to the financial market. It was expected that an increase in time deposits would come mainly from the reduction of household current consumption and the shift in savings from unorganized money markets. Because savings in the form of unorganized money market assets not only were risky for savers but also were used largely for unproductive purposes, such as the purchase of consumer durables and family ritual expenses, the shift of savings from the unorganized market to the organized market was considered beneficial in that aggregate savings were increased and directed into productive investment.

Second, it was expected that domestic investment would increase despite the higher interest rate on bank loans, because the rate of return on investment was thought to be higher than the new loan rate. In the mid-1960s the shortage of domestic savings was considered to be a major constraint

4. Along this line, Jain (1965:29-40) even suggested that a zero (or nearly zero) rate of interest should be maintained for a higher level of savings and high growth of GNP.

on economic growth because intended investment far exceeded the supply of savings, unlike the situation in advanced countries. Therefore, if higher interest rates could initially induce people to save a larger share of their incomes, this increase in saving would in turn contribute to an increase in investment and consequently to the growth of national income. The growth of national income induced by the initial increase in saving would again positively affect the saving propensity of the nation. This process of increasing domestic saving would be repeated and domestic saving would continue to grow after the interest-rate reform. (This point was also suggested by Brown 1973:199-202.)

EFFECTS OF THE REFORM

The interest-rate reform of 1965 had been expected to have wide-ranging effects on the economy, including both direct and indirect effects on financial markets, aggregate saving and investment, and the pattern of resource allocation in the country. The discussion here is limited to the direct effects of the reform on financial saving, aggregate real saving and investment, organized financial market operations, and unorganized money market conditions.

Rapid Increase in Financial Savings

Contrary to conventional expectations regarding public responses to changes in interest rates in developing countries, the people's response to the sharp rise in interest rates was both rapid and substantial. The rise in bank deposit rates was followed by a rapid increase in financial savings, defined to include the time and savings deposits of banking institutions as well as commercial banks' trust accounts. Some of the rapid response was also due partly to an intensified savings campaign staged by the government immediately after the interest-rate reform.

Total financial saving (time and savings deposits plus money in trust) increased by about 25 percent within one month of enactment of the interest-rate reform. The rate of increase in time deposits was much greater than the rate of increase for total financial saving (Table 6.3). Other types of savings deposits remained almost unchanged, whereas time deposits more than doubled during the first month after the reform.⁵ This pattern of increase in financial saving was expected because the interest rate on time deposits was more favorable than that on short-term savings deposits such as notice deposits, or installment savings deposits (including mutual installment deposits). Installment savings could not be increased within a short period of time because under these savings schemes individual savers

5. A small shift from demand deposits to time deposits was observed immediately after the reform. The shift was relatively small and temporary, however. Demand deposits also increased after the reform. See BOK, *Economic Statistics Yearbook* (1966:table 26) and the Bank of Korea yearbooks for later years.

would usually deposit a small sum of money each month (by installment) until the contracted deposit target amount was reached. In any case, that pattern of increase in financial saving generally continued until December 1965 (Table 6.1).

To compare such a sharp increase in financial saving after the interest-rate reform with other financial indicators over a longer period, the data in Table 6.4 are helpful. To highlight some of the major changes after the reform, the total quasi-money (which is roughly equivalent to time and savings deposits of banking institutions) more than doubled in real terms between December 1965 and December 1966. It increased more than ten times in real terms in the six years from December 1965 until the end of 1971. Such a rapid increase was in marked contrast to the negative growth of real quasi-money between 1962 and 1964, during which time the ceiling deposit rate was held constant at 15 percent per annum despite a much higher rate of inflation in the country. The increase in real quasi-money was initially due to the rapid saving response by households and individuals. According to the flow of fund data published by the Bank of Korea, about 81 percent of the small increase in time and savings deposits in 1964 was contributed by individuals (BOK, *Economic Statistics Yearbook*, 1966, 1972). The share of contributions by individuals increased to 88 percent in 1966—that is, after the reform. The individual sector share in the increase of time and savings deposits, however, gradually declined thereafter to reach around 70 percent by 1971.

The increase in real quasi-money was very sharp as already explained, but the total level of money supply (M_1) was kept under control through a stabilization program. Real money supply increased by about 13 percent in 1966 and by about 137 percent between 1965 and 1971. In contrast, the broadly defined money supply (M_2) increased at a much more rapid rate than the narrowly defined money supply, because real quasi-money expanded sharply after the reform. Real M_2 increased nearly five times between 1965 and 1971. As a result, quasi-money, which had been roughly less than a quarter of the broadly defined money supply before the interest-rate reform, increased to 46 percent of M_2 by the end of 1966 and to 67 percent by the end of 1971. The nominal value of quasi-money expanded sharply from a mere 2 percent of money GNP in 1964 to nearly 7 percent in 1966 and then to 22 percent by 1971, but the narrowly defined money supply increased only from 6.8 percent of money GNP to roughly 11 percent between 1964 and 1971. Loans of deposit-money banks were also able to expand rapidly after the reform as the rapid increase in quasi-money made possible a rapid expansion of loanable funds.

Although the quasi-money expanded rapidly in relation to M_1 , M_2 , and GNP during the period of high interest rates, the rate of increase in quasi-money seems to have slowed considerably after 1972, the year in which the bank interest rates were sharply reduced by the monetary authorities.

After 1972 real deposit interest rates often became negative. Reflecting the decline in incentives to financial savers, real quasi-money increased by only 106 percent during the eight-year period from 1972 to 1980, though the narrowly defined money supply increased by about 62 percent during the same period. The nominal value of quasi-money barely increased from 23 to 25 percent of nominal GNP between 1972 and 1980.

Effect on Aggregate Saving and Investment

One who expects a rapid increase in savings through financial institutions after a rise in interest rates may not necessarily agree that the change in interest rates affects the aggregate levels of real saving and investment. Although this chapter has emphasized the important role of financial saving through banking institutions in the mobilization of domestic saving in Korea, it is still unclear whether the high interest-rate strategy actually caused a sharp increase in the aggregate levels of real saving and investment.

Two previous studies on the effect of the Korean interest-rate reform on aggregate domestic saving give somewhat different results. One by Brown (1973) attempted a regression analysis mainly to measure the effect of the 1965 reform on aggregate private saving. For that analysis Brown generally assumed that annual domestic private saving was a function of private disposable income, a nominal or real interest rate, and the domestic private savings lagged a year. Most of his regression results indicated that the regression coefficient of the interest rate variable was not only positive as expected but also statistically significant in explaining the ratio of private saving to private disposable income. Brown therefore concluded that the interest-rate reform of 1965 "caused the saving function to shift upward as people desired to save a larger share of their incomes" (Brown 1973:200). A more recent study by Cole and Park (1983), however, which did not undertake a regression analysis as in Brown's study, suggested that "the effect of the financial reform on domestic savings is ambiguous, because it was only one of many changes that contributed to the upward shift in the saving function" (Cole and Park 1983:211).

To examine the effect of the 1965 reform on aggregate domestic saving, I first prepared a statistical table showing the trends in the ratio of sectoral gross savings to GNP for Korea during 1962-82. Table 6.5 shows that the ratio of gross domestic saving to GNP increased rapidly after 1965. A close look at the data, however, indicates that the rapid increase in the gross domestic saving rate was mainly due to the increase in government saving—which could not have been affected by the higher interest rates of banking institutions.

During the period of high interest rates (1965-71), gross domestic saving increased from 7.4 to 15.4 percent of GNP. Only government savings showed a sharp increase, from 1.7 to 5.4 percent of GNP, during the same period, while business-sector savings remained almost unchanged at 7.5

Table 6.5. Trend in the ratio of sectoral gross savings to GNP: 1962-82 (%)

Year	Gross domestic saving rate				Foreign saving rate	Statistical discrepancy	Gross saving = gross investment
	Government	Business	Household	Sub-total			
1962	-1.5	7.1	-2.3	3.3	10.7	-1.1	12.8
1963	-0.4	7.1	2.0	8.7	10.4	-1.0	18.1
1964	0.5	6.5	1.8	8.7	6.9	-1.6	14.0
1965	1.7	7.7	-2.1	7.4	6.4	1.2	15.0
1966	2.8	7.5	1.6	11.8	8.4	1.3	21.6
1967	4.1	7.9	-0.6	11.4	8.8	1.7	21.9
1968	6.1	7.8	1.1	15.1	11.2	-0.4	25.9
1969	5.9	7.7	5.2	18.8	10.6	-0.6	28.8
1970	6.5	7.5	3.4	17.3	9.3	0.2	26.8
1971	5.4	7.5	2.5	15.4	10.7	-0.8	25.2
1972	3.6	9.1	3.0	15.7	5.2	0.7	21.7
1973	4.2	11.4	7.9	23.5	3.8	-1.7	25.6
1974	2.3	12.1	6.1	20.5	12.4	-1.9	31.0
1975	4.0	11.3	3.4	18.6	10.4	0.4	29.4
1976	6.2	10.9	6.0	23.1	2.4	-0.0	25.5
1977	5.6	10.9	8.6	25.1	0.6	1.6	27.3
1978	6.5	9.9	10.0	26.4	3.3	1.5	31.1
1979	7.2	9.7	9.7	26.6	7.6	1.2	35.4
1980	6.2	8.2	5.5	19.9	10.2	1.4	31.5
1981	6.7	8.3	4.6	19.6	7.9	0.9	28.4
1982	6.7	9.7	5.1	21.5	4.8	-0.1	26.2

Source: BOK, *National Income* (1982).

Note: Ratios are based on current price series. Percentages may not sum to totals because of rounding errors.

to 7.7 percent of GNP. In contrast, household savings, which should have been most affected by the high interest-rate policy, increased from -2.1 to 2.5 percent of GNP between 1965 and 1971. But the base year 1965 was an unusual year. The household saving rate even in 1963 and 1964 was 1.8 to 2.0 percent. Thus it might be more correct to say that the household saving rate simply showed a wide fluctuation by year during the period of high interest rates, rather than a notable increase.

Such a yearly fluctuation in the household saving rate may be an artifact resulting from the inclusion of "changes in agricultural inventories" in household saving. Although the changes in agricultural inventories directly affect the level of gross capital formation and therefore the level of domestic saving, they are primarily determined by the level of agricultural production in the current year because the major crop, rice, is harvested near the

end of the calendar year in Korea. That implies that household saving in the form of increases in agricultural inventories is determined independently from the household propensity to save out of the current income. To eliminate the yearly fluctuation in the household saving rate caused by the fluctuation in agricultural inventories, one can easily adjust the income and saving data by subtracting the increases in agricultural inventories from both household disposable income and savings (Table 6.6). Apart from that adjustment, the adjusted household saving rate given in Table 6.6 is a better indicator of the household saving propensity than that given in Table 6.5 because it measures that sector's saving propensity out of all current disposable income—including transfers from abroad. The household sector's

Table 6.6. Trend in household saving rate, adjusted for change in agricultural inventories: 1962-81

Year	Disposable income (10 ⁹ won) (A)	Savings (10 ⁹ won) (B)	Change in agricultural inventories (%) (C)	Adjusted disposable income (10 ⁹ won) (D=A-C)	Adjusted savings (10 ⁹ won) (E=B-C)	Adjusted household saving rate (%) (F=E/D)
1962	291.0	-3.4	-5.6	296.6	2.2	0.7
1963	421.3	16.9	17.7	403.6	-0.8	-0.2
1964	617.8	25.2	20.8	597.0	4.4	0.7
1965	673.0	1.5	-0.1	673.1	1.6	0.2
1966	853.7	42.9	8.3	845.4	34.6	4.1
1967	1,022.4	17.1	-18.3	1,040.7	35.4	3.4
1968	1,279.3	48.3	-16.7	1,296.0	65.0	5.0
1969	1,681.1	152.4	47.7	1,633.4	104.7	6.4
1970	2,058.7	119.6	50.3	2,008.4	69.3	3.5
1971	2,554.0	118.1	62.3	2,491.7	55.8	2.2
1972	3,126.4	169.3	72.9	3,053.5	96.4	3.2
1973	4,000.6	477.2	44.7	3,955.9	432.5	10.9
1974	5,597.8	511.1	80.7	5,517.1	430.4	7.8
1975	7,350.0	405.1	115.4	7,234.6	289.7	4.0
1976	9,601.8	890.2	143.1	9,458.7	747.1	7.9
1977	12,308.2	1,553.7	198.6	12,109.6	1,355.1	11.2
1978	16,748.2	2,509.4	75.8	16,672.4	2,433.6	14.6
1979	21,108.0	3,001.1	261.6	20,846.4	2,739.5	13.1
1980	25,173.5	2,130.9	-458.2	24,715.3	2,589.1	10.5
1981	30,791.2	2,258.3	588.8	30,202.4	1,669.5	5.5

Source: BOK, *National Income* (1982).

Note: Amounts are expressed in current won.

domestic saving rate in Table 6.5 does not include saving out of such transfers from abroad.

In any case, the adjusted household saving rate showed a large increase after the interest-rate reform of 1965. As shown in Table 6.6, adjusted household saving, which had been less than 1 percent of disposable income until 1965, increased to 4.1 percent in 1966 and remained at least higher than 3.4 percent of disposable income until 1970. The adjusted household saving, however, declined to 2.2 percent of disposable income in 1971. It is normally expected that the higher interest rates would mainly affect household saving. There is no good reason to expect that government and business savings would be positively affected by the higher interest rates. In this respect, one may argue that the sudden jump in the adjusted household saving rate after 1965 reflected the positive effect of the interest-rate reform on domestic saving. There may be some truth in such an argument because the adjusted saving rate after 1965 became consistently higher than that prior to the 1965 reform.

The adjusted household saving rate, however, remained at a relatively high level even after 1972, when bank interest rates (both nominal and real) were again arbitrarily reduced by the government, although household saving had been fluctuating widely between 3 and 11 percent of disposable income. The fact that the household savings propensity was sustained at the higher levels after 1972 may reflect a habit-forming effect on saving. That is, the households that were induced to save a greater share of their income by the rise in interest rates were continuing to save a similar or even higher share of their increased income, even though the incentives to savers were largely removed by the reduction of interest rates. The higher saving rate after 1972 may also reflect the effect of average disposable income per household in the 1970s being higher than in the 1960s. In view of these developments after 1972, it is doubtful whether the sharp increase in the household saving rate (adjusted) after 1965 only reflected the effect of the high interest-rate policy adopted in 1965 and continued until early August 1972. As suggested by Cole and Park (1983), the higher ratio of household saving to disposable income after 1965 could have been made possible not only by the higher interest rates but also by many other factors, including the higher growth rate of income, better investment environment, and the relative price stability attained during 1965-73.

After the interest-rate reform of 1965, gross domestic investment expanded continuously in relation to GNP. As already suggested, gross domestic investment, which had been generally less than 15 percent of GNP until 1965, increased to 22 percent in 1966 and continuously expanded to reach about 29 percent by 1969. Even after 1969, the gross domestic investment rate was generally maintained at a level higher than 25 percent of GNP (22 percent in 1972 being the only exception). The large increase in gross domestic investment was made possible not only by the rapid increase in

domestic saving but also by the continuous inflow of foreign saving. In any case, the growth of domestic investment after 1965 indicates that the higher interest rates of banking institutions did not discourage domestic investment, as expected by some people, but rather contributed to increasing such investment by increasing the supply of both domestic and foreign loans.

Effect on Organized Financial Markets

Because bank deposits, particularly time and savings deposits, increased rapidly after the interest-rate reform, the monetary authorities could expect to improve the techniques of monetary control as originally planned at the time of the reform. The monetary authorities therefore abolished the loan ceiling system and attempted to control the money supply through the indirect techniques of bank reserve manipulations. In early 1966 the monetary authorities began to experiment with all the indirect techniques of monetary control available in Korea. The inflow of foreign capital, mainly in the form of foreign loans, greatly accelerated in early 1966, because of the increased gap in interest rates between domestic and foreign financial markets after the 1965 reform. The increased inflow of foreign capital, together with the rapid expansion of Korean exports, caused a rapid accumulation of foreign reserves. To contract the monetary expansion coming from the rapid accumulation of foreign reserves, the central bank had not only to increase legal reserve requirements for banking institutions but also to freeze a substantial portion of bank deposits by means of forced sales of stabilization bonds and compulsory deposits in the central bank's stabilization account.

As a result, bank loans declined in relation to deposits until around the end of 1967, although the absolute level of bank loans expanded rapidly. The relative decline in bank loans, in addition to the profit squeeze caused by the reverse margin between the bank deposit and loan rates, contributed to a further deterioration of profitability in banking operations after the interest-rate reform.

Table 6.7 provides data on the profitability of banking operations before and after the 1965 reform. The weighted average annual rate of interest due for all commercial bank deposits increased from 2.7 percent in the first half of 1965 to 11.1 percent during the same period of 1966. The average interest rate on commercial bank loans also increased from 16.1 to 25.0 percent during the same period. The difference between the earning and cost ratios to all available funds, however, declined from 1.5 to -0.7 percentage points between the first half of 1965 and the same period of 1966. That is, the ratio of earnings (interest and other income) to total available funds was 9.5 percent, which was 1.5 percentage points higher than the ratio of costs (interest and operating costs) to total funds in the first half of 1965. The ratio of earnings to total available funds, however, became lower than the cost ratio in the first half of 1966. This was partly because the ratio of loans to

Table 6.7. Changes in the costs of funds and earnings of commercial banks before and after the interest-rate reform

Description	First half	
	1965	1966
Average interest rate on deposits		
(A) Interest accrued during the period (10 ⁶ won)	504	3,606
(B) Average balance of deposits for the period (10 ⁶ won)	36,933	65,052
(C) Annual average rate on deposits [2(A)/(B)] (%)	2.7	11.1
Average interest rate on loans		
(D) Interest accrued during the period (10 ⁶ won)	2,180	5,769
(E) Average balance of loans for the period (10 ⁶ won)	27,157	46,230
(F) Annual average rate on loans [2(D)/(E)] (%)	16.1	25.0
Annual ratio of costs and earnings		
(G) Annual ratio of costs to available funds (%)	8.0	13.6
(H) Annual ratio of earnings to working funds (%)	9.5	12.9
(I) Difference between the cost and earning ratio [(H) - (G)] (%)	1.5	-0.7

Source: BOK, *Economic Statistics Yearbook* (1967).

deposits was reduced from 73.5 to 71.1 percent between the two periods and because the ceiling rate on loans was lower than on deposits.

To provide some compensation for the reduction in the rate of banking funds utilization and for the reverse margin between the deposit and loan rates, the central bank paid a 5 percent rate of interest on bank reserves against time and savings deposits during 1966-67. But banking institutions actually started to benefit from the system of bank guarantees for the repayment of foreign loans as the inflow of foreign loans accelerated beginning in 1966. The banks could then collect about 1.0 to 1.5 percent on the face value of foreign loans as guarantee fees without really committing their own resources. Beginning in early 1968, the banks were able to gradually expand their loans in relation to deposits because monetary control had been relaxed somewhat.

Although a substantial portion of the increased financial savings was sterilized for the purpose of monetary control, particularly in the early period of the reform, bank loans to the private sector expanded sharply after September 1965. The higher interest rates on loans did not become a factor restricting loan activities in Korea. The banking funds derived from the increased financial savings were lent out to the business sector mostly for working capital; only about 10 percent of commercial bank loans was used for the purchase of industrial equipment. Even though the loans of banking institutions expanded rapidly after the reform, the supply of loanable funds remained as a scarce factor in the sense that demand for loanable

funds exceeded the supply of such funds at the new rate of interest. This was probably due to the complementary relationship between domestic bank loans and foreign financing. Since the introduction of foreign capital was authorized mainly for fixed investment purposes, the domestic enterprises borrowing from abroad had to borrow also from domestic financial markets for working capital requirements. Of course, the restriction of bank loans for stabilization purposes also contributed to the continuous scarcity of bank loans in Korea.

Even so, the increased supply of bank loans at the higher rate of interest made it easier for the average business person to obtain a bank loan. Bank loans now were no longer the source of easy profits for corporations and individuals, because the loan rates were high enough to discourage unproductive investment. After the reform, it seemed that the bank loans were largely replaced by foreign loans as a source of easy profits since the interest rates on foreign loans were generally much lower than those on domestic loans. Because of the large inflows of foreign loans at rates lower than the domestic bank rate, the monetary authorities had to freeze a significant portion of domestic savings deposits to meet the overall money supply target. If the inflows of foreign capital had been effectively controlled to a reasonable minimum, the organized financial markets could have functioned more effectively in both mobilizing and allocating domestic resources.

Effect on Unorganized Money Markets

The activities of unorganized money markets were widespread in all sectors of the Korean economy before the interest-rate reform. The unorganized money markets were involved not only in money lending for households and small business but also in mobilizing and lending a fairly large amount of funds to big enterprises. It is difficult, however, to evaluate the effect of the interest-rate reform on unorganized money markets. Available data on the unorganized money market activities are not only scant, but also may not be reliable. For instance, a Bank of Korea survey conducted in the first quarter of 1967 indicated that no significant change had occurred in the unorganized market after the reform (BOK, *A Survey on Business Finance*, 1967:5-8). Some businesses still borrowed a portion of their financial requirements from the unorganized markets, where the dominant rate of interest was still about 4 to 5 percent per month as before the reform.

According to Bank of Korea survey data for the previous periods, interest rates in the unorganized market showed an upward trend until about mid-1966. The trend was probably due to a temporary shift of funds from the unorganized markets to bank deposits after the 1965 reform, whereas demand for such nonbank loans was not largely replaced by bank loans. The unorganized market rate, however, returned to the original level thereafter. There are indications that the activities of unorganized money markets continuously expanded in the late 1960s, with some setbacks in the

initial period of the reform. In any case, the unorganized markets flourished until August 1972, when the Presidential Emergency Decree was issued to force both private moneylenders and business borrowers to report the outstanding volume of loans to the business sector and the business sector's debts to the unorganized money markets. The size of business enterprises' borrowings from the unorganized markets, reported and confirmed in accordance with the decree, amounted to about 346 billion won, equivalent to 23 percent of total domestic credit in 1972 and 42 percent of all outstanding loans of banking institutions, including the KDB, as of August 1972. But this volume of unorganized money market loans excludes the outstanding loans of the household sector, including farm households, which were not required to be reported by the government decree (Cole and Park 1983:163-65).

That explains why the interest-rate reform could not succeed in reducing unorganized money market activities as originally anticipated. How, then, could the unorganized markets continuously flourish even when the interest rates in the organized markets were substantially raised, and when the sizes of both domestic and foreign credit could be rapidly expanded after the reform? Here are a few points—not answers—related to these questions.

First, a rapid increase in domestic bank loans, together with the increased inflow of foreign capital after the interest-rate reform, made possible the rapid expansion of Korean industries, which in turn necessitated a further increase in external finance. This brought about a continuously increasing demand for domestic bank loans despite the high loan rates. Because of the increasing demand for bank loans and also for foreign loans, domestic bank loans were still allocated to industries on the basis of government guidelines that gave priority to those industries the government wanted to promote. Industries not favored by the government could not easily obtain bank credit or foreign capital even after the reform, and had to turn to unorganized markets for necessary external finance. This situation explains the continuous expansion of demand for unorganized money market loans after the reform.

Second, even if bank loans could be expanded, the unorganized market loans could not be completely replaced by bank credit, partly because of the rigid loan procedures of Korean banking institutions. The Korean banking system tended to place a heavy emphasis on loan securities (particularly real estate collateral), but moneylenders in the unorganized markets put more weight on the credit standings of borrowers. Bank loan procedures usually were also complicated and time-consuming, and therefore, were not a good source of for short-notice funding needs. A formal short-term money market had not yet been established in the late 1960s, so the unorganized money markets provided an economic source of credit for temporary short-term requirements (e.g., daily loans, loans for a month or two),

whereas bank loans usually required various incidental expenses including insurance costs, paperwork, and time.

Finally, unorganized money market activities flourished even after the reform because they provided the only source of credit for the average household in Korea. As suggested, Korean banking institutions restricted their loans for household consumption needs (including housing finance) in the late 1960s.

CRITICISM AND LESSONS

The interest-rate reform of 1965 certainly brought about a sharp increase in savings through financial intermediaries, which in turn made possible an increase in the supply of bank loans. After the reform, the household saving propensity adjusted for the increases in agricultural inventories rose substantially, suggesting that the higher interest rates could have positively contributed to the growth of aggregate domestic saving in Korea. However, there is not enough evidence to show that the sudden jump in the household saving rate after 1965 was entirely attributable to the higher interest-rate strategy.

It may be true that the higher interest rates contributed to the upward shift of the household saving propensity in the late 1960s, but many other changes favorable to saving and investment also took place during the period. Investment in industries was not hindered by the higher interest rates but expanded sharply owing to the increased supply of loanable funds from both domestic and foreign sources. Although the interest-rate reform did not succeed in reducing the activities of unorganized money markets, the organized financial markets were substantially expanded by the reform. As bank deposits increased after the reform, the monetary authorities improved the techniques of monetary control by relying more upon the indirect method of controlling the reserve base of the banking system, rather than imposing loan ceilings.

The interest-rate reform, however, widened the gap in interest rates between domestic and foreign financial markets, thereby greatly increasing incentives to borrow from abroad. The system of bank guarantees for the repayment of foreign loans instituted in 1962 could therefore be actively used to facilitate the inflow of foreign capital after the reform. The increased inflow of foreign capital undoubtedly contributed to increasing gross domestic investment in Korea, but it created a difficult problem for monetary stabilization. The increased inflow of foreign capital, together with the rapid expansion of Korean exports, caused a rapid accumulation of foreign reserves, thus creating excessive monetary expansion. To control the money supply for price stabilization, a considerable proportion of the increase in bank deposits had to be frozen. This implies that the higher interest-rate policy, which was originally aimed at mobilizing domestic financial savings for domestic investment, was only helping in the conversion of such

savings (after succeeding in creating them) into foreign-reserve assets. Because the supply of domestic credit was continuously squeezed while indirectly encouraging business borrowings from abroad, some sectors of the economy that could not gain access to foreign finance had to rely continuously on credit from unorganized money markets. The increased inflow of foreign capital at a low interest rate contributed to further increasing demand for domestic credit mainly owing to complementarity between foreign finance and domestic credit. As a result, the government could not succeed in balancing demand for and supply of loanable funds even at the higher interest rates and had to intervene continuously in the allocation of loanable funds as it had done before the reform.

Despite the squeeze of domestic supply of loans, which was necessitated by the rapid accumulation of foreign reserves, domestic credit could be expanded much more rapidly during the period of high interest rates than in the earlier years because financial savings had increased rapidly after the reform. On the whole, therefore, the high interest-rate policy adopted in 1965 made a great contribution to the development of financial markets in Korea, although this contribution may be difficult to define in detail. Financial assets and liabilities grew rapidly in relation to GNP during 1965-71. Because the high interest-rate policy was suddenly reversed to one of extremely low interest rates in August 1972, however, the financial development fostered by the interest-rate reform of 1965 came to a halt in 1972. Thereafter, real interest rates in organized financial markets were so often negative that the real growth of financial savings became sluggish despite the rapid growth of GNP in the 1970s. It is the opinion of many economists outside the government that if the abrupt reversal of interest-rate policy had not been made in 1972, Korean financial development could have made rapid progress even during the 1970s. Given the rate of domestic inflation, a policy of gradual reduction in interest rates might have produced a much better result for Korea's financial development than the abrupt policy reversal.

What kind of lessons can be learned from the Korean experience with the high interest-rate policy described? Four lessons may be important for other developing countries and also for Korea's future development.

First, a reasonably high rate of interest should be maintained in developing countries, where insufficient capital is one of the major constraints to economic growth. As the Korean experience suggests, a high interest rate will bring about a rapid increase in saving in the form of financial assets. Saving strategies suggested for developing countries tend to emphasize government saving. It is generally difficult, however, to sharply raise the ratio of government savings to GNP because increasing tax revenues every year is not an easy task for any representative government to undertake. The high interest-rate strategy would be easier to put into effect for increasing voluntary saving in developing countries. Nevertheless, it is widely

believed that households in many developing countries have been accumulating a large proportion of their savings in the form of tangible assets such as residential dwellings, noncorporate business structures, and durable consumer goods. A high interest rate could therefore contribute to diverting such savings from unproductive tangible assets into financial intermediaries where the saving could then be channeled to productive investment. Even if one assumes that the high interest rates cannot increase the aggregate level of real saving, their implementation will result in a more "efficient composition of wealth" (Patrick 1966:181). The efficient composition of wealth is expected to have a positive effect on the growth rate of the national economy.

Second, it is important to equalize interest rates on various types of loans available within a country, regardless of sources of funds, except for minor differences in maturity term and credit standing of borrowers. In the Korean case, preferential interest rates were applied to special bank loans from government funds and to export credit financed out of the central bank's rediscount. What was more critical in the Korean experience was that the domestic high interest-rate policy opened up a new source of disturbance to domestic financial markets because no measure was taken to equalize interest rates on foreign loans with the domestic rate. As long as these preferential loans from both domestic and foreign sources were available at an interest rate much lower than the rates on ordinary commercial bank loans, the demand for such loans would continuously expand because the loans represented windfall gains to borrowers. Because of the large expansion of preferential credit, the supply of nonpreferential credit had to be squeezed to meet the money supply target. It is suggested that developing countries that adopt a high interest-rate policy should at least take measures to equalize the interest burden on foreign borrowings with that on domestic loans, if they are to succeed in equilibrating the domestic financial market at the high interest rate.

Third, a consistent interest-rate policy would be much more desirable than an abrupt change in policy direction from a high interest rate to a low one. In the case of Korea, the abrupt change in policy direction in 1972 (and also in 1982) seems to have hurt the general public's confidence in government policy, thus reducing public support for government policy. Instead of suddenly reversing the policy direction, the Korean government should have taken a gradual approach, and at least maintained a positive real rate of interest in the country. The real rate of interest should be estimated by taking into account people's expected rate of inflation, rather than just the current or lagged rate of inflation measured by either the WPI or the CPI. Although it is not easy to exactly measure the expected rate of inflation, it seems that people's price expectations in Korea have been influenced more by rises in real estate prices than by changes in the WPI or CPI in recent years. In any case, the gradual approach to monetary policy would probably

have resulted in a much better performance in financial aspects of development than what actually happened after 1972. This is an important lesson, not only for other developing countries but also for future policymaking in Korea. The abrupt reduction of the interest rate in Korea in June 1982 (the so-called June 28 measure) indicated that Korean policymakers had not learned the lesson from the failure of the August 3rd measure in 1972.⁶

Finally, a reverse margin between bank deposit and loan rates should be avoided except for short periods of time. In the Korean case the bank deposit rate was set at a slightly higher level than the loan rate to increase the attractiveness of financial savings compared with returns from alternative forms of saving at the time. Such a reverse margin was probably necessary in the initial stage of the high interest-rate policy to change the attitudes of the general public toward financial saving. The reverse margin of bank interest rates, however, not only made it necessary for the central bank to find other means of compensating for banking institutions' losses arising from the reverse margin, but also contributed to creating excess demand for loans. Inasmuch as the deposit rate was higher than the loan rate, some business enterprises with enough funds of their own still retained bank loans while depositing their idle balances in the form of time deposits. Some pyramiding of deposits on loans might also have taken place as people redeposited bank loans to take advantage of the after-tax interest rate, which was higher on deposits than on loans. These practices are partly attributable to the tax system in Korea but actually increased because of the reverse margin of bank interest rates.

6. On 28 June 1982 the government announced a drastic reduction of interest rates on bank deposits and loans. The banks' ceiling deposit rate was reduced by a wide margin, from 12.6 to 8 percent per annum, and the rate on ordinary bank loans was cut from 14 to 10 percent per annum. On 3 July, about a week after the June 28 measure, the government announced that, beginning in 1983, it would enforce the use of real names for the possessors of all financial assets. Although the actual implementation of this measure was later postponed indefinitely, that announcement, combined with the earlier June 28 measure, seems to have had a considerable negative impact on Korea's financial development, probably increasing incentives for capital flight.

7 The President's Emergency Decree for Economic Stability and Growth (1972)

by Wan-Soon Kim

"Enrich the Nation and Strengthen the Army" was perhaps the most popular slogan of the late President Park Chung Hee's inherently authoritarian government. In practical terms, this meant that economic development was the key to the regime's political success and stability, because it was the means for overcoming political and social unrest and frustrations. Having thus enshrined rapid economic growth near the top of its value hierarchy, the Korean government was prepared to intervene directly in economic management whenever it believed that its vigorous pursuit of a high-growth policy was being stifled.

The President's Emergency Decree for Economic Stability and Growth, announced on 3 August 1972, is a classic case in point. In early 1971 the economy appeared to be cooling off. There was an appreciable drop in investment demand, partly caused by the tight credit policy, whereas price increases appeared to be accelerating. With the collapse of the Bretton Woods system as a result of the Nixon price and wage freeze in August 1971, international economic and monetary disturbances generated uncertainty within the Korean business community about the short-term prospects for Korea's renewed export growth. The combination of all these elements led to a definite slowdown in the Korean economy in the latter half of 1971, which continued throughout most of 1972.

In particular, the economic slowdown revealed the chronically unstable and weak financial structures of many business firms, especially the large, highly leveraged ones. Between 1965 and 1969 the total domestic indebtedness of manufacturing industries to financial institutions had increased from 2.6 to 9.2 percent of GNP, and the amount of the curb-market loans was reported to have reached about 190 billion won, or about 28 percent of domestic credit (Cole and Park 1983:126). Likewise, the rate at which the annual volume of external borrowing was expanding was no less than that of domestic indebtedness. From a negligible amount in 1965, gross external borrowing had reached US \$1,800 million in 1969, about 189 percent of Korea's total exports, the highest since 1962 (I. C. Kim 1983a:111-17). Over the four-year period 1966-69, foreign saving accounted for, on average, almost 40 percent of total investment and about 10 percent of GNP. In sum, corporate indebtedness was stretched to such an extent that a moderate

slowdown in demand could cause a number of firms to experience serious financial difficulties.

Because of the heavy reliance on borrowed capital during the 1966–69 investment boom, the average debt/equity ratio of manufacturing industries almost reached 400 percent by 1971. Furthermore, the 1971 devaluation of the won caused a sudden jump in the cost of foreign-debt servicing, creating severe short-term cash-flow problems. Interest expenses rose from 5.9 percent of net sales in 1968 to 9.9 percent in 1971 (Table 7.1). Consequently, the ratio of net profits to net sales decreased very sharply from about 6 percent to a negligible 1.2 percent over the same period. In the case of firms with high debt leverage, the burden of fixed financial charges was extremely heavy, and the number of business failures increased alarmingly.

Influential business associations reacted quickly to the sagging economy. In the latter part of 1971 the Federation of Korean Industries, representing Korea's major firms, sought a meeting with President Park to convey their ideas for dealing with highly leveraged or bankrupt firms. They called for direct government intervention and made a number of policy recommendations, including the conversion of curb-market loans into bank claims, reduction of the corporate tax burden, and lower interest rates.

Table 7.1. Selected financial ratios in the manufacturing industry: 1963–78

Year	Debt/equity ratio ^a	Interest expenses/net sales ratio	Net profit/net sales ratio	Share of securities in corporate investment financing (%)
1963	92.2	3.0	9.1	14.8
1964	100.5	4.9	8.6	11.7
1965	83.7	3.9	7.9	9.3
1966	117.7	5.7	7.7	8.1
1967	151.2	5.2	6.7	3.5
1968	201.3	5.9	6.0	6.4
1969	270.0	7.8	4.3	11.5
1970	328.4	9.2	3.3	14.9
1971	394.2	9.9	1.2	15.1
1972	313.4	7.1	3.9	19.5
1973	272.7	4.6	7.5	21.5
1974	316.0	4.5	4.8	8.2
1975	339.5	4.9	3.4	12.2
1976	364.6	4.9	3.9	16.0
1977	350.7	4.9	3.5	17.7
1978	366.8	4.9	4.0	30.8

Sources: BOK, *Financial Statements Analysis* (1981); BOK, *Flow of Funds Accounts* (1980).

a. Total liabilities/net worth.

The Korean government could have allowed the debt-ridden firms to go bankrupt, but it was feared that an increasing number of bankruptcies would seriously undermine the nation's credit rating in the international capital markets. More important, that option would have had adverse political consequences for the Park government, which had identified its political success with the attainment of rapid economic growth (Cole and Park 1983:160-61). For these reasons, the Park government decided to intervene directly in an attempt to relieve the financial strains on business firms, contain inflationary pressures, revive business confidence, and reform corporate financial structures. Until the announcement of the emergency decree in August 1972, a series of meetings between three economic ministers and certain business leaders were held to work out policy tools.

True to his commitment to rapid economic growth, President Park resorted to temporary stopgap measures to alleviate the business slump and to provide relief to debt-ridden firms. The President's Emergency Decree for Economic Stability and Growth placed a moratorium on curb-market loans, stretched commercial bank loans, reduced interest rates, provided rationalization funds to assist key industries in improving productivity, and launched an all-out campaign to stop inflation.

This chapter will examine and evaluate the successes and failures of the emergency decree, which lasted for about one and one-half years, in terms of its intended purposes and apparent effects. This is basically a short-run analysis. Although neither the benefits nor the costs can be calculated, the crucial factor here is to examine the long-run implications of the use of the decree for government economic management during the ensuing years. The principal argument is that the emergency decree had a remarkably small effect on Korea's financial development. As the economy became increasingly complex, the government's use of discretionary command procedures became both limited and inefficient in the face of strong market forces.

This study relies upon three major sources for its approach and information. First, the author is indebted to the theoretical work of Shaw (1973) and McKinnon (1973, 1976), who regard the poor results of savings mobilization in developing countries as a consequence of financial repression. Second, Jones and SaKong (1980), in their in-depth study of the roles of government and of business in Korea's rapid industrialization, illustrate, in particular, how the Korean government made use of discretionary command procedures as a method of policy implementation. Third, for data to support and verify a number of points made here, the author has benefited from the work of Cole and Park (1983) on the evolution of Korea's financial system and its contribution to Korea's economic development.

MAJOR FEATURES OF THE EMERGENCY DECREE

The emergency decree of 3 August 1972 provided for a series of drastic measures that, in the short-run, were intended to revive business confidence

and to attack the inflation problem at its roots. The long-run intentions were to achieve a more balanced capital structure and to strengthen the competitiveness of private business firms. Foremost among the measures to improve the financial position of business enterprises was that of freeing major companies from the stranglehold of the high interest rates (about 36 percent per annum on the average) charged by the underground moneylenders. In essence, the decree consisted of the following five measures:

1. All loan agreements between firms with business licenses and lenders in the curb market were nullified as of 2 August 1972, and converted into officially confirmed "new" debt claims. Loans exceeding 3 million won were rescheduled for repayment over a five-year period after a three-year grace period, at 16.2 percent annual interest, or the lenders had the option of converting their loans into equity shares, the latter being mandatory for creditors with substantial ownership interest in the borrowing firms. In other words, the (so-called "disguised") informal money-market loans made by large stockholders or executives to their firms were converted into shares or stocks.

2. Approximately 30 percent of the short-term, high-interest (15.5 percent per annum) commercial bank loans held by business firms, amounting to 200 billion won, were replaced by long-term loans at 8 percent annual interest payable over a five-year period after a three-year grace period. The actual amount of replacement was about 194 billion won.

3. The establishment of a credit guarantee fund for small and medium industries, and for agricultural, forestry, and fishery businesses, amounting to 2 billion won in government funds, allowed the banking system to make loans up to ten times the amount of the fund without collateral requirements.

4. An Industrial Rationalization Fund of 50 billion won was created to provide long-term, low-interest loans to support mergers and modernization of priority industries to improve their efficiency, profitability, and competitiveness. In addition, business firms that could meet the rationalization criteria were granted higher depreciation rates and investment tax credits for investments using domestic resources.

5. In support of anticyclical flexibility in budgetary procedures, the decree abolished the existing pegged revenue sharing with provincial governments and made equalization grants dependent on the budgetary conditions of the central government at a given time.

In addition to these emergency measures, the Economic Planning Board (EPB) was instructed by the president to take five supplementary steps. First, as an explicit digression from the hiking of interest rates in 1965, the commercial banks' annual lending rate was reduced from 19 to 15.5 percent; and time deposit rates, from 16.8 to 12 percent. The reduction in interest rates was intended not only to provide financial relief to debt-ridden enterprises but also to eliminate immediately the cost-push effects of higher

interest rates. Second, the exchange rate, which had been eroding since the beginning of 1972, was to be pegged at 400 won to the dollar, with the proviso that the won would not be devalued by more than 3 percent per year. Third, as a direct attack on inflation, the annual increase in wholesale prices was to be controlled within 3 percentage points per annum. Fourth, to keep inflation rates at 3 percent, utility rates were not allowed to increase. Finally, maximum restraint was exercised on the 1973 government budget by reducing increases of wages and salaries of government employees and by restraining increases in public investments.

EFFECTS OF THE EMERGENCY DECREE

Unorganized Money Market and Financial Policies

In an inflationary environment of ample investment opportunities with high rates of return, the government's rapid growth strategy induced larger firms with easy access to bank credit to rely heavily on bank loans for their investment capital. And, as growth was extremely rapid in relation to the existing scale of operations, internal cash generation could not cover an appreciable proportion of the financial requirements for investment and working capital. Interest payments on rapidly accumulating debt, both external and internal, seriously eroded net profits.

In addition, other critical factors supported the continued preference for debt financing against the generation of retained earnings for reinvestment. First, the special tax on retained earnings of closely held family corporations, charged in addition to the applicable corporate income tax, tended to encourage companies to dispose of much of their profits by paying dividends. Second, Korean investors had a general tendency to emphasize current cash yields and to expect a steady annual return from an investment, which resulted in disproportionately high dividend payments to profits—an element of considerable rigidity in corporate dividend policy. Third, depreciation allowances (a tax-deductible business expense item, as well as a source of corporate savings) were permitted in generous amounts but were seldom consistently charged by companies because of their desire to avoid losses. (Tax authorities were said to "penalize" companies showing losses in this manner.) This led to low internal cash generation. Fourth, businessmen were taking advantage of the corporate tax system that allowed interest paid on borrowed funds as a cost in determining profits (subject to a 40 percent tax rate), whereas interest income from high-yielding time deposits was granted a tax-exempt status. In other words, firms earned an interest spread and gained a tax advantage by depositing their own funds and then borrowing them back. Finally, the supply of equity funds from sources external to the companies was limited because of the par-value pricing method and the high financing cost of new issues.

The net effect of those factors was the extremely high debt/equity ratio

of manufacturing enterprises—nearly 400 percent on average—prior to the emergency decree (Table 7.1). Therefore, in times of financial stringency, or when they were pressed for cash to make external debt-service payments on schedule or to satisfy short-term working capital needs, the debt-ridden firms (mostly large ones) came to the curb markets to borrow at rates that were generally between 30 and 50 percent per annum.

In developing countries, where financial markets are fragmented and underdeveloped, financing capital needs is generally more difficult for small and medium-size firms than for large ones. Korea was no exception. There were several reasons why the smaller firms and traditional businesses had to rely on the informal financial markets for most of their working capital and for some financing of fixed investment. First, the banking sector was not able to mobilize adequate financial savings to meet the growing demand for bank loans, largely because of the low return on saving deposits. Second, banks and other financial intermediaries tended to refuse credit to small borrowers, who were often unable to offer acceptable collateral. Third, in financing traditional activities, informal lenders could offer greater flexibility and lower transaction costs because of their intimate knowledge of local business conditions. Last, the government allocated a large share of bank credit to the so-called “essential” industries and very little to “small-scale” industries, small farms, or small processing industries (Cole and Park 1983:168–69).

On the supply side, individual savers who would otherwise have deposited their funds in formal financial institutions were encouraged by high interest rates to enter the curb market as lenders. Business firms were also able to maximize profits by channeling temporary excess liquidity into the curb market on a short-term basis (Cole and Park 1983:169).

The curb market served, therefore, as a short-term money market for both large and small business borrowers. But even though the unorganized money market served useful functions, the government attempted to eradicate it, using command procedures instead of trying to eliminate the inefficiencies of the institutional banking system. The government strongly objected to the existence of the informal credit institutions for two valid reasons. First, they wanted to recoup lost tax revenues from the unreported financial transactions and profits of the “underground” institutions. Second, in times of financial stringency they found that their tight monetary policy measures became ineffective because of the capacity of the curb market to reallocate credit and raise the velocity of money (Cole and Park 1983:158).

As an outcome of the emergency decree, reliable information on the size of the informal money markets was revealed by debt-ridden business firms. The total of the curb-market loans declared by them amounted to about 350 billion won, equivalent to 80 percent of the broad money supply and to 34 percent of the outstanding domestic credit of the banking system (Cole and Park 1983:127). Approximately 114 billion won of these borrowings were lent to enterprises by their owners and shareholders.

Although thousands of curb-market lenders went bankrupt, the lower interest rate on the rescheduled debts provided immediate and substantial assistance to heavily indebted firms. According to a rough estimate by the Bank of Korea, the annual savings from the reduction of the interest burden in 1973 reached more than 100 billion won (BOK, *Report on the Results of the August 3, 1972, Presidential Emergency Decree*, 1973:63). As a whole, the emergency decree was believed to have directly caused a 3.2 percent reduction in the average ratio of financial costs to total business costs for all manufacturing, thereby increasing the ratio of profit to net worth for the same industry by about 9 percentage points (K. S. Kim 1972:45-66).

The debt-refunding operations proved, however, to be only a temporary relief to firms in financially difficult positions. In the long run, the measures directed at improving the capital structure of private business firms failed because they were not followed up by basic policies to deal with the institutional and economic factors that led to the emergence of the curb market.

Most crucial, the government failed to eliminate the disparity between interest rates in the formal and the informal markets. The general downward interest-rate revision contained in the emergency decree marked a complete return to financial repression and conveyed clearly the government's message that it would adhere to a policy of low interest rates and credit rationing—the major causes of the continued expansion of the unorganized financial markets and the persistence of financial dualism.

In addition, institutional factors failed to deal with the country's financial market anomalies. It was widely believed that many debtors did not bother to report their debts, despite the apparent inducement to the borrowers for declaration under the emergency decree, because they knew that the curb market crackdown would not last indefinitely and that institutional sources of funds would remain as scarce as ever. Furthermore, the biggest private moneylenders, who were the most important source of capital for the informal money market, were able to take their money out of the market through a sort of information sharing arrangement among ultimate lenders, borrowers, brokers, and dealers. According to Kang Kyong Shik, the minister of finance during 1982-83, the emergency decree failed because the government did not make it impossible for curb-market lenders to hide behind anonymous bank deposits (*Far Eastern Economic Review*, 9 July 1982:48-50). Under the banking laws, technically anyone could deposit an unlimited amount of money just by giving any name and a matching seal for bank registration and withdrawals. Curb-market operators probably took advantage of this protection of anonymity and used banks as conduits for secret lendings.

By requiring a resident registration number to identify depositors, the government might have marginally succeeded in identifying curb-market loans that were secretly advanced to companies or anonymously deposited

in banks. However, big private moneylenders were also the owners of large business enterprises and could easily say that such large deposits were for investment in their own companies. "Dummy" names could be used for bank deposits to hide curb-market operations. Minister Kang's proposal to require a "real-name" deposit system, if implemented, could have contributed to a more equitable taxation of capital income. The tax on property income, such as income from bank deposits, is relatively lower than the tax on wage income. By using "anonymous" names, financial transactions can be easily concealed. It would have been an almost impossible task, however, for the proposal to have effectively eliminated the role of the curb market in the nation's economy and business.

The informal money markets were temporarily suppressed but began to revive only one year later. The emergency decree simply resulted in a large-scale capital levy on curb-market lenders and a transfer of capital to borrowers, causing a temporary disruption of the informal money markets in their effective and competitive role of funding the small-scale sector over the limits of formal market intermediaries (Cole and Park 1983:165).

The emergency decree had little impact on the recovery and subsequent expansion of the economy. The major factor in the sharp upturn of economic activity after the emergency decree was an upsurge in export demand and a consequent revival in fixed investment. Merchandise exports rose during 1973 by more than 98 percent (in current dollars) compared to the previous year. An important factor in the almost unprecedented growth in Korean exports was the sharp expansion in total Japanese imports estimated at about 70 percent during 1973. Korea benefited from this expansion because of its traditional trade links with Japan and its improved export competitiveness due to its devaluation of the won. Between 1971 and 1973 the won had been devalued by 18 percent against the dollar and 39 percent against the Japanese yen, which was considerably larger than the increase in the domestic price level.

Similarly, the emergency decree had little impact on Korea's financial development. Within a year most of the indicators measuring the extent of financial development, profitability, and other elements of management efficiency began to deteriorate and then returned to the levels that had prevailed before the emergency decree. The debt-refunding operations might have had more serious repercussions for the economy in the following years if the upsurge in export demand had not more than offset the effects of the disruption of the credit system (Cole and Park 1983:164-65).

Price Stabilization

An ambitious goal of the emergency decree, aimed at paving the way for renewed economic growth, was to limit wholesale price increases to 3 percent annually, beginning in 1973. Because "expectations of inflation" were blamed for propelling the price movement and as inflation had been strongly

built into every aspect of economic life in Korea, the gradual attainment of price stabilization seemed almost impossible. It was argued that if the inflation psychology was ever to be eliminated in Korea, it would have to be done within a short period of time by government-imposed, drastic, shock-therapy measures (K. S. Kim 1977).

The Korea Development Institute rendered theoretical, as well as empirical, support to the government's program by substantiating the feasibility of the 3 percent price stabilization target, by applying Song Heeyhon's price equation derived from quarterly data for 1965-71. Song developed a Harberger-type dynamic model of inflation to explain the short-term variations of the wholesale price in Korea. The short-term variations of the wholesale price were explained by changes in money supply, income, the foreign exchange rate, public utility prices, and the price of rice. Having analyzed the factors increasing the WPI, Song (1972:192) forecasted that the 3 percent price stabilization goal might be attained in 1973 if the government could keep the exchange rate at about 400 won per U.S. dollar and hold the annual average rates of increase in the rice price, public utility charges, and money supply within the assumed levels of 5 percent, 3 percent, and 19.9 percent, respectively, while achieving a high annual growth rate of real nonagricultural GNP of 12.3 percent.

In 1972, at the same time that the government was making efforts to restrain undue monetary expansion, improve industrial productivity, and stabilize the exchange rate, rice prices, and public utility charges, it was also creating broad-based, direct measures to control private prices. Direct measures were also being taken to stabilize import prices. For example, when the international prices of scrap iron and lumber shot up, the import predeposit ratios for these commodities were temporarily reduced. Restrictions on the export of some commodities were also imposed when supplies were short in the domestic market.

The government negotiated directly with each industry to persuade them to reduce their prices. The so-called cost-reduction campaign under the Ministry of Commerce and Industry succeeded in suppressing the prices (warehouse delivery) of about 42 industrial goods by 2 to 15 percent in three months (February to April 1973). Also, the Office of National Tax Administration set up 460 "mobile price control patrols" and 80 "price assurance forces" to monitor price increases. Where "gouging" and "cornering" were found, violators were subjected to an immediate tax investigation, a special excess profits tax, and curtailment of bank credit. Moral suasion was also attempted through a major meeting between government and business leaders (Jones and Sakong 1980:125).

The results of the direct price controls were predictable, leading to undesirable developments such as under-the-table payments, supply shortages, poor product quality, and other strategies to circumvent the controls. The government responded with production quotas and daily checks on

shipments of major producers. The Law on Price Stability, enacted in March 1973, prohibited both sales at greater than ceiling prices and restricted shipments.

Realizing the inefficiencies and long-term ineffectiveness of such direct price controls, the government lifted the freeze in December 1973. Because prior approval was required for price increases, and some justifiable price increases were long overdue, when allowed, prices tended to leap upward. Finally, on 5 February 1974, in the wake of the 1973 oil shock, direct price controls were abolished and replaced by selective controls on 32 items. That marked the end of the emergency decree as well.

The government's direct price-control measures contributed, in the short run, to preventing some monopolistic price increases, but with massive administrative costs. Besides, certain fundamental factors made government control over prices unworkable. First, the complete elimination of inflation psychology within a short period of time by shock measures was a formidable (if not an impossible) task for the government. Second, price controls encouraged the emergence of black markets. The discrepancy between controlled and black-market prices caused expectations of high future prices that tended to aggravate the prevailing inflation psychology and made the price stabilization effort all the more difficult. Finally, the government's price stabilization efforts were frustrated by the upheaval in world commodity markets and by the acceleration of price pressures in the United States and Japan. Overseas price developments could not have been foreseen when the target of limiting price increases to 3 percent was adopted in 1972 as part of the emergency decree.

Change in Interest-Rate Policy

A policy of high nominal rates of interest is generally unpopular and therefore often politically difficult. The 1965 financial reform in Korea provoked an outcry of protests in business circles and drew dire predictions of inflation, bankruptcies, and a slowdown of growth. None of these happened.

Businessmen and the general public tend to think of inflation in cost-push terms. They see the possible adverse effects of higher interest rates and rising capital costs but fail to see the much more important effect of financialization of household savings and improvement of efficiency of investment, both leading to a higher level of savings, investment, and growth.

The high-interest-rate policy of 1965 was gradually relaxed over the years. With the onset of the business slowdown and the resurgence of inflation in 1971-72, the average debt/equity ratio of Korean firms at 4 to 1 became almost untenable under the high interest rates, in particular the annual average of 36 percent interest charged on curb-market loans. Therefore, quick financial relief to those debt-ridden enterprises was considered imperative. Also, Korean officials argued that if reasonable price stability could be expected through the government's drastic anti-inflationary measures, a posi-

tive real rate of interest would be attainable even at relatively low nominal rates. Furthermore, the rising real cost of capital was believed to be an element of cost-push inflation that, if not checked, would weaken Korea's competitiveness in the export markets. For those reasons the emergency decree reduced the commercial bank basic lending and time-deposit rates by 3.5 to 4.5 percentage points. Thus, the government returned to the pre-1965 style of financial repression.

Korean officials have a deep-rooted belief in the efficacy of a low-interest-rate policy. To begin with, there has been an historical antipathy to high interest rates. Second, policymakers thought that market-determined interest rates would rise to very high nominal levels and contribute to inflation. Third, the economic authorities held that the cost of capital should be kept low in order to achieve a high rate of economic growth in line with the government-led development strategy and to cajole reluctant businessmen into taking the risks inherent in the development of the heavy and chemical industries. Fourth, in the 1970s saving was shown to depend on income, the remittances of overseas workers, and other factors more than on changes in interest rates. Finally, even if the policymakers had realized the merits of a positive real interest-rate policy, they were not willing to pursue an unpopular course in the face of strong opposition from the favored borrowers (Cole and Park 1983:138-40).

After the general downward adjustment of nominal interest rates in August 1972, the real interest rates in the banking sector were, on average, close to zero and sometimes negative during 1973-78, because of the higher rates of inflation. In comparison, the curb-loan rates consistently carried annual interest rates at about 36 percent on average, reflecting the nominal rate of return to fixed assets and to capital in the manufacturing sector (Table 7.2). The residential land-value index almost doubled between 1972 and 1975. As a result, the growth of the formal financial sector slowed down, and much of domestic savings shifted back into the curb markets or into other assets. In short, the reduction in the real interest rates on bank deposits drove savers away from the banking institutions to the markets for real assets (land, apartments, and houses) for speculation and to the informal money markets.

The low-interest-rate policy generated an excessive demand for credit and necessitated discretionary allocation of funds, which usually excluded smaller firms because of their inadequate collateral and credit standing. Not surprisingly, priority in credit allocation or "policy" loans was given first to the government-owned or controlled enterprises, then to those industries considered strategic to economic development, such as large export firms. Although Jones and SaKong (1980:109) maintain that resources were generally allocated to qualified users under the Park government, some personal bias and corruption were nevertheless the predictable outcome of discretionary credit rationing.

Table 7.2. Interest rates, rates of return, and real estate prices: 1964-78

Year	Nominal interest rate on time deposits (%)	WPI (1975 = 100)	Real interest rate (%)	Curb market interest rate (%)	Rates of return to fixed assets in manufacturing sector (%)	Housing prices (1965 = 100)	Residential land prices (1965 = 100)
1964	15.0	26.2	-14.9	61.4	32.0		
1965	30.0	28.8	8.1	58.8	43.0	100	100
1966	30.0	31.4	19.2	58.7	40.0	142	165
1967	30.0	33.4	22.2	56.4	37.0	165	200
1968	26.0	36.2	17.7	55.9	28.0	217	303
1969	24.0	38.5	16.6	51.2	28.0	365	675
1970	22.8	42.0	12.6	50.8	25.0	379	676
1971	22.0	45.7	12.3	46.3	23.0	516	993
1972	15.0	52.0	1.7	38.9	27.0	593	1,033
1973	12.6	55.6	5.3	39.2	34.0	683	1,116
1974	15.0	79.0	-19.3	37.6	30.0	802	1,400
1975	15.0	100.0	-9.2	41.3	29.0	1,108	2,009
1976	15.6	112.1	3.0	40.5	33.0	1,414	2,707
1977	15.8	122.2	6.6	38.1		1,759	3,472
1978	16.9	136.5	4.5	41.7		3,055	7,895

Sources: Cole and Park (1983:tables 30 and 49); KNHC, *Handbook of Housing Statistics* (1983:322).

Following the policy of low interest rates and government efforts to foster the capital markets, the demand for stocks and corporate debentures grew significantly, and dependency on them rose from 6 percent of total sources of corporate funds in 1968 to 22 percent in 1973 (Table 7.1). The long-term securities markets, however, neither reduced the heavy reliance on bank and foreign-loan financing nor weakened the direct link between the government and the large corporations. To keep the large industrial groups under effective control, the government could not let the market dictate the allocation of credit. Two additional factors impinged on the adequate supply of securities. First, few firms were willing to raise funds through the equity markets beyond the amounts required by the government because of the par-value pricing method and the high financing cost of new issues (Cole and Park 1983:274). Second, as noted before, the low-interest-rate policy, in combination with inflation and tax deductibility, increased the preference of corporations for debt over equity financing.

Cole and Park (1983) argue that the renewed financial repression after 1972 had no apparent adverse effects on either overall economic growth or aggregate domestic savings, at least until 1978. Indeed, the Korean econ-

omy grew at an average annual rate in excess of 10 percent over the period 1973-78. Domestic savings rose from 19 percent of GNP in 1969 to 26 percent in 1978.

Cole and Park (1983) do not discount upward-biased economic growth by allowing for non-national account components, but externalities such as the environmental effects of industrial growth have aroused serious concern in Korea. Water and air pollution and the disposal of wastes are the main environmental problems Korea faces. Wastes discharged into the four main rivers and the coastal waters near the big cities increased rapidly during the 1970s.

Income distribution, however, seems to have deteriorated since the latter half of the 1970s. Soaring prices of real estate may have been responsible for the deterioration in the distribution of wealth. Between 1972 and 1978 average housing prices increased by more than five times and residential land prices increased by more than seven times, whereas wholesale prices rose less than threefold (Table 7.2). As a result, the differences in wealth between those with their own houses and those without have widened markedly.

A highly regressive set of rapid growth strategies, especially preferential low interest credit and tax concessions, generally accorded to large industrial enterprises at the expense of small and medium-size business firms, contributed to the concentration of business in Korea. At present, the level of industrial concentration in Korea is relatively low by historic Asian standards, but it is increasing at a rapid rate.

Moreover, government encouragement of capital-intensive projects has preempted investment funds that might have gone to the small and medium industries, which produce a large part of the country's daily necessities. Consequently, both the shortage of consumption goods and the excess demand for them have become an important source of inflation in recent years.

Finally, some symptoms of inefficiency have been visible. Owing in large part to the government's growth-promotion measures, the rapid expansion of the heavy and chemical industries caused by overinvestment has resulted in some duplication of investment and excess capacity. The rapid increase in the incremental fixed capital output ratio from 2.5 during 1964-73 to 3.7 during 1974-81 was a matter of some concern (BOK, *National Income*, 1982:351-52). This evidence of the deteriorating efficiency of invested capital was a warning note to Korea's long-run debt servicing capacity. Thus, the importance of industrial deepening and technological upgrading for an improvement of productivity of capital cannot be overemphasized.

A high positive interest rate is called for, not because it functions as an unambiguous, direct inducement to save, but because it represents the opportunity cost of holding financial assets. If the growth of the organized financial system is a top policy priority and if the intention is to induce

a shift in savings from curb markets, the monetary yield on the latter should at least be comparable to the rate of return on holdings of goods or other tangible assets, as determined by the rate of change in their prices.

Industrial Rationalization

As Korea entered the 1970s its industrial sector had become more oriented toward heavy manufacturing and chemical industries and more dependent on export demand than in the 1960s. It was widely recognized by both government and industry that simply promoting industrialization was not sufficient and that manufacturing industries had to be able to export at competitive prices. Therefore, with the onset of the business slump in 1971-72, the decline in profitability of major industry groups caused serious concern.

Clearly influenced by the experience of the Japanese Ministry of International Trade and Industry in modernizing and rationalizing key industries during the period 1952-60, the Park government decided to create, through the emergency decree, an Industrial Rationalization Fund of 50 billion won to provide long-term, low-interest loans to modernize equipment and machinery, initiate mergers, and improve the capital structure of manufacturing industries. These measures were intended to make Korean industries more productive so that they would contribute to achieving the 3 percent rate of domestic-price stabilization. The government also meant to make priority industries more competitive in the world market, and where appropriate, to force mergers and consolidations that would bring about economies of scale.

The Industrial Rationalization Council was established under the Office of the Prime Minister to determine who would obtain financial privileges under the emergency decree. The council was chaired by the minister of the EPB and its membership included various economic ministers, governors of special banks, and other private members designated by the president. The council examined candidate companies to determine whether they met the eligibility criteria under which they would receive preferential loans, tax allowances, preferred access to loans of banking institutions, and various administrative favors. Final approval, however, rested with the president.

To be eligible to receive financial privileges under the decree, companies had to fit within one of the following categories: (1) industries producing goods or services indispensable to the nation; (2) industries promoting related industries; (3) machine and raw material manufacturing industries; (4) export industries, tourism, and other foreign-exchange earning industries; and (5) farmers' subsidiary businesses or agricultural/fisheries processing industries that would significantly increase the incomes of farmers and fishermen.

Furthermore, companies had to demonstrate that their rationalization and development would make them more productive and profitable and

thereby benefit the overall national economy. Rationalization funds were to be used to facilitate mergers and consolidations in order to encourage specialization and vertical affiliation of production, optimum scale and methods of production, and the liquidation and transformation of businesses that were redundant. Funds were also to be used for improvement of the physical plant and equipment, to increase capital and otherwise strengthen the financial structure of an industry, and for development of technology and innovation.

Concerned about the considerable increase in the concentration of Korean industry during the period 1966-71, the Industrial Rationalization Fund endeavored to assist small and medium industries important in textiles. The criteria for rationalization of small and medium industries or enterprises were supposed to be determined on an individual basis, taking into consideration the special position and characteristics of those industries.

In addition to providing favorable loans, the emergency decree set allowable accelerated depreciation at 50 to 80 percent for companies that met the economic eligibility criteria. A further stimulus to the substitution of capital for labor was provided by the tax investment credit for investments using domestic resources. The new credit allowed corporations to deduct 10 percent (the rate had previously been 6 percent) of the cost of new investments using domestic resources from their income and corporate tax liability, until the end of 1974. Accelerating depreciation and the investment tax credit together increased the level of corporate investment. According to one crude estimate, an investment of 14 billion won would have been generated for the manufacturing sector if the maximum depreciation rate of 80 percent had been applied (W. S. Kim 1972:143-52).

Some 36 billion won of the 50 billion fund was released by the end of 1973. Manufacturers of polyvinyl chlorides were one of the first groups to take advantage of the financial assistance offered by the government in their attempt to merge companies and rationalize production facilities and programs by expanding the most efficient units and shutting down the uneconomic ones. The amount of government loans distributed for the expansion of facilities in such key industries as electric power, steel, polyvinyl chlorides, and others supplying raw materials accounted for more than 75 percent of the total, whereas less than 4 percent of the funds were given to small and medium-size industries.

It is apparent that the screening procedures left virtually complete discretion to the Industrial Rationalization Council. Because almost any enterprise could construct an argument for privileges under some provision of the decree, and given the excess demand for preferential credit at a low rate (8 percent per annum), discretion was thus inevitable. The success or failure of the rationalization scheme depended on the government's ability to make the right judgments about trends in international trade and about which Korean industries would have a comparative advantage. Pointing to

the considerable difficulties in documenting the manner in which discretion was actually exercised under the Park regime, Jones and SaKong (1980:107-09) conjecture that the government made a genuine effort to ascertain whether the applicant met the economic eligibility criteria, and resources were generally allocated to qualified users. It is more than likely that if a consensus in the council on an industry plan were reached through coercion rather than persuasion, personal bias and wrong judgment would have misallocated the resources.

Tax Revenue Sharing

The principal type of central government grant in Korea is tax revenue sharing. The amount of locally shared revenues is the difference between the amount needed for standard services defined by the central government (calculated on the basis of a system of unit costs) and the amount yielded by 80 percent of the local taxes at the legal or standard rates enumerated in the Local Shared Tax Law. Although this method appeared objectively to recognize inequalities of financial capacity and needs existing at the local level, the total grant disbursed was not the aggregate of the excess of total needs over total revenue. Instead, the grant was pegged at 17.6 percent of the estimated national internal taxes (central government taxes, excluding custom duties and monopoly profits), and actual distribution procedures became subject to political negotiations between the central and local governments.

Still other defects existed. First, the amount needed for standard services was computed only on the basis of the units of services enumerated in the Local Finance Law, which inadequately measured minimum public service levels. Adjustments made to expenditure requirements due to unforeseen factors, such as price increases, were inadequate. Second, a regionally differentiated unit-cost method without due regard to population size, for instance, was discriminatory among provinces. The third defect stemmed from the fact that the local governments had neither their own kinds of tax nor the power to raise or lower tax rates in response to the needs of the local residents. In short, Korea's equalization scheme offered no opportunity for the provinces to exercise their own tax efforts.

The 1972 emergency decree, drawing upon the experience of the previous 20 years, eliminated the legal stipulation of the proportions of revenue sharing in order to reduce the 1973 government budget and to enhance the anticyclical role of future budgets. In other words, the emergency decree made central government financial transfers subject to the policies of the central government at a given time. In the 1973 budget, the funds transferred from the central government to local governments decreased by 0.93 percent to 16.67 percent of national internal taxes.

It was believed at the time that the end to guaranteed earmarking left local governments uncertain that minimum financial requirements could

be met, because transfers could fluctuate from year to year depending on national policy demands on the budget. This author has argued that local governments were entitled to revenue growth linked to the growing economy and that transfers should be put on a more stable and objective basis to preserve local autonomy (W. S. Kim 1977:342-46).

Between 1972 and 1980, locally shared tax revenue, measured as a percentage of national internal taxes, declined from 17.6 percent to 10.2 percent (EPB, ROK, *Budget Summary*, 1983, 1985). A precise formula for the determination of the grant amount was restored in July 1982, but with the reduced percentage of shared tax revenue at 13.27 percent of the estimated national internal taxes.

REFLECTIONS ON AND LESSONS OF KOREAN EXPERIENCES

Although Korea is predominantly a private-enterprise economy, a policy environment exists in which private business firms have been compelled to follow government direction. Given the government's highest policy priority of rapid economic growth and identification of rapid growth with the regime's political success, the Park government could not allow any financial deterioration or constraints to interfere with that objective.

The monetary reform of 1965, although not a consistent financial liberalization, demonstrated the effectiveness of a positive real rate of interest. The measure led to a dramatic rise in household deposit savings, the growth performance of the economy was impressive, and the rate of inflation dropped sharply. In contrast, the thrust of the 1972 economic policies was a major retreat to financial repression.

The abrupt attack on the curb market did not work. Its total elimination turned out to be an impossible task, precisely because the measures enforced did not address the real reasons why the informal money market had flourished. First, to achieve a high rate of economic growth in line with the government-led development strategy, the government deliberately cajoled businessmen into relying heavily on the "policy" loans of the financial institutions under its effective control. Second, the government had a policy of providing preferential low-interest credit, so that priority projects got started right away, but the government failed to institutionalize the informal money market. Furthermore, because the commercial banks failed to supply short-term liquidity and improve their loan operations, the curb market has been a major source of funds, meeting urgent short-term financial requirements for a large number of firms, both big and small. Contrary to what the government argued, the curb money market has not been a constraint to economic growth. It did not inflict harm on the public, especially the small businesses, nor did it impede the efficiency of capital as a whole. In sum, a low-interest-rate policy and consequent credit rationing were the major causes of the continued expansion of the unorganized financial markets in Korea.

Therefore, any rash attempt to close the market that supplements the very deficiencies of the organized financial markets would seriously impair the normal operations of the nation's businesses. Thus, Cole and Park (1983:290-91) conclude that one important lesson to be learned from the Korean experience with the curb markets is that the social costs incurred by the administrative control of the credit market are too great and that it is difficult for the government to destroy a financial system that is fulfilling a useful role. Thus, Cole and Park indict any abrupt attempts to suppress the curb markets, such as the emergency decree, as being contrary to the broader public interest.

The principal short-term target of the decree was price stabilization. According to Jones and SaKong (1980:290-91), however, the government's attempt at broad-based price controls proved to be inefficient and was in fact an aberration. Furthermore, a year after the emergency decree, the outcome of this domestic policy was completely overshadowed by the worldwide recession following the Arab oil embargo (October 1973), the food crisis, and the recession in the United States. In December 1973 alone, wholesale prices jumped by 5.4 percent; and during the first quarter of 1974, the WPI increased by 22.5 percent. Under such a situation approaching hyperinflation, the real interest rates in the banking sector were on an average close to zero or sometimes even negative. And the curb money market appeared to gain its market share once again.

The emergency decree was believed by many policymakers to have brought some improvements. But, at best, they were short-lived and more apparent than real. The recovery and subsequent expansion of the economy were largely due to an upsurge in exports. The decree had no appreciable impact on Korea's financial development. Hence, one conclusion that can be drawn from the Korean experience is that repressive measures require continued intervention to make up for their flaws. The Korean government's failure to enhance financial deepening in subsequent years persuaded the monetary authorities to retreat farther from liberal financial policies. Likewise, any success would only have reinforced the rationale of the repressive measures (Min 1976:56).

Finance had mattered as much as the real-sector variables, such as investment, saving, and export, in explaining growth and development. The sharp increase in the incremental fixed capital-output ratio during 1974-81 raises a serious question as to the efficiency of invested capital during this period. Symptoms of inefficiency are obvious in some industrial sectors, largely brought about by officially directed, subsidized credit, and government coercion that had initiated various industrial projects, in spite of their dubious comparative advantage. As a result, excess capacity emerged in heavy industries, while excess demand in the face of capacity limitations for light industrial goods fueled inflationary pressures. Furthermore, the long gestation periods of heavy industrial investment, creating income gains without immediate output gains, also boosted domestic prices.

One important legacy of the emergency decree is the continuing antipathy to high nominal interest rates. Since 1980 downward adjustments of the interest rate on one-year time deposits continued until the rate reached 8 percent per annum in June 1982. As in the case of the emergency decree, such sharp reductions were justified on the grounds of providing financial relief to debt-ridden enterprises. As usual, the government argued that because of its successful anti-inflationary measures, a positive real rate of interest would be attainable at relatively low nominal interest rates. Obviously, the government used the current rate of inflation in its computation of the real interest rate, but failed to consider whether the yield on monetary savings was at least comparable to the rate of return on holdings of goods or other tangible assets. The currently used price indexes underweigh the rapidly rising housing costs and cannot represent the opportunity cost of holding financial assets.

Another important legacy of the emergency decree is a borrowing profile that business firms in Korea have developed over the years. Since "problem" firms have been rescued so long as they have conformed to government policies and have responded to government suggestions, they are assured that the government is likely to assist them in any future periods of financial stringency. This, in turn, has prompted the new entrepreneurs to incur, even if not recklessly, the risk of overexpansion and excessive corporate indebtedness. In other words, a system of credit allocation based on preferential financing has encouraged Korean enterprises to rely more on debt financing than on internally generated funds. Indeed, it is a moot question if Korean business firms, after having been addicted to borrowing, would be able to overcome their financial difficulties without external assistance.

Some people argue that the authorities "know best" and that they can intervene directly in economic management, enforcing discretionary decisions that will prove, in the end, to be both coherent and desirable. In the past, the combination of persuasion, inducement, and coercion often succeeded under a repressive political system. But as the emergency decree illustrates, even the use of the government's discretionary command procedures was limited in the face of strong private market forces. The curb market has survived many repeated assaults. As the Korean economy becomes more complex, the bureaucracy simply cannot control as many aspects of the economy in as much detail as it would like. On the grounds of reduced complexity and more efficient allocation of resources, the repressive financial system should be dismantled and the discretionary bureaucratic decision making should be withdrawn.

8 Policy Response to the Oil Crisis and the Presidential Emergency Decree (1974)

by Yoon Hyung Kim

The Middle East war of October 1973 and the oil crisis brought home to Korea its extreme vulnerability to external developments. The Arab oil embargo and the quadrupling of the world oil price, coupled with the recession in the Japanese and U.S. economies and the high price of food grains and raw materials, posed a major threat to the future prospects of the Korean economy. When the oil price shock occurred, Korea depended on imported oil for 55 percent of its total energy needs, and was, therefore, hit hard by the sharp increase in the world oil price.

Korea's energy resources are limited to anthracite coal, hydropower, and firewood. Anthracite coal is the main domestic energy resource with total reserves estimated at 1.5 billion tons, of which no more than 545 million tons are recoverable (about 30 years' supply at the 1980 production rate). Anthracite coal deposits are in mountainous areas, which require draft- and shaft-type underground mines and labor-intensive mining with low productivity compared with other methods of mining. The quality of coal is poor (about 3,500–5,500 kcal/kg) and is not suitable for coking coal. Korea's hydroelectric potential is estimated at 2,000 MW and is concentrated on four main river systems—Han, Naktong, Kum, and Sumjin. Most of the sites are small and have a low head, so that costly dams are needed to regulate the river flows.

At the beginning of the industrialization drive of the First Five-Year Economic Development Plan (1962–66), fuelwood was the basic energy source. It could not, however, provide sufficient energy for industrial production and power generation, which were growing at average annual rates of 15 percent and 17 percent, respectively.

Because firewood had been the predominant source of primary energy through the early 1960s, the mountains were denuded. Concerted efforts for reforestation have been pursued since the early 1960s. A law for the preservation of forests was enacted and a reforestation program was undertaken to control erosion and to protect watersheds. Only limited fuelwood was available from the thinning and removal of excess trees and cutting was allowed only by permit.

The government encouraged not only the industrial sector but also the urban residential and commercial sectors to replace firewood with domestic

anthracite coal. Most of the limited firewood could then be used by the rural sector. Accordingly, the share of firewood used for industrial energy declined sharply from 71 percent in 1961 to 16 percent in 1966; its share in the residential and commercial sector declined from 58 percent to 52 percent. The share of firewood in the total supply of primary energy declined from 57 percent in 1961 to 43 percent in 1965 (Table 8.1).

The government took a series of steps to encourage domestic coal production. The most impressive policy was the enactment of the Provisional Coal Development Law in December 1961, providing for the amalgamation of small, private coal mines. As a result, the production of anthracite coal increased twofold from less than 6 million tons in 1961 to about 12 million tons in 1966, showing an average annual growth rate of about 15 percent. The share of coal in total primary energy consumption rose from 33 percent in 1961 to 44 percent in 1965 (Table 8.1).

As the economy spurred in the early 1960s, the domestic supply of anthracite coal could not meet the growing demand for fuel by the industrial and power sectors. The growth rate of the manufacturing sector increased from 15 percent per annum in 1962-66 to an average rate of 22 percent per annum in 1967-71; the growth rate of the electric power sector increased from 17 percent to 22 percent per annum.

The urban population (i.e., inhabitants of cities and towns of more than 20,000 persons) rose from 28 percent of total population in 1961 to 34 percent in 1966. The rapid growth of urban areas led to a virtual explosion in the urban residential and commercial demand for fuel and, in late 1966, brought about severe supply shortages of coal briquettes used for household cooking and heating. The 1966 coal shortage was the turning point. The government then adopted a new energy-transition policy to replace oil for anthracite coal as the major fuel.

To restructure consumption patterns, the government took measures ranging from administrative orders and guidelines to publicity campaigns about the greater convenience and cleanliness of oil heat. It made the import of kerosene space heaters duty-free, encouraged the use of other oil-heating appliances, imported large quantities of heating oil to meet immediate needs, and began drawing up plans for future growth in fuel needs to be met from an expanded domestic refinery capacity and direct imports.

The government restricted coal consumption by the nonresidential sector. The Korea Electric Power Company was ordered to use oil instead of coal for all generating plants capable of burning either fuel. This restrictive policy led to inefficiencies and maintenance problems in coal-fired power plants. The government also strongly encouraged industrial plants to replace coal with oil and to install oil-burning equipment.

The substitution of petroleum for coal was successful because of the experience and knowledge in the field of petroleum acquired through joint ventures with foreign oil companies, the comparative technical and

Table 8.1. Structure of the primary energy supply: 1961-80

Energy Source	1961		1965		1969		1973		1979		1980	
	10 ³ TOE	%										
Domestic												
Coal	3,226	32.9	5,291	43.9	5,647	32.5	7,244	29.2	7,887	20.9	8,602	22.7
Hydroelectric	163	1.7	178	1.5	359	2.1	306	1.2	582	1.5	496	1.3
Firewood	5,636	57.4	5,142	42.7	4,355	25.1	3,672	14.8	2,892	7.7	2,517	6.6
Subtotal	9,025	92.0	10,611	88.1	10,361	59.7	11,222	45.2	11,361	30.1	11,615	30.6
Imports												
Oil	790	8.0	1,439	11.9	6,981	40.3	13,624	54.8	24,690	65.3	24,024	63.2
Nuclear	0	0	0	0	0	0	0	0	788	2.1	869	2.3
Coal	0	0	0	0	0	0	0	0	954	2.5	1,475	3.9
Subtotal	790	8.0	1,439	11.9	6,981	40.3	13,624	54.8	26,432	69.9	26,368	69.4
Total	9,815	100.0	12,050	100.0	17,342	100.0	24,846	100.0	37,793	100.0	37,983	100.0

Source: Ministry of Energy and Resources, ROK, unpublished data.

Note: Coking coal is excluded from the primary energy supply.

TOE—tons of oil equivalent.

economic advantages of petroleum for power generation and industrial use, and the greater convenience and cleanliness of oil heating for middle- and upper-income households and for commercial uses. This comparative advantage lasted, of course, only as long as oil supplies were cheap and abundant.

The increased competition from petroleum fuels led to a decrease in coal production by 17 percent in 1968. It then remained at the lower level until 1969, increasing unemployment and hardship in coal-producing regions. To encourage investment in coal mining and to slow the growth of oil imports, the government increased the import duty on bunker-C fuel oil, from 5 to 10 percent in 1969, using the additional revenue for investment or subsidies in the coal industry.

During the Second Five-Year Development Plan (1967-71), coal's share in industrial use and power generation declined considerably. In 1966 coal accounted for 78 percent of thermal power generation and 40 percent of industrial requirements; in 1971 the respective shares were only 5 percent and 6 percent. This important shift in Korea's energy policy can be better seen in the sharply increased share of oil in total primary energy supplies, from 8 percent in 1961 to 55 percent in 1973 (Table 8.1).

The quadrupling of the world oil price in 1973-74 raised the costs of oil imports to \$1.1 billion in 1974 from about \$296 million in 1973. In addition to the serious deterioration in its terms of trade resulting from the sharp rise in the price of oil, the attendant world recession led to a weakened world demand for exports, thereby exacerbating the immediate international balance-of-payments position.

In response to the oil crisis, the government assumed four major tasks: a diplomatic mission to the Middle East, a mission to the international financial markets, macroeconomic policy measures, and energy-specific policy measures. The government identified a top-level Korean manager of an oil company with intimate contacts in Saudi Arabia and employed him as an intermediary to contact the Saudi government. In December 1973 the Korean government dispatched a presidential envoy to Saudi Arabia, carrying a letter from President Park. The Saudi government proposed in response that the Korean government issue a statement sympathetic to the position of the Arab countries. While the government was withholding the statement and consulting with the U.S. government, the Japanese prime minister visited Saudi Arabia and issued the same statement. The Korean government then followed suit.

To secure channels of credit, the government made use of three former Korean bankers who had good relations with foreign bankers. The government sent these financial experts to New York, London, and Tokyo to convince foreign bankers of the growth potential and credit-worthiness of the Korean economy.

The government implemented a set of policies in January 1974 designed

to deal with the changes in the external environment. The two main policy measures were the energy-specific measures aimed at energy conservation and reduced dependence on imported oil, and the financial policies of relying heavily on external savings. The government thus made little attempt to control inflation, which it viewed as imposed by external factors, and allowed bank credit to expand by nearly 50 percent to finance imports for economic growth (Cole and Park 1983).

In the face of external shocks such as that of 1973-74 a country could respond by: (1) expanding its exports, (2) replacing imports with import substitutes, (3) reducing imports by maintaining a lower economic growth rate, or (4) increasing external debt to sustain a high economic growth rate. Korea's main response was to combine measures (1) and (4), thereby achieving a real GNP growth rate of 8 percent in 1974, an average annual GDP growth rate of 7.2 percent during 1974-82, and an increase in the external trade (exports plus imports) to GDP ratio from 40.3 percent in 1972 to 67.7 percent in 1982. The effectiveness of Korea's response to the external shock must be attributed, in part, to its outward-oriented trade and industrialization policies and market-oriented pricing policies. These contributed to the resilience of the Korean economy to external shocks.

What is unique, however, about Korea's response to the external shock is that, in addition to the policies described above, it undertook certain microeconomic and energy-specific measures to cope with the shock. The Presidential Emergency Decree for National Economic Security is a measure specifically designed to sustain the standard of living for low-income groups, promote consumption restraints, conserve resources, better utilize domestic resources, and maintain the balance-of-payments equilibrium.

This chapter focuses on these microeconomic and energy-specific measures, analyzing how they helped the Korean economy cope with the external shock of 1973-74 and its aftereffects.

MAJOR FEATURES OF THE POLICY MEASURES

In December 1973 the president's Economic Secretariat began an intensive effort to produce a set of policy measures. Their work was confidentially guided by the senior secretary for economic affairs of the Office of the President, mobilizing only selected government bureaucrats and a few economists from the Korea Development Institute. Within one month, the government issued a set of policy measures known as the Presidential Emergency Decree of 14 January 1974, to mitigate the worst effects of the oil price increases and to maintain overall growth.

The Korean government also brought together its then widely dispersed energy experts to formulate energy policy. Their review of the Japanese Heat Management Law and energy conservation legislation in France, Germany, and Scandinavian countries led to formulation of the Heat Management Law, which was enacted in January 1974.

The Presidential Emergency Decree for National Economic Security

The Presidential Emergency Decree of 14 January 1974 was a set of sophisticated policy measures that: reduced the burden of oil-price adjustments on low-income groups, thus sustaining their standard of living; imposed heavy taxes on the incomes of high-income groups and on the consumption of luxury goods; improved working conditions of low-income wage earners; reformed the system of tariff-rate exemptions; and adjusted the 1974 budget.

The decree provided a substantial, one-year temporary cut in business income tax and earned income tax. The cut ranged from 30 to 100 percent, increasing as the level of income decreased. The exemption limit of the acquisition tax and property tax was raised from 30,000 to 60,000 won. In addition, the implementation of the newly enacted National Welfare Pension Program and the Private Schoolteachers Pension Program was postponed for one year in 1974 to relieve the low-income groups of the burden of contributing to pension funds. Moreover, as a price-stabilization measure, the sales prices of rice, barley, and coal briquettes—basic necessities of daily life—were heavily subsidized and administrative guidance was used to secure a balance of their supply and demand. An “unjust-profit” tax was applied to windfall gains made through price manipulations. The government also suspended the travel tax on train, streetcar, city bus, van, and passenger-ship fares, and reduced the travel tax on taxicabs from 20 percent to 10 percent. To maintain the farmers’ standard of living, the government increased the purchase price of rice by 500 won per bag (from 10,877 won to 11,377 won per bag) in 1973, with no limit on the quantity of rice purchased. For the urban poor, the government executed public works projects amounting to 10 billion won, which expanded employment opportunities for low-income urban workers. Another measure created a fund totaling 30 billion won to be used as a special credit for small and medium-size firms at the subsidized interest rate of 12 percent, or 3 percent below the normal bank rate. The government compensated the commercial banks for the resulting interest loss. Two billion won from the government budget was also contributed to the Trust Guarantee Fund to enhance the mortgage position of small and medium-size firms.

The government restrained consumption and promoted conservation by raising taxes on certain commodities, thus making up for the revenue losses caused by reduction in the tax burden for the poor. Substantial increases in customs tariffs and commodity taxes were applied to liquors, passenger cars, and luxurious items such as jewels, precious metals, and furs. To further restrain luxury consumption, entertainment-related taxes were increased by 50–200 percent. Acquisition taxes on villas, deluxe cars, and golf courses were raised and corporate real estate used for nonbusiness purposes became subject to the tax. The property tax on residential property,

which had been a uniform 0.2 percent, was made progressive with a maximum rate of 5 percent. Taxes on vacant land and land held by corporations for nonbusiness use were raised from 0.2 percent and 0.4 percent, respectively, to a flat rate of 5 percent. The gasoline tax was raised by 50 percent.

The decree specified that priority be given to wage payments and other claims against employers arising from employment service when employers disposed of their properties. Heavy punishments were imposed on entrepreneurs for overdue wages, unjust dismissals, and poor working conditions.

The system of tariff-rate reductions and exemptions was modified to secure the balance between supply and demand and thus maintain price stability by increasing the items eligible for elastic tariff rates from 25 to 70, including rice, salt, raw materials, agricultural chemicals, and assorted feeds. To limit imports and improve the balance-of-payments position, tariff reductions and exemptions were made item-by-item instead of industry-by-industry, as applied earlier, and the range of exemptions was reduced.

Finally, the government modified the budget for 1974 because of the drastic changes in internal tax and tariffs. Although the revenue from the income tax and the travel tax was expected to decline by 39.6 billion won, the revenue from the liquor tax, entrance tax, commodity tax, acquisition tax, property tax, and taxes on petroleum products was expected to increase by 63.8 billion won. Out of the net revenue increase, 32.8 billion won was appropriated for financing the public works projects, the subsidy to farmers, the subsidies to the coal industry and to small and medium-size firms, and a 30 percent increase in salaries of government employees. Moreover, 43 billion won from the general account plus 7 billion from the special account were held in reserve to suppress aggregate demand by controlling government expenditures. Use of this reserved fund required approval from the president.

Energy-Specific Policy Measures

The Korean government's immediate response to the 1973 oil crisis was to introduce emergency measures for energy conservation and nationwide publicity campaigns for voluntary conservation of energy. This first emergency program was consolidated later into a more comprehensive energy program, the main objective of which was to achieve economic growth with less energy consumption and less dependence on oil. Accordingly, several energy-specific policies, which were designed to conserve energy and substitute other fuels for oil, were implemented in 1974.

Energy conservation measures. Some of the most important conservation measures include pricing policies, publicity campaigns, financial and fiscal incentive schemes, regulations for registration, and institutional arrangements.

Subsidized electricity had been used to promote industrial development and coal briquettes were subsidized for the poorest segment of the population. The increase in the price of petroleum in 1974, however, drastically altered that policy. The government increased the domestic prices of petroleum products to fully reflect the increased cost of imported oil. Passing on the sharp rise in the world oil price to final consumers generated strong incentives for conservation. Furthermore, a heavy tax was imposed on gasoline, increasing from 200 percent to 300 percent.

Initially, the government was reluctant to increase abruptly the prices of coal and electricity, especially in the case of coal briquettes, because these were used by the middle- and lower-income groups. Later, when a government study on coal consumption patterns showed that many users of coal briquettes could afford the full cost of coal, the price of coal briquettes in real terms increased sharply from 1977 through 1980. This had the effect of inducing conservation and stimulating coal production. In 1975, after charging subsidized rates for many years, the Korea Electric Company (KECO) obtained substantial rate increases; to encourage energy conservation KECO introduced peak-load pricing in 1977 and increasing block schedules in 1979.

These pricing policies appropriate for energy conservation were further augmented with other conservation programs. The Heat Management Law, enacted on 1 January 1974, was aimed at promoting effective use of energy by industry. The law, which was amended in December 1975, required that every firm using more than 500 tons of anthracite coal (or its equivalent) submit an annual plan for energy conservation and employ a heat manager to supervise the plan's execution.

The Heat Management Law also provided for the establishment of energy consumption standards and the creation in May 1974 of the Korea Energy Management Association (KEMA). The law commissioned KEMA, under the guidance of the Ministry of Commerce and Industry, to perform heat audits, train heat managers, inspect fuel-using equipment, provide technical assistance to large heat users, and recommend methods for improving efficiency in energy use.

During 1975-80 KEMA conducted numerous activities including heat audits of large-scale industrial plants, technical guidance visits to medium-size industrial and large commercial plants, on-site energy conservation reviews, and consultations. It also carried out inspection of boilers and pressure vessels for pressure and safety. If the recommended improvements had been carried out the savings would have been, according to KEMA's estimate, 9.4 percent of industrial energy consumption in 1975-80. KEMA also held energy conservation meetings, seminars, and training workshops for heat managers, engineers, and technicians.

Since 1975 the government has been promoting an annual National Convention on Energy Conservation Promotion and an annual Energy Con-

ervation Exhibition. Case study reports by heat managers, engineers, and technicians are discussed and energy-savings systems, new developments, and models of new concepts are exhibited. The national convention, held in Seoul and presided over by the prime minister, is attended by more than 3,000 participants each year. Commendations are announced for successful conservation cases, and prizes ranging from the President's and Prime Minister's Prizes to the Minister's Prize are awarded.

The efforts of the government to promote energy conservation were also reflected in institutional developments. The Korea Institute of Energy Conservation (KIEC) was established in September 1977 to conduct research on several aspects of conservation, with special emphasis on maximizing the efficiency of fuel-using equipment. KIEC became the Korea Energy Research Institute (KERI) in 1980, performing integrated energy-policy studies. In 1978 the Ministry of Energy and Resources was formed, taking its staff largely from the Ministry of Commerce and Industry. The new ministry assumed responsibility for national energy planning and energy conservation.

In response to the second oil shock of 1979-80 and the doubling of the world oil price, the Ministry of Energy and Resources promulgated the Law Governing Rationalization in the Use of Energy in June 1980, which replaced the Heat Management Law. The objective of the new law was to promote the rational use of energy in all areas and for all users, including residential, commercial, and transportation sectors not previously covered. It has the same strict regulations as the Heat Management Law, but also empowered KEMA to order fuel conversion and to designate uses of fuels. The new law also included provisions for improvement of the total energy supply system and established a fund to assist in rationalizing energy utilization. The fund provided preferential loans for: (1) introduction of energy-saving equipment, (2) installation of combined heat and power supply systems, (3) installation of building insulation, and (4) research on and development of energy-saving equipment.

Within the framework of the above legislative and institutional arrangements, the Korean government introduced several conservation policies specifically aimed at industrial, transportation, residential, commercial, and the power sectors.

The Law Governing Rationalization in the Use of Energy of 1980 introduced fiscal and financial incentives to encourage investment in energy-saving techniques and equipment. Preferential loans for industrial energy savings investment, insulation of buildings, and solar system installation were provided by the Energy Rationalization Fund, the Energy Savings Facilities Fund, and the Solar Energy Promotion Fund. The government also provided tax incentives for energy-saving investment, such as special depreciation allowances (100 percent of investment for the first year) and an investment tax credit of 8-10 percent from corporate or income tax. The

government also reduced the tariff rates on imported energy-saving facilities from 15–30 percent to 0–15 percent.

To promote energy conservation in the transportation sector, the government restricted the private ownership of automobiles by imposing high acquisition and quarterly use taxes on cars and a gasoline tax of 300 percent. Since 1977 a special excise tax of 180 percent on gasoline and 7 percent on diesel fuel has been levied, in addition to the general value-added tax of 10 percent. Furthermore, the government enforced temporary conservation restrictions during the first and second oil crises—gas stations were closed on Saturdays and Sundays, limitations were put on the use of official cars, and speed limits were strictly enforced. In the residential and commercial sectors, the government launched various publicity and educational campaigns to encourage voluntary energy conservation, such as using less light and heat at home, limiting the use of private cars, and walking any distance shorter than two kilometers between home and office and school.

During the first and second oil crises, the government imposed many temporary but mandatory restrictions on the use of energy. Air-conditioning was banned except during the period from July 10 to August 20; outdoor signs using electricity were not allowed except for hospitals, pharmacies, and emergency purposes; the number of street lights or the level of lighting was cut in half; restaurants and similar commercial establishments were instructed to close one night per week; elevator operations on floors lower than the third were banned; and surcharges were imposed on individual households using more than 500 kilowatt-hours (kwh) of electricity per month.

Building codes for new homes and buildings were made mandatory. The government also instituted schemes for labeling energy efficiency for a limited number of consumer electric appliances. Finally, preferential loans were made available for home insulation and installation of solar hot-water heaters.

Because the power sector was the largest end-user of primary energy, the government embarked on a coordinated effort to improve overall energy efficiency for power plants and to promote energy conservation at the consumer end. KECO gradually retired old plants with low thermal efficiency and set up mandatory targets of thermal efficiency for each remaining plant. The 345-kV transmission network, commissioned in 1971, became the backbone of the transmission system. KECO also upgraded the distribution voltage from the 100/200V to the 220/330V level. Furthermore, an automatic load-dispatching facility installed in 1979 enables KECO to provide economic dispatch. The most important measure for saving electric energy, however, was the revised tariff structure. Residential and commercial consumers were put on an escalating block schedule so that, as they used more electricity, the average charge per kwh increased. Furthermore, the previous decreasing rate schedule for industrial customers was replaced

in 1979 by a flat-rate schedule for all energy consumption. Finally, for load-management purposes, peak-load pricing was introduced in 1977 for large industrial customers. Such revisions of the tariff structure were introduced as an incentive to reduce consumption and shift use to hours when average electricity costs were lower.

Transition away from oil as the dominant source of primary energy. The Korean economy has undergone three energy transitions. The first transition, from firewood to anthracite coal, was made during the period of the First Five-Year Economic Development Plan (1962-66). The second transition was characterized by the replacement of coal by oil during the period of the Second Five-Year Economic Development Plan. Since the oil crisis of 1973-74, a new transition from oil to a different mix of imported fuels has been under way.

The oil crisis of 1973, the steep rises in oil prices in 1974, the prospect of further oil price increases, and the possibility of future shortages led the government to promote the maximum exploitation of domestic energy resources and to diversify imported fuels among oil, coal, and nuclear energy. The government promptly launched an interim program for increased development of domestic energy resources and a nationwide campaign to conserve energy. It also prepared a long-term plan for rationalizing energy supplies and minimizing their costs. To increase production of domestic coal, the government raised the price by 51 percent in 1974 and by another 26 percent in 1975. It also provided a grant of up to 70 percent of the cost of getting a mine into operation and concessionary loans for up to 15 percent of these costs for the coal industry. This subsidy was mainly financed with the proceeds from the special tax levied on bunker-C oil. Although the government had promoted maximum exploitation of hydroelectric resources, hydropower could not meet the sharp increase in fuel demand arising from rapid economic development and industrialization. Consequently, the government looked to other imported fuels, particularly nuclear fuel and coal.

The government strongly encouraged the cement industry to replace oil with imported bituminous coal through subsidized credit measures. It also ordered the power company to burn coal instead of oil in all generating plants capable of burning either fuel. Furthermore, the government switched its major fuel for power generation from oil to a mix of nuclear energy, bituminous coal, and oil by constructing nuclear power plants, coal-fired power plants, as well as oil-fired power plants. Since the first oil crisis, the central feature of the Korean program for power expansion has been a massive shift to nuclear power and coal-fired thermal power. Finally, as domestic coal nearly reached its maximum rate of production, the government began to import anthracite coal to slow down the substitution of petroleum products for coal in the residential and commercial sector.

THEORETICAL APPROPRIATENESS

The Presidential Emergency Decree

The principal objectives of the decree were to bring about an equitable distribution of the burden of the imported inflation and to cushion the effect of the worldwide recession on domestic economic growth. To this end, tax reductions for low-income groups and tax increases for high-income groups were introduced, along with lower controlled prices on basic necessities and higher taxes on luxuries and leisure activities. The decree also included measures preventing the deliberate deterioration of the work environment and established the rights of workers to protect them from abuses by their employers.

Although one of the objectives was to distribute the burden of the imported inflation in an equitable manner, the decree actually sought to reverse the increasing disparity in income distribution of the preceding several years. Earlier economic policies were oriented toward achieving economic growth and little attention was paid to equitable income distribution. The gap between the rich and poor had become, however, a cause for social unrest by the early 1970s and it became necessary for political stability that the government undertake measures to bring about income redistribution. The oil crisis gave the government a timely opportunity for introducing the measures, which under other circumstances would have met with greater resistance from certain segments of the society.

Given the objectives of redistributing income in favor of the poor and restraining the consumption of luxuries by the rich, were the measures in the decree appropriate? Lowering taxes for low-income groups and raising taxes for high-income groups for the purpose of redistribution are measures consistent with efficient allocation of resources, if they have a negligible effect on the work-leisure choice. Also, given the objective of curtailing the consumption of luxuries and leisure activities and what might be called conspicuous consumption, heavy taxation of such activities was an appropriate measure.

Additional measures for income redistribution such as the provision of low-priced basic necessities and the dual-pricing system for rice (selling rice at a low price and buying it at a high price) created a price distortion in the economy. The dual-pricing system—which required government financing—contributed to inflation and inefficient allocation of resources. The low controlled prices of basic necessities brought about occasional shortages in supply and necessitated the provision of subsidies to production to increase their supply. Where subsidies were not offered or were insufficient to increase production to meet the demand, shortages were met with imports. These imports, which were larger than they would have been if prices had not been held artificially low, required additional foreign exchange.

Although heavy taxation of the consumption of luxuries and leisure activities is appropriate to the objective of curtailing these activities, it may not have been needed if the financial institutions had been liberalized. Given the repressed financial regime and low interest rates, there was little incentive for the rich to save for future consumption. The consumption pattern of the rich of overspending on current consumption should be viewed, therefore, as a consequence of the distortion in the financial market.

In Korea the rich and the middle class could lend money in the unorganized money markets, earning rates higher than those offered by the banks. The Presidential Emergency Decree of 3 August 1972, which was intended to relieve the debt burden of large businesses, had a confiscatory effect on moneylenders in the unorganized money markets. After that experience and faced with low interest rates in the organized money market, it would not be too difficult for anyone to decide to spend more now and save less.

The distortion in the financial market and government actions like the decree of 3 August 1972 may have caused the saving ratio of households to be lower than it would have been without such distortion and thereby led to the heavy reliance on foreign savings. Thus, the distortion in the financial market; government actions affecting property rights, consumption of luxuries and leisure activities; and foreign debt should be considered not as separate but as interdependent issues. High taxes on leisure activities and the consumption of luxuries may help restrain such activities, but will do little to increase domestic saving, and thus decrease dependence on foreign savings, without financial liberalization and the security of private property.

The decree made a provision for preferential credit assistance to small and medium-size firms on the verge of bankruptcy. Its objective was to maintain employment and thus ensure the livelihood of low-income wage earners. Although the measure is commendable, one must ask why the small and medium-size firms were more vulnerable than others to bankruptcy. The large firms have been favored customers in the organized money markets whereas small and medium-size firms were the major borrowers in the unorganized money markets. The latter paid higher interest rates than the former and were probably adversely affected by the decree of 3 August 1972, as it had the effect of drying up the credit supply in the unorganized money markets. This is an example of how distortion in one market necessitates the introduction of distortion in another market. The result is "patch-on-patch-up" economic policies where the excess burden of the two policies is additive, not offsetting.

The effectiveness of the decree of 14 January 1974 in coping with the first oil crisis may lie in its moderating influence on wage increases. Tax cuts for low-income groups and lowering the prices of basic necessities cushioned the decrease in real wages caused by oil price increases. These

measures, combined with increased taxes on high-income groups and on luxury items, made it possible for the government to hold wage increases to a moderate pace. These moderate wage increases contributed to Korea's ability to increase its exports of services and merchandise, to carry out successful import substitution, and to allow an annual GDP growth rate of 7.2 percent during 1974–82. This was accomplished, in part, by making Korean labor internationally competitive; the decree made this possible without bringing about political instability. Income redistribution and restraints on luxury consumption, which were the principal objectives of the decree, could be thus regarded as intermediate steps toward this end.

Energy-Specific Policy Measures

Broadly speaking, energy-specific policy measures may be broken down into price and nonprice measures. These measures were introduced to achieve energy conservation and substitution of other fuels for oil.

The key to understanding the Korean energy policy and response to the oil crisis lies in recognizing that, throughout the 1960s and into the early 1970s, the use of energy was subsidized for industrial users to promote industrial development and for households because it was a basic necessity. Oil price increases, however, made this cheap energy policy too costly to continue. Adjustments were thus made in the prices of fuels to reflect the increases in the world price of oil which brought about energy conservation and interfuel substitution.

A more fundamental issue is whether or not nonprice measures such as publicity campaigns and the employment of heat managers were necessary. As additional measures to price adjustments they may have contributed to the speed at which energy conservation and interfuel substitution were carried out. The effectiveness of such measures, however, depends on the moral leadership of politicians or the coercive power of the government. The effectiveness of the moral leadership of politicians is short-lived and the coercive power of the government entails enforcement costs and creates room for discontent and corruption. A society must choose, given its historical and political background, an optimum combination of price and nonprice measures to bring about energy conservation and interfuel substitution. Whether or not the combination introduced in the decree was optimal is difficult to say, but the effectiveness of the moral leadership of politicians and of the coercive power of the government is subject to the law of diminishing returns.

EFFECTS OF THE POLICY MEASURES

The Presidential Emergency Decree¹

In 1974 GNP grew at an annual rate of 8 percent in real terms, and in 1974–82 GDP grew at an annual rate of 7.2 percent. Compared with the rate of 9.7

percent in 1964-73, this was a slight decrease. Relative to other developing countries in Asia and to the rest of the world, Korea fared well during the turbulent period of 1974 through 1982. What accounts for this performance of the economy? How much did the decree contribute to it?

In their study of external shocks and policy responses of Asian countries, Naya, Kim, and James (1984:18) conclude:

The NICs [newly industrializing countries] were able to withstand the impacts of the external shocks much more successfully than countries in Southeast and South Asia, though the effects on the NICs were greater relative to the size of their economies. The reason for the better performance of the NICs lay in their long-term strategies and policies rather than in their short-term responses. Their outward-looking trade and industrialization policies and market-oriented pricing policies, especially for production inputs, added to the resilience of their economies.

Although we agree with the above conclusion, we believe that the decree as a short-term measure had the effect of stabilizing wages in the face of deteriorating terms of trade. Among the NICs, Korea relied less on import reduction through lower GNP growth as a policy response to the external shocks, but more on export-market penetration and import substitution. The reason for the latter is, we argue, the international competitiveness of Korean labor. The decree contributed to that competitiveness by holding down the rate of wage increase.

In analyzing the factors accounting for Korea's economic growth in 1974-82, the role of external savings cannot be ignored. Table 8.2 shows a close relationship between the imports of petroleum and petroleum products and the increase in foreign debt. There were clear quantum jumps for both items in 1974 and 1979—the years of oil crisis. We also find three distinct phases in the table. In 1968-73 the average annual imports of petroleum and petroleum products was \$169 million and the average annual increase in foreign debt was \$603 million. These amounts increased, respectively, to \$1.7 billion and \$2.1 billion in 1974-78, and to \$5.8 billion and \$5.6 billion in 1979-82. These figures indicate that Korea's foreign debt in effect financed its oil imports. Thus, without having to reduce imports, the country increased its exports and carried out its successful import substitution with a small decrease in its economic growth rate.

In 1982 Korea had an external debt of \$37 billion. One could have argued then that its excellent record in 1974-82 was purchased at the price of this huge external debt and that the day of reckoning was due at any moment. Naya, Kim, and James (1984) argued, however, that given its ability to adjust to external shocks, and with continuing excellent export performance, Korea should be able to meet its debt obligations. According to their

1. The author is grateful to Dr. Chung H. Lee for contributing this section concerning the effects of the Presidential Emergency Decree.

Table 8.2. External debt and imports of petroleum and petroleum products: 1967-82 (10⁶ US \$)

Year	External debt outstanding	Increase in external debt	Imports of petroleum and petroleum products
1967	645		59
1968	1,199	554	73
1969	1,800	601	108
1970	2,245	445	133
1971	2,922	677	187
1972	3,589	667	218
1973	4,260	671	296
1974	5,937	1,677	1,020
1975	8,456	2,519	1,339
1976	10,533	2,077	1,658
1977	12,648	2,115	2,065
1978	14,871	2,223	2,312
1979	20,500	5,629	3,416
1980	27,365	6,865	6,164
1981	32,490	5,125	6,918
1982	37,314	4,824	6,740

Source: Adapted from Table 4 in I. C. Kim (1983b) and BOK, *Economic Statistics Yearbook* (1970-85).

Note:

Average annual increase in external debt

1968-73: \$603 million

1974-78: \$2,122 million

1979-82: \$5,611 million

Average annual imports of petroleum and petroleum products

1968-73: \$169 million

1974-78: \$1,679 million

1979-82: \$5,810 million

calculation, Korea's debt service to GNP ratio was 4.7 in 1973, 4.8 in 1980, and 5.7 in 1982. Their estimates of the debt service to exports ratio during these three years were 15.1, 12.2, and 13.1, respectively. The figures were taken to indicate that Korea's ability to service external debt did not significantly deteriorate during 1974-82. The current account surpluses of recent years have indeed proved their prediction to be correct.

Energy-Specific Policy Measures

Progress in energy conservation. Some conservation measures have already brought about important changes in energy efficiency, particularly in the industrial sector. Although it is difficult to define the exact effect of these measures, the use of macroindicators backed with more disaggregated in-

dicators provides a useful means of monitoring progress in energy efficiency.

Overall energy efficiency and intensity of energy use (measured by energy consumption per unit of real GNP), rose sharply between 1960 and 1973 (Figure 8.1). But since then, this trend has been reversed due to increased conservation efforts and structural changes in the economy.

Inasmuch as the energy/GNP ratio is not an exact measure of energy conservation potential, more detailed analyses are needed to assess gains in energy efficiency. Hence, we estimated an energy-demand equation using time-series data from 1961 to 1980 (see note in Table 8.3). With this equation we estimated the hypothetical energy consumption—the consumption that would have prevailed if there had been no oil crisis—at 43,299 thousand TOE (tons of oil equivalent) in 1980 (Table 8.3). Compared with the actual energy consumption, these hypothetical figures are higher by about 3 to 8.4 percent. These estimates suggest that Korea's energy conservation program was fairly successful.

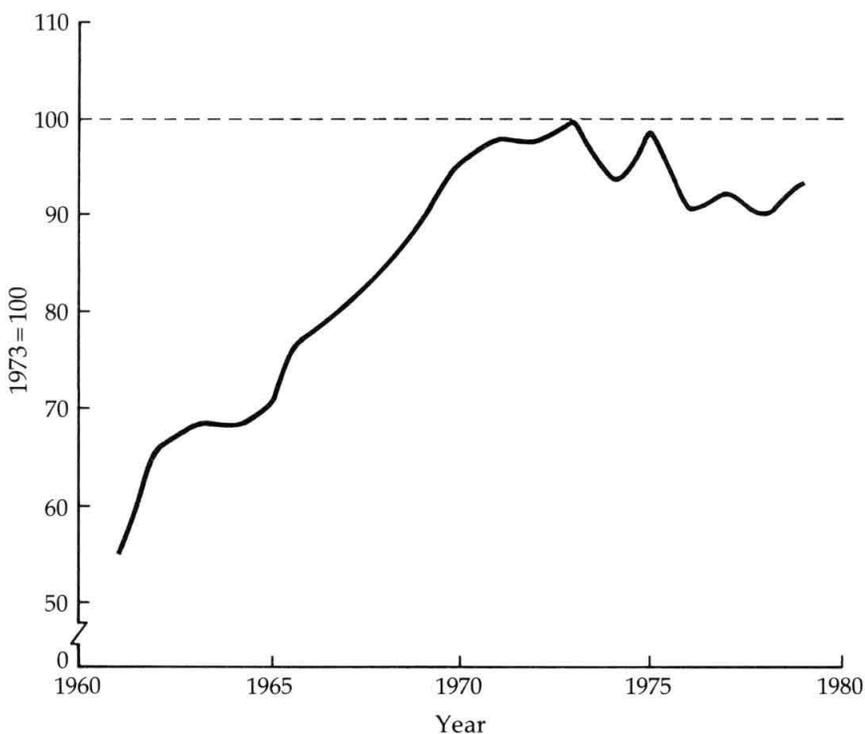


Figure 8.1. Commercial energy per unit of real GNP: 1960-80

Source: EPB, ROK, *Handbook of Korean Economy* (1980).

Table 8.3. Actual versus hypothetical energy: 1974-80

Year	Total primary energy (10 ³ TOE)		Estimated reduction of energy consumption (%)
	Actual	Hypothetical	
1974	25,510	27,654	8.4
1975	27,076	28,673	5.9
1976	29,805	31,566	5.9
1977	33,074	34,761	5.1
1978	36,157	38,660	6.9
1979	40,503	41,727	3.0
1980	41,103	43,229	5.2

Source: Ministry of Energy and Resources, ROK, unpublished data.

Note:

$$\ln E = 0.5892 + 0.5442 \ln E_{-1} + 0.4518 Y - 0.0560 D,$$

(2.29) (6.10) (5.80) (-3.03)

$$R^2 = 0.998, DW = 1.92$$

where E = energy consumption in 10³ TOE

E_{-1} = lagged energy consumption in 10³ TOE

Y = GNP in 1975 billion won

$D = 0$, 1961-73

1, 1974-80

Figures in parentheses are t -values for the estimated coefficients.

The equation is statistically significant, explaining 99.8 percent of the variance in aggregate energy consumption for the period. It was used to estimate hypothetical energy consumption for 1974-80, assuming that $D = 0$. The estimated values were then compared with actual energy consumption, the difference between the two being a rough indicator of the reduction in energy demand obtained in 1974-80.

TOE—tons of oil equivalent.

An accurate estimate of conservation results is hampered by conceptual difficulties and by data limitations. Nevertheless, an econometric model can provide a useful means of monitoring progress in energy efficiency, especially if it is backed up by more disaggregated indicators such as sectoral energy consumption per unit of output. In the case of Korea it is possible to use input-output tables for 1970, 1975, and 1978, and derive physical coefficients of total energy use for the industrial sectors. Table 8.4 shows these fixed-coefficient estimates used for industrial energy savings during 1970-75 and 1975-78, assuming that no technical change in energy use occurred between these periods.

Table 8.4 clearly reveals a large decrease in energy requirements between 1970 and 1978. If technology as represented by the 1970 energy-use coefficients had persisted until 1975, all industries would have required 23 percent more than their actual use. The difference would have been even greater (34 percent) by 1978. If, however, technology as represented by the 1975 energy-use coefficients had persisted until 1978, all industries would have

required 8 percent more energy. That is, energy savings of more than 8 percent did occur between 1975 and 1978 over and above those achieved between 1970 and 1975.

Table 8.3 indicates that direct energy coefficients in the manufacturing sector declined more sharply between 1970 and 1975 than between 1975 and 1978. These large changes between 1970 and 1975 happened soon after the petroleum price increases and resulted mostly from short-run, improved energy-conservation management rather than from long-run economies associated with new plant or equipment. They seem to have occurred mainly in light and heavy manufactures where energy is used primarily for processing, materials forming, cutting and handling (e.g., textiles, electrical machinery, transport, and machinery) rather than in the production of basic materials. Savings in energy-intensive manufactures occurred in 1975-78, as energy-saving designs and economies of scale were incorporated into new plants and equipment. Table 8.4 also indicates that an important technical change in energy consumption occurred in rapidly expanding industries that have higher energy costs.

The input-output studies suggest that the heavy industry path of industrialization, adopted in the early 1970s, was accomplished without requiring more energy for a given level of industrial activity. Table 8.4 shows that direct energy-use coefficients of manufacturing, which were expressed in thousand tons of oil equivalent (10^3 TOE) per 1975 billion won of gross output, declined from 1.28 TOE/ 10^6 in 1970 to 1.02 in 1975 and then to 0.824 in 1978. This was achieved through a greater emphasis on less energy-intensive heavy and chemical manufactures.

Table 8.5 shows the structural changes in the manufacturing sector between 1970 and 1978. The output share of light manufactures declined gradually from 52.6 percent to 44.2 percent, while that of heavy and chemical manufactures rose from 47.4 percent to 55.8 percent. Note, however, that within heavy and chemical manufactures the output share of energy-intensive manufactures decreased from 39.9 percent in 1970 to 34.0 percent in 1978. (For a more detailed study, see Y.H. Kim 1983.)

Progress in energy transition away from oil. Korea has made considerable efforts to decrease its oil dependency mainly through restructuring fuel patterns for power generation away from oil to a mix of nuclear energy, bituminous coal, and oil. Although the main benefits of the restructuring are expected to accrue in the next 5-10 years because power plants have the longest investment gestation period in the economy, some of the decisions made since 1974 have already brought about important changes in energy supply patterns with the oil dependency of the electric-generation sector declining from 81 percent in 1973 to 77 percent in 1980. Korea's oil dependency rose from 53 percent in 1973 to 63 percent in 1979, but declined to 61 percent in 1980 (Kim and Smith 1989).

Table 8.4. Estimates of energy efficiency by sector: 1970-78 (excluding noncommercial energy)

Sector	Gross output (10 ⁹ won at 1975 prices)			Energy intensity (TOE per 10 ⁶ won)			Energy savings (10 ³ TOE)		
	1970	1975	1978	1970	1975	1978	1975 ^a	1978 (I) ^b	1978 (II) ^c
Light manufactures	2,052.6	4,859.3	8,483.8	0.653	0.513	0.413	964.0	844.4	2,532.9
Food, beverages, tobacco	1,044.5	1,820.4	3,149.3	0.525	0.482	0.367	78.3	362.2	497.6
Textiles and apparel	554.0	2,532.6	3,600.0	0.886	0.572	0.479	653.9	334.8	1,465.2
Lumber and wood products	176.7	269.3	478.5	0.526	0.451	0.353	20.2	46.9	82.8
Miscellaneous manufactures	277.4	687.0	1,256.0	0.752	0.444	0.364	211.6	100.5	487.3
Heavy manufactures	294.0	1,534.7	4,158.4	1.235	0.483	0.360	1,262.6	496.9	3,791.3
Fabricated metal products	43.2	180.0	494.6	1.795	0.992	0.699	144.5	144.9	542.1
General machinery	63.5	185.7	471.5	0.891	0.816	0.566	13.9	117.9	153.2
Electrical machinery and equipment	96.1	681.6	2,073.4	1.059	0.344	0.278	487.3	136.8	1,619.3
Transport machinery	74.1	423.2	942.9	1.001	0.366	0.267	607.3	93.3	1,446.4
Precision and optical products	17.1	64.2	176.0	0.488	0.339	0.316	9.6	4.0	30.3
Energy-intensive manufactures	1,559.5	3,886.1	6,547.4	2.104	1.866	1.650	814.4	1,661.2	3,068.5
Pulp and paper	88.9	216.4	384.3	1.440	0.997	0.893	95.9	40.0	210.2
Chemicals, coal, petroleum	1,085.2	2,550.7	4,009.4	1.678	1.450	1.359	581.6	364.9	1,279.0
Nonmetallic mineral products	196.0	338.5	573.4	4.230	3.920	3.289	104.9	361.8	539.6
Primary iron and steel	160.4	689.6	1,356.2	2.512	2.705	2.136	-133.1	771.7	509.9
Primary nonferrous metals	29.0	90.9	224.1	3.397	1.581	1.033	165.1	122.8	529.8

Manufacturing (total)	3,906.1	10,280.1	19,189.6	1.280	1.020	0.824	3,041.0	3,002.5	9,392.7
Agriculture	2,301.6	2,629.8	3,097.3	0.067	0.102	0.128	-92.0	-80.5	-188.9
Fishery products	150.5	316.0	328.2	3.245	2.944	4.813	95.1	-613.4	-514.6
Mining	79.5	114.4	159.2	1.373	1.235	1.211	15.8	3.8	25.8
Electricity	147.5	319.3	507.2	15.252	14.544	13.831	226.1	361.6	720.7
Construction and other utilities	1,005.2	1,579.8	2,808.2	0.829	0.554	0.449	434.4	294.9	1,067.1
Transport and storage	572.3	1,044.3	1,728.3	5.240	4.237	3.826	1,047.4	710.3	2,443.8
Commerce and services	2,997.6	4,360.3	6,341.0	0.616	0.460	0.553	680.2	-589.7	-399.5
Grand total	11,160.3	20,644.0	34,159.0	1.226	1.152	1.065	5,448.0	3,089.5	12,547.1

Source: BOK, *Input-Output Tables (1970, 1975, 1978)*.

- a. 1975 energy savings through the use of 1975 energy coefficients instead of 1970 coefficients.
 - b. 1978 energy savings through the use of 1978 energy coefficients instead of 1975 coefficients.
 - c. 1978 energy savings through the use of 1978 energy coefficients instead of 1970 coefficients.
- TOE—tons of oil equivalent.

Table 8.5. Composition and growth of the manufacturing sector: 1970-78 (%)

Subsector	Composition			Annual growth rate	
	1970	1975	1978	1970-75	1975-78
Light manufactures	52.6	47.3	44.2	18.8	20.4
Food, beverages, and tobacco	26.8	17.7	16.4	11.8	20.0
Textiles and apparel	14.2	20.3	18.8	30.3	20.0
Lumber and wood products	4.5	2.6	2.5	8.8	21.1
Miscellaneous manufactures	7.1	6.7	6.5	19.9	22.3
Heavy manufactures	7.5	14.9	21.7	39.2	39.4
Fabricated metal products	1.1	1.8	2.6	33.0	40.1
General machinery	1.6	1.8	2.5	23.9	36.4
Electrical machinery and equipment	2.5	6.6	10.8	48.0	44.9
Transport machinery	1.9	4.1	4.9	41.7	30.6
Precision and optical products	0.4	0.6	0.9	30.3	40.0
Energy-intensive manufactures	39.9	37.8	34.1	20.0	19.0
Pulp and paper	2.3	2.1	2.0	19.5	21.1
Chemicals, coal, and petroleum	27.8	24.8	20.9	18.6	16.3
Nonmetallic mineral products	5.0	3.3	3.0	11.5	19.2
Primary iron and steel	4.1	6.7	7.0	33.9	25.3
Primary nonferrous metals	0.7	0.9	1.2	25.7	35.1
Grand total	100.0	100.0	100.0	21.4	23.1

Source: Table 8.4.

CRITICISMS AND LESSONS

The Presidential Emergency Decree

There is no doubt that by most standards we may regard Korea's response to the external shock of 1973-74 (and that of 1979) as a success. One measure of this success is that GDP grew at an average annual rate of 7.2 percent during the turbulent 1974-82 period. This is higher than the rate achieved by any of the other Asian developing countries, except Hong Kong and Singapore.

This success in maintaining a high rate of economic growth was in part due to the fact that the government did not deviate from its basic macroeconomic objectives—rapid economic growth and industrialization—in the face of a severe external shock. Instead of reducing imports by lowering the rate of economic growth and instituting import-substitution, the govern-

ment continued with its policies of export promotion and external financing. These policies made it possible to pursue macroeconomic objectives without being overly concerned with the balance-of-payments constraint. One consequence of the policies was, however, a rapid increase in Korea's external debt, which rose from \$3.6 billion in 1972 to \$12.6 billion in 1977 (J. H. Kim 1987). Such a rapid increase in external debt, which eventually reached \$40 billion in 1983, raised doubts in some quarters as to the solvency of the Korean economy—but these doubts disappeared by the mid-1980s with the continuing success of the economy and current account surpluses.

The Presidential Emergency Decree of 14 January 1974 played a critical, short-term role complementary to the macroeconomic policies. Given the terms of trade deterioration resulting from the oil price increase, there would have been pressure for wage increases if the burden of the deterioration was not equitably shared. In one sweep the decree brought about income distribution, thus mitigating the effect of the oil shock on the poor and wage earners. The government was thus able to moderate wage increases and maintain the competitive edge of the Korean economy. The decree probably made it easy for the government to stay with its macroeconomic policies and thus achieve its objectives of export expansion and economic growth.

It is obvious that drastic measures such as the decree cannot be undertaken by a weak government or a government subject to pressure from strong interest groups. Such policy instruments may not be easily duplicated in other countries or even in Korea in later years. In other words, we may say that the decree was an economically efficient and effective instrument that was politically feasible at the place and at the time it was implemented. Whether an equally drastic measure would be politically feasible in Korea at a later date is highly questionable.

Energy-Specific Policy Measures

With rapidity and flexibility the Korean economy achieved three energy transitions, and its energy conservation efforts were also successful in reducing the energy growth rate. The energy transitions and energy conservation were accomplished through a set of policy packages that included pricing policies, regulation, fiscal and financial incentives, and institutional reforms. But these various measures were taken in a rather piecemeal fashion lacking an overall coordination that recognized their interdependence.

Korea's indigenous energy resources remain limited and the country will continue to be heavily dependent on imported fuels, especially oil. According to projections of the Korea Development Institute, the contribution of domestic supplies of energy will continue to diminish, from 31 percent in 1980 to 13 percent in 1991. If the projections are correct, 87 percent of the

country's total energy requirements will have to be imported. Continuation of the recent rapid economic growth rate—around 8 percent—thus entails acceleration of the third energy transition, from oil to a mix of other imported fuels, and economies in the use of energy.

Because energy pervades all aspects of economic activity and its demand is derived from the structure and growth of the whole economy, the policy goal of achieving an optimal mix of fuels and conservation of energy will be realized only if it is supported by adequate policies of demand management in the consuming sectors—industry, transportation, and residential/commercial. It is, therefore, essential that the energy implications of alternative development policies in all these sectors be properly appraised, and that effective trade-offs be made between energy efficiency and additional capital expenditures, fuel conversion and additional capital expenditures, and technologies that differ in energy intensity and capital cost.

Clearly, maximization of energy efficiency requires changes in the economic structure. The essence of restructuring the sectoral output mix is to redirect final demand and producers' purchases away from energy and energy-intensive goods. Accordingly, the current incentive system should be reformulated to accelerate changes for both the final demand mix and the input proportions of domestic production. Meeting the energy challenge entails a large-scale reallocation of resources and thus calls for bold policy changes covering prices, tariffs, subsidies, tax incentive schemes, and financial policies. Unless Korea realigns its economic policies in this way, before oil becomes scarce and more expensive, its economic security will be endangered.

Critical to such realignment would be further institutional arrangements to make the Ministry of Energy and Resources stronger and more expert. But no matter how good the Ministry of Energy and Resources becomes, much of its work will involve coordination with other ministries as well as with businesses and the public. In formulating and implementing energy policy, the ministry will have to judge political, economic, technical, and other market forces affecting energy choices. Such judgments must be based on support from other key ministries such as finance, industry, transportation, construction, foreign affairs, and defense. This puts a high premium on the political standing of the energy minister and on his skill in interministerial decision making.

The Ministry of Energy and Resources should develop a considerable capacity for negotiating with other ministries and official bodies, cultivating allies, and finding ways to persuade reluctant officials, businessmen, and others about the efficient use of energy and the consequential changes in regard to fuels. Thus a premium is also placed on the kinds of contacts the ministry's experts and policy planning staff have with all other parts of the government. The extent to which these other government bodies participate in the ministry's effort to have close exchanges rests on the power of the minister and on the caliber of his staff.

9 The Comprehensive Stabilization Program (1979)

by Sang-Woo Nam

By the early 1970s Koreans had learned to live with a high rate of inflation—a rate that had averaged well over 10 percent per year since 1960. Korean policymakers and others tended to look at inflation as an inevitable price for high economic growth. After the first oil price shock of 1973, however, there were obvious signs that inflation was accelerating.

During the nine years preceding the energy crisis, the rate of increase in consumer prices had averaged 11.4 percent per year, but during 1974–75 the rate jumped to 25 percent. These high rates were caused by more than just the import price hike; they reflected inflationary pressures that had built up over many years. By 1976–78, the inflation rate was several percentage points higher than it had been before the oil crisis. Even with virtually no import price increase, consumer prices continued to rise at an annual average of 13 percent (Table 9.1).

Table 9.1. Macroeconomic overview: 1976–78

Item	1976	1977	1978
GNP growth (%)	15.1	10.3	11.6
Fixed investment (%)	14.7	26.6	39.4
Exports of goods and services (%)	43.0	26.7	17.5
Employment growth (%)	6.1	3.0	4.3
Unemployment rate (%)	3.9	3.8	3.2
Current account balance (10 ⁶ US \$)	-314	12	-1,085
Commodity exports (10 ⁶ US \$)	7,815	10,047	12,711
Receipts from overseas construction (10 ⁶ US \$)	247	657	1,049
New orders received (10 ⁶ US \$)	2,502	3,516	8,145
Inflation rate (%)			
Wholesale prices	12.1	9.0	11.7
Consumer prices	15.3	10.1	14.4
Food and beverages	17.8	11.6	16.7
GNP deflator	17.7	16.3	20.6
Wages	35.5	32.1	35.0

Sources: BOK, *Economic Statistics Yearbook* (1979); Ministry of Construction, ROK, unpublished data.

It is not difficult to trace the sources of the accelerating inflation. One of the main causes was the excessive expansion of the money supply, which grew at an average annual rate of 32.1 percent during the 1976-78 period. That rapid expansion of money was largely a consequence of the growth of net foreign assets, a large deficit in the government's Grain Management Fund, brisk investment demand, and the expansion of preferential policy loans (Table 9.2).

On the supply side, the sectoral imbalance in the allocation of capital for fixed investment aggravated inflationary pressures. During 1976-78 more than 77 percent of all manufacturing equipment investment was undertaken in the heavy and chemical industries. To make the investment possible, an increasing share of bank credit was allocated to these industries, a share that reached 60 percent in 1978 even though heavy and chemical industries accounted for only half of manufacturing production (KDI 1981).

With a disproportionate share of scarce capital being diverted to investment projects that required a long gestation period, the modernization and capacity expansion of other sectors was constrained. These sectors included agriculture, small and medium-size businesses, and the commodity distribution system—sectors that together ensure the smooth supply of daily necessities and other essential commodities. Low productivity in these sectors and the resulting supply shortages were major sources of inflation and threatened to disrupt the stability of the economy.

Government efforts to reduce inflation through price controls did more harm than good. In the course of regulation the government usually deferred justifiable price adjustments for far too long. Once increases were

Table 9.2. Expansion of the money supply: 1971-78 (%)

Item	1971-73	1974-75	1976-77	1978
Money supply (M_1)	34.0 (33.1)	27.3 (24.5)	35.7 (34.7)	24.9 (32.2)
Sectoral contribution				
Government	7.8	21.0	-2.0	4.5
(Grain and fertilizer management)	(8.9)	(26.4)	(13.6)	(8.5)
Private	17.2	51.0	5.8	46.9
Foreign	10.8	-31.3	41.9	-11.6
Other	-1.8	-13.4	-9.9	-15.0
Quasi-money	28.5	25.6	37.2	40.9
Money supply broadly defined (M_2)	30.3 (33.6)	26.1 (26.6)	36.6 (33.1)	35.0 (39.3)

Sources: BOK, *Economic Statistics Yearbook* (1979); Ministry of Finance, ROK, unpublished data.

Note: Based on year-end figures except for those in parentheses, which are based on annual averages.

allowed, prices tended to acquire an independent upward momentum. This pattern of "stop-go" price setting also led to such undesirable effects as supply shortages, deteriorating product quality, and inadequate investment.

On the cost side, high inflation was accompanied by a rapid rise in wages. During 1976-78, wages increased at an annual rate of 34.2 percent, far surpassing the growth of labor productivity—an indication that wage increases were a major inflationary factor. With soaring housing and land prices, the rapid wage increases seemed to have produced little improvement in workers' welfare (Table 9.3). Finally, it was frequently alleged that the introduction of the value-added tax (VAT) system in 1977 exacerbated inflation. The VAT system may have indeed contributed to accelerating inflation because of the downward rigidity of prices in the process of price restructuring.

Persistent high inflation threatened the prospects for high growth by eroding the competitiveness of Korean exports in the international market. Weakening export competitiveness means slow growth for the Korean economy, which is dependent on an outward-looking growth strategy. Korean export growth slowed between 1977 and 1979, as export profitability deteriorated with the acceleration of wage and price increases. During 1976-79, Korea's export profits dropped by 32 percent as unit labor costs rose by 137

Table 9.3. Export profitability and export growth, 1976-79

	1976	1977	1978	1979
Nominal wage (manufacturing) (A)	134.7	180.2	242.1	311.4
Labor productivity (manufacturing) (B)				
KPC index ^a	107.2	118.8	133.1	154.1
National income data ^b	101.0	110.5	123.8	131.2
Unit labor cost [(C)=(A/B)]				
KPC index	125.7	151.7	181.9	202.1
National income data	133.4	163.1	195.6	237.3
Unit value of exports (won) (D)	111.7	122.3	135.4	161.8
Export profitability (D/C)				
KPC index	88.9	80.6	74.4	80.1
National income data	83.7	75.0	69.2	68.2
Growth of exports (%) ^c				
Korea	51.8	30.2	26.5	18.4
Taiwan	53.8	14.6	35.5	26.9
Singapore	22.5	25.1	23.0	40.4
Hong Kong	41.9	12.9	19.5	31.7

Sources: BOK, *Economic Statistics Yearbook* (1980); IMF (1982); Directorate General of Budget, Accounting and Statistics, Taiwan, *Monthly Bulletin of Statistics* (1977-80).

a. Korea Productivity Center (KPC) index (1975 = 100).

b. Computed by using national income data (value added per worker, 1975 = 100).

c. Percentages computed on the basis of current US dollars.

percent and the unit value of exports increased only about 62 percent (Table 9.3). Unit labor costs, measured in U.S. dollars, rose only 23 percent in Singapore and 40–45 percent in Taiwan and Hong Kong during the same period.

There was increasingly strong evidence that the potential energy of the nation was being wasted by the high inflationary pressures and diverted from effective concentration on economic development. Korean entrepreneurs, lured by incentives to speculate in real estate and inventories, were distracted from the technological and managerial innovation needed for long-term growth. Businesses were frequently blamed for being preoccupied with borrowing as much money as possible from banks, only to invest it in real estate or to expand unproductive businesses.

The waste of productive resources was also evident in the more diffused atmosphere of society at large, and it was closely related to the widening disparity in income distribution. The rich made speculative fortunes overnight that far outstripped what an honest wage earner could save in a lifetime. Thus, more and more resources, including some of the nation's best managerial talent, were enticed into speculative activities. Finding themselves unrewarded, workers grew frustrated and developed negative attitudes toward their work. Their discontent was occasionally expressed in organized demonstrations.

Although consistent data on income distribution are scant, income distribution seems to have deteriorated in the latter half of the 1970s. Tighter credit rationing in favor of the heavy and chemical industries, which occurred at the expense of small and medium-size businesses, and various government regulations restraining competition among producers contributed to the concentration of economic power. Soaring prices of real estate was probably an even more important cause of the deterioration in the distribution of wealth. Between 1973 and 1978, average housing and residential land prices jumped by factors of 4.5 and 7.1, respectively, while consumer prices and urban household income multiplied only 2.3 and 3.5 times (EPB, ROK, *Annual Report on the Family Income and Expenditure Survey*, 1982; KNHC 1980). Thus the differences in wealth between those with their own houses and those without widened (Table 9.4).

Table 9.4. Household income distribution by class and degree of income concentration: 1965–80

Item	1965	1970	1976	1980
Gini coefficient	0.344	0.332	0.391	0.389
One-tenth distribution ratio (lower 40%/upper 20%)	19.3/41.8	19.6/41.6	16.9/45.3	16.1/45.4

Sources: Figures for 1965, 1970, and 1976 are from KDI (1979), estimated by Dr. Choo Hak Joong. Figures for 1980 are from EPB, ROK, *Social Indicators* (1982).

MAJOR FEATURES OF THE STABILIZATION PROGRAM

Major Contents of the Program

A consensus within the government that a major policy change was needed had been developing for some time. The newly appointed deputy prime minister, Shin Hyon Whack, was strongly in favor of a stabilization policy. Therefore, in December 1978, President Park asked three institutions—the Economic and Scientific Council, the Bank of Korea, and the Korea Development Institute (KDI)—independently to propose policy measures to deal with the problems of the Korean economy. Upon being briefed by each of these institutions, President Park asked the Economic Planning Board (EPB) to formulate and implement comprehensive stabilization measures based on the three reports.

The result was the Comprehensive Stabilization Program announced on 17 April 1979 by the EPB. The major features of the program were:

- restrictive budget management with expenditure cuts and deferral of some public investment projects;
- restrictive monetary policy with particular attention given to improving the operation of preferential policy loans and interest rates;
- adjustment of investment in the heavy and chemical industries;
- facilitation of the supply and stabilization of the price of daily necessities, including improvements in the commodity distribution system, financial and tax support for producers, elimination of institutional barriers restraining supply capacity, and a deceleration of price controls; and
- reaffirmation of the government's determination, originally announced in the August 1978 Comprehensive Measure, to prevent a recurrence of real estate speculation.

Restrictive Fiscal and Monetary Management

To cool off the overheated economy, the government further limited monetary expansion, which had already been restricted since late 1978. The year-end target of monetary expansion was set at 23–25 percent, a drastic reduction compared with the record of the previous three years, when growth in the broadly defined money supply had ranged from 33 to 40 percent annually. However, the trend of strong private investment and consumption expenditures early in 1979 indicated that the GNP growth rate for 1979 would greatly surpass the original target which had been set at 9 percent. Thus, the government thought that monetary restrictions should be strengthened to make sure that the monetary target would be attained. Because the government had already planned to restrict the foreign sector's contribution to the expansion of the money supply by limiting the increase in net foreign assets to below \$300 million, it had to tighten credit in the government and private domestic sector.

The stabilization program included measures to reduce the money supply available to the government sector by about 300 billion won, an amount equal to 7 percent of total government revenue and 15 percent of the total increase in the money supply planned for 1979. The program for the reduction of government expenditures included a 5 percent cut in current spending, a reduction in subsidies to local governments, a postponement of construction plans for government offices and government-backed institutions, and adjustments in other public construction work plans.

Attention was also called to the need for conservative fiscal management for 1980, underscoring the importance of a substantial reduction in the deficits generated by the high grain-price support program. Suggested priority areas for the 1980 budget included stabilizing the livelihood of the people and enhancing the nation's economic growth potential by: (1) sponsoring more diversified and mechanized farming, (2) expanding investment in social infrastructure and manpower development, (3) providing greater support for the modernization of the nation's distribution system and to small and medium-size firms, and (4) promoting the machinery industry.

For more efficient financial management and effective credit control, the program emphasized the need to improve the operation of preferential policy loans, including export-support credit and interest-rate adjustments.

Specifically, the program's sponsors noted that the designated strategic sectors had been given priority in the allocation of bank credit causing an excessive reduction in the availability of funds for less favored sectors. It was also recognized that too many sectors were eligible and that there were no clear rules for selection. These were to be corrected to ensure that preferential financing would be sufficiently sustained to provide adequate future support to such strategic sectors as the heavy and chemical industries, particularly in providing financing for exports on a deferred payment basis. On the basis of this diagnosis, officials in charge of the program suggested that preferential financing be decreased and managed by an investment coordination committee that would not only decide the total size but also determine allocation priorities and the desirability of individual projects.

With regard to the export-financing system, qualification for access to export credit was eased to include exporters with annual exports of over \$10 million regardless of their ratios of net foreign exchange earnings content. Procedures for exporters to obtain credit for raw material imports were simplified and made more flexible. Interest-rate adjustments for the mobilization of additional savings were made on some categories of bank deposits, corporate bonds, and short-term finance company paper. Interest rates on bank installment time deposits, for example, were raised from 13.2 to 16.2 percent per annum. Furthermore, a more comprehensive program for improvement of the financial sector, including the operation of preferential policy loans and interest rates, was to be prepared by the end of June 1979.

Readjustment of Investment

Investment in the heavy and chemical industries was disproportionately large; the supply of skilled labor and the capacity to absorb related technology lagged far behind the huge investments in these industries. Thus, the products of those investments could not be expected to compete favorably in international markets. The investment needs of the heavy and chemical industries were beyond the capacity of domestic savings, and served to limit investment and supply capacity in the light manufacturing and related service sectors, which produce consumer goods for domestic consumption.

The picture on the demand side was no brighter. The level of investment in the heavy and chemical industries surpassed potential demand even before the second oil price shock in 1979.

Recognizing these problems, stabilization program authorities outlined the following general directions for the support of the heavy and chemical industries.

1. More attention was to be given to such basic requirements for the successful promotion of the heavy and chemical industries as workforce development, the smooth introduction of foreign technology, and an effective incentive system.

2. The support system for the heavy and chemical industries was to be designed to be more concentrated and selective. Support would be limited to areas in which Korea had a strong international comparative advantage. But the industries selected would be given effective and systematic support until they graduated from the import-substitution stage and became competitive export industries. For industrial sectors other than selected heavy and chemical industries, government protection from foreign imports would be reduced and competition allowed.

3. The scale, content, and timing of investment plans for heavy and chemical industrial projects were to be readjusted. The basic guideline for adjusting investment projects was to postpone or cancel projects that led to excess capacity or duplication of facilities. Projects without a long-term comparative advantage in international markets, or without adequate private financing, were also to be reconsidered.

As proposed in the program, the Investment Coordination Committee was established to oversee investment readjustment. Headed by the deputy prime minister, the committee was composed of the ministers of finance, commerce and industry, and energy and resources, together with the chief economic secretaries to the president, and a few others. The committee was to review and consider postponement of all new investment projects and those already under construction that were using over \$5 million in foreign loans or domestic loans in foreign currency.

Price Stabilization for Daily Necessities

Because the high rate of inflation during 1976-78 was largely caused by a demand-supply imbalance in food and some other essential commodities, the program included measures to forestall any recurrence of a rapid rise in prices of those commodities. The measures designed to increase the supply of agricultural and marine products were highly comprehensive. Stability in the prices of daily necessities and other essential commodities was also pursued through financial supports, tariff cuts, and institutional reforms.

Improvement of the commodity distribution system was given continuous attention in the stabilization program. The establishment of specialized wholesale dealers and large-scale retail sales outlets such as supermarkets and chain stores was encouraged, and the drafting of a more comprehensive program for the modernization of the nation's distribution system was planned. Finally, to minimize distortions originating from extensive price controls, the number of monopolistic and oligopolistic products whose prices were under government control was to be reduced from 74 items to the roughly 30 items considered critical to the stable livelihood of the people.

To alleviate the economic burden of people most adversely affected by price decontrol, the government planned to extend direct assistance to the poor. A total of about 30 billion won was appropriated to aid the poor. Tuition subsidies for middle-school children were extended and wages for relief employment in public works were increased. Compensation for rises in coal briquette prices was also provided.

IMPLEMENTATION

Policy Response to the Second Oil Price Shock

Less than three months after the Comprehensive Stabilization Program was launched, the nation was hit by a round of steep increases in international oil prices. The immediate impact of the increases, together with the removal of price controls from a large number of commodities, was a sharp acceleration of domestic inflation. Both wholesale and consumer prices rose by as much as 18 to 19 percent in 1979.

Economic activity also slowed suddenly in the latter half of 1979. The growth of GNP, which had been over 10 percent during the first half of the year, dropped to 6.4 percent for the year as a whole. Owing to the increasing uncertainty resulting from higher oil prices, fixed investment decelerated drastically. Commodity exports, which had been slowly weakening since 1977, registered a negative real growth rate (-2.5 percent) in 1979. The current account deficit rose to \$4.2 billion, almost four times as large as that of 1978.

By early 1980 prospects were even more gloomy than they had been in 1979. The oil import bill for 1980 was expected to increase by more than

\$3 billion, and there was little hope for a comparable expansion of Korea's exports. Under the circumstances, economic policymakers strongly felt that some action should be taken in response to the unfavorable overseas developments and the economic complications caused by domestic political developments. They seem to have been convinced that a doubling of the number of unemployed, to more than one million, would be a critical threat to social and political stability and that a further deterioration in the balance of payments might lead to serious questioning abroad about the credit-worthiness of the Korean economy.

Immediately after the New Year's holiday, Dr. Kim Mahn Je, president of KDI, was asked to prepare a report for President Choi Kyu Hah called "Measures to Cope with Economic Difficulties." The report was the basis for the policy package announced on 12 January 1980 by the minister of finance. The package included two important policy adjustments: devaluation of the won and an increase in interest rates.

Given the accumulated overvaluation of the Korean won since 1975, the exchange-rate adjustment was inevitable. The won was devalued by 20 percent—from 484 to 580 won per U.S. dollar. As a follow-up measure, a floating exchange-rate system based on a basket of major currencies was adopted in late February. The decision to float the won was made to prevent abrupt and excessively large exchange-rate adjustments and also to avoid sudden shifts in the terms of trade vis-à-vis non-U.S. trading partners.

The upward annual interest-rate adjustment averaged 5 to 6 percent for all financial assets in the organized markets. The interest rate on general bank loans, for example, was raised from 19 percent to 25 percent per annum. The interest-rate adjustment was designed mainly to offset part of the newly fueled cost-push effect of the won devaluation by absorbing liquidity. In other words, the interest-rate adjustment could be construed as a continued commitment to the stabilization policy on the part of the government.

Reflationary Policy Packages in Response to the 1980 Predicament

Several months after the interest-rate adjustment, financial savings increased substantially, helping to absorb excess liquidity. However, as the economic situation continued to deteriorate in the midst of social unrest, the government gradually eased the original restrictive policy stance on three separate occasions—in June, September, and November 1980.

The government announced a set of policies on 5 June 1980 calling for the allocation of additional funds for public works programs and the expansion of loans to small and medium-size enterprises and for housing construction targeted for low-income families. To stimulate investment and boost business confidence, the official interest rates were lowered by 1 to 2 percentage points and a planned upward adjustment of interest rates for short-

term export loans was postponed. To accommodate these policy adjustments, the targeted money-supply growth rates were adjusted upward by 5 percentage points to 20 and 25 percent for the narrowly and broadly defined money supply, respectively.

In spite of the June measures, general economic activity remained sluggish except for the export sectors, which reacted favorably to the exchange-rate depreciation in January. Therefore, two more policy packages were prepared—one in September and the other in November—to expand housing construction, to stimulate exports and investments, and to support purchases of selected consumer durables.

The policies included measures to reduce the range of capital gains tax rates on real estate transactions from 50–80 percent to 35–75 percent, and to make more credit available to stimulate residential construction. Measures to promote exports included an upward adjustment of export loans per dollar of letter of credit and strong financial support for exports of heavy industrial products on a deferred payment basis. As a means of stimulating fixed investment by easing the financial burden of businesses, bank and nonbank interest rates were readjusted downward by an average of 2 to 3 percentage points in September and another 2 to 3 percentage points in November. Finally, to encourage purchases of selected consumer durables, easy credit and a 30 percent cut in sales tax rates were offered.

Despite these expansionary measures, monetary management continued to be tight, in part as a result of large deficits in the balance of payments. The annual monetary expansion for 1980 was contained at 16.3 and 26.9 percent for the narrowly and broadly defined money supply, respectively.

The performance of the Korean economy in 1980 was disappointing. In the midst of weak domestic demand, GNP declined to 6.2 percent, while unemployment rose sharply to 5.2 percent. An unusually long spell of cold weather throughout the summer months of 1980 resulted in a crop loss amounting to a quarter of the expected yield. Because of the sharp deterioration in the terms of trade, the current account deficit widened to \$5.3 billion. Inflation of wholesale and consumer prices accelerated to record levels of 39 and 29 percent, respectively. The 36 percent exchange-rate depreciation vis-à-vis the U.S. dollar together with the 20 percent rise in unit import prices were the primary causes of the rapid rise in the inflation rate.

Stabilization Efforts and Initial Steps Toward Structural Improvement in 1981

In spite of a strong surge in export orders, recovery remained elusive, with little sign of any pickup in investment. This situation prompted the announcement of an additional reflationary package in April 1981, which included additional credit for exporters and small and medium-size firms to replace or upgrade their facilities, and expanded fiscal support for purchases of domestic machinery and equipment.

The housing construction industry remained weak despite the reduction in the capital gains tax rate in September 1980. Therefore, another program was drafted in late June 1981 to encourage housing construction. The program included an extension of the temporary tax reduction on capital gains, an increase in the deduction for the annual inflation allowance from 10 to 15 percent in the calculation of capital gains, and additional loans for the purchases of small apartment units.

During the last two months of 1981, the government relaxed its tight monetary policy somewhat by lowering the interest rates three times by a total of about 3 percentage points, in step with a sizable decline in the inflation rate. The rates of money supply growth were 4.6 and 25 percent for the narrowly and broadly defined money supply, respectively. In addition to rather tight monetary management, the government resorted to moral persuasion for wage restraint to prevent the effect of the exchange-rate depreciation from being offset by a corresponding wage-price spiral.

To enhance popular understanding of the difficult economic situation and to build a broad consensus behind the new economic policy direction, economic education was started toward the end of 1980 on a presidential initiative. In December 1981 an economic education task force was formed within the EPB until a formal organization—the Bureau of Economic Education—was established a year later.

Stabilization efforts were also reflected in the exchange-rate policy. Exchange rates were maintained within a narrow range and prices for government-held rice and public utility services were set cautiously.

As a result of these efforts, as well as the relative stability in import prices and domestic food prices, the rate of inflation was substantially reduced to a level slightly over 20 percent.

The GNP growth rate for 1981 was 6.4 percent, representing a substantial recovery from the 6.2 percent decrease in 1980. Commodity exports expanded by more than 18 percent in real terms and led the economic recovery. Consequently, the current account deficit was narrowed to \$4.6 billion, a \$700 million improvement over the previous year.

The significance of 1981 goes beyond the aggregate economic performance of that year. To enhance the efficiency of the entire economic system, the government took important first steps toward major reforms in at least three areas during 1981: financial liberalization, realignment of the industrial incentive system, and promotion of competition among domestic and foreign firms.

The government divested itself of equity shares in the Hanil Bank, one of the nation's five major commercial banks. An over-the-counter commercial paper market was developed for short-term finance companies and merchant banking corporations. Interest rates on these notes were left to market forces, although a ceiling was later imposed.

In the area of industrial policy, new guidelines for industrial promotion

were introduced. The basic idea was to equalize incentives for investment in all industries and to gradually phase out the existing discriminatory system. The new guidelines were geared to benefit industries with a current or potential international competitive edge, and projects related to either manpower and technology development or higher energy efficiency.

The Fair Trade and Anti-Monopoly Act, which has been in effect since April 1981, has minimized the purview of direct price controls. To promote foreign competition, commodity imports and direct foreign investment were further liberalized.

Reflationary Measures in Response to the Delayed Recovery of the World Economy

On 14 January 1982, soon after the cabinet reshuffle in early January, the new economic policymaking team—the so-called “real economy” team headed by Deputy Prime Minister Kim Joon Sung—prepared a policy package designed to stimulate economic recovery. The package included measures to promote exports, encourage housing construction and other domestic investment, and expand support for the agricultural sector.

In May the government implemented another set of policy measures to further stimulate the economy. A large-scale road-paving project with a capital requirement of 200 billion won was announced. Small and medium-size firms were given increased financial support amounting to 220 billion won. Efforts to further stimulate housing construction included sharp reductions or the elimination of capital gains taxes on newly built houses and on land to be used for small housing plots, as well as a reduction of the acquisition and registration taxes on small housing units.

Shortly before the May measure, however, an unfortunate incident in the curb-loan market forced two of the largest corporations into bankruptcy. The shock of the incident led to a sharp curtailment of the curb-loan market and also of the activities of the organized short-term financial market. Consequently, many businesses were suddenly faced with a shortage of operating funds, leading to a brief rash of corporate defaults.

Another policy package, released on 28 June, had as its most important feature the reduction of bank interest rates on both deposits and loans by an average of 4 percentage points. Virtually all bank lending rates were lowered to 10 percent per annum, eliminating special consideration for prime borrowers or preferential policy sectors, such as exporters or small and medium-size firms. In addition, the government planned to reduce the corporate income tax rate, and special consumption taxes on some consumer durables were reduced to promote demand for those products.

Finally, with a view to correcting the structural weaknesses of the Korean financial sector, a banking reform program was incorporated into the package. The reform led to three more major commercial banks being privatized by 1983.

In early July, several days after the June measures, the Ministry of Finance announced a proposal to require all financial transactions to be made in the original names of the persons concerned. This proposal sought to weaken the unregulated curb-loan market and to establish an institutional foundation for more equitable taxation. Implementation of this controversial proposal was repeatedly postponed by the National Assembly on the grounds that its potential disruptive impact on the financial market would be too serious and that more administrative preparation was needed prior to its implementation. Nevertheless, some progress was made toward discouraging people from holding financial assets anonymously or under fictitious names by imposing heavy taxes. The "real-name" requirement for financial transactions is scheduled for implementation in 1991.

Bank credit expanded fairly rapidly in the wake of the curb-loan scandal in May. The growth of the broadly defined money supply reached as high as 32 percent during the 12-month period before the end of the third quarter of 1982, but it decreased to 27 percent by the end of the year.

Inflation rates as measured by wholesale and consumer prices were further stabilized at 4.7 and 7.2 percent, respectively, for 1982.

The real GNP growth rate for 1982 remained at 5.3 percent. Commodity exports rose only 2.5 percent, reflecting a delayed recovery of the world economy, but domestic fixed investment showed a sharp 11.6 percent increase. The 1982 current account deficit decreased to \$2.7 billion from \$4.6 billion in the previous year, or from 7.5 to 4.5 percent of GNP.

Strong Recovery with Further Reduction of Inflation in 1983

Given the expected recovery of the world economy in 1983, top priority in economic management for 1983 was focused on maintaining continuous price stability while fully exploiting the momentum of economic recovery by strengthening the competitive position of Korean industries.

The rate of monetary expansion in 1983 was originally planned at 18 percent in broadly defined terms, compared with a 27 percent increase in 1982. This target was later revised to 15 percent as prices stabilized more than expected partly because of a cut in oil prices in the spring.

During the fall of 1982, several months after the 4 percentage point drop in bank interest rates, the real estate market started to show signs of heating up. Tentative antispeculation measures implemented in December 1982 included a stepped-up monitoring of real-estate transactions in areas of widespread speculation and improvement in the housing distribution system. As a speculative housing boom reappeared in the early spring and summer of 1983, however, the government took additional measures to stop real estate speculation in April and September 1983.

By 1983 the Korean economy had regained the strong growth momentum of old, registering a GNP growth rate slightly in excess of 9 percent for that year (Table 9.5).

Table 9.5. Economic trends: 1979-83

	1979	1980	1981	1982	1983
GNP growth (%)	6.4	-6.2	6.4	5.3	9.2
Fixed investment (%)	9.7	-12.0	-6.1	11.6	12.3
Exports of goods and services (%)	-3.6	9.9	17.2	4.4	13.3
Employment growth (%)	1.3	0.3	2.5	2.7	1.3
Unemployment rate (%)	3.8	5.2	4.5	4.4	4.2
Current account balance (10 ⁶ US \$)	-4,151	-5,321	-4,646	-2,650	-1,619
Trade balance (10 ⁶ US \$)	-4,396	-4,384	-3,628	-2,594	-1,649
Exports (10 ⁶ US \$)	14,705	17,214	20,671	20,879	23,100
Services and transfers (10 ⁶ US \$)	244	-937	-1,018	-55	30
Inflation rate (%)					
Wholesale prices	18.8	38.9	20.4	4.7	0.2
Consumer prices	18.3	28.7	21.3	7.3	3.4
GNP deflator	19.3	25.8	16.2	7.7	2.8
Wages	28.3	23.4	20.7	15.8	12.0
Expansion of money supply ^a (%)					
Narrowly defined (M ₁)	20.7	16.2	4.6	45.6	17.2
Broadly defined (M ₂)	24.6	26.9	25.0	27.0	15.3
Unified budget deficit (ratio to GNP)	1.5	3.4	5.0	4.6	2.6
Interest rates ^a (%)					
One-year time deposit	18.6	19.5	16.2	8.0	8.0
General loans (one-year)	18.5	19.5	16.5	10.0	10.0
Exchange rate ^a (won/US \$)	484.0	659.9	700.5	748.8	795.5

Sources: BOK, *Economic Statistics Yearbook* (1984); Ministry of Finance, ROK, unpublished data.
a. Year-end.

The rapid increase in commodity exports since the latter half of 1983 has mainly been the result of the U.S. economic recovery and its overvalued currency. The current account deficit was reduced to \$1.6 billion in 1983.

Prices remained remarkably stable throughout 1983 despite the full-fledged economic recovery and the relatively high increase in wages. On an average annual basis, wholesale prices rose only 0.2 percent, and consumer prices showed a modest rise of 3.4 percent.

Consistent with the efforts to stabilize costs, monetary policy remained rather restrictive. That was a significant achievement in light of the depressing impact on the domestic financial market of two tragedies in 1983—the shooting down of the Korean Airlines aircraft and the terrorist bombing of senior Korean officials in Rangoon. Expansion of the money supply dur-

ing 1983, narrowly and broadly defined, was contained to 17.2 and 15.3 percent, respectively.

During 1983 significant progress was made toward structural improvement of the economy. In the financial sector, divestiture of government shares of the major commercial banks continued, and the lowering of entry barriers late in 1982 was rewarded with the opening of two joint-venture banks, many short-term finance companies, and mutual savings and finance companies.

Efforts to expose the economy to the bracing effects of foreign competition also continued. New policy measures were released in October 1982 that allowed direct foreign investment in an additional 94 Korean Standard Industrial Classification (KSIC) industries, and simplified administrative procedures surrounding such investment.

Korea's import liberalization ratio was again raised from 74.6 to 80.4 percent as the government liberalized imports of an additional 305 Customs Cooperation Council Nomenclature (CCCN) eight-digit commodities in July 1983.

THEORETICAL BASIS AND EFFECTS OF THE POLICY

Monetary Management

The central policy tool in stabilization efforts after 1979 was the restriction of the money supply. The basic approach to stabilization was to let the tight money policy reduce inflationary pressure and, at the same time, to stabilize all the major cost factors such as wages and interest. One could say that Korea's stabilization efforts were basically based on the monetarist thesis that, in the long run, the quantity of money is the key variable determining inflation, whereas real economic activity is little affected by the money supply.

As already described, the growth of the money supply slowed significantly after 1978 (Table 9.5). The drastic fluctuation of money supply growth during 1981-82 largely reflected changes in the bank-deposit system that included the July 1981 strengthening of interest-rate incentives to expand savings deposits, and the July 1982 abolition of the notice deposit.¹

A major question in managing monetary policy and monitoring its effects is to decide which monetary aggregate to use as a central indicator. In Korea the pivotal indicator shifted from the narrowly defined money supply (M_1) during most of the 1960s, to domestic credit during 1970-78, and then to the broadly defined money supply (M_2) in 1979. The rationale for relying heavily on the broadly defined money supply is that it is a more comprehensive indicator and thus a more stable one.

1. A type of deposit requiring notice prior to withdrawal of funds. Firms were the main depositors.

It is true that a broadly defined monetary aggregate is less vulnerable to a shift of funds among different types of deposits due to changes in the interest-rate structure and the deposit system. The fact that an indicator shows a more stable trend, however, does not necessarily indicate that it is a more reliable monetary aggregate in the sense that it has a closer relationship with economic activity. Quite to the contrary, S. W. Nam (1982) shows that the correlation between the rate of monetary expansion and that of nominal GNP is much higher for the narrowly defined money supply. That is why it is mainly the narrowly defined money supply that is used for the analysis in this paper.

In connection with monetary policy after 1979, one may ask whether there is any significant relation between money supply and the inflation rate and, if so, how is it possible to explain the disparity between the relatively high growth rate of money and the slow rate of nominal GNP growth during 1982-83. To answer these questions, the monetarist approach holds that inflation is determined in the money market with the money supply assumed to be more or less exogenously given. Demand for money will depend not only on income, but also on interest rates and the expected inflation rate. Then, a downward adjustment of interest rates and decelerating inflationary expectations will lower the inflation rate for a given rate of monetary expansion by increasing the demand for money.

A simple money-determined price model, presented in Appendix 9.1, seems to strongly support this thesis. The inflation rate is well fitted with the growth of money supply per unit of production, real interest rates, and a measure of inflationary expectations (Figure 9.1). Viewing the same model from another angle, demand for real-money balances also turns out to be significantly affected by real interest rates and inflationary expectations. The rate of growth of the money supply during 1982-83 was high—25 percent in the narrowly defined money supply and 23.8 percent in the broadly defined money supply on an annual average basis—compared with the 13 percent growth of nominal GNP. To a large extent, the difference between the growth rates of the money supply and nominal GNP seems to be explainable by the large drop in interest rates and the decline in inflationary expectations since late 1981.

In this connection, it is not difficult to find examples of steady and significant drops in inflation and interest rates over the course of several years being followed by a period when prices showed stability even with the relatively rapid expansion of the money supply (Table 9.6). After inflation in consumer prices in Taiwan decreased steadily from 18.5 percent in 1960 to 2.4 percent in 1962, the money supply grew at an annual rate of 23.2 percent during 1963-64. Still, prices remained stable and nominal GNP grew only 15.1 percent a year during that period. Chile is another case in point. There, the rate of consumer price increases dropped from 506 percent in 1974 to 40 percent in 1978, and, as the money supply increased at an aver-

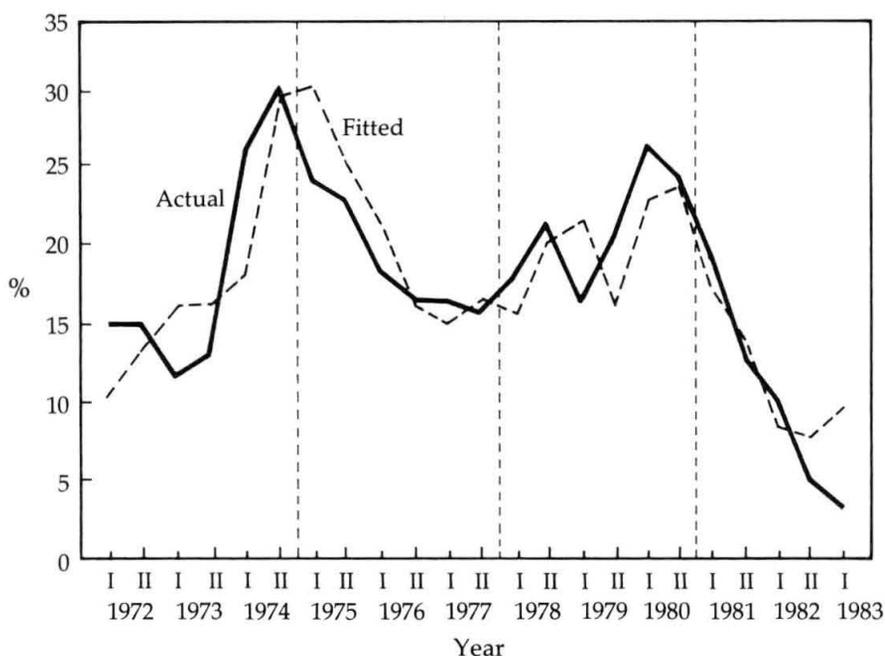


Figure 9.1. The tracking of inflation by money supply growth (annual rate of GNP deflator increase): 1972-83

Note: For the equation from which the fitted values are derived, refer to Appendix 9.1.

age rate of 63 percent a year during 1978-80, the nominal GNP grew at an annual rate of only 48 percent.

Although there is a consensus that a tight money policy is necessary to curb inflation, resistance from business circles has proven to be rather strong. Business leaders have argued for years that Korea's money stock is too small to adequately support economic activity; thus the money supply growth rate should be increased rather than restricted. How erroneous this argument is can easily be seen by comparing countries with differing rates of money supply growth. In the case of Chile, where the money supply grew at a very high annual rate of 125 percent during 1971-81, the M_1 /nominal gross domestic product (GDP) ratio dropped from 18.4 percent in 1970 to 5.8 percent in 1981, when the inflation rate went as high as 165 percent. A similar trend was also evident in other Latin American countries suffering from hyperinflation such as Argentina, Uruguay, and Brazil.

Japan and West Germany are the opposite cases in which stable growth of money has led to low inflation and a slight rise in the M_1 /nominal GDP ratio. They offer strong evidence that higher levels of money supply growth increase the velocity of money and thus increase the elasticity of nominal GDP (or prices) with respect to the money supply. This is simply because

Table 9.6. Average annual rate of money supply growth and velocity: 1970-81 (%)

Country	Growth of M_1^a (A)	Growth of nominal GDP ^a (B)	Real GDP ^a	GDP deflator ^a	Change in velocity	Elasticity of nominal GDP with respect to money (B/A)	M_1 /Nominal GDP	
							1970	1981
High-inflation countries ^b								
Chile	124.8	170.2	2.1	164.6	20.2	1.36	18.4	5.8
Argentina	107.8	138.6	1.9	134.2	14.8	1.29	17.0	8.6
Uruguay	53.5	65.2	3.1	60.2	7.6	1.22	14.4	7.8
Brazil	46.7	54.0	8.4	42.1	5.0	1.16	16.5	8.8
Peru	34.3	38.3	3.0	34.3	3.0	1.12	17.0	12.3
Low-inflation countries								
Singapore	14.5	14.1	8.5	5.2	-0.3	0.97	28.1	26.5
Panama ^c	12.4	12.5	4.6	7.6	0.1	1.01	9.6	9.4
Japan	12.3	12.2	4.5	7.4	-0.1	0.99	29.1	30.4
West Germany	7.9	7.7	2.6	5.0	-0.2	0.97	15.4	15.5
Korea	26.2	30.7	9.1	19.8	3.6	1.17	11.5	9.1

Sources: IMF (1983); World Bank (1978-83).

a. Growth rates have been computed by using the least-squares method and are drawn from World Bank (1982).

b. The Latin American countries with the highest inflation rates during 1970-81.

c. The Latin American country with the lowest inflation rate.

GDP—gross domestic product.

expectations of high inflation are produced by rapid monetary expansion and, having these expectations, people become less interested in holding large real-money balances.

Fiscal Policy

The performance of fiscal management in relation to the stabilization efforts may be evaluated by the response to two questions: whether fiscal policy was anticyclical, and how much progress was made toward improving the budget structure and reducing the budget deficit.

Tight fiscal policy was one of the essential elements of the Comprehensive Stabilization Program of April 1979. The program called for a reduction of government expenditures by 100 billion won, the postponement of some public construction projects, and a tight government budget for 1980. Furthermore, in 1979 a surplus of 368 billion won in the general account of 1978 was not appropriated for general budget spending but used to repay borrowings of the Grain Management Fund and the Government Supply Fund. The result was a contraction of the money supply by 129 billion won in the government sector.

As the economy started to plunge into recession in the latter half of 1979, however, fiscal management could no longer serve the stabilization effort single-mindedly. Enacting anticyclical measures, the government expanded construction activity for the purposes of maintaining growth momentum and creating job opportunities, and it augmented its support to low-income households that were badly squeezed by high inflation.

As a result, deficits in the unified budget, which included 16 special accounts and 25 government-managed funds together with the general account, widened sharply to 4.3 percent of GNP during the 1980–82 recessionary period from 2.8 percent of GNP during the overheated period of 1976–78. The public sector's contribution to money supply growth was also substantial. During 1980–82, some 1.8 trillion won of money was created through this sector, accounting for 72 percent of the growth in the narrowly defined money supply (Figure 9.2).

In 1983, when tax revenue increased much faster than had been planned owing to the strong economic recovery, the ratio of the unified budget deficit to GNP dropped to 2.6 percent from 4.6 percent in the previous year, and there was a slight contraction of money through this sector. What is more noteworthy is that the 1984 budget forecasted a surplus of 580 billion won in the general account and its expenditure level was set 30 billion won below that of the 1983 budget. That represented a strong commitment to stabilization efforts on the part of the government. Moreover, the fact that the National Assembly supported the government's budget proposal seemed to indicate that a broad consensus had been reached on the need to improve fiscal management.

The experiences of many developed countries clearly show that sound

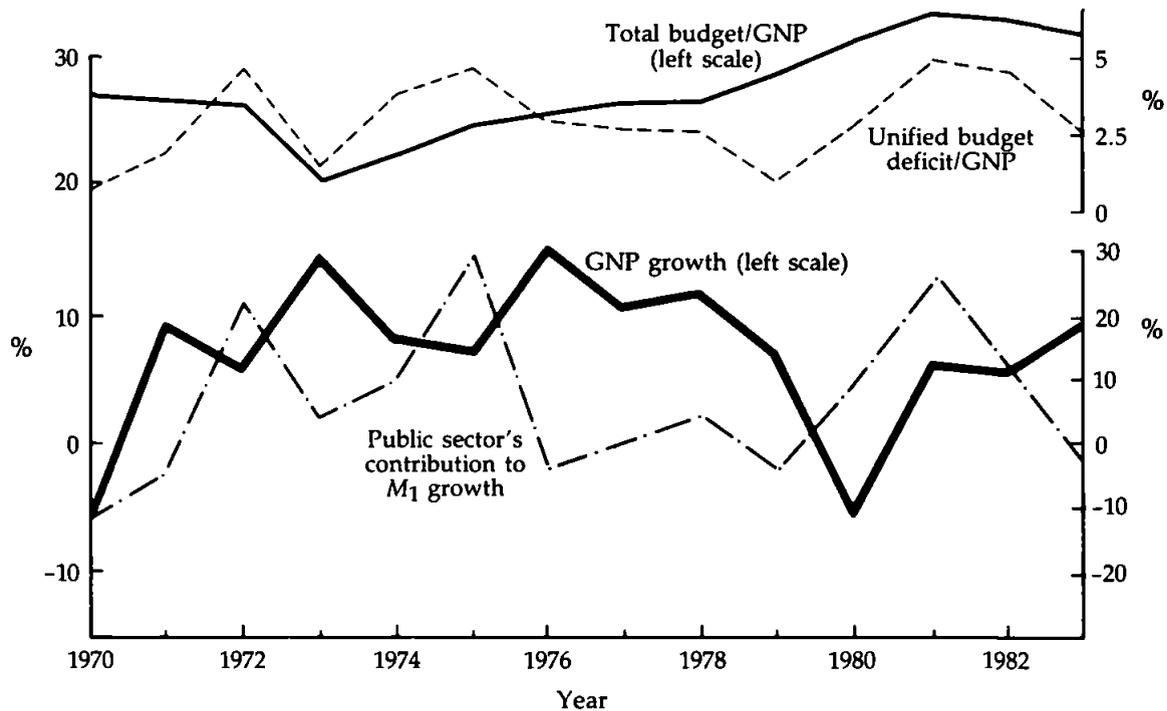


Figure 9.2. Management of the national budget over the business cycle:
1970-83

Source: BOK, *Economic Statistics Yearbook* (various issues).

budget management is essential for maintaining stable prices, avoiding a crowding-out situation in the capital market, promoting a more efficient public sector, and building a healthy reserve. However, the rigidity of the Korean budget structure seriously limits the flexibility of fiscal management.

It is more or less accepted that the minimum defense expenditure will be around 6 percent of GNP or approximately one-third of total spending in the general account. Legally prescribed subsidies to local governments and for education account for another 25 percent. Wages for government employees and the burden of government debts are also nondiscretionary rigid expenditures. These nondiscretionary expenditures, accounting for roughly 70 percent of all general account spending, highlight the importance of reducing the budget deficit.

One of the most critical tasks in the reduction of the budget deficit is improving the operation of government-managed funds. The National Investment Fund and the National Housing Fund could be easily replaced by bank credit. Closing the deficits in the Grain Management Fund and the Fertilizer Account, however, is much tougher.

It took much effort for the government to persuade farmers to accept a lower rate of increase for the government purchase price of rice and barley. Despite a high rate of adjustment for the government's selling price of rice in 1981 and a steady drop in the rate at which purchase prices have increased since 1982, a substantial deficit still remains whose accumulated total at the end of 1983 reached 1.5 trillion won. In 1983 the deficit widened as the government increased purchases and was forced to cut the selling price of rice slightly in situations of stable market prices and growing government stocks (Table 9.7).

The Korean fertilizer industry had been suffering from high production costs because of inefficient facilities, overcapacity, and unprofitable exports. As fertilizer prices were adjusted only once during the 1976-83 period, the deficit in the Fertilizer Account was substantial, leading to an accumulated deficit of 680 billion won at the end of 1983. Borrowings from the Bank of Korea by the Grain Management Fund and the Fertilizer Account together contributed as much as 6.8 percentage points to the 20.9 percent annual growth of the narrowly defined money supply during 1979-83.

Interest and Exchange Rates

After the substantial increase in interest rates in early 1980, the rates were readjusted downward in eight steps. The interest rate on one-year time deposits, for instance, was raised from 18.6 percent to 24 percent per annum in 1980 but was lowered on three occasions and was down to its previous level of 18.6 percent in November 1981. The downward adjustments continued until June 1982 when the rate was lowered from 12.6 to 8 percent per annum (Figure 9.3).

The government considered the interest-rate reductions as justified

Table 9.7. Operation of the Grain Management Fund and Fertilizer Account: 1975-83 (annual averages)

Year	Increase in government rice price		Deficit (10 ⁹ won)		Borrowings from BOK (10 ⁹ won)		Contribution to M ₁ growth (%)
	Buying (%)	Selling (%)	Grain Management Fund	Fertilizer Account	Grain Management Fund	Fertilizer Account	
1975-78	23.0	18.8	92	22	166	55	15.1
1979	15.4	18.2	209	48	200	0	7.4
1980	22.0	20.8	242	126	130	30	4.9
1981	25.0	37.5	144	162	220	100	8.4
1982	14.0	0.0 (21.2) ^a	131	117	200	100	7.5
1983	7.3	-2.3 (-1.9) ^a	286	102	250	100	6.0
Accumulated total			1,533	679	1,642	570	

Source: Ministry of Agriculture and Fisheries, ROK, unpublished data.

a. High-grade rice.

BOK—Bank of Korea.

because the anti-inflationary measures were viewed as successful enough to allow positive real interest rates. It also wanted to ease the excessive financial burden of corporations hard-pressed for funds during the recession. Given these policy shifts, one may ask what role the official interest rate was expected to play in Korea and how reasonable was the real interest rate argument?

In the Korean economy, where excess demand for funds has always been a problem, there are limitations on the effectiveness of using interest-rate policies to adjust the demand and supply of funds. Thus monetary policy mainly relied on controls over the money supply in a rather direct way until 1981, but since then it has used a more indirect approach. In practice, interest-rate adjustments have been made with different objectives in mind on each occasion. These included the mobilization of savings, lightening corporate financial burdens in a depressed business environment, and preventing the economy from overheating.

While lowering interest rates in line with decelerating inflation to alleviate the business interest burden, the authorities also attempted to squelch speculative investment in real estate and to lower people's inflationary expectations by stepping up educational efforts to attract financial savings.

When the authorities argued that adequate real interest rates were being given to depositors despite lower nominal interest rates, they were

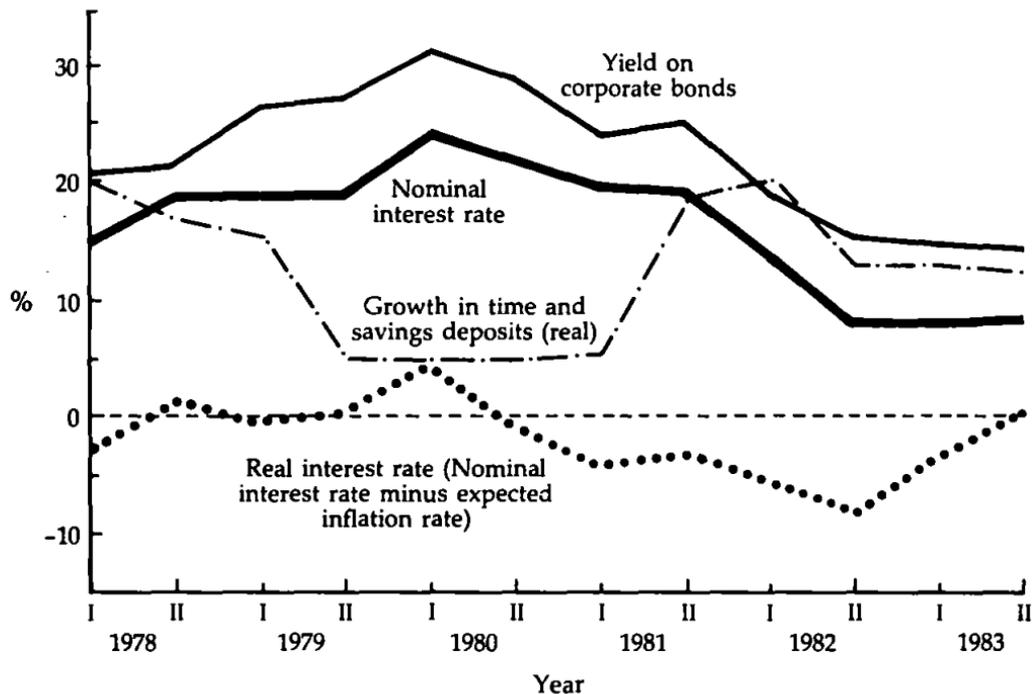


Figure 9.3. Trend of interest rates and deposits: 1978-83

Source: BOK, *Economic Statistics Yearbook* (various issues).

Note: For the calculation of the expected inflation rate, refer to Appendix 9.1.

obviously using the current rate of inflation in their calculation of the real interest rate. When it comes to inflation, however, people usually have long memories and this is particularly the case when they have experienced chronic inflation in the past. The shift of funds from time and savings deposits to demand deposits, the shortening of deposit maturities, and the sporadic speculative movements in the real estate market that followed the June 1982 interest-rate cut seem to indicate that the cut was somewhat larger than justifiable. As time passed and prices remained stable, however, people adjusted to the low interest rate.

Nevertheless, indications are that adjustment is a slow process. The market interest rate, measured by the yield on corporate bonds, was about 5 percentage points higher than the one-year time deposit rate before the June 1982 interest-rate adjustment, but the interest rate differential widened to 7 percentage points in the latter half of 1982 and narrowed only marginally to 6.3 percentage points in 1983. The corporate bond yield was only 27 percent higher than the deposit rate in 1981 but was 78 percent higher in 1983. Time and savings deposits, which grew 19 percent in real terms in the year preceding the June 1982 interest-rate adjustment, increased during 1983-85 at the modest rate of about 10 percent.

In the process of lowering interest rates, important progress was made toward creating a more rational interest-rate structure. By June 1982 the preferential interest rates applied to various policy loans were abolished to make them subject to the same rate as general loans. Until then, the complicated and fairly arbitrary interest-rate structure was believed to be partly responsible for the alleged inefficiency in resource allocation during the 1970s. By eliminating the interest-rate incentive for preferential policy loans, it became easier to scale down or phase out some of the policy loans.

Since early 1980 the exchange rate has been floated against the performance of the currencies of Korea's major trading partners vis-à-vis the U.S. dollar and the differences in the inflation rates between Korea and those countries. This rule enables the exchange rate to be adjusted in such a way as to maintain Korea's overall export competitiveness. The Bank of Korea, which is in charge of managing the exchange rate, seems to have followed this principle fairly closely, even though there has been some deviation.

A look at the degree of exchange rate distortion shows that, during 1981-83, the nominal exchange rate vis-à-vis the U.S. dollar depreciated at a stable 6 to 7 percent a year. Based on a calculation of the real effective exchange rate, the Korean won seems to have been overvalued by about 6 percent during 1981, although that number may vary slightly depending on the composition of the currency basket and the relative weight given to each currency. Since then, owing to the deceleration of the inflation rate, this overvaluation has been essentially corrected (Table 9.8).

Nevertheless, a mechanical calculation of the real effective exchange rate may lead to a misleading conclusion as to the trend of export competitive-

Table 9.8. Real effective exchange rates: 1980-83

End of month	Nominal exchange rate (won/US \$)	Nominal exchange rate	Effective exchange rate ^a	Relative price ^b	Real effective exchange rate ^c
12/80	659.9	100.0	100.0	100.0	100.0
6/81	685.1	103.8	96.2	106.1	90.7
12/81	700.5	106.2	100.0	106.5	93.9
6/82	740.8	112.3	97.8	106.3	91.8
12/82	748.8	113.5	102.1	106.9	95.5
6/83	776.7	117.7	103.6	105.9	97.8
9/83	789.3	119.6	105.2	105.6	99.7
12/83	795.5	120.5	105.7		

Sources: BOK, *Economic Statistics Yearbook* (1984); IMF (1983).

$$a. \text{ Effective exchange rate} = \sum_i w_i \left(\frac{\text{won per US \$}}{\text{basket currency } i \text{ per US \$}} \right).$$

Basket currencies include those of Korea's seven major trading partners. The weight given to currency i (w_i) is based on its relative trade volume: United States 0.424, Japan 0.397, West Germany 0.067, United Kingdom 0.039, Canada 0.032, France 0.022, and the Netherlands 0.020.

$$b. \text{ Relative price} = \frac{\text{WPI (Korea)}}{\sum_i (w_i \text{ WPI}_i)}.$$

$$c. \text{ Real effective exchange rate} = \frac{\text{effective exchange rate}}{\text{relative price}}.$$

ness. For one thing, wholesale price indices may not correctly reflect prices of the goods actually traded. Moreover, the interest rate on export loans was not lowered as much as that on general loans and unit labor costs rose relatively faster than did wholesale prices. Thus export competitiveness after 1982 might have been overestimated because of the difference in interest-rate reductions in the export sector, and to the extent that the export sector is more labor-intensive than the domestic sector.

Wage Policy

Wage guidelines in Korea have a rather short history. They first appeared in a statement by Deputy Prime Minister Nam Duck-Woo in February 1977, when he said, "When a price adjustment is demanded based on wage increases given by monopolistic or oligopolistic producers, the maximum acceptable wage increase will be 15 to 18 percent only." Since the fall of 1981, government announcements of planned pay increases for public servants have served as informal wage guidelines for the private sector. The announced increase rates were 9 percent for 1982, 6 percent for 1983, and a freeze for 1984. Acting through the Bankers' Association of Korea, the

government also tried to keep wage increases low by having banks restrict credit to firms that increased wages beyond government guidelines. This move in late 1980, however, faced strong resistance from the Federation of Korean Trade Unions. Whenever there was a more explicit confrontation over this issue, the government would say "There is no official guideline. It is just a suggestion on the part of the government."

That rather insincere and evasive attitude did not help to build a consensus behind the need for wage guidelines. Consequently, workers have become suspicious of any suggestion of wage guidelines, and government efforts to stabilize wages have been ineffective. In spite of a variety of educational programs geared to stabilize wages, the rate of wage increases did not slow as fast as the government had hoped.

Under government influence, negotiated base salary increases in the private sector in 1982 and 1983, which averaged 9.5 and 6.9 percent, respectively, were very close to those for public servants. However, *de facto* wage increases in the private sector were much higher than the negotiated rates—15.8 percent in 1982 and about 12 percent in 1983 (Table 9.9)—indicating that effective wage guidelines depend on a broad consensus among labor, management, and the government. Otherwise, businesses can easily circumvent guidelines under the existing complicated wage structure.

Whenever official wage settlements were proposed, the most commonly used formula called for holding wage increases to the rate of inflation plus growth in labor productivity. In practice, ambiguities have always remained, such as which inflation rate (the past or the expected one) should be used and how labor productivity would be measured.

A commonly used labor productivity measure is the productivity index compiled by the Korea Productivity Center (KPC). The KPC productivity

Table 9.9. Increase rates of base salaries and all compensation: 1977-83 (%)

Year	Public servants		Private-sector workers	
	Base salaries	All compensation	Base salaries (negotiated)	All compensation
1977	32.0	25.0	36.0	32.1
1978	20.0	26.0	29.7	35.0
1979	15.0	23.0	26.8	28.3
1980	10.0	22.0	21.5	23.4
1981	10.0	17.0	16.1	20.7
1982	9.0	9.9	9.5	15.8
1983 ^a	6.0	8.5	6.9	11.6
1977-83 average	14.6	18.8	20.9	23.8

Sources: Budget Office, EPB, ROK, unpublished data; Korea Employers Federation, unpublished data.

a. Estimated.

index, however, seems to have an upward bias, particularly during recessionary periods. Furthermore, there has been a tendency to apply the rate of labor productivity increase in the manufacturing sector to other sectors, where productivity growth is slower. Measured as value added per worker, labor productivity grew at an annual rate of 5.6 percent during 1976-78, whereas real wages rose as much as 18.5 percent annually. Owing to the stabilization efforts, real wage increases slowed to 2.8 percent a year during 1979-82, although labor productivity declined slightly during the period (Table 9.10).

The rationale for wage restraint was that stable wages were essential for export competitiveness because many of Korea's exports were still labor intensive. Furthermore, because labor costs constitute a large share of total costs of final goods and services, price stability is impossible without stable wages.

As mentioned earlier, Korea's export competitiveness deteriorated sharply during the 1976-79 period because of a sharp increase in unit labor costs. During 1980-82 Korea's unit labor costs in the manufacturing sector rose 50 percent, much faster than in other Asian newly industrializing countries. Nevertheless, because the exchange rate depreciated 51 percent, unit labor costs measured in U.S. dollars did not rise, and they even recovered part of the loss in relative export competitiveness that took place during 1976-79 (Table 9.11).

Misunderstanding and confusion concerning the causal relation between wages and inflation and the contribution of wages to inflation have been frequent. On the basis of regression analysis, some have argued that wage

Table 9.10. Average annual rate of increase in real wages and labor productivity: 1971-82 (%)

Item	1971-73	1974-75	1976-78	1979-80	1981-82
Nominal wages	14.8	30.7	34.2	25.8	18.2
Manufacturing	16.0	31.1	34.3	25.7	17.4
Consumer prices	9.3	24.8	13.3	23.4	14.1
Real wages	5.0	4.7	18.5	2.0	3.6
Manufacturing	6.1	5.0	18.5	1.8	2.9
Labor productivity					
KPC index ^a	8.3	10.5	9.5	12.9	11.8
Manufacturing	9.0	11.4	10.0	13.2	12.7
Value added per worker ^b	7.2	0.9	5.6	-2.4	0.4
Manufacturing	8.2	2.4	7.4	5.0	4.2

Source: BOK, *Economic Statistics Yearbook* (1975, 1980, 1983).

a. Korea Productivity Center (KPC) index.

b. Nonagricultural sector.

Table 9.11. Unit labor costs for manufacturing in Korea, Taiwan, Singapore, and Hong Kong: 1976-82 (1975 = 100)

Item	Korea	Taiwan	Singapore ^a	Hong Kong
Nominal wage (A)				
1976	134.7	116.8	104.7	115.9
1979	311.4	188.1	128.6	170.1
1982	526.6	297.0	191.1	240.4
Labor productivity ^b (B)				
1976	101.0	106.9	103.0	107.0 ^c
1979	131.2	136.7	114.2	119.6 ^c
1982	148.2	157.4	128.9	133.7 ^c
Unit labor costs in national currency [(C) = (A/B)]				
1976	133.4	109.3	101.7	108.3
1979	237.3	137.6	112.6	142.2
1982	355.3	188.7	148.3	179.8
Exchange rates per US \$ (D)				
1976	100.0	100.0	104.2	99.3
1979	100.0	94.9	91.7	101.3
1982	151.1	103.0	90.2	122.9
Unit labor costs in US \$ [(E) = (C/D)]				
1976	133.4	109.3	97.6	109.1
1979	237.3	145.0	122.8	140.4
1982	235.1	183.2	164.4	146.3

Sources: BOK, *Economic Statistics Yearbook* (1980, 1983); Council for Economic Planning and Development, Taiwan (1980, 1983); Directorate General of the Budget, Accounting and Statistics, Taiwan, *Quarterly National Economic Trends* (1977-83); Department of Statistics, Singapore (1980, 1983); Census and Statistics Department, Hong Kong (1977-83); United Nations, *Monthly Bulletin of Statistics* (1977-83).

a. All industries.

b. Value added per worker.

c. GDP/total employment in all but the construction industry.

increases have not had significant responsibility for inflation, although a causal linkage the other way around is fairly strong. However, their price equations usually include the money supply as well as cost variables, combining two independent price models. Thus the claim that wage increases have played only a passive role in the inflationary process seems ill-grounded.

Another erroneous argument based on business accounting data is that the contribution of wages to inflation is very small because wages account

for less than 10 percent of total costs in the manufacturing sector. These data are composite income statements aggregated across individual firms at all stages of production. Thus material costs constitute the major share, and they can be decomposed into raw materials, both imported and domestic primary goods, and value added (including wages) in previous stages of processing. The wage share of total costs is therefore much higher than these accounting data indicate.

As for the GNP deflator, a rough estimate of the wage share can be obtained from national income data. Assuming that 70 percent of unincorporated business income consists of wages, and forgetting some minor categories, one can attribute 59 percent of the GNP during the 1970-82 period to wages, 30 percent to return to capital, and the remaining 11 percent to net indirect tax.

By estimating a cost-based price equation utilizing these data, one can decompose the past inflation rate. The explanatory variables in the price equation include composite cost of productive factors calculated by using the above shares, the cost of imports, and a measure of demand pressure in the nonagricultural sector. An agricultural price index is also included, because agricultural prices are, for the most part, determined independently of costs.

According to this analysis, the rise in unit labor costs during 1979-80 was responsible for more than half of the annual inflation rate of 22.6 percent as measured by the GNP deflator (Table 9.12). Although the increase in unit labor costs slowed somewhat during 1981-82, it still contributed more than three-quarters of the 12.2 percent annual inflation rate. Labor costs were not as important in determining wholesale prices as were import costs during the 1979-82 period. They contributed about 9 and 6 percentage points

Table 9.12. Decomposition of inflation by cost factor: GNP deflator, 1971-82 (%)

Item	1971-73	1974-75	1976-78	1979-80	1981-82
Import costs	5.9	15.1	0.5	11.6	4.6
Unit import value	2.7	12.1	0.1	8.3	0.6
Exchange rate	3.2	3.0	0.4	3.3	4.0
Cost of productive factors	5.2	9.2	11.8	14.3	8.2
Wages	5.5	9.0	11.9	12.6	9.5
Demand pressure	-0.3	-0.9	1.7	-4.6	-2.2
Agricultural prices	2.7	3.7	4.2	1.6	1.5
Other	0.0	-0.1	0.0	-0.3	0.1
Actual price increases	13.5	27.0	18.2	22.6	12.2

Sources: BOK, *Economic Statistics Yearbook* (1975, 1980, 1983).

Note: For the equation on which this analysis is based, refer to Appendix 9.1.

to the annual wholesale price increase of 28.4 percent and 13.4 percent, respectively, during the 1979-80 and 1981-82 periods.

Economic Education Program

A policy-related economic education scheme began in Korea in the late 1970s with the efforts of some economic technocrats to persuade top policymakers and other high-ranking officials to deal with the increasing problems with the economy. Their efforts led to the enactment of the Comprehensive Stabilization Program in April 1979. To be successfully implemented, the program needed to secure broad understanding and cooperation from the people. At the initial stage government officials were targeted for education because they were to be the driving force behind the new economic policies.

Since the end of 1980 the economic education program has made rapid strides under presidential sponsorship. In December 1981 an EPB task force, headed by the assistant minister, was established to give the program greater continuity. In November 1982 a regular EPB organization, the Bureau of Economic Education, was established to undertake economic education programs on a more systematic and permanent basis. The target group has been broadened to include all classes of people, and the educational media have been diversified to include lectures, slides, video tapes, newspapers, booklets, radio, and television. The Bureau of Economic Education formulates an annual education program, supports education in other organizations by preparing educational materials and appointing education officers, and sends materials on major economic policies to about 5,000 public opinion leaders in academia, the press, parliament, business, and the army.

Economic education in Korea was started as an attempt to get the broad and active support of the people for the government's economic policies. A good example has been education on economic stabilization, a program in which the government tried to convince people of the gravity of inflation caused by excessive wage demands based on high inflationary expectations.

Not all economic education, however, has been limited to the promotion of government policies. Many programs have given information to economic units to help them rationalize their economic decisions or to enhance people's understanding of the workings of the economy at home and abroad. This approach enables people to plan with greater certainty and to narrow differences in the perception of economic realities that inhibit the domestic consensus needed for effective economic policy-making.

Given the short history of economic education in Korea, it may be too early to evaluate its performance. The nature of the education defies easy evaluation in any case.

LESSONS AND REMAINING TASKS OF THE STABILIZATION POLICY

Lessons

From the 1960s through the early 1980s Korea had one of the highest inflation rates in the world. Among over a hundred countries included in the World Bank, *World Development Report* (1983) for which inflation data for 1960-81 in terms of the GDP deflator are available, Korea stood in eleventh place, behind only the Latin American countries that had suffered from hyperinflation. By the late 1970s it became obvious that high inflation was undermining the growth potential of the Korean economy. The Comprehensive Stabilization Program of April 1979 was born from the understanding that inflation is not an inevitable product of high growth but something that must be cured to sustain growth.

The Comprehensive Stabilization Program faced rough going in its early stages. The twin blows of the oil price increase and the assassination of President Park several months after the program was launched endangered the program's prospects, requiring constant discipline from the government. In 1980 the Korean economy experienced unprecedented difficulties with political and social unrest, a severe crop failure, a contraction in world trade, and a major exchange-rate depreciation on top of soaring import prices.

In this environment, it was painful and took courage to maintain the restrictive monetary policy stance. To compensate for the weakening of economic activity, a series of reflationary policy measures were enacted during 1980-82. To business circles, the policy packages fell short of expectations and were too weak to boost business activity. To the many academicians who strongly supported the austerity moves, they meant the abandonment of the stabilization policy. In general, the government was cautious in preparing these reflationary packages, with the possible exception of the June 28 measure in 1982 that significantly lowered interest rates. The rate of monetary expansion was substantially reduced, except in 1982 when the relatively rapid growth of money was more or less justified as a response to the weak activity of the financial market in the wake of the curb-loan scandal in the spring.

Around the end of 1982, there was renewed concern over the possibility of reigniting inflation because of the large expansion of the money supply since the early summer, an expected recovery of the economy, and the anticipation of increased raw material import prices in 1983. The government moved quickly after late 1982, however, to tighten its rein over the money supply. The external environment has also been favorable given the cut in oil import prices in the spring of 1983. A lighter financial burden for heavily indebted corporations together with the improving capital utilization ratio partly compensated for the steady rise in unit labor costs. The result was a continued deceleration of inflation to a 3 percent level for 1983.

Inflation rates were low and stable through 1987, but inflation accelerated in 1988 when CPI inflation rose to 7.1 percent from the 1 percent level that had prevailed during 1983–87. From Korea's stabilization efforts and performance, what lessons can one derive that might serve as a reference for other countries?

First, Korea's experience seems to indicate that it takes time—several years—and strong leadership commitment to cure chronic inflation. If a country is to deal with any incidental inflation such as that induced by an oil price shock, the prescription may be a tight money policy for a brief period. However, consistent and uninterrupted care for a considerable time period seems to be required for a country suffering from chronic high inflation. Inflation is fundamentally cured only when the suppliers of productive factors such as workers, capitalists, farmers, and entrepreneurs are satisfied with a low rate of nominal income growth, and this can only be achieved in stages in an inflation-prone country. Therefore, a strong commitment to stabilization policies by the country's leaders is critical. It was apparent that President Chun was serious about curbing inflation; presidential support was the key ingredient responsible for the consistency of the stabilization efforts throughout the prolonged recession.

The second lesson is that for best results stabilization policies should be accompanied by efforts to improve the efficiency of resource allocation. When the allocation of more limited resources is distorted, the supply capacity of some sectors will be constrained and overall industrial efficiency will suffer, resulting in price instability. Korean policymakers were keenly aware of this problem because distorted resource allocation was already an important cause of inflation before the stabilization effort. The Korean approach was to promote more competition not only among domestic suppliers but also with foreign imports, to encourage direct foreign investment in Korea, to realign the industrial incentive system, to allow more autonomy in banking operations, and to check the expansion of the public sector.

Even though the above measures were all appropriate and essential for the long-run efficiency of the economy, Koreans seem to have been less successful in dealing with ongoing resource allocation problems. The process of redressing overinvestment and duplicative investment in some heavy and chemical industries has been slow and ineffective in many cases. Preferential policy loans and credit extended to bail out troubled corporations have restricted credit availability in other sectors. And under a rigid and low-interest-rate regime, banks have had a strong incentive to favor larger corporations in spite of strenuous encouragement by the authorities to give more credit to small and medium-size firms. Moreover, there were some signs of disintermediation (transfer of financial resources when the short-term interest rate exceeds the savings dividend) from financial institutions to the unorganized money market, the real estate market, and consumption.

The third lesson is the importance of a broad consensus on the need for policies to ensure price stability. When relying only on a tight money policy, stabilization efforts may be painful and time consuming. Thus Korean policymakers in recent years have directed much of their efforts to stabilizing the costs of productive factors. These moves have included informal guidelines to restrain wages in the private sector, to keep nominal interest rates low, to discourage high dividend payments, and to stabilize agricultural prices. These efforts cannot be successful without the full support of the parties involved. Such support in turn hinges on convincing them that their relative share of income will not be squeezed by conformity to government guidelines or policies.

The attempt to build a national consensus in Korea and to secure broad cooperation from all sectors often has not been handled very well. Arbitrary and overly ambitious approaches have led to unnecessary resistance and to misunderstandings on the part of groups who feared they were bearing the brunt of the government's efforts to stabilize prices. This reaction is evident from the large wage drifts from negotiated increase rates, instability in the financial market, and widespread distrust among farmers toward government policies. The approach might have been more effective when the income of all factor suppliers was simultaneously dealt with in a more balanced manner.

Finally, for any stabilization effort to be widely appreciated, its primary emphasis should be stabilizing the livelihood of the people. Wage earners are generally observed to have money illusions. Even in situations where their real wage increase is the same, they are more sensitive to price increases when their nominal wage increase is only 10 percent rather than 30 percent. If their shopping basket happens to cost more than the official price index indicates, they are liable to distrust government statistics and are not likely to cooperate with government policies.

Realizing this, the EPB has, since 1981, compiled a separate price index of ten basic daily necessities, including rice, and has tried to stabilize their prices. The government has failed, however, to maintain stable prices in one essential area—the real estate and rental housing market. During 1983, when consumer prices rose only 2 percent on a year-end basis, house rents rose 13 percent. More dramatic was the rise in Seoul's house and land prices, which increased more than 30 percent and 50 percent, respectively, during 1983. As buying homes becomes a more and more remote possibility every year, renters have had to pay an increasing portion of their income for housing. In these circumstances, the government's talk of wage restraint on the basis of stable prices may not sound very convincing.

Remaining Tasks

Although the inflation rate has been reduced much faster than the original target because of restrictive monetary and fiscal management and the

favorable trend in import prices, the revised Fifth Five-Year Development Plan (1982-86) concludes that continued efforts to ensure price stability are needed on a more or less permanent basis. More specifically, the plan called for stable monetary expansion at an average annual rate of about 12 percent for the broadly defined money supply, and for the elimination of the unified budget deficit by 1986. (Although this was not achieved, the budget deficit shrank considerably.) Improvement of the commodity distribution system and mobilization of domestic savings were also important objectives of the plan.

Apart from those mentioned, there remain many additional tasks to be undertaken for the successful realization of stabilization goals. An institutional realignment is needed to empower the Bank of Korea with sovereign control over the supply of money. The prime responsibility of the central bank should be in controlling inflation by maintaining a stable money supply; this requires greater independence from the government. As people's inflationary expectations subside, the inflow of savings into the financial market should become more stable and the differential between the free market and official interest rates will narrow. Then, the workings of the financial markets should be improved by gradually liberalizing interest rates. Interest rates should be determined in closer relation to demand and supply conditions in the market as well as by the credit-worthiness of borrowers.

Eliminating the deficit in the government's Grain Management Fund remains a persistent problem. On the assumption that the shift in diet will continue to reduce rice consumption, the agricultural sector may have to undergo a substantial change and the two-tiered price system will no longer be tenable. Farmers will have to be encouraged to switch gradually from major grains to high-value vegetables, stock raising, and fruit. Moreover, in light of the fact that more than two-thirds of farm households own less than one hectare of cultivated land, some institutional changes may have to be made to facilitate the farm mechanization essential for the enhancement of agricultural productivity.

Under the current real estate tax system, large capital gains can be obtained from real estate investments. The incomplete land registration system and the complex regulatory laws on land use make it difficult to establish an effective monitoring system on real estate ownership and transactions. In addition, real estate speculation was, to some extent, the result of the government practice of using taxation on real estate as part of its anticyclical measures. Thus, the antispeculative measures of the government have to be more comprehensive, tackling fundamental problems of supply and demand in the market. The basic approach to the stabilization of real estate prices may include making property and capital gains taxes heavier and more progressive, reforming the housing financing system, and increasing the supply of housing lots and rental houses.

Finally, in an effort to stabilize wages, the government's wage guidelines should try to induce improvements in the wage structure rather than be obsessed with wage restraint alone. In addition to encouraging the larger corporations to restrain the wage increases of highly paid white-collar workers, the government should also consider adoption of a minimum-wage system for production workers. Introduction of a minimum hourly wage will lead to higher productivity, not only by giving workers stronger motivation, but also by inducing firms to become more managerially and technologically innovative. Furthermore, to secure wage stability when substantial changes are taking place in the labor market structure, stepped-up efforts will have to be directed to on-the-job training, retraining programs, and the establishment of an efficient employment information system.

APPENDIX 9.1 Money Demand and Price Equations

The equations presented below were estimated, unless otherwise specified, with semiannual period-averaged data for a sample period of 13.5 years from the first half of 1970 through the first half of 1983. Superscript m in a variable notation denotes the moving average of the current and the previous periods, while $4m$ denotes the moving average of the current and previous three periods. A dot ($\dot{}$) indicates percentage change over the same period of the previous year, and numbers in parentheses below coefficients are t -values.

A. Demand for Money (Ordinary Least Squares [OLS] Estimate)

$$\begin{aligned}
 (1) \ln(M_1/Pv) = & - 1.271 + 0.938 \ln \sum_{i=0}^1 V_{-i} - 2.478 \ln(1 + \dot{P}^e/100) \\
 & (25.6) \qquad (5.78) \\
 & - 2.039 \ln[(100 + r_t)/(100 + \dot{P}^e)] - 0.044 Df \\
 & (7.08) \qquad (2.67) \\
 & - 0.214 D(81/82) - 0.111 D(82/83) \\
 & (6.31) \qquad (2.35) \\
 & R^2 = 0.9841 \quad D.W. = 1.43
 \end{aligned}$$

$$\begin{aligned}
 (2) \ln(M_2/Pv) = & - 1.877 + 1.038 \ln \sum_{i=0}^3 V_{-i} - 1.925 \ln(1 + \dot{P}^e/100) \\
 & (33.2) \qquad (5.07) \\
 & - 0.799 \ln[(100 + r_t)/(100 + \dot{P}^e)] - 0.034 Df \\
 & (3.19) \qquad (2.40) \\
 & + 0.110 D(81/82) + 0.114 D(82/83) \\
 & (3.75) \qquad (2.75) \\
 & R^2 = 0.9918 \quad D.W. = 1.68
 \end{aligned}$$

where $D(81/82)$: Dummy variable for the second half of 1981 and the first half of 1982

$D(82/83)$: Dummy variable for the second half of 1982 and the first half of 1983

Df : Seasonal dummy variable for the first half of a year

M_1, M_2 : Narrowly and broadly defined money supply, respectively

Pv : GNP deflator (1975 = 1.00)

$\dot{P}v^e$: A measure of the expected inflation rate based on past inflation rates with the weights assumed to show a geometrically declining distribution

$$= \sum_{i=1}^5 0.3(1 - 0.3)^{i-1} \dot{P}v_{-i} / \sum_{i=1}^5 0.3(1 - 0.3)^{i-1}$$

r_t : Interest rate on one-year time deposits, and

V : Gross national product in 1975 constant prices

B. Money-Determined Price Equations (Estimated with the Cochrane-Orcutt Iterative Technique)

$$(1) \ln Pv = 1.746 + 1.045 \sum_{i=0}^6 w_i \ln(M_1/V)_{-i} + 1.154 \ln(1 + \dot{P}v^e/100) \\ (7.03) \quad (4.69) \\ + 0.691 \ln[(100 + r_t)/(100 + \dot{P}v^e)] \\ (3.22)$$

$$\rho = 0.499 \quad R^2 = 0.9990 \quad D.W. = 0.194$$

where w_i 's are polynomially distributed lag coefficients:

$$w_0 = 0.092 \quad w_1 = 0.122 \quad w_2 = 0.144 \quad w_3 = 0.159 \\ w_4 = 0.165 \quad w_5 = 0.163 \quad w_6 = 0.154$$

$$(2) \ln Pw = 6.079 + 1.011 \sum_{i=0}^6 w_i \ln(M_1/V)_{-i} + 1.509 \ln(1 + \dot{P}w^e/100) \\ (26.8) \quad (3.64) \\ + 0.745 \ln[(100 + r_t)/(100 + \dot{P}w^e)] \\ (1.90)$$

$$\rho = 0.642 \quad R^2 = 0.9964 \quad D.W. = 1.87$$

where Pw : Wholesale price index (1975 = 100)

$\dot{P}w^e$: A measure of the expected inflation rate in terms of wholesale prices.

$$= \sum_{i=1}^5 0.3(1 - 0.3)^{i-1} Pw_{-i} / \sum_{i=1}^5 0.3(1 - 0.3)^{i-1}, \text{ and}$$

$$\begin{array}{lll} w_0 = 0.154 & w_1 = 0.195 & w_2 = 0.209 \\ w_3 = 0.196 & w_4 = 0.156 & w_5 = 0.089 \end{array}$$

C. Cost-Based Price Equations (OLS Estimate)

$$(1) \ln Pv = - 9.358 + 0.336 \ln(Pm \cdot Rex)^m + 0.750[0.59 \ln ULCn^{4m} \\ (10.5) \qquad \qquad \qquad (8.94) \\ + 0.30 \ln COC^m + 0.11 \ln(Ti^m / CV_n^m)] + 0.624 \ln Rcu^m \\ (4.00)$$

$$+ 0.148 \ln Pv,a + 0.022 Df \\ (2.19) \qquad \qquad (1.86)$$

$$R^2 = 0.9991 \quad D.W. = 1.68$$

$$(2) \ln Pw = - 6.221 + 0.493 \ln(Pm \cdot Rex)^m + 0.443 \ln ULCm^{4m} \\ (17.8) \qquad \qquad \qquad (16.7)$$

$$+ 0.203 \ln COC^m + 0.017 Df \\ (2.28) \qquad \qquad (1.66)$$

$$R^2 = 0.9986 \quad D.W. = 1.64$$

where COC: Estimated overall cost of capital

$$= DEP/CV + (0.4 Rb + 0.25 Rf) (1 - Tc) + 0.15 Rum \\ + 0.2 Req$$

CV: Nominal gross national product

DEP: Capital depreciation allowance

Rb: Bank interest rate on general loans

Req: Dividend yields based on face value of equity stocks

Rf: Approximated effective cost of borrowing from abroad

$$= (Reuro + 1.0) (1 + RISKex/100) + RISKex$$

Reuro: Eurodollar rate on three-month maturity loans

RISKex: Exchange risk measured as annual rate of exchange rate depreciation during the recent two-year period

Rum: Interest rate on unorganized money market loans, and

Tc: Corporate income tax rate for the highest income bracket

CV_n : Value added in the nonagricultural sector in current prices

P_m : Unit price for commodity imports in U.S. dollars

$P_{v,a}$: Price deflator for agricultural value added

R_{ex} : Exchange rate in won per U.S. dollar

R_{cu} : Capital utilization ratio in the nonagricultural sector

$$= (V_n - V_f) / \hat{V}_{nf}$$

V_n : Value added in the nonagricultural sector in 1975 constant prices

V_f : Net factor income from abroad

\hat{V}_{nf} : Estimated potential nonagricultural value added excluding V_f , which was obtained from the following equation based on quarterly data (1969-82)

$$\begin{aligned} &= - 15.375 + (0.342 D1 + 0.471 D2 \\ &\quad (14.1) \quad (5.85) \quad (8.07) \\ &\quad + 0.448 D3 + 0.503 D4) (K_n^m)_{-1} \\ &\quad (7.69) \quad (8.68) \\ &\quad + 1.702 \ln (K_n^m)_{-1} \\ &\quad (13.9) \end{aligned}$$

$$R^2 = 0.9974 \quad D.W. = 0.27$$

where $D1, D2, D3, D4$: Seasonal dummy variables for the first, second, third, and fourth quarters, respectively, and

K_n : Capital stock in the nonagricultural sector (period-end)

T_i : Indirect internal tax revenue, and

ULC_m, ULC_n : Unit labor cost (productivity-adjusted wage cost) in the manufacturing and nonagricultural sectors, respectively, where productivity was measured as value added per employment

TAXATION POLICIES

10 The 1966 Tax Administration Reform, Tax Law Reforms, and Government Saving

by Chong Kee Park

Tax reform is a continuous and sensitive process that promotes the improvement of tax law and administration to ensure they remain responsive to changing economic and social conditions and to the changing priorities and objectives of public policy. There have been numerous tax reforms in Korea since 1961, but the two most important were the reorganization and improvement of tax administration in 1966 and the enactment of a comprehensive tax law revision in 1967. The immediate objectives of these reform measures were to narrow the gap between tax law and practice, and to make the tax structure more responsive to changing rates of inflation and economic growth. The ultimate objectives were to mobilize domestic resources and improve the saving function of the government sector.

Tax revenues increased more rapidly than GNP during 1957-62 (with the exception of 1961), but during 1963-65 failed to keep pace with rising levels of GNP (Table 10.1). Several interrelated factors were responsible for the decline in the tax ratios after 1962, including the rate of growth in GNP

Table 10.1. Tax revenue as a percentage of GNP: 1957-65

Year	Tax revenue as percentage of GNP			Nominal GNP growth rate	GNP price deflator (1965=100)	Inflation rate (% per year)
	National taxes	Local taxes	Total tax revenue			
1957	6.7	0.8	7.5	29.7	37.8	
1958	8.1 (7.3)	0.8	8.9 (8.1)	4.8	37.6	-0.5
1959	11.0 (8.6)	1.0	12.0 (9.6)	6.7	38.4	2.1
1960	11.1 (8.8)	0.9	12.0 (9.7)	11.6	41.9	8.7
1961	8.7	0.9	9.6	20.3	48.4	14.4
1962	9.3	1.5	10.8	17.4	54.9	12.6
1963	7.4	1.5	8.9	40.0	70.4	24.9
1964	6.0	1.2	7.2	42.8	92.9	27.7
1965	7.2	1.4	8.6	15.7	100.0	7.4

Sources: ONTA, ROK, *Statistical Yearbook of National Tax* (1960, 1967); BOK, *Economic Statistics Yearbook* (1967).

Note: Numbers in parentheses are exclusive of education tax, foreign exchange tax, and land income tax levied in 1958, 1959, and 1960.

and changes in its composition, changes in price levels, changes in the tax system structure, shifts in the composition of imports, and the altered effectiveness of tax administration. It is important to note that the largest declines in the nation's tax/GNP ratio occurred in 1963–64 when prices were rising most rapidly. The most significant increases in the ratio, however, were recorded in 1958–59 when prices remained relatively stable and the growth in nominal GNP was modest. The big increase in the ratio in 1962 may represent a recovery from the decline in 1961, which was partly attributable to major tax reforms occurring in that year. Thus, the relationship between the tax yield and GNP during 1958–64 suggests that the Korean tax system as a whole was not responsive to changes in nominal GNP, particularly when such changes were accompanied by rapidly rising price levels.

Rapid inflation magnifies the differences in the rates of change among the various economic sectors and types of income. Moreover, in a rapidly developing economy, relatively large structural changes take place within a short time. If these differential rates of growth and structural changes increase the relative importance of sectors subject to lower effective tax rates, total tax revenue would grow less rapidly than GNP, even if revenue yields from taxes increase in proportion to their respective taxable bases. This is what happened in Korea in 1964. The agricultural sector accounted for the unusually large proportion of the growth in GNP in that year, increasing by 15.6 percent in comparison with 9.6 percent for the overall economy. The share of agriculture in GNP rose from 37 percent in 1962 to 47 percent in 1964 (BOK, *National Income*, 1980). Because of the low tax on agricultural income, the total increase in tax yield was small relative to the growth in GNP.

The downward trend in the ratios of tax revenue to GNP since 1962 also reflects unusual increases in prices triggered by a poor harvest in late 1962 and a structural defect in the tax system that prevented the system from responding to increases in prices and money income. The sharp increase in government expenditure and the budget deficit in 1962 further aggravated the inflation that impaired tax collections in the following two years. Over the 1960–62 period total government expenditures increased sharply from 17.0 percent to 25.4 percent of GNP, while total revenues including counterpart funds rose only slightly from 18.8 percent to 20.8 percent of GNP. As a result a huge fiscal deficit, equivalent to 4.5 percent of GNP, was generated in 1962 (Table 10.2). Most of the decline in tax revenues after 1962 was in indirect taxes, the assessment base of which failed to keep up with the soaring inflation of 1963 and 1964. Some of the excise and commodity taxes—such as those on liquor and sugar—were unit taxes (a fixed tax per unit of the commodity) rather than *ad valorem* taxes (a fixed percentage of the value of the commodity), with the result that their tax liabilities fell behind the increase in GNP at current prices. The ratio of liquor tax

Table 10.2. Central general government revenues as a percentage of GNP: 1960-69

Item	1960	1962	1964	1966	1967	1968	1969
	As percentage of GNP						
Internal taxes	8.0	6.1	4.2	6.8	8.3	9.9	10.4
Other taxes ^a	3.0	3.1	1.9	2.4	2.8	3.4	3.4
Other domestic revenue ^b	1.0	3.3	1.4	2.0	1.7	2.0	3.0
Total domestic revenue	12.0	12.6	7.4	11.2	12.9	15.3	16.8
Counterpart fund	6.8	8.2	4.0	3.7	3.1	2.1	0.8
Total revenues	18.8	20.8	11.4	14.9	16.0	17.5	17.6
Total expenditures	17.0	25.4	10.8	13.7	14.5	16.6	17.8
Fiscal balance	1.8	-4.5	0.6	1.2	1.4	0.9	-0.2
	As percentage of total revenues						
Total tax revenues ^a	58.6	44.3	53.0	61.7	69.6	76.3	78.4
Other domestic revenue ^b	5.3	16.0	12.1	13.4	10.8	11.5	17.1
Counterpart fund	36.2	39.6	35.0	24.9	19.6	12.2	4.5
Total revenues	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: BOK, *Economic Statistics Yearbook* (1971); Brown (1973: table 5).

a. Includes customs duties and monopoly profit.

b. Includes trust fund and interest.

revenue to GNP dropped by more than 40 percent between 1962 and 1964, and yields from indirect taxes as a whole declined from 3.1 percent of GNP in 1962 to 1.6 percent in 1964 (C. K. Park 1970).

The decline in the tax ratio after 1962 was also partly due to increased tax exemptions and reductions and because much of the growth in GNP during that period took place in industries enjoying substantial tax benefits. The exemptions and reductions granted under the Corporation Income Tax Law rose sharply from 110 million won in 1961 to 1,046 million won in 1964, representing 6.4 percent and 25.5 percent, respectively, of corporate income taxes actually collected in those years (C. K. Park 1978). Most of these statutory exemptions and reductions were allowed under various provisions of the law to encourage investment in specific industries and to stimulate reinvestment of earnings.

This type of tax concession was not limited to income taxes; tax liabilities of indirect taxes such as customs duties and commodity taxes were also waived for businesses earning foreign exchange. Between 1962 and 1964 customs duties declined from 1.9 percent to 1.2 percent of GNP, while commodity tax revenues dropped from 1.4 percent to 0.5 percent of GNP. Because the share of imports in GNP was at an all-time high in 1962 and 1963,

the declining ratios of tax revenues (from customs duties and commodity taxes) to GNP may have resulted from large tax concessions granted on raw materials for manufacture of goods for export and changes in the composition of imports. The decline also is attributable to the unrealistic exchange rate, which understated the won value of imports to which customs rates applied. The large decline in commodity tax revenues during this period was caused by a tightening of import restrictions, forced by the unrealistic exchange rate, that sharply reduced imports of such major revenue-yielding items as radios, TV sets, films, and manufactured textiles (Brown 1973).

The weakening position of tax revenue in the fiscal system was a major cause of concern for fiscal authorities and planners in the government. The implications for future tax and fiscal policies were clear. If the government sector were to provide the necessary share of financial resources to implement the forthcoming Second Five-Year Development Plan, reversal of the declining trend in the tax ratio would be necessary. With the anticipated decrease in counterpart funds and uncertain prospects for private savings, financing from domestic sources, including tax revenues, would have to cover an increasing proportion of total budget requirements.

MAIN FEATURES OF THE POLICY MEASURES

Within certain limits, restoring the tax/GNP ratio could be achieved by improved administration of existing taxes. Lack of tax compliance was still widespread. Strict penalties were not imposed for tax evasion, and tax officials failed to enforce fair and equitable assessments. Bargaining between tax collectors and taxpayers and the resulting payoff were common features of the assessment process. Thus, it was absolutely necessary that tax administration be tightened. Nonetheless, more stringent enforcement of tax laws would not be sufficient; the growth and changing structure of the economy required adjustments in the tax system itself if the government were to play a leading role in financing development. Maintaining required ratios of tax revenue to GNP would necessitate higher tax rates, new tax sources, or both.

Shortly after assuming power in 1961, the military government began to make numerous revisions both in the tax administrative regulations and procedures and in tax laws. To encourage voluntary taxpayer compliance, the Tax Collection Temporary Measures Law and the Tax Delinquent Special Measures Law were enacted, whereby the government gave up all existing claims to penalties for past tax delinquencies but pledged to deal more strictly with future delinquencies. In addition, a tax reduction was provided for voluntary filing of tax returns for personal income tax, corporation tax, and business activity tax. To assist taxpayers in filing voluntary tax returns, a tax accountant system was adopted by enacting the Tax Accountant Law. Additional measures taken during the early phase of the military govern-

ment to improve tax enforcement included the strengthening of the tax withholding system, reorganization of regional tax offices, and screening and retraining of tax officials.

In December 1961 the government overhauled the entire tax system by making extensive revisions in tax laws. The basic objectives of the tax reform set forth by the new military regime were to: (1) simplify the tax structure to ensure voluntary compliance on the part of taxpayers; (2) improve the income elasticity of the tax system to meet rapidly rising revenue requirements; (3) redesign the tax system to promote savings and investments for economic development; (4) bring about a more equitable distribution of the tax burden; and (5) improve the local tax system to increase the revenues to local governments from their own tax sources (MOF, ROK, 1979b, I:340-41). Although the 1961 tax reform was extensive in nature and coverage, additional revisions and minor changes of tax laws were enacted almost annually to support the implementation of the First Five-Year Development Plan (1962-66).

Tax Administration Reform

Despite strenuous efforts by the military government to improve the revenue productivity of the tax system, the results were disappointing. Various corrections in administrative procedures and in tax laws failed to produce the expected additional revenues. It was not until the president gave his full support to drastic administrative reform and to the tax collection effort that tax revenues began to rise rapidly. The year 1966 marked the beginning of a new era in tax administration in Korea. The Law Amending the Government Organization Law, dated 28 February 1966, provided that "for the purpose of supervising the assessment, exemption, reduction and collection of national domestic tax, as well as all matters pertaining to the management of state-owned property and property vested to the government, the Office of National Tax Administration is hereby created under the direction of the Minister of Finance" (Law No. 1750, Article 26, paragraph 10). Thus, the major function of the Office of National Tax Administration (ONTA), mandated by the law, was to administer all national tax laws in connection with the assessment, exemption, reduction, and collection of taxes and to manage state-owned properties. ONTA consisted of a national office made up of four bureaus and 11 sections, and a field organization consisting of five regional offices located in four cities (Seoul, Taejŏn, Kwangju, and Pusan), each headed by a regional commissioner reporting to the commissioner and deputy commissioner of the national office. Below the regional office level there were originally 77 district tax offices throughout the country, each headed by a district chief reporting to the regional commissioner and the commissioner of the national office. The number of district offices was later increased substantially; by the end of 1982 there were six regional and 105 district offices throughout Korea (ONTA, ROK, 1982).

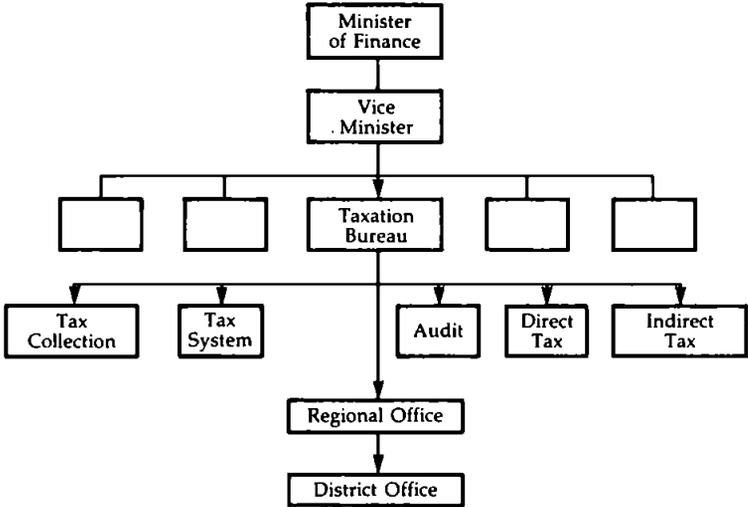
The organizational reform of national tax administration split the original function of the former Bureau of Taxation in the Ministry of Finance into the semi-autonomous ONTA and the Tax System Bureau (Figure 10.1). While ONTA was responsible only for administration of the national tax laws, the Tax System Bureau in the Ministry of Finance was charged with the primary responsibility for matters related to taxation policy, tax legislation, international tax treaties, and tax analysis and research. In addition to separation of these functions, the reorganization provided for great expansion of the investigation and inspection activities of the tax administration agency. Upgrading of the status of the newly created tax administration agency is shown in Figure 10.1, which compares the organizational structures of the tax administration before and after the 1966 reform. The top tax administrator was raised from bureau director rank (Grade II civil servant) before the reorganization to subcabinet vice minister rank commissioner after the administrative reform. All other positions of tax officials below the commissioner level were also upgraded.

Recognizing that weak tax administration was a source of public discontent, President Park Chung Hee took a strong personal interest in the improvement of tax enforcement, and appointed one of his closest associates in the 1961 military coup as Commissioner of National Tax Administration. The president gave him his full-fledged support against mounting political pressures brought by those who sought relief from higher taxes (Cole and Lyman 1971). Dubbed the "quiet revolution" by President Park, the developments of the last nine months of 1966 thrust the tax administration authority into a position of previously unparalleled prominence. Created during a period of considerable uncertainty, facing an enormous responsibility and burden under the forthcoming Second Five-Year Development Plan, and headed by a relatively unknown individual with no experience in the tax field, ONTA compiled a remarkable record.

The existence of substantial tax evasion and avoidance was at the time widely recognized. In the face of rapidly rising domestic revenue requirements for the economic development programs, it was imperative that this revenue requirement be met first by those who were not paying their fair share of tax imposed by existing law. Unless these people met their tax obligations, additional burdens would have to be placed on those taxpayers who paid their taxes honestly, and the inequity in the distribution of tax burdens would be increased. For these reasons, the commissioner firmly believed that improved enforcement through reduction of evasion and intensification of collection efforts was the most urgent task facing the new tax administration authority.

Accordingly, the initial efforts of the new tax agency concentrated on extensive fraud investigations and internal audits. The new investigation procedure used by ONTA involved a centrally controlled and coordinated information production, processing, and evaluation system. Information

BEFORE REORGANIZATION



AFTER REORGANIZATION

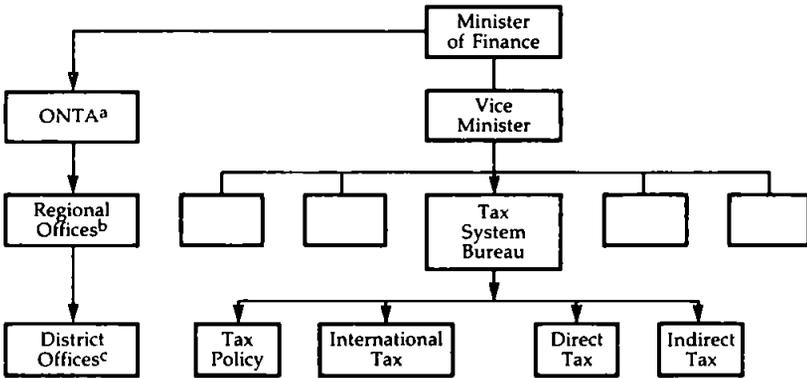


Figure 10.1. Tax administration before and after the reorganization of 1966

- a. Headed by a commissioner with vice minister rank.
- b. Headed by a regional commissioner with bureau director rank (Grade II civil servant).
- c. Headed by an officer with division chief rank (Grade IV civil servant).

was then channeled to the appropriate field investigation teams for final disposition or referred to regional or district offices for disposition after preliminary investigation. The new procedure was particularly relevant to business conditions and taxpayer practices then existing in Korea. These operations also involved close coordination and cooperation with other pertinent investigative agencies on an unprecedented scale, which in itself was a significant development. Implementation of the improved investigative procedures was impressive, even at the earlier pilot stage.

The number of investigations completed increased sharply from 924 in 1965 to 13,242 in 1966. Additional taxes and penalties collected as a result of implementing new investigation procedures amounted to 2,209 million won in 1966, compared with only 303 million won for 1965. The revenue effect of the improved investigation procedure was manifest in the 1966 figure. The 1966 total amounted to 1,774 million won collected as taxes and 435 million won collected as fines (ONTA, ROK, *An Outline of Korean Taxation*, 1967). The fact that a considerable sum of taxes was collected as a result of fraud investigation suggested that there still existed a great number of tax evaders. The actions of ONTA clearly demonstrated that all citizens and business enterprises were subject to taxation.

Abuse by tax officials was one of the widespread grievances against the government. The Office of Inspector-General was created within ONTA, under the direct supervision of the commissioner (Figure 10.2), to strengthen the internal audit function of ONTA. The new units under the inspector-general were charged with the important tasks of investigating tax officials' misconduct and examining the operations of all segments of ONTA. The significance of the new internal auditing function was its independent status. Previously, internal investigations were staffed on an ad hoc basis with personnel recruited from other divisions of the tax agency; now the reorganized unit had its own permanent staff. Thus, more objective appraisals were possible by the auditing personnel who had no direct ties or allegiance to the activities being audited. As for the other function—internal security—an effective program in that area contributed greatly toward minimizing corruption and improving the public image of the tax administration agency.

During the nine-month period after the inauguration of ONTA on 3 March 1966, a total of 59 district tax offices underwent extensive internal audits. As a result, a total of 350 million won in penalty taxes was collected. According to Table 10.3, which breaks down the sum of penalty tax collection by tax sources, corporate income tax accounted for more than 64 percent of the total penalty taxes collected, followed by personal income tax with 26 percent. Internal audits were conducted on 68 tax offices in 1965, compared with 59 offices in 1966. The incidence of tax delinquencies detected through the audits reached 2,887 in 1965 and 1,237 in 1966, but the sum of penalty tax collected amounted to 18.9 billion won in 1965 and 350.4 billion won in 1966 (ONTA, ROK, *An Outline of Korean Taxation*, 1967:155). Thus the revenue impact of the internal audit was enormous.

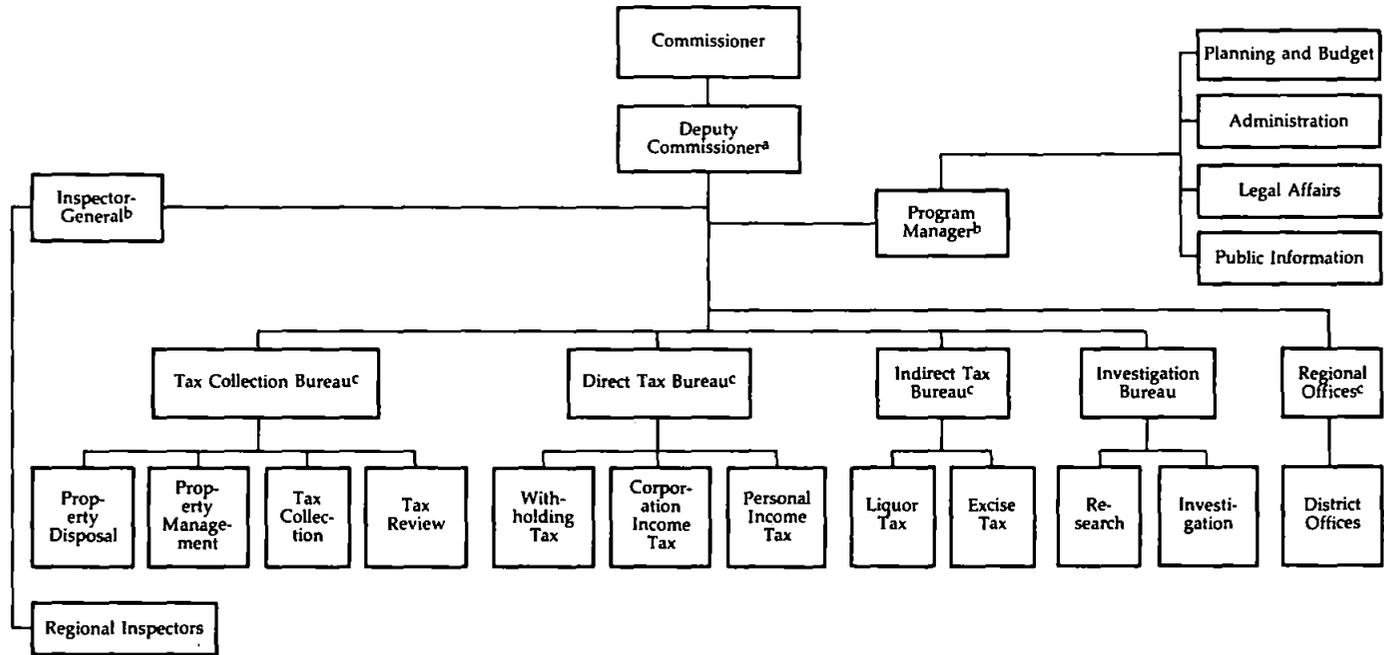


Figure 10.2. Organizational chart of the ONTA

Source: ONTA, ROK, *An Outline of Korean Taxation* (1967).

- a. Grade I civil servant.
- b. Grade II civil servant.
- c. Grade II or III civil servant.

Table 10.3. Result of internal audits, 3 March-31 December 1966

Item	Amount of penalty taxes (10 ⁶ won)	Percentage of total
Personal income tax	89.5	25.6
Corporation income tax	225.6	64.4
Inheritance and gift tax	3.3	0.9
Business activity tax	11.7	3.5
Liquor tax	0.7	0.2
Stamp tax	0.3	0.1
Excise taxes	1.7	0.4
Other	17.5	4.9
Total	350.4	100.0

Source: ONTA, ROK, *An Outline of Korean Taxation* (1967).

ONTA experimented with another application of a new tax compliance procedure: the voluntary disclosure program. Two voluntary disclosure programs of tax evasion were carried out in the last half of 1966. As a new concept adopted in Korea's tax administration policies, these programs encouraged tax violators to confess past evasion in return for immunity from civil and criminal action. Proclaimed as grace periods preceding intensified fraud investigation efforts, the programs achieved noteworthy results. During the first period, which lasted for 45 days between June and July 1966, taxpayers in 771 cases voluntarily disclosed and paid 282 million won in additional taxes. At the beginning, only one period for making disclosures was planned. But, petitions from business associations and the Chamber of Commerce and Industry calling for another chance to disclose past errors led to the scheduling of a second period. During 20 days in September 1966, additional taxpayers in 9,794 cases voluntarily disclosed and paid 1,059 million won in evaded taxes. Voluntary disclosure cases and amounts of tax collection by major regions are presented in Table 10.4.

One of the most important aspects of the improvement in tax administration was the introduction of the "green return" system. Labeled the "green return" simply because of the color of the form used, this system represented a transitional measure taken to encourage individuals and firms to file tax returns on a self-assessment basis rather than under government supervision. Adoption of a voluntary return filing system was thus the first major step toward movement away from the traditional method of having tax officials prepare returns for taxpayers. Under this system, firms that kept satisfactory accounting records and whose accounting books were open to the public were allowed to file their tax returns on a self-assessment basis without interference from tax officials. The pilot operation initially selected 1,574 eligible taxpayers. The number of taxpayers responding totaled 1,359

Table 10.4. Voluntary disclosure program of tax evasion, 1966: Number of cases and amount of tax collected

Region	Cases			Amounts (10 ⁶ won)		
	First period ^a	Second period ^b	Total	First period ^a	Second period ^b	Total
Seoul	204	3,022	3,226	92	717	809
Taejŏn	36	724	760	11	30	41
Kwangju	284	1,975	2,259	23	85	109
Pusan	247	4,073	4,320	156	227	382
Total	771	9,794	10,565	282	1,059	1,341

Source: ONTA, ROK, *An Outline of Korean Taxation* (1967).

a. Refers to 45-day period during June-July 1966.

b. Refers to 20-day period during September 1966.

or about 86 percent of those eligible. There were, however, approximately 2,800 taxpayers actually eligible for this program. To pave the way for expanding the program and bringing all taxpayers under a voluntary system, the government continued to promote voluntary filing and payment by taxpayers through various activities, such as conducting seminars and town meetings, extensive coverage by the mass media, and establishment of taxpayer information and service centers. To stimulate an awareness among the public of the importance of paying taxes and to secure the active support and cooperation of taxpayers, the Ministry of Finance officially designated March 3 as "National Tax Day," to be observed annually.

Tax Law Reform

Subsequent to the large tax law reform of December 1961, there were relatively minor revisions of tax laws between 1962 and 1966 in conjunction with the implementation of the First Five-Year Development Plan. In the 1962 tax revision, for instance, the number of personal income tax brackets was increased from three to four and corporation income tax rates were increased to meet the rising revenue requirements of the government. In 1963-64 the laws relating to corporate income tax, the commodity tax, and the petroleum tax were revised. The corporation income tax was made progressive with two income brackets and rates. The commodity tax base was substantially expanded by adding 24 new taxable commodity items including jewels and precious-metal products, and the tax rates on certain luxury goods were increased. The Petroleum Products Tax Law was also amended to reduce the gasoline tax rate from 300 percent to 100 percent while doubling rates on diesel oil and heavy oil. To provide incentives to invest in certain key industries and to foster foreign exchange earnings by export, the Law Governing Tax Reduction and Exemption was promulgated in 1965. This law in effect consolidated into a single piece of legislation all

provisions pertaining to tax concessions to businesses that had previously been included in separate tax laws.

As the government embarked on the Second Five-Year Development Plan (1967-71), another major tax reform was enacted to provide financial support to the economic development plan. The tax reform of 29 November 1967 was the most comprehensive reform since that of 1961. Thirteen existing tax laws were revised and two new tax laws were enacted as an integral part of the government's effort to promote rapid economic growth and industrialization. The major objectives of the tax law reform were to: (1) make the tax structure more conducive to economic development; (2) enlarge the taxable base of the economy; (3) improve equity in the distribution of the tax burden; (4) improve the efficiency of tax administration; and (5) protect the rights and interests of taxpayers (MOF, ROK, 1967:31). Specific measures included in the reform were designed to facilitate the implementation of other policy measures such as avoidance of undue credit expansion, redistribution of income, active promotion of exports, increased private savings, and strengthening of financial institutions.

As a first step toward a gradual transition to a "global" personal income tax system, the 1967 reform introduced a partial globalization of the existing "schedular" system of personal income tax, under which tax rates varied among five schedules (sources) of income: wages and salaries, business income, real estate income, dividends and interest, and other income. If a taxpayer had an annual income in any one of the five categories of the schedular income taxes equal to or greater than the specified amounts, then all of his income was subject to the global tax, provided that total income from all sources exceeded 5 million won. Specified amounts of a minimum annual income were 2.4 million won for wages and salaries, 3 million won for business income, 1.5 million won for real estate income and dividend and interest income, and 1 million won for other income. As tax relief for low-income taxpayers, the exemption for wage and salary earners was raised from 5,957 won to 8,000 won per month. This rise in the exemption amount was accompanied by a partial tax credit system under which a taxpayer was allowed to credit against tax liability an amount equivalent to 3 percent of the difference between 15,000 won and actual monthly income. By means of this credit system, the effective tax rate was reduced on all wage and salary incomes lower than 15,000 won per month. Similar provisions were made for business and real estate income. The statutory rate structure was also revised by increasing the number of income tax rate brackets from five to seven for wage and salary income and from five to six for business and real estate income. Tax rates for each income bracket were adjusted accordingly (Table 10.5).

One of the most important changes in the corporation income tax was an introduction of discriminatory rates for closely held family corporations; for which tax rates were from 5 to 10 percentage points higher than for

Table 10.5. Changes in statutory tax rates for personal income, before and after the 1967 tax law reform

Before the reform		After the reform	
I. Wage and salary income			
Monthly income level	Rate (%)	Monthly income level	Rate (%)
20,000 won or less	7	15,000 won or less	7
In excess of 20,000 won	15	In excess of 15,000 won	9
In excess of 40,000 won	25	In excess of 20,000 won	16
In excess of 60,000 won	35	In excess of 30,000 won	18
In excess of 80,000 won	40	In excess of 40,000 won	30
		In excess of 60,000 won	40
		In excess of 80,000 won	50
II. Business and real estate income			
Annual income level	Rate (%)	Annual income level	Rate (%)
200,000 won or less	15	200,000 won or less	15
In excess of 200,000 won	20	In excess of 200,000 won	20
In excess of 500,000 won	30	In excess of 500,000 won	30
In excess of 1,200,000 won	40	In excess of 1,200,000 won	40
In excess of 4,000,000 won	50	In excess of 3,000,000 won	50
		In excess of 5,000,000 won	55

Source: MOF, ROK (1967).

“open” corporations. In addition, dividends paid by “open” corporations were tax exempt, while those paid by “closed” corporations were taxable at 15 percent. Also, temporary profit tax exemption or reduction provided under the Corporation Income Tax Law was replaced by the investment tax credit. In another area of direct taxation, the tax reform of 1967 introduced a new land speculation control tax—a capital gains tax levied at 50 percent on profits from transfers of urban real estate.

One of the most significant measures in the area of commodity taxation was the increase in the list of items subject to the tax from 46 to 80. Some of the new items were the result of subdividing previously taxed categories, but many were items that had been removed from the taxable list in the 1961 tax reform but whose sales had subsequently increased. Another major feature of the commodity tax reform in 1967 was the introduction of a system levying the tax at the retail instead of the manufacturing stage on items such as jewels, pearls, and precious metals. Tax rates on luxury commodities and imported items were also increased. To make liquor taxes more responsive to price changes, they were shifted from a unit basis to an *ad*

valorem rate schedule. Kerosene and bunker-C oil, which had been previously untaxed, were made subject to rates of 30 percent and 5 percent, respectively; kerosene used for lighting purposes in rural areas was, however, exempt from the new tax. Another new tax introduced in the 1967 tax reform was a 10 percent tax imposed on telephones.

In conjunction with the Third Five-Year Development Plan (1972-76), another major tax law reform took place at the end of 1971 and new tax laws were put into effect beginning 1 January 1972. The 1971 reform was designed to accomplish, among other things, the following specific objectives: (1) to reduce the tax burden of low-income persons, (2) to provide tax inducements to encourage saving by individuals and businesses, (3) to reduce excessively high marginal income tax rates, and (4) to improve horizontal equity so that those with equal ability would be taxed equally (MOF, ROK, 1972:11). In line with these objectives, personal income tax rates on wages and salaries and business income were reduced and the basic tax exemption level was increased. Interest income from bank deposits, which previously had been exempted entirely, became subject to a 5 percent tax. In addition, the minimum income subject to the global income tax was lowered from 5 million won to 3 million won. Corporation income tax rates also were adjusted downward and the application of the investment tax credit system was expanded to cover a wider range of businesses and industries. All told, ten major tax laws were affected by the 1971 reform.

In response to the oil crisis and consequent economic deterioration at home, the Presidential Emergency Decree was declared on 14 January 1974, providing a substantial temporary tax cut for low-income wage and salary workers. The magnitude of tax reduction was 50 percent for annual incomes between 600,000 won and 840,000 won and 30 percent for incomes ranging between 840,000 won and 1,200,000 won. Incomes below 600,000 won were completely exempted from personal income tax for one year (C. K. Park 1978:74).

Until 1974 Korea's personal income tax system consisted of both schedular taxes and a global tax. Under the schedular system, exemptions, deductions, and rate structures varied considerably depending on the type of income. The system was complex and difficult to administer and produced haphazard incidence effects. The primary objective of the 1974 reform was to correct these defects in the personal income tax by replacing the schedular system with one that was almost completely global. Under the new system, virtually all personal incomes (excluding interest and dividend incomes), which were previously included in the five different schedules, are taxed only under the global system. The new system also provided an additional exemption for bonus income, widened the range of deductions to reduce the tax burden on families, increased substantially the maximum levels of deductions, and reduced tax rates over most ranges of taxable income (MOF, ROK, 1975b:9-78). The land speculation control tax, introduced

in 1968, was replaced by the capital gains tax. The other nine tax laws were also affected by the tax law reform of 1974.

In July 1975 the Defense Tax Law was enacted for the purpose of providing financial resources required for modernization of the national defense force. Under this law, most taxpayers became subject to a surtax at rates ranging from 0.1 percent to 30 percent. Specifically, the defense surtax covered customs duties, four national internal direct taxes, four national internal indirect taxes, six local tax items, and commercial advertisement (MOF, ROK, 1975a:14-18). The tax, adopted as a temporary measure in 1974, was originally scheduled to expire in 1980, but the expiration was subsequently postponed twice and is now scheduled for 1990.

In a drastic change of the existing indirect tax structure, the 1976 tax law reform adopted a new value-added tax system to replace eight of the 11 existing indirect tax items (the business activity tax, commodity tax, textile products tax, petroleum products tax, electricity and gas tax, transportation tax, admissions tax, and entertainment and restaurant tax). In addition to the value-added tax, special consumption taxes were also levied on luxury consumer goods. The value-added tax law provided for a single basic rate of 13 percent, adjustable within a range of 3 percentage points without legislative approval. Initially, however, a 10 percent rate was applied to minimize inflationary effects of the tax. Exempted from the tax were unprocessed foodstuffs and basic daily necessities such as tap water, coal briquettes for home heating, and medical services. A zero rate was applied to exports (MOF, ROK, 1977).

THEORETICAL APPROPRIATENESS OF THE POLICY MEASURES

Government-sector financing has several objectives. The role of a tax structure is to accomplish the transfer of resources from the private sector of the economy to the government in an efficient and equitable manner. Taxation also has other important economic objectives, such as the promotion of economic growth and adjustments in the distribution of income and wealth (Musgrave 1959). It may be useful to review briefly the appropriateness of the 1966-67 tax reform measures in the light of these overall objectives.

Broadly speaking, the goal of economic development is to improve the general welfare of the people by raising the standard of living. To attain such improvement the economy has to grow not only in terms of total income but also in terms of per capita income. Tax policy has an important bearing on the rate of economic growth, by affecting the rate of investment and other determinants of growth. Over the long term, growth requires increases in investment, whether in manufacturing plant, in the form of infrastructure such as highways and electric power, or in human capital formation such as education and health. To finance the desired rate of growth

in a noninflationary manner, savings have to be large enough to pay for the required level of investment. Savings not derived from the private or foreign sectors must, therefore, be provided by the government sector through increased domestic revenue, including taxes.

The fundamental premise underlying the 1966–67 tax reform was that a substantial increase in government domestic revenue was needed to provide for noninflationary financing of the investment requirements of the development plan. The attainment of the required level of domestic savings depended, to a large extent, upon the degree to which the government could continue to increase the ratio of tax revenue to GNP and to restrain the growth in current domestic expenditure. Strengthening the revenue potential of the tax system was thus the major concern of the tax reform. The 1967 tax law reform program was formulated so as to provide for changes estimated to produce a net increase of 6.7 billion won in 1968 national internal tax revenues. Another important source contributing to the growth in tax revenues was the administrative improvement of tax enforcement.

The objective of tax reform is to provide a tax structure compatible with the financing of a desired rate of economic growth. As the required rate of growth increases, so must the necessary level of finance. The issue, however, is not one of total tax revenue only. The way in which a given amount of total tax revenue is raised influences the private savings rate. Certain measures, such as taxes on luxury commodities, are more conducive to household saving than are others, like higher marginal rates under the personal income tax. That was one important reason that the 1967 tax law reform sharply increased the reliance on taxation of luxury items by substantially expanding the base of taxable goods, coupled with increased tax rates. Increased commodity taxation also increased government saving by increasing tax revenues. A savings incentive was provided by exemption of interest income on bank deposits from the personal income tax, even though the provision is objectionable on equity grounds. Similarly, the higher rate of taxation on corporate dividends was designed to encourage the retention of earnings in corporations and to stimulate business saving.

Tax policies affect not only the level but also the pattern of private investment, and it is important to avoid causing serious distortions as a result of tax measures. Distortion often results when tax incentive provisions are implemented without clearly defined objectives. The 1967 tax law reform was designed to minimize distorting effects by limiting future use of incentives to situations where they would be most needed. Provisions dealing with profit tax exemption or reduction under the Corporation Income Tax Law were replaced by the investment tax credit. The investment tax credit is usually preferred because it applies only to investment in depreciable assets, which are the primary source of productivity gains, whereas rate reduction applies to earnings from all physical capital, including inventory investment (Musgrave 1967).

Although economic growth is an important objective of tax policy, equity goals must be considered as well. (For a discussion of equity standards applied by tax theorists, see Bittker 1980.) It is important to consider how tax laws contribute to distribution of income and wealth. In particular, policy should aim at improving the welfare of those segments of the population that have lagged behind and whose standards of living have remained very low. Tax reform should contribute to securing more equitable distribution of income and improved distribution of the tax burden—a distribution that will reduce the share borne by the low-income groups. Adjustments in the distribution of income must be subject to the constraint, however, that they take into account the adverse effects on incentives and economic growth which might arise from them.

The tax law reform program of 1967 presented the improvement of equity in the distribution of the tax burden as an important policy objective. To reduce the tax share borne by low-income taxpayers, the exemption limit was raised, removing a considerable number of low-wage earners from the tax roll. In addition, by means of the newly introduced tax credit system, the effective tax rate was reduced on all salary and wage incomes lower than 15,000 won per month. These two adjustments in the personal income tax law resulted in revenue losses of approximately 4.2 billion won in 1968 (MOF, ROK, 1967:42).

Attainment of the target rate of revenue growth depends to an important degree on increased effectiveness in administration of the tax system. The imposition of new taxes, the increases of tax rates, and the broadening of the base of existing taxes may all be needed to meet rising revenue requirements. But such measures will have only limited effects on the government's ability to meet its responsibilities in financing investment requirements unless the capabilities for tax administration are also strengthened. Improved administration is, therefore, a vital aspect of tax reform. Tax evasion and avoidance were widespread in Korea, especially among the self-employed in commerce and trade and in the professions. The primary objectives of administrative reform were to reduce tax evasion, eliminate unnecessary administrative burdens on the taxpayer, and to secure a more equitable and effective application of the law. Unless taxpayers feel that the tax system is reasonably equitable and efficiently enforced, not much can be done to improve taxpayer cooperation and morale. The tax administration reform of 1966 was a first step toward achieving these broad objectives.

EFFECTS OF THE POLICY MEASURES

One of the major characteristics of Korea's tax system has been the perverse response of tax yields to changing rates of inflation and growth. During periods of relative price stability, 1958–60 for example, tax enforcement was tightened and tax revenue yields increased sharply; but in 1963 and

1964, when inflation accelerated, the increase in tax revenue slowed considerably. The tax reforms of 1966-67 were designed to improve these structural deficiencies and to strengthen the revenue potential of the tax system.

The creation of ONTA brought much more forceful tax enforcement in Korea. The most important administrative improvements introduced by the new tax agency were the reorganization of tax administration, the growing emphasis on investigation and audit, and the promotion of voluntary filing and payment of taxes. The tax law reform enacted late in 1967, effective for fiscal year 1968, included a number of changes in rates, coverage, exemptions, credits, and so forth that affected the yields of some major taxes in the system. These, and subsequent structural and administrative modifications, were reflected in the changes in revenues from 1966 to 1968 as well as from 1962-64 to 1966-68 (Table 10.6).

The increase in tax revenues, both in absolute amounts and relative to GNP, reflects the government's determination to reverse tax trends that partly contributed to the inflationary pressure of the early 1960s. Following the tax reforms of 1966 and 1967, total internal tax revenue rose sharply from 42.1 billion won in 1965 to more than 70 billion won in 1966 and to 156.4 billion won by 1968. The unprecedented tax revenue goal of 70 billion

Table 10.6. Trends in tax revenue and other measures of tax performance: 1962-72

Year	Tax revenue ^a (10 ⁹ won)	Percentage increase in tax revenue	Tax revenue as percentage of GNP	Income elasticity of tax revenue
1962	21.5	20.1	6.2	1.49
1963	24.7	14.9	5.1	0.44
1964	29.2	18.2	4.2	0.49
1965	42.1	44.1	5.2	2.44
1966	70.0	66.5	6.8	1.68
1967	103.8	48.3	8.2	1.44
1968	156.4	50.6	9.8	1.49
Averages				
1962-64	25.1	17.7	5.2	0.81
1966-68	110.1	55.1	8.3	1.54
1969	218.1	39.4	10.5	1.14
1970	283.8	30.1	11.0	1.08
1971	355.5	25.3	11.3	1.04
1972	374.3	5.3	9.7	0.32

Sources: ONTA, ROK, *Statistical Yearbook of National Tax* (1968, 1974); BOK, *National Income* (1974).

a. Refers to national internal tax revenue.

won for 1966, adopted by the new commissioner of taxation upon taking office, was exceeded by 11 million won. This amounted to an annual rate of increase of 66.5 percent in 1966. A hefty increase of more than 66 percent in a single year was the highest growth rate ever recorded in the history of Korea's tax collection. It was obvious that administrative improvements, rather than changes in tax laws, were the key factors in this unprecedented increase in tax revenue in 1966. Minor tax law changes occurred in 1965, but these had little impact on revenue yield. Although both tax law changes and administrative improvements, without even considering economic growth, contribute to the increase in tax revenue, it is difficult to separate the two effects because they usually occur at the same time. One estimate of ONTA shows, however, that the revenue effect of improvement in tax compliance and investigation of tax evasion alone was about 6.5 billion won in 1966, representing more than 9 percent of the total taxes collected in that year (ONTA, ROK, *An Outline of Korean Taxation*, 1967:140).

From 1967 to 1968 total tax revenue rose from 103.8 billion won to 156.4 billion won, an increase of 50.6 percent. However, more than 48 percent of this increase was in the form of personal and corporation income taxes, which together grew by 53.9 percent in 1968. Structural changes in the income taxes contained in the 1967 tax law reform are reflected in these changes in revenues for 1968. The marked increase in revenue from personal income tax appears to have resulted from growth in the number and income of taxpayers, better enforcement and compliance, or a combination of these factors—rather than from changes in tax rates or exemptions. The increase of more than 8.6 billion won in corporation income tax revenue in 1968, however, reflected other factors in addition to the structural changes made in the 1967 tax law reform. With the large increase in corporate net income in 1968, the increase of 54.1 percent in corporation income tax revenue reflected primarily the growth in the tax base.

Table 10.6 also shows several indicators of long-term tax revenue performance after 1962. The rate of increase in tax revenues rose sharply from an annual average of 17.7 percent during the confused 1962–64 period to an average of more than 55 percent during the fiscal push of 1966–68. From 1966 to 1968 tax revenues more than doubled; over the same period GNP, at current prices, increased barely more than 50 percent. The tax effort measured by tax/GNP ratios of these two distinct periods rose from 5.2 percent in the confused period to 8.3 percent in the accelerated tax drive period. While tax revenues increased in absolute amounts in the years between 1962 and 1964, the growth in tax revenues failed to keep pace with the increase in GNP. Reversing this deteriorating trend, the ratio of tax revenue to GNP began to increase rapidly after 1966 when tax collection efforts began to gain momentum. According to the measures of tax elasticity shown in the last column of Table 10.6, the elasticity of total tax yields with respect to GNP averaged 1.54 for the 1966–68 period, as compared with an average

of only 0.81 during 1962–64. It should be noted that the income elasticity of tax revenue was only about 0.4 in both 1963 and 1964.

While total tax revenues continued to rise steadily after 1966, increased revenues from improved tax administration reached an upper limit and the high revenue growth rates experienced in the 1966–68 period began to slow in the early 1970s. Three aggregate measures of tax behavior presented in Table 10.6 show some signs of decline in the early 1970s. The sharp decline in growth rate as well as in other measures in 1972 is largely attributable to major tax reforms of 1971 that reduced the personal income and corporation income tax rates. Tax revenues from these two sources actually declined in absolute amounts in 1972, substantially reducing the growth rate of total internal tax revenue to a mere 5 percent and the overall tax/GNP ratio down to less than 10 percent. Moreover, the elasticity of total tax yields with respect to GNP sharply declined to 0.32 in 1972. The tax law reform of 1971 as well as the slowdown in economic growth during 1971–72 had an adverse effect on revenue yields.

Most of the decrease in personal income tax revenue that resulted from the tax law changes was the result of reductions in tax rates and a 50 percent increase in the size of the basic tax exemption. In addition, the President's Emergency Decree for Economic Stability and Growth on 3 August 1972, which provided additional investment tax credits and other incentive provisions to encourage increased investment in industrial plant and equipment, resulted in a sharp decline in the absolute amount of corporation income tax yields in 1973 (I. K. Hong 1974). Corporation income tax revenue declined from 56.7 billion won in 1971 to 54.8 billion won in 1972 and to 49.8 billion won in 1973. Tax collection efforts were again lax in 1977, reflecting substantial changes in the tax structure contained in the tax law reform of 1976. This reform provided for substantial increases in tax exemptions for personal income tax. As a consequence, the annual growth rate of personal income tax revenue abruptly declined from 60.6 percent in 1976 to 10.5 percent in 1977, while that of total internal tax revenue dropped from 35.4 percent to 22.2 percent over the same period.

That the drive to increase tax collection through tax reforms of 1966–67 was successful is also suggested by the improved fiscal position of the general government budget sector. As shown in Table 10.2, central general government domestic revenue increased rapidly from 7.4 percent of GNP in 1964 to 12.9 percent and 16.8 percent of GNP, respectively, in 1967 and 1969. From 1962 to 1964 the relative importance of the general government budget sector including counterpart funds contracted sharply under the impact of rapid inflation. In 1964, for instance, the total revenues of the sector were equivalent to only 11.4 percent of GNP, as compared with 20.8 percent GNP in 1962. From 1964 to 1969, however, total revenues of the general government budget increased considerably, so that the ratio of these revenues to GNP rose from 11.4 percent in 1964 to 17.6 percent in 1969.

Between 1964 and 1969, the composition of general government budget revenues underwent a significant change, as shown in the bottom half of Table 10.2. The increasing share of total revenue derived from internal taxes, customs duties, and profits transferred from the Office of Monopoly after 1966 stands in sharp contrast to the much smaller contributions from these sources in the early 1960s. In 1962, when counterpart funds still accounted for nearly 40 percent of total revenues, national taxes and monopoly profits accounted for 44 percent. But the share of the latter has increased sharply since 1964, reaching nearly 70 percent in 1967 and more than 78 percent of total receipts in 1969. Because the relative importance of counterpart funds as a source of general budget revenue continued to diminish from more than 39 percent in 1962 to less than 5 percent in 1969, the government budget sector had to rely to an ever-increasing degree on tax revenues—the tax reform of 1966–67 made a significant contribution to this effect. The necessity of meeting a rising share of budget revenues from tax sources has undoubtedly served as a constraint on expansion of government expenditures from the budget. The rate of increase in tax revenue was much faster than that in expenditures during the 1964–67 period, and an expanding surplus generated in the budget helped finance the nation's development programs. In 1967 there was a budget surplus equivalent to 1.4 percent of GNP.

The shift in the budget sector from a deficit to a surplus position after 1964 made a major contribution to the growth in domestic savings, which facilitated rapid growth. Given the low level of income and the difficulties involved in bringing about a rapid increase in private savings, the fiscal sector assumed a major share of the task of meeting the national domestic savings requirement during the 1966–68 period.

Domestic savings continued to be dominated by the private sector until about the mid-1960s, but the government sector moved from negative saving to positive saving in 1964. The effect of the 1966–67 tax reform measures is amply demonstrated by sharp increases in the level of government saving through 1970. Table 10.7 shows that government saving increased steadily from dissaving (negative saving) of 1.8 billion won in 1963 to more than 100 billion won in 1968 and to 175 billion won in 1970. As a percentage of GNP, government-sector saving rose from a negative rate of minus 0.4 in 1963 to a positive rate of 6.5 in 1970, raising the total domestic savings rate from 8.7 percent to 17.3 percent. This was accompanied by rapid increases in tax revenues and a growth in the overall tax/GNP ratio from 8.6 percent in 1963 to 14.8 percent in 1970. This progress was possible only by substantially increasing the government's ability to collect more tax revenues and by restraining the growth of government consumption.

From 1963 to 1970 government saving increased by 176.9 billion won, accounting for 42 percent of the increase in domestic savings. As a result, the government saving share in domestic savings rose from less than 6 per-

Table 10.7. Government saving as a percentage of GNP: 1963-72 (10⁹ current won)

Year	Government saving		Domestic saving		Government saving as percentage of domestic saving
	Amount	Rate (%)	Amount	Rate (%)	
1963	-1.84	-0.4	43.72	8.7	-4.6
1964	3.33	0.5	62.64	8.7	5.7
1965	13.79	1.7	59.39	7.4	23.0
1966	28.55	2.8	122.83	11.8	23.7
1967	52.55	4.1	145.76	11.4	36.0
1968	100.87	6.1	249.33	15.1	40.4
1969	127.45	5.9	405.92	18.8	31.4
1970	175.06	6.5	465.21	17.3	37.6
1971	178.30	5.4	506.17	15.4	35.1
1972	143.65	3.6	633.10	15.7	22.9

Source: EPB, ROK, *Major Statistics* (1983).

cent in 1964 to more than 40 percent in 1968 but then slightly declined to 37.6 percent in 1970.

That the increase in tax revenues was accompanied by increased savings in the government sector is quite clear. But what is not clear is the effect of increased government revenues and savings on total domestic savings. It is probable that certain taxes work to reduce private saving by more than the amount that government saves out of the additional revenues. We may speculate that heavy reliance on tax revenues to raise government saving might have had some adverse effects on the growth of private saving, but it is difficult to verify this with existing data. As one observer put it, "as for the effects of taxation on private saving, on the one hand private saving as a percent of income probably would have risen more rapidly if the growth of government revenues (about 30 percent per year in constant prices) had been less. On the other hand, income probably would not have grown as rapidly as it did if it were not for the increase of efforts to expand government revenue and saving" (Brown 1973:192). Out of all this, one may draw the general conclusion that increased tax revenues and government saving made a significant contribution to moving the Korean economy to a high-growth path during the second half of the 1960s (Mason et al. 1980; Johnson 1972).

CRITICISMS AND LESSONS OF THE KOREAN EXPERIENCE

The rapid expansion of government functions and activities in Korea after 1961 resulted in renewed emphasis on the role of taxation in the promo-

tion of economic growth and welfare. As the economic and social structures of the nation became more complex and interdependent, the concept of the role of taxation also changed. Taxation is no longer considered merely as a device to finance government activities but has been increasingly recognized as an important tool for achieving economic objectives and for bringing about a more equitable distribution of income and wealth.

What can other developing countries learn about taxation and its effects from the Korean experience? Tax policy played only a minor role in the development process of Korea until the early 1960s. Compliance problems were severe, tax collection was lax, and a continuing rapid rate of inflation limited what could be accomplished through structural reform. It was not until the government began to make more conscious and systematic efforts to correct serious deficiencies in the whole tax system that there were dramatic increases in tax collections and in the efficiency of tax administration. A major breakthrough in the tax effort came in 1966-67, when the national tax ratio increased from 7.2 percent of GNP in 1965 to 13.2 percent in 1968. The substantial improvement in tax administration was probably the most important single factor in this breakthrough. Korea was well aware that efficient administration was a crucial aspect of tax policy, and no system could be better than its actual implementation.

It would be less than candid, however, to leave the impression that tax reform and administrative improvement in Korea faced no problems. There were some major difficulties. Resistance from vested interest groups, both public and private, and inertia constituted major barriers. A serious shortage of trained managers and technicians, rigid government employment practices, an unpredictable political climate, and commercial intrigues were some of the other problems.

There was a growing feeling that increased tax revenues through improved administration would soon reach an upper limit and, therefore, that growth in revenues should be more directly related to growth in the tax base and changes in the tax structure. Another view also prevailed—that rapid increases in the ratio of total tax revenues to GNP were constrained by widespread inequities inherent in the tax structure, and that these inequities had become less tolerable as improvements in tax administration pushed assessments to higher levels to meet revenue requirements. Thus, the 1967 tax law reform concentrated on structural improvements of the tax system. There have been numerous tax law changes since 1961, but the 1967 revision can be considered one of the few comprehensive tax law reforms that occurred during these years. The reform broadened the tax base, raised tax rates, and introduced a number of equity and incentive features into the tax system.

The Korean experience provides evidence for the general expectation that the tax structure changes in the course of economic development. During the course of economic development since 1961, the composition of the tax

structure in Korea gradually shifted from commodity-oriented indirect taxation to income-based direct taxes and back again to indirect taxation. One of the most important lessons that can be learned from the Korean experience is that, contrary to what has often been widely observed, the income tax has an important role to play even on a limited scale in the revenue system of developing countries. Income taxation was found to be an important source of government revenue in Korea, where revenue yields from both personal and corporation income taxes represented 34 percent of total tax revenue of the central government in 1968, compared with only 15–25 percent in the early 1960s. Despite such inhibitions as the lack of tradition in income tax compliance and enforcement, Korea has made significant progress in developing a system of taxing incomes. Korea's experience clearly shows that income tax is a potentially productive source of tax revenue in the context of rapidly rising revenue requirements of developing countries.

Did Korea pursue appropriate tax goals? Tax reform cannot be adapted to any single goal, such as adequate revenue, economic growth, stability, or equity. Since there are trade-offs among these conflicting objectives, all must be taken into account. The primary concern underlying most of the major tax reforms occurring in Korea during 1960–80 was, however, the stimulation of economic growth. An improved tax treatment of business and investment was common to these reforms. Though the equity objective was mentioned, the major focus of the 1967 reform was "to make the tax structure more conducive to economic growth." One of the greatest deficiencies in Korea's tax system results from the wide range of tax incentives and special tax privileges provided to business, which led to a built-in erosion of the tax base. It is generally agreed that these provisions have been costly, inequitable, and ineffective in achieving their intended objectives. In 1979 the cost of lost revenue was as high as 40 percent of the total corporation income tax that would have been collected in the absence of the tax incentive system. Even more significantly, this relief has been used mainly by the largest corporations (Tait, Faria, and Heller 1979). It is, therefore, important to reassess carefully whether tax incentives are essential to stimulate new investment and thus justify the distortions in resource allocation and the huge revenue loss.

In Korea, where heavy reliance is placed on fiscal incentives to spur economic growth in the private sector, some regressiveness of the tax system is unavoidable. In past tax law reforms only minor emphasis has been placed on the equity aspect of taxation. Although the improvement of equity in the distribution of the tax burden was cited as one of the stated objectives of the 1967 reform, tax policy *per se* did not have an important equalizing effect on the distribution of income. Some changes in the personal income tax have been enacted to increase tax exemptions for low-income groups and to improve its progressivity in the rate structure. The 1967 reform, for example, provided for an increased tax exemption limit and also introduced

the partial tax credit system to provide some progression in the lower income ranges. Another example of a tax relief measure was the Presidential Emergency Decree of 14 January 1974, which provided a substantial temporary tax cut for the low-income wage and salary earners. But major areas of the personal income tax reform in the past have had to do with adjusting the incentive effects inherent in the direct tax system. Some of the fiscal incidence studies on Korea indicate that tax impacts on income distribution have not been substantial in Korea (Bahl, Kim, and Park 1986). Others also pointed out that the redistribution of income and wealth was not a major concern of government economic policy (Cole and Lyman 1971).

The tax law reform of 1967 introduced a partial globalization of the schedular system of personal income tax, and another comprehensive tax reform of 1974 made the personal income tax almost completely a global tax system. In spite of this modernization reform, personal income tax in Korea plays a far less important role than it should. The share of personal income tax in total tax revenue has been declining steadily since the early 1970s. While the principle of the global income tax system has been accepted, the present form of this tax is unsatisfactory. There are several provisions that limit the usefulness of this tax as a means of bringing about more equitable treatment of taxpayers with incomes from different sources. This limited role reflects the fact that a large proportion of personal income, such as dividend and interest income, is only partially taxed. From the standpoint of equity and of raising more revenue for the government, all dividend and interest income must be fully included in the global income tax base.

In another area of direct tax, more vigorous efforts should be made to increase tax revenue from land, financial assets, inheritance, and gifts. Just as income and consumption expenditures are considered an important criterion for taxation under the current income and value-added taxes, wealth should also be treated as an important criterion for taxation under an equitable tax system. Taxation of wealth should form an important element of the overall tax structure of the nation. Improved methods for more vigorous enforcement of inheritance and gift taxes would certainly increase the share of wealth taxes in total tax revenue. Revenues from inheritance and gift taxes currently account for much less than 1 percent of total central government tax revenue. But the tax effort in this area should improve considerably in the future, so that the inheritance and gift tax yield may eventually account for 2-3 percent of total tax revenue.

The value-added tax has been contributing significantly to the increased tax revenue since its introduction in 1977. As a result, indirect taxes (including value-added tax) now account for more than 65 percent of total internal tax revenues. The tax structure needs to be improved to prevent the regressive nature of the value-added tax from having severe adverse effects on the distribution of income and of the tax burden. Special attention needs

to be focused on the likely impact of the tax on the expenditure patterns of different household groups, particularly the burden on low-income wage earners.

11 Introduction of the Value-Added Tax (1977)

by Kwang Choi

In December 1976 the Korean government passed legislation to bring a value-added tax (VAT) into effect from 1 July 1977. The introduction of VAT in Korea—as a substitute for a complicated system of indirect taxes—was part of a large-scale tax reform in 1976, in which 18 taxes were created or amended. VAT, together with a newly enacted special consumption tax, replaced eight categories of indirect taxes: the business tax, commodity tax, textile tax, petroleum products tax, admissions tax, travel tax, gas and electricity tax, and entertainment and food tax.

Each of the previous indirect taxes replaced by VAT had its own rate structure as well as a different tax base and administrative procedure. The consolidation and incorporation of numerous indirect taxes into VAT was expected to simplify the rate structure, tax base, and administration of the indirect tax system, thereby eliminating the overlapping auditing practices that had plagued the previous system. VAT is also an important instrument against tax evasion by means of the reciprocal controls exercised by taxpayers themselves.

The concurrent introduction of the special consumption tax along with VAT was designed to inject some progressivity into the indirect tax system through increased taxes on goods and services consumed disproportionately by high-income groups.

VAT was also expected to promote exports and capital formation. Under VAT, exports are zero rated at the final stage of production and rebates are available on taxes paid at earlier stages of production. With the previous system the cumulative taxes at earlier stages of transactions in export goods were either not rebatable or only partly refundable. Therefore, it was believed that the introduction of VAT would have a favorable effect on exports, which have been the driving force behind the rapid growth of the Korean economy. Because the previous indirect tax system did not provide credit for the taxes paid on investment goods, and because taxes were not to be imposed on capital investment under the new regime of consumption-type VAT, VAT was expected to encourage capital formation.

The introduction of VAT was strongly recommended because the previous cascade turnover tax system was believed to have several disadvantages resulting in resource misallocation and inefficiency. First, the turnover tax encouraged vertical integration because the reduction of interfirm sales

reduced total tax liabilities. Second, it penalized specialization for the same reason. Third, estimates of the tax content of a price at any particular stage of production were perforce arbitrary, which in turn made indirect tax adjustment at country borders arbitrary. All in all, the adoption of VAT was regarded as a reform of an unwieldy and distortionary indirect tax system.

Although the government emphasized that VAT was designed not to increase tax revenue but to remove the negative effects of the previous gross turnover taxes, it must be stated that the government expected VAT to yield the substantial revenue necessary to meet the fiscal demands required for the successful implementation of the Fourth Five-Year Economic Development Plan. The influence of budgetary needs was, if not the only cause, at least an important reason for the decision to establish VAT in Korea.

VAT is superior to a business tax or a sales tax from the viewpoint of revenue security for two reasons. First, under VAT, only buyers at the final stage have an interest in undervaluing their purchases because the deduction system ensures that buyers at earlier stages will be refunded the taxes on their purchases. Therefore, tax losses due to undervaluation should be limited to the value added at the last stage. Under a retail sales tax, however, both retailer and consumer have a mutual interest in underdeclaring the actual purchase price.

Second, under VAT, if payment of tax is successfully avoided at one stage, nothing will be lost if it is picked up at a later stage. Even if the tax is not picked up subsequently, the government will at least have collected VAT paid at stages previous to that at which the tax was avoided. If evasion takes place at the final stage, the state will lose only the tax on the value added at that point. If evasion takes place under a sales tax, however, all the taxes due on the product are lost to the government.

There is a big difference between the theoretical advantages of a hypothetical tax and the actual advantages of a particular form of tax. However simple VAT may be in theory, the Korean experience with VAT makes it clear that it is not simple in practice. It creates a host of problems that give rise to voluminous paperwork, more or less arbitrary distortions in trade and consumption, and inequities in the tax burden. This chapter examines the Korean VAT and draws lessons from its effects since its introduction in 1977.

MAIN FEATURES OF THE KOREAN VAT

The structure and administration of VAT in Korea are basically similar to those of the countries in the European Economic Community (EEC). It is a consumption-type VAT, the variety in use throughout Europe. Under Korean VAT businesses are permitted to deduct immediately from sales not only current inputs but also the full value of capital goods accrued during the taxable period.

VAT is collected by the invoice method—each firm must collect VAT on the value of its sales (unless they are exempt) but is entitled to a credit for

taxes invoiced by its suppliers. As credit is allowed only if supported by invoices provided by suppliers, this method of administration is expected to facilitate audits because each firm is required to supply evidence on taxes that should have been paid by its suppliers.

Scope and Tax Base of VAT

The scope of VAT is usually defined with reference to both taxable transactions and taxable persons. The Korean VAT code defines taxable transactions as the supply of goods or services and importation of goods. Supply of goods is the delivery or transfer of goods by contractual or legal action, including the sale of goods on an installment basis and the personal use of business assets, as well as inventory goods when a business closes. Supply of services includes the rendering of services or having a person use or utilize goods, facilities, or rights on any legal or contractual basis. Importation of goods is simply the entry of goods into Korea from abroad.

A taxable person is anyone who independently engages in the supply of goods or services. Taxpayers include individuals, corporations, any organization of persons, foundations, and state and local authorities, regardless of whether the taxable transactions generate profits. The requirement that a taxable person act in an independent capacity excludes employees from an obligation to charge VAT on services provided to their employers.

The taxable amount or tax base is the full amount received for the supply of goods or services. It includes taxes (other than VAT and the defense surtax), duties, and incidental expenses such as packing, transportation, and insurance costs charged to the purchases. For sales on installment or credit, the tax base is the total price of goods supplied. The taxable amount does not include discounts or rebates and the value of goods returned or broken, lost, or damaged before they are delivered to their purchaser.

Tax Rates

Before the introduction of VAT, Korea suffered from a complicated rate structure of indirect taxes. The business tax, which was a major target of the tax reform, had five differentiated rates ranging from 0.5 percent to 3.5 percent of turnover, depending on the category of business. The previous indirect tax system had more than 50 rates ranging from 0.5 percent to 300 percent (Table 11.1). The complicated structure of the indirect tax system had created a strong desire to simplify and consequently to adopt a single VAT rate.

Although Korea has a single-rate VAT system, like those of Denmark and Sweden, the VAT code has allowed the government to adjust the normal rate (13 percent) by as much as 3 points when deemed necessary to improve the general state of the economy or to adjust tax revenue. Since its inception the VAT has been implemented at the minimum level of 10 percent. In 1988 the National Assembly passed legislation fixing the VAT rate

Table 11.1. Pre-VAT and VAT tax rates: 1977

Pre-VAT regime				VAT regime			
Item	Tax rates			Item	Tax rates ^a		
	Num-ber	Mini-mum	Maxi-mum		Num-ber	Mini-mum	Maxi-mum
Business tax	5	0.5	3.5	VAT ^b :			
Commodity tax	17	2.0	100.0	General			
Textile tax	7	10.0	40.0	taxpayers	1	10.0	10.0
Petroleum				Special			
products tax	4	10.0	300.0	taxpayers	2	2.0	3.5
Admissions tax	12	5.0	250.0	Special con-			
Travel tax	3	5.0	20.0	sumption tax ^c	13	10.0	180.0
Gas and							
electricity tax	1	15.0	15.0				
Entertainment							
and food tax	4	2.0	20.0				

Source: MOF, ROK (1980).

a. Rates effective at the time of VAT introduction.

b. Special taxpayers are taxed at 2 percent or 3.5 percent of their turnover, whereas general taxpayers are taxed at a 10 percent rate.

c. The minimum and maximum rates of the special consumption tax as of 1 January 1988 are 5 percent and 100 percent, respectively.

at 10 percent, removing the discretionary power of the government to adjust the tax rate by plus or minus 3 percent.

There are also exceptions to the single 10 percent rate. Businesses whose sales are less than 36 million won a year (24 million won a year prior to July 1988) are taxed at a rate of 2 percent of turnover. Furthermore, individuals engaged in brokerage and intermediary services are subject to a 3.5 percent tax on their turnover unless it exceeds 6 million won.

The Korean VAT system cannot be directly compared to the VAT systems of other countries. Most European countries have multiple-rate VAT structures that apply higher rates to luxuries and lower rates to necessities. But we must look at the indirect tax system as a whole to make a valid comparison of one country with another. For example, although Korea does not have a multiple-rate VAT system, many items are subject to other taxes (such as the special consumption tax, liquor tax, defense tax, and education tax) in addition to VAT, which produces the same effect as a multiple-rate system (Table 11.2).

Zero Rating and Exemption

Korean VAT provides two types of tax exemption: "zero rating" and "exemption." "Zero rated" supplies are technically taxable but at a zero rate.

Table 11.2. Taxes applied to selected goods as a percentage of the producer's price: 1988

Item	Pro- ducer price	Special con- sump- tion tax or liquor tax	De- fense tax	VAT	Educa- tion tax	Deliv- ery price	Con- sumer price
Subject to special consumption tax							
TV (black and white 14")	100.0	5.0	1.5	10.6		117.1	140.4
TV (color 20")	100.0	28.0	8.4	13.6		150.0	175.2
Refrigerator (below 250 l)	100.0	28.0	8.4	13.6		150.0	180.1
Washing machine (w.p. 350B)	100.0	40.0	12.0	15.2		167.2	192.2
Piano	100.0	20.0	6.0	12.6		138.6	162.6
Passenger car (below 2,000 cc)	100.0	15.0	4.5	12.0		131.5	131.5
Coke (355 ml)	100.0	20.0	6.0	12.6		138.6	170.4
Sugar (15 kg)	100.0	30.0	9.0	13.9		152.9	168.9
Coffee (2 kg)	100.0	40.0	12.0	15.2		167.2	195.6
Subject to liquor tax							
Unfiltered liquor (<i>takju</i>)	100.0	10.0		11.0		121.0	u
Beer	100.0	150.0	45.0	31.0	15.0	241.0	u
Distilled spirits (<i>soju</i>)	100.0	35.0	3.5	13.8		152.3	u
Whisky	100.0	200.0	60.0	38.0	20.0	318.0	u
Wine	100.0	40.0	4.0	14.8	4.0	162.8	u
Vodka	100.0	40.0	4.0	14.8	4.0	162.8	u

Source: MOF, ROK (1983a).

u—unavailable.

The implication is that VAT charged on inputs relating to them can be reclaimed just as were inputs relating to taxable supplies. "Exempt" supplies are outside the scope of VAT altogether so there is no question of reclaiming the relevant input tax.

The zero rate applies to exports from Korea, services rendered outside of Korea, international transportation by ship and aircraft, and other goods or services supplied to earn foreign exchange. Zero rating is applied only to traders who are residents or to domestic corporations; however, for

international shipping and aerial navigation, nonresident traders and foreign corporations are subject to zero rating on a reciprocity basis.

For exempted goods or services, tax is charged on purchases from the exempt supplier but not on the value added by the exempt organization. If the exempt firm sells to households and has positive value added, exemption reduces net liabilities. If the exempt firm sells to other firms, its exemption increases their tax burdens, because businesses that purchase exempt inputs have no credits to apply against their own tax liability.

Korean VAT allows a variety of exemptions for social, political, and administrative reasons. Exemptions are applied to basic necessities such as unprocessed foodstuffs and piped water; to certain classes of commodities that would be hard to tax, such as banking and insurance services and owner-occupied housing; and to certain commodities classified as social and cultural goods, such as medical and health services, education, books, newspapers, and artistic works. Goods and services supplied by public enterprises, independent professional services, and duty-exempt goods are exempt from VAT. Monopoly goods, telephone services, postage stamps, and so forth are exempt from VAT because supplementary separate taxes are imposed. Finally, to reduce administrative and compliance problems, small taxpayers whose annual tax liability is less than 20,000 won (10,000 won prior to December 1988) are exempt from VAT.

Administrative Aspects

Registration with the VAT authorities is the initial step in the administrative process. A trader must register at the VAT office in the district in which he resides within 20 days after he commences taxable activities. A record of all registered taxpayers is maintained on a computer file that includes: the VAT registration number, taxpayer's name and residence number, and firm's name and address, telephone number, business code, trade, classification, date of registration, and date of commencement of business.

The Korean VAT law requires an enterprise to register separately at each place it conducts business and to furnish a separate return for each location. This is an unfortunate carryover from earlier business tax laws and deters efficient business administration without increasing the tax yield.

When a registered trader supplies goods or services, he must issue an invoice to the buyer showing the date of supply; the seller's name, address, and VAT registration number; the customer's name and registration number; the value and identity of the goods or services supplied; and the amount of VAT. There are two types of tax invoices. General tax invoices are presented by the taxpayers to the district office and numbered serially. Special taxpayers use simplified tax invoices and are not required to submit any invoices to tax authorities.

Each invoice must be prepared in quadruplicate. One is kept by the seller,

another is sent by the seller to the district tax office, and the third copy is kept by the purchaser, who sends the fourth copy to his district tax office. The two copies received at tax offices are forwarded to the computer data processing unit, which carries out a cross-check of sales against purchases.

In the latter half of 1977, 7.2 percent of all invoices (buyer and seller) failed to match; in 1982 the proportion of mismatches decreased to 1.4 percent. Interestingly, output invoices caused fewer difficulties than input invoices. The mismatching ratio for output invoices for each year was about half of that for input invoices. This result is consistent with our expectations since VAT tax liability can be minimized by maximizing input claims. The percentage of mismatched input invoices fell from 12.1 percent in 1977 to 2.4 percent in 1982. Erroneous data, which mean that sales and purchases of invoices match but the details of the invoices do not, decreased from 5.9 percent in 1977 to 0.3 percent in 1982 (MOF, ROK, 1983a).

Initially, all tax invoices in which the value of a transaction exceeded 100,000 won were computerized for auditing, but as of July 1980 computer processing was restricted to tax invoices with a value of 300,000 won or more. As a result, the number of invoices processed by computer dropped from 112 million in 1978 to 33 million in 1982 (MOF, ROK, 1983a).

There are two steps in the tax payment and return procedure. First, taxpayers are required to furnish the tax authorities with preliminary returns stating their tax base and the tax amount payable or refundable within 25 days (50 days for foreign corporations) from the date of termination of each preliminary return period. The first tax period is from January through June and the second is from July through December. Second, taxpayers must file with the tax authorities the tax base and tax amount payable or refundable for each taxable period within 25 days (50 days for foreign corporations) after its expiration. Taxpayers are required to submit tax invoices at the time of the preliminary or final return concerned. This quarterly payment of VAT has proved easier to work with than the more frequent two-month tax period used under the old business tax system.

Traders who are engaged in retail businesses or who operate ordinary restaurants and hotels must install a cash register (with tape for audit purposes) and issue tax invoices showing the value of supply. By such compliance traders are deemed to have fulfilled their obligations of bookkeeping and receive a tax deduction equivalent to 0.5 percent of total sales.

Penalties are imposed for failure to register or apply for inspection, for nonissuance of tax invoices, and for default on tax returns and payments. Penalties equivalent to 1 percent and 2 percent of total sales for individuals and corporations, respectively, apply for the biannual inspection. For failure to issue a tax invoice in transactions between taxable persons or failure to keep proper records, the penalty is 1 percent of the sales amount for individuals and 2 percent for corporations. Where a trader fails to file a return,

or does not pay the tax amount due, or files a tax return under-reporting his obligations, he is liable to a penalty equivalent to 10 percent of his tax liability (ROK 1976). Penalties have been imposed mostly on general taxpayers for failing to issue tax invoices, for delaying the submission of invoices to government, or for submitting incorrect returns (MOF, ROK, 1983a).

Transitional measures were necessary to eliminate certain problems of double taxation that otherwise would have arisen when VAT was introduced in Korea. Taxpayers were allowed to take credits for previous taxes that had already been paid on inventories on the date of the changeover. Since the taxes replaced were of a multistage turnover variety, a difficult problem arose in determining the effective tax rate on the many types of goods in inventories, so the government imposed the average rate on each inventory item.

Treatment of Small Businesses

Under any form of sales taxation, small businesses have to be granted special treatment because of their inability to cope with the requirements of keeping adequate records that larger enterprises can handle at a reasonable cost. The purpose of the special treatment is to reduce the administrative burden on small enterprises but not the taxes that normally would be charged on the goods and services they supply.

Small businesses, called "special taxpayers" under Korean VAT, are those whose total sales are less than 36 million won a year. For businesses engaging in transactions through a proxy, agent, intermediary, cosignee, or contractor, any trader whose annual sales are less than 6 million won is treated as a special taxpayer. Unlike general taxpayers whose tax base is value added, a standard 2 percent tax rate is used to calculate the amount of tax due to the government. Small businesses engaged in transactions through a proxy, agent, intermediary, cosignee, or contractor are taxed at a rate of 3.5 percent on their annual sales.

When a business eligible for special taxation has submitted tax invoices to the government, an amount equivalent to 5 percent of the input tax amount is deducted from the tax amount payable. Special taxpayers issue simplified tax invoices and file their tax returns every six months, whereas general taxpayers issue standard tax invoices and file returns and pay taxes every three months. Special taxpayers do not have to file a preliminary tax return but do have to pay half of their taxes to the government during the immediately preceding tax period.

In Korea special taxpayers file about 76-78 percent of all VAT tax returns (MOF, ROK, 1983a). Although general taxpayers are in the minority, they are the more important source of revenue. General taxpayers pay approximately 94-95 percent of the total VAT, whereas the tax amount contributed by special taxpayers comprises only about 5-6 percent of VAT collected (MOF, ROK, 1983a).

IMPLEMENTATION PROCESS

Careful examination and long preparation preceded the introduction of VAT in Korea. Much of the interest in the introduction of VAT was undoubtedly stimulated by the widespread acceptance of VAT in Europe. Although the decision to introduce VAT was made in 1971, the law was not enacted until 22 December 1976, and took effect on 1 July 1977. It is not clear, however, whether the two years or so immediately prior to the adoption of VAT were sufficient to prepare for its implementation.

Extensive studies of the VAT system were conducted before the government's formal VAT announcement on 19 January 1976. To benefit from the experience of European countries, the government sent a small delegation to talk to officials who were administering the tax in the EEC countries where it had already been enacted. The Korean VAT also embodies proposals prepared by such well-known authorities as James D. Duignan, Carl S. Shoup, and Alan A. Tait, all of whom contributed to the development of the new tax law.

The Korean government allowed less than one year for disseminating information and conducting educational programs to explain the new law to taxpayers and the general public before the tax became effective.

To secure the cooperation of the business community, the government set up a special Deliberation Committee for the Implementation of VAT, composed of government officials and representatives of the Chamber of Commerce, the Korean Federation of Industries, the Korean Traders' Association, the Korea Tax Accountants Association, the Korea Institute of Certified Public Accountants, and the Customs Brokers Association.

Nationwide tryout exercises of filing tax returns were carried out on three separate occasions (in March, May, and July 1977) before the changeover to VAT. On average, more than 98 percent of the taxpayers in the groups concerned participated in these trial runs. Important steps taken before the introduction of VAT included the introduction of new invoices for business tax withholdings at the beginning of 1975. This was a good transition process to the invoicing system needed for VAT. The withholding system under the business tax was successfully adapted to the transitional needs of the administrative structure needed for VAT.

Concurrent with the consultation and information program, the Korean government expanded and retrained its tax administration staff. This task was facilitated by a substantial reservoir of trained personnel experienced in administering the complicated business tax and other indirect taxes. The government provided additional training for 32,444 public officials under the auspices of the Ministry of Finance, the Office of National Tax Administration (ONTA), and the Office of Customs. The ONTA staff increased by 1,999 from 9,443 in 1976 to 11,442 in 1977. Most of this increased recruitment was a result of VAT. However, the new recruits did not go directly into VAT work but were assigned to other sections to release more

experienced officers for VAT. Because VAT replaced another kind of consumption tax, there were no structural changes in the organization of tax administration.

To introduce the new tax to officials who would be dealing with VAT, the government prepared a staff handbook explaining the tax procedures in detail. Answers were provided in advance to questions that were likely to be asked either by the staff themselves or by the taxpayers. Despite the government's efforts, insufficient communication with taxpayer organizations and consumer groups damaged the prospects for close cooperation. Passive and active opposition to the introduction of VAT came from many sources. Each interest group had its own reasons for opposing the new tax and each had different reasons. VAT was opposed by labor as regressive. Business in general, particularly small business, opposed the tax compliance costs as being too high. At the Economic Ministers' Meeting, however, in which every major economic policy measure is deliberated, only the minister of commerce and industry opposed the adoption of VAT. He pointed out the likelihood of a substantial increase in the prices of industrial products. Furthermore, the Democratic Republican Party, the ruling party at the time, was not in favor of introducing VAT because the party feared it would weaken support in the upcoming general election. Unhappiness with VAT on the part of the business community was demonstrated by its call to postpone the implementation of VAT immediately before VAT became effective. Some tax administrators also did not support the tax, pointing out the administrative problems of collecting the tax from retailers and the higher cost of collecting VAT than of collecting the taxes it would replace.

The designers of the tax did their work well. Although VAT has gone through a number of changes since its introduction, these have been minor. By 1 January 1984, the VAT law had been amended three times, the VAT presidential decree 15 times, and the VAT ministerial ordinance 12 times, but the basic structure of the tax remained unaltered. The difficulty encountered has been within the bounds of what can be expected on the occasion of any major tax reform.

EFFECTS OF VAT

Since its introduction, VAT has become a major source of revenue in Korea, fulfilling the chief, if tacit, goal of the government. In 1982 VAT yielded 2,094 billion won, or 22 percent of the total tax revenue of the Korean government, national and local, making it by far the single largest tax in Korea (Table 11.3). VAT represents more than 36 percent of the national taxes on goods and services and accounts for approximately 6.5 percent of private consumption.

The central government of Korea relies heavily on taxes on goods and services, which account for more than 68 percent of the total national tax

Table 11.3. National and local tax, 1970-82, and value-added tax yield, 1977-82

Item	1970	1972	1974	1976	1977	1978	1979	1980	1981	1982
Total national and local tax as % of GNP	14.8	13.0	13.9	17.4	17.4	17.9	18.4	19.2	19.3	19.8
Value-added tax										
Amount (10 ⁹ won)					242	839	1,089	1,471	1,805	2,094
As % of:										
Total national and local tax					8.2	20.4	20.3	22.4	22.1	22.0
Total national tax					9.2	23.0	22.9	25.3	24.9	24.9
Total tax on goods and services					13.5	33.2	33.3	35.8	36.0	36.8
Private consumption					2.2	5.9	6.0	6.4	6.3	6.7
GNP					1.4	3.6	3.7	4.2	4.2	4.4
National tax on goods and services										
Amount (10 ⁹ won)	223	296	580	1,358	1,793	2,527	3,270	4,104	5,009	5,696
As % of:										
Total national tax	61.1	62.2	63.5	64.9	68.4	69.2	68.7	70.7	69.0	67.8
GNP	8.3	7.3	7.9	10.2	10.5	11.0	11.2	12.0	11.8	11.8

Source: ONTA, ROK, *Statistical Yearbook of National Tax* (1975, 1980, 1983); MOF, ROK (1983b); BOK, *National Income* (1982).

revenue (Table 11.3). Though the relative importance of indirect taxes in the Korean tax system has been high, there was no significant change in their importance before and after the introduction of VAT. National taxes on goods and services as a percentage of GNP were 10.2 percent in 1976 and 11 percent in 1978.

The burden of VAT in Korea is still low compared with that in developed industrial countries. VAT has been approximately 4 percent of GNP in recent years. The relatively low overall burden of VAT in Korea can be accounted for by the fact that the ratio of total tax revenue to GNP is below 20 percent in Korea, whereas the figure is well above 30 percent in most advanced countries.

Tax policy has pervasive effects on the economy, influencing the level of economic activity, prices, wages, foreign trade, and the distribution of income and wealth. Adoption of VAT is widely viewed as a move toward a more desirable system of indirect taxation. Because so much has been happening to Korea's fiscal structure, it is difficult to sort out empirically the effects of the introduction of VAT on the economy. To encompass all of these economic effects systematically would require a fully articulated econometric model, which is almost entirely lacking at the moment.

Although the economic effects of VAT are not known with certainty because no systematic analysis has been carried out in Korea so far, our aim here is to summarize whatever evidence is available and to point out policy issues regarding economic effects that were controversial both before and after the introduction of VAT in Korea.

With regard to the economic effects of VAT, we are concerned with four major issues: VAT's effects on the price level, investment, exports, and distribution of the tax burden.

Price Level

In assessing the impact of VAT on the general price level, a conceptual distinction must be made between VAT as an additional tax and as a substitute revenue source. As a new or additional tax, VAT is likely to increase prices, provided there is an accommodating monetary policy. It should be pointed out that although VAT would be reflected in higher prices, this result would be a one-time increase—not a recurrent increase—in the price level unless mismanagement of aggregate demand led to a wage-price spiral.

In the strictly logical sphere, assuming parity in the yield of suppressed taxes and of the new VAT and a perfect market, it may be stated that the substitution of VAT for existing indirect taxes should not have increased the overall price index because the level of public expenditure was not changed nor was the economic nature of taxation, which, in all of these hypotheses, presents the same forward shifting characteristics.

Since VAT in Korea was expected to yield the same amount of revenue as the replaced indirect taxes, direct effects on the general price level were

expected to be small, if present at all. Nevertheless, significant changes were expected in the effective tax rates on individual goods and services because the distribution of the replacing and replaced taxes was not identical. There were some fears that the prices of goods on which the tax burdens were reduced would not fall or would fall by less than the prices of goods on which the tax liability rose. To the extent that increases in the prices of commodities on which the tax burden increased were more certain than decreases in the prices of commodities on which the tax burden decreased, some increase in price level would occur.

Table 11.4 compares the price changes forecasted with those observed in major industries. It was predicted that the introduction of VAT of a 10 percent rate would lead to an increase in the wholesale price level of 0.155 percent and to a decrease in the consumer price level of 0.537 percent. In the two months after the introduction of VAT, the wholesale price level went up 3.4 percent, of which the implementation of VAT is estimated to have contributed 0.061 percent points.

At the time VAT was introduced, the government estimated that a 13 percent VAT rate would boost consumer prices by 3.4 percent and a 10 percent VAT rate would have no effect on the consumer price index (CPI). During the six- and 12-month periods before the introduction of VAT, the CPI rose by 6.7 percent and 10.1 percent, respectively, compared to increases of 3.9 percent and 14.0 percent in the first six and 12 months, respectively, following the introduction of VAT.

How much of the increase in prices should be attributed to the introduction of VAT is far from clear. However, it can be safely concluded that, due to the tight price controls by the government, the introduction of VAT does

Table 11.4. Predicted and actual change in price levels due to implementation of VAT: 1977 (%)

Item	Predicted change		Actual change
	WPI	CPI	WPI ^a
Agricultural products	0.244	-0.050	0.148
Textile products	-0.439	-0.094	-0.307
Wood products	-0.006	-0.010	0.007
Chemical products	0.136	-0.110	0.053
Ceramics and glass	-0.013	-0.039	0.034
Metal products	0.329	-0.157	0.288
Fuel and electricity	-0.153	-0.029	-0.170
Other	0.057	-0.048	0.008
Total	0.155	-0.537	0.061

Source: MOF, ROK (1980).

a. Actual change within two months of introducing VAT in 1977.

not seem to have had a strong impact on prices, and that most of the increase in prices was attributable to the general inflationary situation in the economy.

In an attempt to meet widespread uncertainty about the price effects of VAT, the Korean government took two steps. First, the government decided to reduce the initially proposed single tax rate from 13 percent to 10 percent just before the introduction of VAT. Second, to prevent use of the new tax as an excuse for firms to raise their prices to consumers, the government imposed strong price controls.

The government had control over the prices charged by monopolies and oligopolies and set ceilings on factory and wholesale prices for 251 goods. A list of pre-July 1977 prices was prepared in order to hold prices to that level immediately before the tax change. The government launched a large-scale campaign to publicize recommended retail prices for a variety of consumer goods. This campaign and the existence of widespread price controls curbed any price increases that could have occurred through uncertainty, increased business margins, and profiteering.

Despite the inflationary condition of the economy, as indicated by the excessive provision of domestic credit and accelerated wage increases, price controls appear to have been successful in dampening the wage-price nexus for inflation (Table 11.5). It is also noteworthy that increases in the general price level were due mainly to a price increase in food products. During the period from the third quarter of 1977 to the last quarter of 1978 food prices went up by 28.7 percent while nonfood prices increased by only 8.4 percent (Table 11.5). This increase in food prices immediately after the introduction of VAT, which was mainly due to crop failures and the increase in government selling prices of rice, led the general public to believe that VAT was the cause of the increase in the general price level. Food products, however, are exempt from VAT.

Broadly speaking, the introduction of VAT does not seem to have had a major impact on the rate of price increases in Korea. The full effects on prices of the implementation of VAT depend not only on the initial impact but also on market interactions, the stage of the business cycle, and other policy measures. This is confirmed by the experiences of other countries that have adopted VAT. According to Alan A. Tait, who analyzed the effects of introducing VAT on the CPI, VAT was not a contributory factor to inflation in 26 out of the 31 countries examined (Tait 1980).

Investment and Savings

Unlike most of the taxes it replaced, VAT does not burden capital goods because consumption-type VAT provides full credit for the tax included in purchases of capital goods. The credit does not subsidize the purchase of capital goods; it simply eliminates the tax that has been imposed on them.

Because investment was taxed under the previous indirect tax system

Table 11.5. Prices, wages, and domestic credit indexes, 1974-80: Three years before and three years after VAT introduction (third quarter, 1977 = 100)

Year	Quarter	CPI	WPI	Index of food prices	Index of nonfood prices	Wage index	Credit index
1974	III	63.6	65.9	54.4	72.1	42.3	45.2
	IV	65.1	68.4	58.4	73.7	47.7	52.4
1975	I	69.7	76.5	65.0	81.8	47.2	59.4
	II	75.4	80.6	71.3	84.9	50.2	62.3
	III	80.3	82.4	74.7	86.1	55.4	66.0
	IV	83.6	84.5	76.6	88.2	60.7	69.3
1976	I	85.3	88.3	80.3	92.2	62.4	72.8
	II	88.2	90.0	83.9	92.9	68.1	76.2
	III	91.5	91.6	86.6	94.0	76.7	78.6
	IV	91.3	93.1	87.6	95.6	82.1	84.3
1977	I	94.2	96.0	91.8	98.0	82.1	87.4
	II	96.9	98.0	95.7	99.3	91.0	92.1
	III	100.0	100.0	100.0	100.0	100.0	100.0
	IV	101.0	101.8	103.9	100.9	108.7	104.3
1978	I	106.5	106.5	113.7	103.3	107.7	115.5
	II	109.9	109.1	119.3	104.4	122.5	127.0
	III	114.7	111.6	124.9	105.4	136.3	136.6
	IV	117.9	114.9	128.7	108.4	149.8	152.1
1979	I	122.9	118.2	131.8	111.8	145.7	162.9
	II	132.6	126.5	136.0	122.2	158.4	171.5
	III	135.7	138.1	136.7	138.8	172.5	185.6
	IV	140.7	142.0	136.5	144.7	188.2	206.2
1980	I	156.1	165.0	153.1	170.1	180.3	226.2
	II	167.4	180.6	167.7	186.3	198.1	241.9
	III	174.9	186.8	178.4	190.8	218.6	261.1

Sources: MOF, ROK (1980); BOK, *Monthly Bulletin* (1981); BOK, *Price Statistics* (1982); BOK, *Quarterly Gross National Product* (1982); Administration of Labour Affairs, ROK (1981).

but was exempted under VAT, investment costs fell accordingly. Support for capital investment by means of VAT refunds is summarized in Table 11.6, which shows that the switch to VAT provided industries such as manufacturing and electricity and gas with substantial benefits. The tax refunds for investment amounted to 18,336 million won for the second half of 1977 and 64,655 million won for all of 1982.

Comparison of the rates of savings and investment in years before the introduction of VAT with those in years since its adoption is not instructive enough to produce any conclusion regarding the effects of VAT on savings.

Table 11.6. Support of capital investment through VAT refunds by industry: 1977-82

	July-Dec. 1977		1978		1979		1980		1981		1982	
	Refund (10 ⁶ won)	Share (%)										
Manufacturing	13,449	73.3	34,135	62.1	32,241	58.1	24,045	66.4	23,867	48.2	16,323	25.2
Mining	12	0.1	32	0.0	27	0.0	139	0.4	284	0.6	28	0.0
Construction	418	2.3	1,055	1.9	121	0.2	175	0.5	3,628	7.3	2,159	3.3
Electricity and gas	1,693	9.2	11,502	20.9	18,422	33.2	3,559	9.8	7,734	15.6	30,642	47.4
Wholesale and retail trade	86	0.5	304	0.6	496	0.9	1,377	3.8	1,588	3.2	2,781	4.3
Transport and storage	1,064	5.8	2,142	3.9	739	1.3	1,601	4.4	1,796	3.6	2,384	3.7
Other	1,614	8.8	5,789	10.5	3,422	6.2	5,333	14.7	10,606	21.4	10,338	16.0
Total (A)	18,336	100.0	54,959	100.0	55,468	100.0	36,229	100.0	49,503	100.0	64,655	100.0
Capital investment (B)	2,689,040		7,023,070		9,458,180		11,240,030		12,097,100		14,139,970	
Support ratio (A/B)	0.7		0.8		0.6		0.3		0.4		0.5	

Source: MOF, ROK, internal data.

or investment. Although there is no evidence that investment or savings increased, a questionnaire survey by the government shortly after the adoption of VAT showed that VAT was more conducive to investment than was the old indirect tax regime (MOF, ROK, 1980).

Exports

It is commonly agreed that the introduction of VAT with zero rating on exports has a favorable influence on exports. Zero rating removes any tax paid on goods at any stage because zero-rated goods are fully exempt from any tax when sold, and producers of such goods are entitled to a refund of any tax paid on purchases to produce such goods.

In abstract terms, VAT is neutral with regard to international trade if exports are exempt from payment of tax and imports are subject to the tax. The exported commodity is totally exempt from any taxes, whereas the imported commodity pays a tax equal to that levied on the commodity sold in the domestic market. In actual fact, the neutrality of VAT with regard to international trade is subject to two limitations. The first is the difficulty of verifying the forward shift in the incidence of tax burdens; the second is the technical regulation needed to enforce the neutral characteristic of the tax limit.

Giving greater tax benefits to exporters was one of the stated goals for introducing VAT into Korea. Although this goal is politically appealing, it is logically incorrect. A lot has been said and written about the effects that the adoption of VAT would have on the competitiveness of Korean industry, and subsequently on Korean exports and the balance of payments. To examine the effects of VAT on exports, we have to distinguish between two cases: substitution of direct taxes for VAT and replacement of indirect taxes by VAT. When a country adopts a VAT system as a replacement for direct taxes or with a reduction in direct taxes, it gains a trade advantage because the government can rebate a larger proportion of the tax content of exports and collect VAT on imports. When a country substitutes VAT for indirect taxes, as in Korea, the trade advantage of VAT substitution is negligible because the refund system on export goods is a part of the replaced indirect tax system.

Regardless of which tax VAT replaces, many believe that a VAT rebate, in itself, will expand exports and that a VAT levy will retard imports. This belief might have a positive effect on trade if it encourages businesses to compete more rigorously in international markets. This result would depend on the importance of nonprice considerations in explaining export activity. In a questionnaire survey conducted by the government, a large number of Korean businessmen expressed the view that the new VAT was more favorable to exports than the old indirect taxes (MOF, ROK, 1980).

The effect of VAT on exports can be indirectly investigated by comparing the general characteristics of the new VAT system with those of the previous

tax system and by looking at the trend of the indirect tax rebates in supporting exports.

The exact determination of taxes paid under the turnover tax scheme was generally difficult and frequently impossible to calculate. Because the business tax and other indirect taxes were hidden in the price of export goods, they could not be readily rebated although rebates of all indirect taxes were permissible under the law. Because of the cumulative nature of the turnover-type business tax, export goods were exempt only at the final sales stage, and the government had to estimate the border tax adjustment for export rebates on the taxes previously paid in the production and distribution process. The awareness of the problem that it is impossible to calculate the tax content of prices was one of the factors behind the reform of the indirect tax system in Korea.

As it was difficult to determine the amount of taxes included in the price of export goods under the previous indirect tax system, the government had to issue rules prescribing how much tax was buried in the price of each type of export good. The average rate on the credit for export goods was imposed by the government. Therefore, the prescribed average rate was normally either lower or higher than the actual payment. As a result, export prices usually included either a hidden subsidy or a hidden penalty.

The substitution of VAT for the previous indirect tax system has made the determination of taxes paid on exports much easier because the characteristics of a typical VAT can overcome the problem of calculating the taxes paid. This so-called border tax adjustment merely guarantees that both imports and domestically produced goods consumed in Korea bear the same tax and allow Korean exports to enter the world markets free of tax. It should be noted, however, that this border tax adjustment does not stimulate exports but does inhibit imports more than would a comparable turnover tax imposed on sales to Korean consumers.

By examining the trend in the average indirect tax rebate per dollar of exports, one can indirectly estimate the impact on exports of the change in the Korean indirect tax system. Table 11.7 shows that the average tax rebate per dollar of exports has been increasing during the past ten years or so. Though the actual effect may differ from product to product, there was a sharp increase in the average tax rebate per dollar of exports, from 33.56 won per dollar in 1976 to 53.56 won per dollar in 1978. This result shows that the government underestimated the border tax adjustment under the previous tax system. In this sense, the adoption of VAT benefited the export industry.

According to the poll on the new rebating system, a majority of export company officials agreed that the introduction of VAT had a positive effect on the trade competitiveness of their goods (MOF, ROK, 1980). The survey also showed they felt that VAT supported exporters more than the previous tax structure. Though we may conclude that a switch to VAT with zero

Table 11.7. Average annual rebate of indirect taxes per dollar of exports: 1973-82

	Exports (10 ⁶ US \$)	Total rebate ^a (10 ⁶ won)	Rebate per dollar (won)
1973	3,225	68,523	21.24
1974	4,460	101,488	22.75
1975	5,081	168,728	33.21
1976	7,715	258,913	33.56
1977	9,687	514,226	53.08
1978	12,711	680,813	53.56
1979	15,055	852,150	56.60
1980	17,505	1,306,584	74.64
1981	21,259	1,748,125	82.23
1982	21,853	1,892,966	86.62

Source: MOF, ROK, internal data.

a. Total rebate under the previous system and VAT, including the special consumption tax.

rating on exports may have made a modest contribution to the improvement of balance of payments in Korea, particularly due to its ease and precision in calculating tax rebates, this contribution should not be over-emphasized. Because exchange rates or domestic inflation would soon adjust in response to any initial improvement in the balance of payments, any competitive edge induced by tax substitution would soon dissipate.

Distribution of the Tax Burden

Like other taxes, VAT has distributive properties in that its burden will fall more heavily on some sections of society than on others. Perhaps the most controversial issue when the introduction of VAT was under consideration was its effect on the distribution of tax burdens. The regressivity issue of VAT continues to be a topic for heated debate.

A comprehensive VAT is regressive because lower-income taxpayers consume a higher proportion of their income than do middle- and upper-income taxpayers. A number of studies (Heller 1981; Oh 1982; Han 1982) have been carried out to estimate the distribution of VAT burdens. The results of these estimates are summarized in Table 11.8. Using the household income and expenditure survey, these studies all base the distribution of VAT burdens on consumption patterns and the estimated rate of taxation on each category of consumer goods.

In all these studies (Heller 1981; Oh 1982; Han 1982), VAT is shown to be more or less regressive with respect to income. According to a study by Peter S. Heller (1981), VAT in Korea is regressive, with the burden declining from 5.55 percent of income at the lowest decile to 3.91 percent at the highest. The burden is lower in the farm sector than in the nonfarm sector,

Table 11.8. Effective burdens of VAT on income (%)

Item	Income decile									
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Heller										
All households	5.55	5.19	4.19	5.00	4.67	4.84	4.79	4.04	4.11	3.91
Nonfarm households	5.94	5.63	5.82	5.75	5.46	5.38	5.51	5.31	5.02	3.91
Farm households	4.80	4.02	3.42	3.27	3.13	2.89	2.73	2.46	2.22	
Oh										
1976 data	3.62	2.90	2.98	2.94	2.86	2.85	2.76	2.73	2.79	2.42
1978 data	3.56	3.10	3.07	3.05	3.05	2.99	2.91	2.86	2.77	2.60
Han										
Nonfarm households	9.38	7.50	6.70	6.40	5.99	5.69	5.38	5.06	4.67	3.82
Farm households	8.44	5.96	5.14	5.07	4.24	4.18	3.73	3.53	3.17	2.90

Sources: Heller (1981); Oh (1982); Han (1982).

with the relative burden declining at the upper deciles in the farm sector. Whereas Yeon-Cheon Oh's analysis claims that the distribution of VAT burdens is only slightly regressive, Seung-Soo Han's study concludes that regressivity is quite strong (Oh 1982; Han 1982). According to Han's estimate, the effective burden of VAT on income for the highest decile is about 40 percent of that for the lowest decile. The corresponding figure based on Oh's study is around 70 percent.

Not only is the regressivity of VAT more pronounced in Han's study than in Oh's, but the absolute burden of VAT throughout all income classes is also much higher in Han's study than in the study by Oh. Those in the lowest decile pay 9.38 percent of their income as tax according to Han (1982) and 3.56 percent according to Oh (1982). But the people whose incomes are in the top 10 percent are estimated to have tax burdens of 3.82 percent and 2.6 percent of their income in Han's and Oh's analyses, respectively.

A variety of indirect taxes were replaced by VAT and the special consumption tax in Korea. Therefore, it is worth ascertaining whether VAT substitution led to increased or reduced regressivity. As shown in Table 11.9, which summarizes the burdens of domestic indirect taxes before and after the streamlining, the empirical studies done to date yield mixed results.

According to Oh (1982), the distribution of the tax burden by income decile appears on the whole to have become slightly less regressive after the tax reform. Two other studies by Heller (1981) and Han (1982), however, show that regressivity has generally increased. Two explanations can be offered to account for the fact that the distribution of the indirect tax burden changed relatively little in the shift from the pre-VAT to the VAT re-

Table 11.9. Burdens of domestic indirect taxes on income under the pre-VAT and the VAT regimes

Item	Income decile									
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Heller										
All households										
Pre-VAT	7.42	7.29	6.30	6.73	6.76	7.14	6.73	6.43	6.22	7.00
VAT	7.81	7.57	6.29	7.15	6.85	7.22	6.80	6.20	6.20	6.85
Nonfarm households										
Pre-VAT	7.64	7.83	8.14	7.57	7.73	7.92	7.73	8.31	7.49	7.00
VAT	8.39	8.40	8.70	8.29	8.07	8.15	8.03	8.38	7.71	6.85
Farm households										
Pre-VAT	6.98	6.25	5.45	5.00	5.02	4.74	4.41	4.37	3.79	
VAT	6.70	5.96	5.18	4.79	4.65	4.35	3.97	3.83	3.30	
Oh										
1976 data										
Pre-VAT	5.93	4.75	4.91	4.79	4.61	4.67	4.51	4.47	4.53	4.12
VAT	4.93	4.07	4.22	4.13	3.98	4.01	3.87	3.82	3.92	3.54
1978 data										
Pre-VAT	5.82	5.15	5.14	5.09	5.07	4.99	4.90	4.81	4.78	4.54
VAT	5.71	4.98	4.97	4.96	4.93	4.85	4.75	4.68	4.62	4.34
Han										
1976	15.70	13.10	12.40	11.90	11.50	11.20	10.80	10.40	9.70	9.10
1978	20.40	15.80	13.80	13.10	12.10	11.40	10.60	9.90	9.00	7.10

Sources: Heller (1981); Oh (1982); Han (1982).

gines or has become worse over time. First, the VAT system was designed to be quite regressive. Second, the tax rates and tax base of the special consumption tax, which was concurrently introduced to supplement VAT, are insufficient to allow it to play its assigned role. In all the studies reviewed, the burden of the special consumption tax is proportional to income or is even somewhat inversely related to income.

The incidence studies reviewed above vary in their estimates of the distributive effect of VAT itself, and in their comparisons of the distributive effect of VAT and previous indirect taxes. Still, all these studies indicate, as expected, that VAT is regressive and that the replacement of the previous indirect taxes with VAT and the special consumption tax has not lessened the regressivity of overall indirect tax burdens.

Because Korea relies heavily on indirect taxes for its revenue, the regressivity of indirect tax burdens implies that the overall tax burden in Korea is regressive. Therefore, there remains a need for the government to improve the distribution of income by moderating the regressivity of VAT and

the indirect tax system in general and by moving toward greater reliance on direct taxes.

CRITICISMS, CURRENT ISSUES, AND LESSONS

Because more than a decade has elapsed since the implementation of VAT in Korea, an interim assessment is possible. VAT in Korea has been working relatively well, in some cases much better than its designers and the taxpayers had anticipated. The number of complaints has been small, though some have been loud. Complaints have been made and will continue to be made about various aspects of the tax structure and the details of its operation. Many of these protests, however, are more in the nature of special interest pleading or general grumbling than attacks on the concept of the tax.

Korean experiences with VAT clearly show the importance of good bookkeeping practices and the implications of the habit of requesting receipts by buyers after each transaction. A precondition for the introduction of VAT was well-established record keeping, which proved to be too demanding and cumbersome for Korean firms, especially small ones accustomed to poor bookkeeping or to keeping no records at all. The practice of bargaining between sellers and buyers to settle prices, which most Koreans take for granted, was a hindrance to the introduction and acceptance of VAT. Other countries planning to adopt VAT should make every effort to establish the system of attaching price tags to retail products.

On almost all counts, VAT in Korea should be considered an improvement over the indirect taxes it replaced. Its base is broader. It permits more precise border tax adjustment. Taxpayers have by now familiarized themselves with VAT. There is no evidence of large-scale tax evasion. Revenue from VAT is large and in line with the calculations based on the volume of private consumption.

Although VAT can and does work in Korea, it is not free from arbitrary elements and controversies. To deal with the annoying problems associated with VAT, a distinction must be made between problems inherent in VAT and those also true of other taxes. By way of conclusion, the major issues currently facing the VAT system in Korea are reviewed to help other countries learn from the Korean experience.

Scope and Coverage of VAT

One recurrent question about the structure of VAT in Korea concerns the possibility of extending VAT to sales that are currently exempt. The widespread use of exemption is founded on the desire to reduce the regressivity of the VAT burden. Needless to say, the extensive use of exemptions reduces the efficiency advantage that might have been gained from a more neutral tax structure.

Exemptions facilitate the administration of VAT. This is true particularly

of exemptions for small taxpayers and certain services. It should be borne in mind, however, that excessive exemptions complicate administration because of the difficulty of distinguishing taxable from nontaxable transactions and the resulting need for more detailed records and invoices.

Current issues on the Korean VAT exemption scheme center around two major questions. The first is the very purpose of the VAT exemption, and the second is the possibility of narrowing the scope of the exemption. It is generally understood that exemptions are allowed to reduce the regressivity of the VAT burden. It must be pointed out, however, that the reasons for the exemption scheme in the VAT structure lie not in the reduction of regressivity but in the simplification of administration and compliance.

Moderation of the regressivity could be achieved more effectively through the zero-rating scheme rather than through the exemption scheme. This simple but important point has not caught the attention of VAT designers in Korea and many other countries. Zero-rated supplies are technically taxable but at a low rate; the implication is that VAT charged on inputs relating to them could be reclaimed just as were inputs relating to taxable supplies. Exempt supplies are outside the scope of VAT altogether so there is no question of reclaiming relevant input taxes. Because an exempt transaction bears some VAT, the relief of the tax burden on low-income people should be sought through the application of a zero-rating scheme rather than an exemption scheme for goods and services consumed disproportionately by the poor.

Even under the current exemption scheme, a review of the list of goods and services currently exempted leads one to question the appropriateness of the inclusion of some items on the list. In principle, exemptions from VAT should be limited to basic necessities such as unprocessed foodstuffs and to goods and services the government wishes to exempt for social or cultural reasons.

Several selections on the exemption list have been controversial, including services provided by financial institutions and insurance companies, government-provided goods and services that compete with commercial operations, and independent professional services. On the grounds of tax equity between privately and publicly supplied goods and services and the economic efficiency of preserving the capacity of private firms to compete for business with public agencies, it has been strongly suggested that some commercial activities by semi-governmental bodies should not be exempted.

The exemption of rent, insurance, and financial services means that traders of these outputs have to bear input taxes but cannot reclaim them. They are expected to pass the tax on to their customers. Business users of those services thus have to bear some VAT costs, despite the philosophy of the tax. The major problem with taxing financial services is the difficulty of recalculating the correct tax base. One way to tax the value added of insurance and banking services would be to rely on the direct additive

method, that is, adding together their annual wage and salary payments, rental payments, and profit. A tax of 0.5 percent on gross receipts of banking and insurance companies has been imposed in Korea since the beginning of 1982. To determine whether it is desirable to bring these financial institutions within the scope of VAT, one has to consider whether to eliminate the special tax recently imposed or to accept the consequences of imposing a heavier burden on this sector than on others.

Practically all independent professional services, such as those provided by doctors, lawyers, accountants, and architects, are currently exempt. It has been suggested that all these professional services should be taxed. Given the fact that these independent professionals currently pay relatively little tax under the personal income tax, it would seem advisable to make their services subject to taxes unless they can fully shift their tax burdens to their customers. Furthermore, from an equity point of view, it is desirable to adopt a common policy toward all professional services rather than to single out one particular service for exclusion from the exemption.

All in all, exemptions should be held to a minimum not only to keep the VAT base broad but also to minimize administrative problems and distortions in the economy. The neutrality of the tax would be improved if the coverage of services were broadened and if exemptions were replaced by zero ratings. Increased use of zero ratings rather than exemptions would reduce the advantages that large firms have over small ones.

Tax Rate Structure

A single rate of 10 percent has been used in Korea since the introduction of VAT in 1977. If VAT were imposed at a uniform rate on all consumption, it would be regressive when measured against income, because consumption expenditures take a decreasing fraction of personal income as income levels rise. To reduce the tax burden on low-income taxpayers and to inject an element of progressivity into VAT, suggestions have been made to use differentiated multiple rates rather than a single uniform rate.

Experiences with rate differentiation elsewhere do not recommend its use in Korea; the EEC countries have found that such a differentiation complicates administration and compliance and destroys both neutrality and the advantages that uniformity brings. Furthermore, using multiple rates is an inefficient way to achieve redistributive objectives.

The tax rate structure of VAT has a direct influence on its administration and compliance. Many problems arise from the use of multiple rates. First, the rate structure may not be sufficiently defined, leaving products that can fit into more than one category. Second, the categories themselves may be based on criteria for which information is not readily available. Third, multiple rates cost too much for small businesses dealing with a variety of goods, because it is extremely time-consuming for them to account separately for each different category when filling out tax returns. Fourth, multiple rates

provide taxpayers with the opportunity to evade the taxes either through miscalculation or other manipulations.

Given the limitations of record keeping on the part of taxpayers and auditors, it is imperative that the tax be kept simple, and the most important requirement for simplicity is the use of a single rate. If a higher tax burden is desired on certain classes of goods or services, this should be attained by separate levies like the special consumption tax either at the importation or manufacturing level, as is the case now in Korea.

The regressivity of VAT can be moderated, but not eliminated, by special measures like exemptions and differentiated rates. Even if many commodities were zero rated, a significant progressivity or even a substantial decrease in regressivity could not be obtained. A set of distributional goals can be more easily achieved using the available alternative devices.

Participants at the Brookings conference, which reviewed the European experience with VAT, agreed that the use of multiple rates and exemptions complicates administration and compliance and distorts consumption in ways that are unlikely to promote economic efficiency (Aaron 1981). They held that distributional objectives should be pursued with other instruments, notably transfer payments and income taxes. Many of the European countries that have adopted a multiple-rate VAT have been moving to simplify their tax rate structure. The United Kingdom, Belgium, and Ireland have all decreased the number of their VAT rates.

Administrative Problems

The administrative problems posed by VAT have been considerable although administrative efficiency for the VAT system was an important consideration behind its adoption in Korea. All taxable transactions must be fully recorded. Invoices must be issued so that the purchaser can deduct the tax charged on the sale. For some time administration of VAT has been subject to criticism. The administrative aspects of VAT are still controversial, and recent public concern about the VAT system in Korea centers around the issues of administrative efficiency and compliance costs.

The degree of compliance and the cost of administration depend on whether businesses are accustomed to keeping good written records, on the establishment of a modernized distribution system, and on the share of business activity carried out by small establishments. The lack of systematic record keeping in many parts of the Korean economy would make administration difficult and evasion easy even under the best of circumstances. Unless distribution channels through which commodities change hands are modernized and solidly established, there is no way of controlling the illegal transfer of tax invoices to a third party.

VAT is said to be self-enforcing because of how it is usually administered. Korean experience with VAT, however, suggests that the so-called built-in, self-enforcing aspect of the tax, which permits the matching of the tax credits

of one taxpayer against the tax payments of another, is illusory or, at least, a much overrated advantage because invoices can be falsified.

The advantages of the invoice method have not been fully realized in practice and are not likely to be fully realized, because of the practical impossibility of checking all invoices on the part of tax collectors and because of efforts to evade the tax on the part of taxpayers. Much evasion occurs through the failure of some parties to report all transactions. There is a measure of self-policing in that evasion by suppliers through the understatement of the tax collected is balanced by the purchasers' interest in ensuring that all tax payments are recorded. Similarly, evasion by purchasers who overstate the taxes they pay runs counter to the interests of suppliers.

It must be stressed that VAT is not a self-enforcing tax. Although taxpayers do have an incentive to request invoices for their purchases to increase their input of tax audit, this incentive is in many instances counterbalanced by the desire to suppress both purchases and sales to avoid not only VAT but also income taxes.

The ability to administer VAT is a function of a large number of factors. One group of factors, which are internal to the VAT system, is the scope of the tax, the degree of its complexity in terms of rate structure, the exemptions, the reporting techniques and procedures, the tax payment procedures, and the treatment of small businesses. Another group of factors, which are external not only to VAT but also to any other kind of tax, includes the degree of literacy, the size of the monetary economy, the adequacy of bookkeeping, the attitudes toward taxation and tax administration, and the efficiency of tax administration services. Administrative difficulties can be overcome when the intrinsic complexity of the tax law is compatible with the external factors mentioned here.

Special Taxpayers

One of the major criticisms of VAT in Korea has been the burden on businesses, particularly on small businesses, to keep books and file returns to the tax authorities in the prescribed format. Taxpayers' records must clearly show not only total sales and the taxes payable but also all purchases and taxes paid. Whereas large and medium-size firms can absorb the accounting and procedural requirements of VAT with relative ease, the problem lies in the size of small businesses. Although the control and audit of special taxpayers may be kept to a minimum, their numbers alone pose problems of registering, filing returns, and collecting taxes that could impede efficient administration of the entire tax system. The cost of managing a large number of special taxpayers must be weighed against the considerations of revenue and equity. If the administrative burden outweighs their revenue potential, it may be better for such special taxpayers to be exempt from VAT.

In 1982, 78 percent of all special taxpayers had annual sales lower than

5 million won, and this group of taxpayers contributed less than 3 percent of total VAT collected. From a purely administrative point of view, exemption of special taxpayers from VAT is attractive in that both administration and compliance would be made easier with no substantial loss in revenue. Some suggest that the authorities should be lenient in applying VAT to small traders. The temptation to move toward more lenient treatment of troublemaking small taxpayers should be resisted, however, because such concessions are costly in terms of government credibility and would have a profound effect on the bookkeeping and accounting practices of all taxpayers, both general and special.

Another important policy issue is the question of how to determine which taxpayers should be considered special or small. Prior to 1988 the dividing limit was total yearly turnover of 24 million won. In 1983 the opposition Democratic Korean Party suggested that the limit be increased to 36 million won per year; the limit was increased to that level in 1988. The increase should have been rejected because the aim of special treatment of small businesses is not to give them more favorable treatment but to provide a simplified system, which approximates the true tax liability without imposing an intolerable burden on either the taxpayer or the tax administration.

Taxpayers are hesitant or reluctant to be categorized as general taxpayers simply because special taxpayers are treated preferentially relative to general taxpayers. The manipulation of sales totals and the disguised closing of businesses are well-known practices. These illegal practices in large part explain the fact that despite the rapid growth of the economy there is no change in the number of special taxpayers as a percentage of total VAT taxpayers.

Coordination of VAT with Direct Taxation

A high degree of coordination between the staff in charge of VAT and those in charge of direct taxes is very important. It is an open secret that in Korea taxpayers cheat on their sales not to evade VAT but to evade personal and corporate income taxes. Operation of VAT resembles that of the income tax more than that of other taxes and an effective VAT system greatly aids income tax administration.

Countries differ in the degree to which they combine administration of their VAT with individual and corporate income taxes. To secure close coordination between them, institutionalization is necessary at the technical level through means such as automatic processing of data obtained through tax returns or audits, the exchange of this information, consultation as to special audit programs, and the design of forms. In any event, close cooperation with the income tax administration is of great importance for strengthening both VAT and the income tax.

One lesson that the Korean experience holds for a country contemplating

the adoption of VAT is that implementation of VAT is bound to fall well short of the theoretical ideal. However simple VAT may be in theory, Korean experience makes it clear that it is not simple in practice. It creates a host of special problems that give rise to paperwork and more or less arbitrary distinctions.