OECD ECONOMIC SURVEYS

KOREA

1994

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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION DE COOPÉRATION ET DE DÉVELOPPEMENT ÉCONOMIQUES

En vertu de l'article 1er de la Convention signée le 14 décembre 1960, à Paris, et entrée en vigueur le 30 septembre 1961, l'Organisation de Coopération et de Développement Économiques (OCDE) a pour objectif de promouvoir des politiques visant :

— à réaliser la plus forte expansion de l'économie et de l'emploi et une progression du niveau de vie dans les pays Membres, tout en maintenant la stabilité financière, et à contribuer ainsi au développement de l'économie mondiale ;

— à contribuer à une saine expansion économique dans les pays Membres, ainsi que les pays non membres, en voie de développement économique ;

— à contribuer à l'expansion du commerce mondial sur une base multilatérale et non discriminatoire conformément aux obligations internationales.

Les pays Membres originaires de l'OCDE sont : l'Allemagne, l'Autriche, la Belgique, le Canada, le Danemark, l'Espagne, les États-Unis, la France, la Grèce, l'Irlande, l'Islande, l'Italie, le Luxembourg, la Norvège, les Pays-Bas, le Portugal, le Royaume-Uni, la Suède, la Suisse et la Turquie. Les pays suivants sont ultérieurement devenus Membres par adhésion aux dates indiquées ci-après : le Japon (28 avril 1964), la Finlande (28 janvier 1969), l'Australie (7 juin 1971) et la Nouvelle-Zélande (29 mai 1973). La Commission des Communautés européennes participe aux travaux de l'OCDE (article 13 de la Convention de l'OCDE).

Published also in English.

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Introduction

The Republic of Korea has had relations with the OECD for some time through its participation in various OECD bodies. Over the past couple of years, Korea[1] has become a full participant in the Council Working Party on Shipbuilding, the Development Centre, the Nuclear Energy Agency and the Steel Committee. In addition, Korea has been granted observer status in numerous Committees, including the Trade Committee, the Industry Committee, the Environmental Policy Committee, and, subject to special invitation, the Economic and Development Review Committee. It is the intention of the present government of Korea to seek full membership in the Organisation by 1996. By that time Korea's per capita income will probably be about twice that of Turkey and about the same as in Greece and Portugal. In overall size the economy is likely to exceed that of sixteen Member countries, falling just behind Spain. In the list of world trading countries Korea already ranks thirteenth, with shipments to OECD countries accounting for more than 55 per cent of its total merchandise exports.

The present draft is divided into nine parts. The first two provide an historical background and trace the evolution of the Korean economy since the end of the Korean war, focusing on the underlying political and economic forces and relating Korea's economic performance to those of OECD countries. Part III looks at current economic trends and prospects. Reflecting the special nature of this Survey, the focus is more on deviations from desirable, and potentially feasible, development paths than on short-term cyclical variations of economic variables. Each of the following four parts is devoted to one of the four principal markets of the economy: the market for goods and non-financial services, the labour market, the money and capital market, and the real estate and housing market. The purpose of these chapters is first to describe the structure and functioning of goods and factor markets, including a brief historical review of major reforms, and secondly, to evaluate market results against policy objectives,

thereby identifying unresolved problem areas. Part VII deals with public sector issues relating to the size and structure of spending and sources of finance, with particular emphasis on social expenditure. The use of public enterprises as a tool of policy is also discussed, while the role of regulatory policies is examined in the relevant market-specific chapters. The Conclusions of the Survey, assessing past achievements and reforms and discussing outstanding problems and challenges, are presented in Part IX.

I. The historical and political background

While the rapid economic development of South Korea dates only from the past 30 years, Korea is a nation with a rich heritage based on over twelve hundred years as a unified state. The country has developed considerable homogeneity over this period and was independent except for brief interruptions during the height of the first Mongol empire in the 13th century and the annexation by Japan in the 20th century. Throughout its history Korea has interacted with China, Japan and other Asian countries, and has been part of a broader East Asian culture centred on China. This section briefly outlines the major historical developments in Korea, giving most attention to the period since the Republic of Korea was created in its present form in 1948.

Developments prior to the 20th century

It is generally believed that the ancestors of the Korean people migrated to the Korean peninsula in the Neolithic Age. In the 1st century AD tribal leagues gradually developed to the stage of state powers with the emergence of Koguryo in the north and Paekche and Shilla in the south. Koguryo gained control over a large part of Manchuria at the height of its territorial expansion in the 5th century. These three states channelled the advanced technology and culture of China and of their own to Japan. The three states were finally unified into a single nation in the 7th century by Shilla, the latecomer to statehood among the three. Unified Shilla prospered with the full development of Buddhist culture in the 8th century, and existed for more than three centuries until it was succeeded by Koryo in the 10th century. It was during the Koryo dynasty in the 12th century that the printing technology with moveable metal type was invented, several hundred years before Gutenberg's invention in Europe.

The Yi dynasty, which was established at the end of the 14th century, ruled Korea until the beginning of the 20th century. Under this dynasty, Korea developed its own national identity aided by the introduction of Hangul, its own phonetic writing system, in the 15th century. One major advantage of Hangul was that it helped increase literacy, thus greatly facilitating commercial transactions beyond those of small-scale village market variety. Confucianism, the state philosophy of both the Yi dynasty and China, placed great emphasis on the benefits of education. The population grew steadily, supported by improvements in agricultural methods. Serfdom gradually declined while private ownership of land increased. By the latter part of the dynasty, the rural labour force was largely free, and most land was privately owned and could be freely bought and sold. The existence of substantial urban populations (by pre-modern standards) created the need for a commercial network and made for the rise of a money economy in the 17th century.

The opening and colonisation of Korea

The opening of Korea to modern economic forces dates from the late 19th century. After unsuccessful attempts by the United States and France to open Korea to international trade in the 1860s, Japan forced Korea to accept a one-sided commercial treaty in 1876. To counter rising Japanese influence, the Chinese government also forced a commercial agreement on Korea. Further treaties followed with other countries at the urging of China. The growing political awareness of Korea's backwardness prompted the Yi dynasty to introduce reforms. Although some reforms were implemented, there was a large-scale revolt of the peasantry in 1894, which the Yi regime was only able to overcome with Chinese military help. Following the victory of Japan in the Sino-Japanese war of 1894-95, the treaty of Shimonoseki recognised that Korea was in Japan's sphere of influence. Japan's supremacy in the region was further increased by its victory in the Russo-Japanese war in 1905 and its annexation of Korea in 1910.

The 35-year period of Japanese rule following the annexation was a painful and difficult experience for Korea, although it constitutes only a brief interlude in Korea's history. Growing resistance to Japanese colonial rule reached a head in 1919. Following severe repression of large-scale civil disobedience, a provisional government was created abroad. The Japanese took steps to suppress Korea's

national and cultural identity, forcing the population to take Japanese names, and the schools to teach in the Japanese language.

While colonial policies were intended to benefit Japan, they also produced changes in Korea. Communication and transportation links were developed, as well as the education system. A number of institutional reforms were introduced by the new rulers such as the codification of modern civil laws, introduction of a new financial system, increased monetisation of the economy, separation of the executive and the judiciary, and others. To help secure sufficient food supply for Japan, the colonial authorities focused during the 1910s and 1920s on increasing agricultural production through the introduction of new technologies and investment in irrigation. Parts of the farmland were expropriated, causing many tenant farmers to emigrate to southern Manchuria and nearby areas. Korea became an important supplier of rice to Japan with an average of 40 per cent of its total rice crop being shipped to Japan between 1925 and 1939. During the 1930s, Japan encouraged investment in manufacturing and mining enterprises to strengthen its military power. Recent estimates suggest that output rose by 3 to 4 per cent annually between 1911 and 1938, and per capita consumption by 2 per cent. The share of output coming from agriculture dropped from 70 per cent to 50 per cent and the share of manufacturing rose from 5 per cent to almost 20 per cent. Large-scale factories, however, were the domain of Japanese firms. An industrial labour force in factories and modern institutions did emerge, but Koreans were given little opportunity to enter supervisory, technical or managerial posts.

The creation of the Republic of Korea

The years between 1945 and 1953 were a period of extreme disarray for Korea. Following Japan's defeat in the Second World War, the country was partitioned and United States troops were stationed in the southern part of the country. Following failure to re-unite the country, democratic elections were held in 1948 leading to the election of President Syngman Rhee. After the almost complete withdrawal of American troops in 1949, the Republic of Korea was invaded by North Korea in 1950. The Korean war, which ended in 1953, destroyed over 40 per cent of industrial facilities and damaged 20 per cent of the housing stock. War damage has been estimated at more than one year of output. In addition, the country had to cope with the repatriation of one million people

from Japan and the influx of two million refugees from the north of the country, raising the population by almost 20 per cent. Very rapid inflation ensued.

The *first republic*, which had been created in 1948, lasted for seven years after the end of the war. During that period, Korea was governed by President Rhee who was re-elected four times, though in 1954 a bill was passed in the Parliament granting the President a life-term. While the conservative government drew much support from people who had benefited from colonial rule, the government did introduce a fundamental land-reform in 1948. Land expropriated from landlords was given to the previous tenants and the size of individual holdings was restricted in order to gain the support of the rural population. Economic activity was characterised by rent-seeking. Multiple exchange rates and extensive import licensing backed an import substitution policy. Exports were almost non-existent, representing only 5 per cent of GDP by 1960 – considerably less than in the 1930s. Preferential access to foreign aid was a notorious source for rent-seeking. The economy stagnated, with per capita real GDP rising by only 1 per cent annually. Little progress was made in recovering from the losses of the war years and real GDP per capita appears to have been only 70 per cent of the 1938 level, despite an aid programme that averaged 7 per cent of GDP between 1953 and 1960.

The period of rapid economic growth

After a period of increasing political repression, large scale student demonstrations resulted in the downfall of the first republic in 1960. A parliamentary system was introduced to replace the previous presidential system but the *second republic* lasted only nine months before there was a military take-over in 1961. Eventually, a new constitution was introduced and the leader of the military coup, General Park Chung-Hee was elected President of the *third republic* in 1963. The economic reforms introduced in 1964 by President Park, notably unification and devaluation of the exchange rate and tariff exemption for exporters, together with the fiscal reforms introduced in the second half of the 1960s, laid the foundations for a period of exceptionally rapid growth. The United States aid programme was phased-out. Between 1963 and 1973, real GDP rose by almost 140 per cent and per capita GDP almost doubled.

By 1972, President Park introduced further changes to the constitution that increased his power. The National Conference for Unification, whose members were appointed by the President, nominated members to the National Assembly and also elected the President. The *fourth republic* (or the Yushin system) permitted the re-election of the President for an unlimited number of six-year periods and, indeed, President Park was re-elected twice by the Conference without any opposition. The President sought to maintain political support through a rural development programme that was aimed at increasing co-operation and self-reliance. Nevertheless, there was continued political and labour unrest provoked by the rapid structural change and high inflation. Political turmoil culminated in the assassination of the President in 1979. The end of this decade represented the apogee of the state planning effort which channelled resources into certain heavy and chemical industries.

A new President was elected by the National Conference but quickly the military seized power. A new constitution established the *fifth republic* in which the President was elected for one seven-year term. Political unrest was compounded by a fall in output in 1980 caused by the rise in oil prices, sluggish world trade and bad harvests, and perhaps also by over-investment at home. The economic crisis led to a reassessment of economic policies. The new President, General Chun Doo-Hwan, introduced a stabilisation programme that reduced inflation and the government embarked on a gradual liberalisation programme. At the end of the stabilisation programme in 1983, output had increased by over 110 per cent since 1973 and per capita output by over 80 per cent.

The transition to democracy

In 1987, President Chun introduced the constitution of the *sixth republic* in which a President would be elected directly by the population with a mandate of five years. President Roh, an ex-general of the previous ruling party, was narrowly elected in December 1987 – the first democratic transition of power in Korean history.

At the end of the term of President Roh, new elections were held under the existing constitution and President Kim, a former dissident, was elected. He is the first Korean President without a military background. By 1993, the first year of

his government, output was about 125 per cent higher than in 1983 and per capita output had risen by over 100 per cent.

The democratisation of Korea presents new challenges for economic policies. Social welfare has been given more emphasis though its share in government spending has been kept stable. At the same time, the rapid growth of labour costs has provoked further structural change in the economy. The policy measures taken or planned by the present government are discussed later in this report after a brief review of economic developments over the past 40 years.

II. Korean economic development

During the past three decades, Korea has achieved a remarkable economic record. At the end of the Korean War, per capita income was only 1 per cent of that in the OECD area. By 1992, income per capita had risen to one-third of the OECD average and was on a par with that of Greece and Portugal. The economy had become larger than that of all but nine OECD countries in 1992 and eight in 1993. Korea was the thirteenth largest exporter in the world. This dramatic change and the successful adjustment of the economy to both the oil shocks of the 1970s and the debt crisis of the early 1980s seem to reflect sound underlying economic fundamentals and the ability of policy to adapt to rapidly changing circumstances.

Economic policies in Korea[2]

Korea's post-war history can be divided into five phases corresponding to changes in the economic policy regime: *i)* the recovery from the Korean War, 1953-1961; *ii)* export promotion, 1961 to 1973; *iii)* the Heavy and Chemical Industry (HCI) drive, 1973 to 1980; *iv)* economic liberalisation, 1980 to 1987; and *v)* democratic reforms, 1987 to the present.

Recovery from the Korean War, 1953-61

During this period, the government followed a development strategy based on import substitution. It shifted its emphasis in 1957 from urgent reconstruction projects to price stabilisation. The economy was dependent on large inflows of foreign aid, which financed nearly three-quarters of total imports between 1953 and 1960. Multiple exchange rate regimes kept the Korean won substantially overvalued. The overvaluation of the exchange rate discouraged exports

while high tariffs and quantitative import restriction encouraged import substitution. Growth in per capita output was low in this period.

Export promotion, 1961-73

In the 1960s, the primary goal of economic policy was export expansion. A key step was the 1964 devaluation, which was accompanied by the introduction of a sliding-peg system of adjustment aimed at preventing real appreciation of the won. In addition, an incentive system designed to channel resources into export-oriented activities was established. Exporters were supported by direct cash payments, permission to retain foreign exchange earnings for the purchase of imports, and the exemption from virtually all import controls and tariffs. The state-controlled banking system, which provided financial support for exporters at preferential rates, used export performance as the criterion of credit worthiness. The government, in consultation with firms, set export targets for industries as well as individual firms. These targets appear to have influenced firm behaviour. In addition to pecuniary incentives, national awards were given to successful exporters.

The level of protection was high in industries without strong export prospects and low in internationally competitive industries. In the aggregate, though, export promotion measures made the incentives to export and to sell in the domestic market roughly equal.[3] Financial-sector policy aimed at ensuring the supply of funds for firms, while fiscal policy was focused on establishing a financial surplus that could be also channelled to firms. In addition to tax concessions for exporters, the government extended special temporary tax privileges to key industries. These tax concessions and plans for large industrial projects in chemicals, fertiliser, iron and steel and heavy machinery presaged the heavy and chemical industry (HCI) drive of the 1970s.

Heavy and chemical industry drive, 1973-79

Despite a decade of unprecedented economic growth, the government decided in 1973 to shift from general export promotion to targeting heavy and chemical industries. The decision was based on both political and economic factors. One major concern was to prepare for a reduced U.S. military presence. A second policy goal was to upgrade the industrial structure to maintain export success in the face of increased competition in light manufactures from other

developing countries. The government believed that continued economic progress required large-scale, risky investments which would not be undertaken without decisive government leadership.[4]

The HCI drive was intended to anticipate changes in Korea's comparative advantage by focusing on the iron and steel, non-ferrous metals, shipbuilding, machinery and chemical industries. The programme was a sector-specific, import-substitution plan relying, in particular, on the allocation of credit to favoured industries. The share of total bank loans to industry accounted for by the chemical, basic metals and fabricated metal and equipment industries increased from one-third in 1973-74 to about 60 per cent in 1975-77. As a result, the average rate of capital formation in the HCI sector, which had increased at the same rate as light industry during the 1960s, was nearly twice as high during the HCI drive. Increased government involvement in the allocation of credit boosted the share of "policy loans"[5] from less than half of domestic credit in 1970 to 60 per cent in 1978. The government gave conditional incentives to encourage private investors to participate in officially-backed projects. In addition, state-owned enterprises were established in key industrial sectors such as steel and petrochemicals. Special industry-promotion laws favouring the machinery, iron and steel, non-ferrous metals, petrochemicals and shipbuilding industries also provided targeted benefits during the 1970s.

In addition, selective trade and tax policies were used as tools to promote key industries. Increased protection for heavy industries, particularly machinery, reversed the earlier trend towards reducing import licensing. Rising aggregate rates of effective protection introduced a significant anti-export bias. Marginal effective tax rates discriminated sharply between industries as a result of tax holidays, investment tax credits and accelerated depreciation granted to strategic industries. By the late 1970s, the difference between the marginal effective tax rate for the heavy and chemical industries and that for other industries had risen to 30 per cent.[6]

Economic liberalisation, 1980 to 1987

The new government which took office in 1980 faced serious economic problems: high inflation, a terms-of-trade loss stemming from the second oil shock, and over-investment and low profitability in certain of the industries favoured by the HCI drive. A macroeconomic stabilisation plan was accompa-

nied by a liberalisation of structural policies. Preferential credit and tax concessions were reduced to limit credit expansion and reduce the budgetary imbalance. Government intervention became more functional in nature and less industry- or firm-specific, making it more neutral and transparent. Important changes, which will be discussed in more detail in later chapters, occurred in policies governing financial markets, international trade, foreign direct investment and competition policy.

Contrary to initial intentions, only limited steps were taken in the early 1980s to liberalise the financial sector, which had long been dominated by the government. The commercial banks were privatised and the dispersion of regulated interest rates was reduced. Entry barriers to non-bank financial markets were relaxed. Selective industrial promotion laws were replaced by an industrial development law allowing the rationalisation of declining industries such as shipbuilding and overseas construction. The scale of financial problems in these industries prompted the government to assist their rationalisation via the banking system. Legal restrictions on the establishment of new ventures and fixed investments to expand production capacity were liberalised. Price control regulations were replaced in 1981 by a Fair Trade Act, intended to promote competition. Trade barriers were reduced by the 1984 five-year tariff reduction plan and the number of import items receiving automatic approval was increased. Finally, regulations governing inward direct investment and technology imports were liberalised to some extent.

Democratic reforms, 1987 to 1992

Economic reforms continued after the June 1987 declaration in favour of democratic reforms. Labour laws and practices were changed, allowing a sharp increase in the number of unions and members, but also leading to a rising number of labour disputes and strikes. Further progress was made in reducing barriers to trade. A second five-year tariff reduction plan, announced in 1989, has reduced rates on manufactured imports to levels comparable to those in the OECD area, while non-tariff barriers were also lowered. Remaining controls on current-account transactions were dismantled in 1988 when Korea accepted the obligations under Article VIII of the IMF's articles of agreement. Less progress was made in reducing restrictions on foreign direct investment. After falling

significantly between 1984 and 1987, the number of industries where foreign investment was prohibited remained constant between 1987 and 1992.

Reduced inflation and the emergence of current-account surpluses encouraged plans to further liberalise financial markets. A programme of interest-rate deregulation was announced in 1988. While some interest rates, such as those on money market instruments and corporate bonds, were liberalised, actual deregulation fell short of the plan. Controls remained on most deposits, except some long-term ones. A second programme, announced in 1991 to deregulate interest rates, included many elements from the 1988 plan that had not been implemented.

The new five-year economic plan, 1993 to 1997

Following the inauguration of Kim Young Sam in February 1993, the new government adopted a five-year economic plan for the period 1993 to 1997. Recognising that the growing complexity of the economy and political democratisation have rendered government interference in the economy less effective and more costly, the plan calls for reduced government control and guidance of the economy. A major goal is to reduce regulations on business activities, including those governing land use, environmental protection and industrial safety. Entry barriers limiting the establishment of new businesses will be lowered. Remaining price controls will be eliminated, while prices of public services will be rationalised.

A second major goal is financial market reform. A four-stage plan envisages a liberalisation of interest rates and an easing of financial market regulations. These changes are intended to promote the autonomy of financial institutions and allow the use of more indirect instruments to control the money supply. The changes will be accompanied by a gradual internationalisation and opening of Korea's financial market. Korea will prepare for OECD membership by liberalising 91 items in the capital account and 57 items in the current invisible trade account.

The government also plans to promote the internationalisation of the economy by increasing the transparency of trade-related policies and making domestic regulations consistent with international standards. Restrictions on inward and outward foreign direct investment will be eased. The competitiveness of Korean firms is expected to be enhanced through increased spending on research and

development, projected to account for 3 to 4 per cent of GNP by 1998. Labour force skills are to be upgraded through expanded vocational education. The plan also calls for increased economic co-operation between the Republic of Korea and North Korea.

According to the plan, at least half a million new housing units are to be built each year, with public apartments for low-income families accounting for about half. The rate of home ownership is projected to rise to 90 per cent by 1998. Increased investment in public transportation is planned to alleviate urban traffic problems and environmental protection will be given more emphasis. The government will continue to develop a Korean social welfare system.

The policies in the five-year plan, which are discussed in more detail in the following chapters, are expected to result in average growth of 7 per cent, raising per capital income to US$14 000 by 1998.

The evolution of the Korean economy

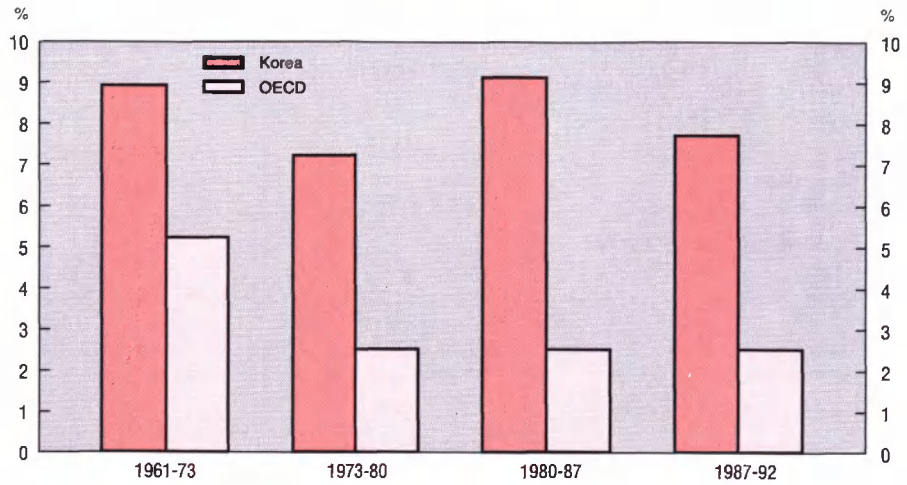
Economic growth and living standards

The Korean War (1950-53) destroyed almost two-thirds of productive capacity and almost one million people were killed. Following the end of the war, GNP growth of 4 to 5 per cent per year was realised during the period of reconstruction. After peaking in 1957, however, the growth rate declined to less than 2 per cent in 1960 with exports remaining negligible. Sustained economic take-off did not occur before a government firmly committed to economic development had been established in 1961. During the following 30 years, the average annual GDP growth rate of 8.4 per cent was one of the highest in the world. While the economy experienced several growth recessions, GDP growth never fell below a 7 per cent average in any of the periods shown in Diagram 1, opening a significant gap with the economy of North Korea (Box 1).

Rapid economic growth resulted in a marked improvement in living standards across all segments of the population. Real per capita income increased eight-fold between 1961 and 1992,[7] reaching nearly $7 000. The share of the population classified as living below the ''poverty line'' declined from 40 per cent in 1965 to less than 10 per cent. The improvement in living standards

Diagram 1. **GDP GROWTH IN KOREA AND THE OECD**

Annual average percentage change



Source: OECD; IMF.

is reflected in the rise in life expectancy from 47 to 71 years between 1965 and 1990 and a sharp decline in infant mortality.

Growth was accompanied by significant changes in the structure of the economy. The importance of agriculture, which accounted for more than one-third of GDP in 1961 and almost two-thirds of employment, declined sharply (Diagram 2 and Box 2). Meanwhile, the share of manufacturing in GDP doubled to a peak of one-third in 1987 before declining somewhat. There was also a significant shift in the composition of manufacturing output. Heavy industry, which includes chemicals, iron and steel, metals, machinery and transportation equipment, increased its share of manufacturing output from about one-fourth in 1961 to two-thirds by 1992. Heavy industry grew most rapidly in the seven years to 1980, more than doubling its share in GDP. The industries which grew most rapidly during the 1980s, *e.g.* consumer electronics and semiconductors, were not directly promoted by the HCI drive.

Official statistics suggest that the distribution of household income is one of the most equal among developing countries. Despite the "growth-first" strategy,

Comparison of North and South Korea

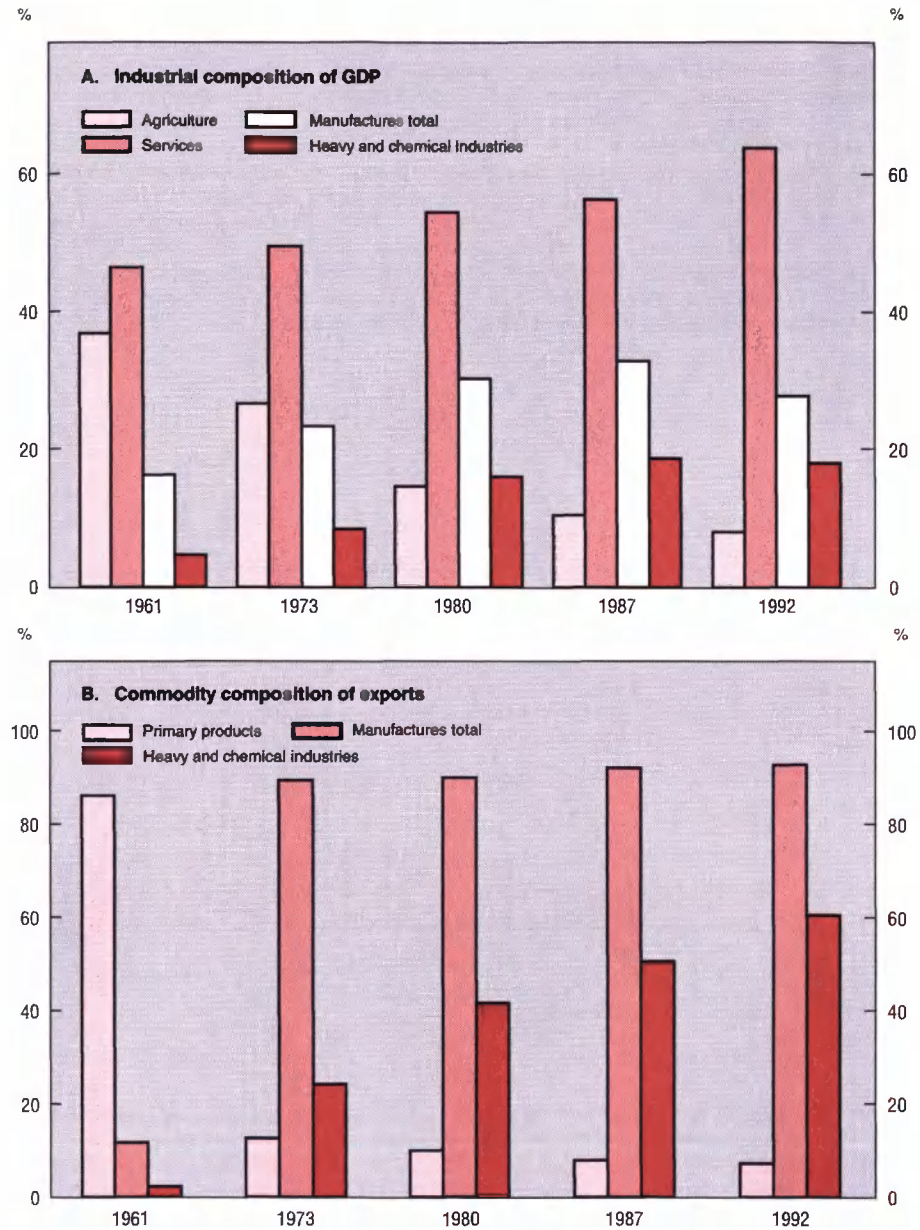
1990 unless otherwise noted

Item	Unit of measurement	South Korea	North Korea
A. SIZE			
Area	Thousand km^2	99.0	120.5
Population	Millions	42.8	21.8
Density	Population/km^2	432	181
B. ECONOMIC INDICATORS			
GNP	Billion US$	242.3	23.2
GNP per capita	US$	5 659	1 064
Exports	Billion US$	65.0	0.8
Imports	Billion US$	69.8	1.2
Trade/GNP	Per cent	55.6	8.6
C. SOCIAL INDICATORS			
Infant mortality rate	Deaths per thousand	25.0	28.0
Life expectancy	Years	71.0	69.5
Rural population	Per cent of population	27.9	40.2
Population growth, 1985-90	Annual rate of increase	0.9	1.8
Radios (1989)	Per 1 000 inhabitants	1 003	207
Televisions (1989)	Per 1 000 inhabitants	207	14
Newsprint consumption	Per 1 000 inhabitants	10 070	150
D. ECONOMIC PERFORMANCE			
Average GNP growth, 1987-90	Per cent	9.1	–0.5
Average export growth, 1987-90	Per cent	10.6	–2.7
GNP growth, 1991	Per cent	8.4	–5.2
Export growth, 1991	Per cent	10.6	–15.0

Note: Little is known about the North Korean economy. Basic data, such as population and GNP, are unavailable. The GNP estimate shown in the Table was estimated by the National Unification Board (part of the government of the Republic of Korea) on the basis of North Korean statistics on net material product and the government budget. This estimate is consistent with others made using different methods. The data on foreign trade is from the International Monetary Fund. The other indicators shown in the Table were reported in the *Statistical Yearbook* of the United Nations.

there was some decline in inequality (as measured by the Gini coefficient) during the 1960s (Table 1).[8] This contrasts with the usual pattern of rising income inequality during take-off periods.[9] Factors that may explain the apparent decline in income inequality include investment in education and the outward-looking strategy that promoted exports of labour-intensive manufactured products. The relatively even distribution of income at the start was probably the result of the

Diagram 2. **COMPOSITION OF GDP AND EXPORTS**



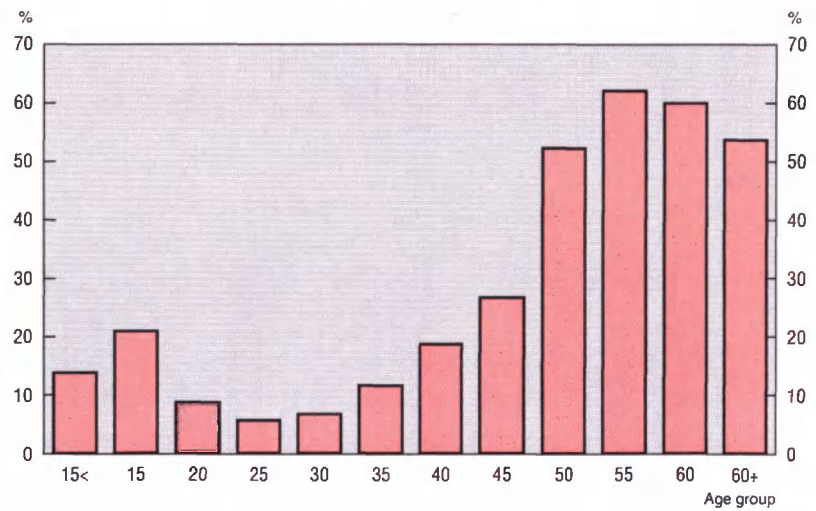
Source: Sakong (1993) and Yoo (1990).

The decline of the agricultural sector

Until twenty-five years ago more than 50 per cent of the labour force was still employed in agriculture. Since then, the share of agriculture has fallen rapidly, remaining high, however, by OECD standards. In 1990, only Greece and Turkey had a larger share. After remaining stationary between 1960 and 1980, the number of workers employed in agriculture fell in the 1980s. The total population living on farms has contracted considerably faster due to the exodus of young people out of farming and a fall in family size of those people who have remained on farms. As a result, the farm population has aged rapidly: only 31 per cent are currently accounted for by people aged between 20 and 49 and almost 39 per cent by people above 50. Demographic factors are likely to reduce the farm population to only 6 per cent of the total population within one generation, bringing it into line with the present share in the OECD area.

Diagram B1. **FARM POPULATION**

As per cent of non-farm population



Source: Economic Planning Board of Korea.

The share of agriculture in total output is less than half the share in employment. Part of the explanation for the low level of productivity is the part-time nature of a significant share of the agricultural labour force. In 1991, about 34 per cent of farm households were classified as part-time by the Ministry of Agriculture and only 54 per

(continued on next page)

(continued)

cent of the household income of farms came from agricultural activities. The total annual hours worked per household member is under 400. The low productivity also reflects the extremely small size of farms. The average farm size is slightly over 1 hectare while almost one-third of all farms are smaller than 5 000 square metres. For such small "farms", the total annual labour input is less than 200 hours per household member. It is only when the farm size reaches 1.5 hectare that the labour input of the entire household approaches that of an individual industrial worker.

The predominant agricultural crop is rice, accounting for over 30 per cent of agricultural output. The dominance of rice in output is a reflection of the dominance of rice in food consumption, where it accounts for 40 per cent of total calorie intake. However, the absolute level of rice consumption is now falling both on a per capita basis and in total. Consequently, rice production has been on a falling trend and all the increase in farm output has come from higher value crops such as vegetables or crops that require even less labour input such as fruit. The raising of livestock has been increasing, following the increased demand for meat in urban areas. As a result, the share of non-grain output in total output has risen from under 20 per cent to almost 60 per cent during the past three decades.

land reform instituted in the late 1940s. The only period when the labour share of income did not increase was during the 1970s, when heavy and chemical industries were strongly promoted and the large business groups, the *chaebols*, grew in importance.

The official statistics do not fully capture the impact of the rapid increases in real estate prices as neither capital gains nor imputed income from owner-

Table 1. **Household income distribution**

Percentage of total household income

	1965	1970	1976	1980	1985	1988
Per cent of households						
Upper 10 per cent	25.8	25.4	27.5	29.5	28.3	27.6
Upper 20 per cent	41.8	41.6	45.3	45.4	42.7	42.2
Lower 40 per cent	19.3	19.6	19.9	16.1	18.9	19.7
Lower 20 per cent	5.9	7.3	5.7	5.1	6.1	6.4
Gini coefficient	0.344	0.332	0.391	0.389	0.345	0.336

Source: Sakong (1993).

occupation are recorded. Between 1975 and 1988, real land prices rose threefold, increasing the degree of inequality since land ownership in Korea is highly concentrated: the top 5 per cent of landowners own about two-thirds of the total area of privately owned land but the concentration by value may be less.[10] The concentration of ownership amongst all households is even higher since the vast majority of households in urban areas do not own any land.

Sources of growth

The rapid growth of factor inputs, primarily capital and labour, has been the major source of growth. Total factor productivity (TFP) growth, defined as the increase in output per unit of input, has not been unusually high. During the period 1963 to 1990, TFP increased at an average rate of 2.4 per cent, accounting for about one-quarter of total output growth (Table 2).[11]

During the export promotion period (1961 to 1973), labour input increased at a 3.2 per cent annual rate, reflecting both increases in employment and hours worked. The contribution of business investment was much less important during

Table 2. **Growth of GDP and its sources**
By sub-period, in per cent

	1963-1973	1973-1979	1979-1990	1963-1990
GDP growth rate (annual average)	9.00	9.26	8.21	8.74
Contribution to growth:				
Factor inputs	5.64	7.01	6.66	6.36
Business labour input	3.18	3.49	2.66	3.04
Employment	2.28	2.13	1.64	1.99
Hours worked	0.50	0.52	–0.07	0.27
Age-sex composition	–0.06	0.30	0.14	0.10
Education	0.47	0.55	0.94	0.68
Non-residential capital input	1.19	1.79	2.66	1.92
Fixed non-residential private capital	0.41	0.89	1.93	1.14
Inventories	0.78	0.90	0.73	0.79
Residential capital input	1.24	1.67	1.26	1.35
Land	0.03	0.06	0.08	0.06
Output per unit of input	3.37	2.25	1.55	2.38
Improved resource allocation	1.23	1.76	0.96	1.24
from agricultural inputs	1.17	1.55	0.84	1.12
from non-agricultural self-employed	0.06	0.21	0.12	0.12
Effect of weather on farming	0.23	0.18	–0.11	0.08
Economies of scale	0.26	0.34	0.21	0.26
Advances in knowledge and n.e.c.	1.64	–0.02	0.50	0.80

Source: Pilat (1993).

this take-off period. By contrast, TFP growth was relatively rapid, boosted, *inter alia*, by massive migration of agricultural workers to higher productivity jobs in manufacturing and services. The share of agriculture in the labour force declined from almost 65 per cent in 1960 to less than 50 per cent in 1973. Advances in knowledge, together with residual factors, also made a significant contribution to growth during the decade following the adoption of an outward-oriented policy stance.

Factor inputs increased even more rapidly during the HCI drive (1973 to 1979); labour force growth remained above 3 per cent, while capital accumulation accelerated. Despite faster input growth, GDP growth remained broadly unchanged, however, due to a decline in TFP growth. This slowdown occurred despite a continued shift of farm workers to urban areas that reduced the share of agricultural labour to one-third by 1980. In contrast to the previous decade, though, advances in knowledge and other residual factors failed to contribute to growth, suggesting that the economy operated less efficiently during the 1970s.

Labour input expanded less rapidly during the 1980s as employment growth decelerated and working hours declined. This was possibly offset by a better-educated labour force: the average years of schooling increased from seven years per worker in the 1970s to over ten in 1990. The share of investment increased to one-third of GDP, making non-residential capital inputs as important as labour inputs. TFP growth decelerated as a result of a smaller contribution from the reallocation of agricultural workers to manufacturing and service sector jobs. Advances in knowledge and other residual factors, once again, made a positive contribution during the 1980s. Expenditures on capital-good imports remained high and domestic R&D expenditures increased as a share of GDP. Technology licenses increased following liberalisation of the rules restricting them in the early 1980s. Of the $6.1 billion in royalty payments since 1962, over 90 per cent was for technology imported after 1981. Almost half of the royalty payments went to the United States and another third to Japan.

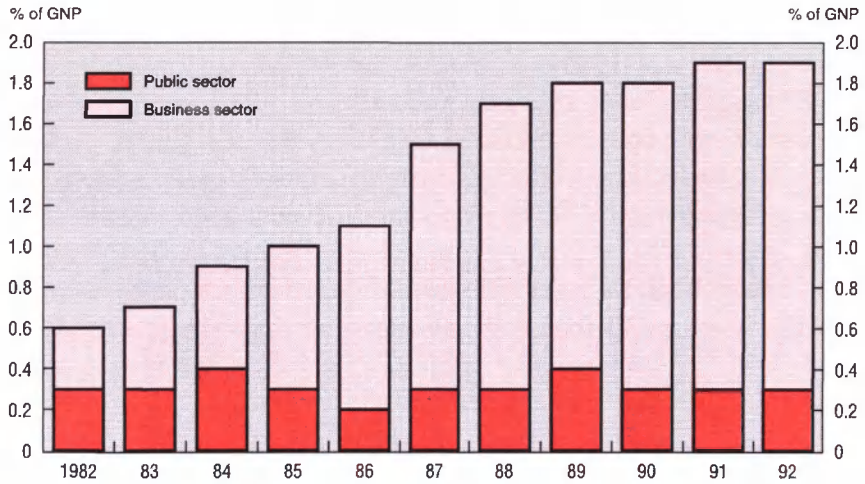
While TFP growth has not been outstandingly rapid in any of the periods reviewed above, increases in labour productivity have been rather exceptional. Labour productivity increased at an 8 per cent annual average rate between 1970 and 1990. The rapid increase in the capital stock was a key factor boosting the productivity of workers. The amount of capital per worker nearly tripled between 1966 and 1985 and has increased further since (Box 3).

Technology policy in Korea

The rapid economic growth described above owes much to the combination of imported technology and low labour costs. This development path has become more difficult to follow in recent years for several reasons. First, foreign firms have become more reluctant to share technology through licensing as the gap between the technology of Korean firms and their competitors narrowed, and second, economic development has resulted in a major increase in labour costs which has progressively eroded the initial large competitive edge.

The business sector has responded to the changed environment by significantly increasing its expenditure on research and development. Business R&D expenditure has risen rapidly, to about 1.6 per cent of GNP by the early 1990s, more than in typical OECD countries (Diagram 1). Government expenditure in this area has remained constant at about 0.3 per cent of GNP. The major part of the industrial effort is targeted on technology improvement rather than basic research with patent registrations by Korean companies outside Korea being virtually non-existent. The orientation of the R&D effort towards applied technology is also confirmed by articles published in international scientific journals.

Diagram B2. **BUSINESS AND PUBLIC SECTOR EXPENDITURE ON RESEARCH AND DEVELOPMENT**



Source: Ministry of Science and Technology.

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Government policy has aided the growth of expenditure by the provision of a favourable tax environment. Apart from being regarded as cost of production in company taxation, the government grants a tax credit equal to 10 per cent of such expenditures. Capital expenditure for research facilities also generates tax credits and can be depreciated more rapidly than other physical assets. These policies were introduced in 1989.

Government policy towards the import of technology through licensing arrangements was liberalised at the end of the 1970s and the beginning of the 1980s. Starting from an initial situation where any technology import contract that involved royalty payments had required prior government approval, by 1984 the import of technology through royalty arrangements only required notification of contracts to the government. This liberalisation led to a rapid increase in royalty payments from an annual average of about $100 million before the liberalisation to over $1 billion by 1990. However, the number of cases of technological licensing has fallen since 1989. All through this period, it would appear that firms have preferred to import technology through the purchase of capital equipment taking advantage of the training and assistance provided when such sales took place.

Looking ahead, policies are aimed at achieving a 5 per cent share of R&D expenditure in total GNP by 2001. The intermediate goal is to raise the share of expenditure to 3.5 per cent of GDP by 1996. Viewed against high R&D expenditure countries abroad, such goals look very ambitious. Government R&D expenditure is projected to rise 18 per cent per year over the next five years, about 5 percentage points faster than the expected increase in GNP. Part of the finance should be provided by increasing the proportion of the defence budget spend on R&D from 2.6 per cent to 7 per cent. In addition, a special levy on publicly-owned corporations is planned to be introduced and finally a Science and Technology Promotion Fund will be created. This fund will be empowered to make subsidised loans for funding core technologies and to subsidise basic technological projects. In addition, the government has created a new specialised bank (the Korea Technology Banking Corporation) that will lend to companies that have a demonstrated record of technological innovation. In addition, the KTB has a specialised unit that will attempt to ensure that the transition from R&D results to commercial products is achieved in a more efficient and systematic manner.

Although the government will limit its direct expenditure, it has decided on key production areas such as ultra-large scale semiconductors, broad band data transmission, high definition television, new drugs and manufacturing technologies where it will help to finance product development and ensure co-operative research efforts. In addition, the government will aid fundamental technological development in advanced materials, advanced vehicle technology, bio-materials and nuclear reactors. To the extent that this R&D work takes place in the public sector it will be in research institutes that will have to bid for contracts from the private sector; little work will take place in the university sector.

If R&D expenditures are to grow at more than double the growth rate of the economy in the next five years, there will be a need to raise significantly the number of

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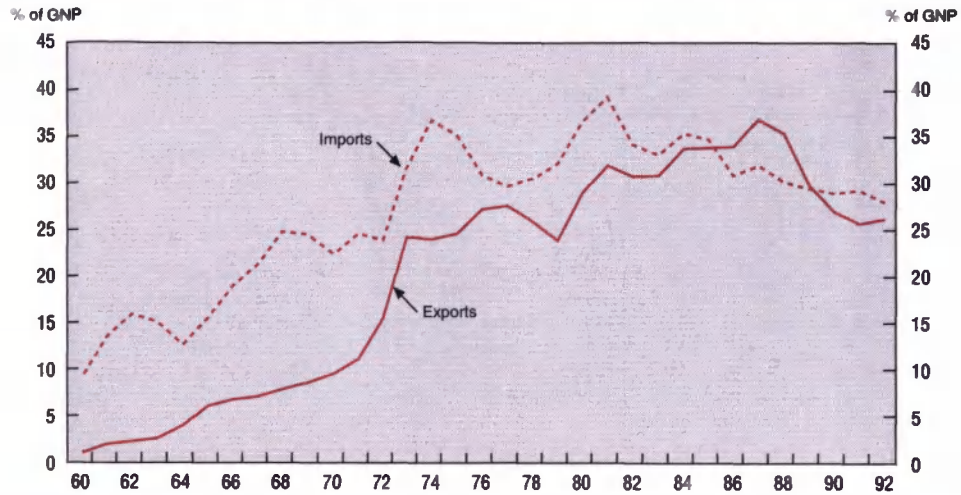
science and technology graduates from universities. At present, about 41 per cent of new enrolments are in the science and technology areas, though the proportion falls to 35 per cent on graduation. The government hopes to raise this proportion of enrolments to 55 per cent by 1996. This may require some changes to the science curriculum in high schools in order to broaden the knowledge of science-based students. For the lower level of technicians, the government aims to increase the share of students attending vocational high schools from 30 per cent to 50 per cent, providing a technical route to qualification.

External sector

Exports played a key role in economic development, particularly during the 1960s and 1970s. Until 1960, exports were low and foreign exchange was provided by a large aid programme. Between 1961 and 1973, however, the volume of exports increased at an annual rate of 35 per cent, increasing its share of GDP from less than 1 per cent to 24 per cent (Diagram 3). The key events in this process were the decisions in 1963 to abandon multiple exchange rates, devalue the currency and to introduce a foreign trade regime that allowed ''quasi'' free trade for the export sector. While export growth moderated during the 1970s and 1980s, Korea's share in world markets continued to rise until 1988 (Diagram 4). International competitiveness was preserved by frequent currency devaluations before 1980. After 1980, the exchange rate regime has been changed to one of managed floating, with the daily exchange rate movements being limited relative to the market average rate of the previous day. International competitiveness was permitted to fluctuate significantly during the 1980s.

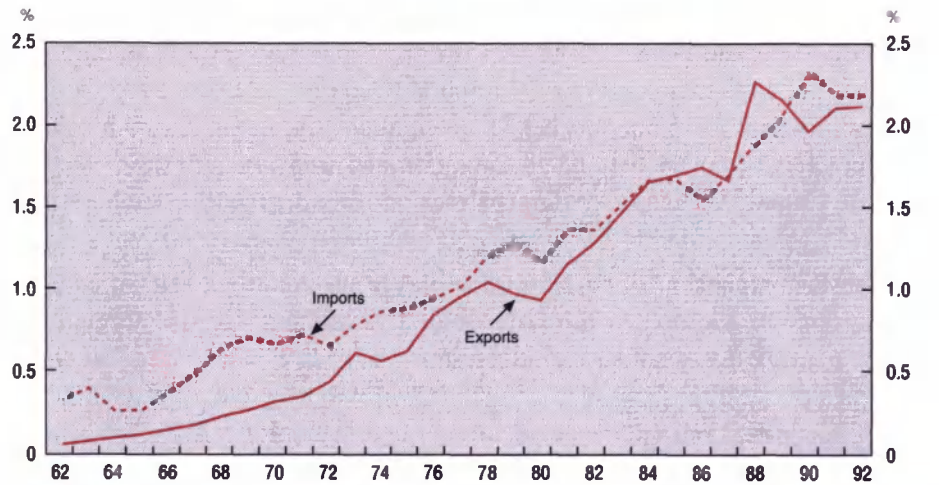
Rapid export growth was accompanied by a sharp change in the composition of exports. In 1961, raw materials, lumber, agriculture and fishery goods were the most important items (Table 3). During the past 30 years, however, the share of manufactures in total exports has increased from 12 per cent to 95 per cent (Diagram 2, Panel B). The composition of manufactures has also changed significantly since 1972 when labour-intensive products, such as textiles and apparel, wigs and footwear accounted for two-thirds of exports. In 1991, more advanced products, led by electronic goods, dominated the list of major

Diagram 3. **MERCHANDISE EXPORTS AND IMPORTS**



Source: Yoo (1990).

Diagram 4. **KOREA'S SHARE OF WORLD TRADE**



Source: IMF.

Table 3. **The commodity structure of exports**

Per cent of total exports

1961		1975		1991	
Export	Percentage	Export	Percentage	Export	Percentage
1. Iron ore	13.0	Textiles, garments	36.2	Electronic products	28.0
2. Tungsten	12.6	Electronic products	8.9	Textiles, garments	21.5
3. Raw silk	6.7	Steel products	4.6	Steel products	6.3
4. Anthracite	5.8	Plywood	4.1	Ships	5.7
5. Squid	5.5	Footwear	3.8	Footwear	5.3
6. Other fish	4.5	Deep-sea fish	3.6	Chemical products	4.2
7. Graphite	4.2	Ships	2.7	General machinery	3.3
8. Plywood	3.3	Metal products	2.4	Automobiles	3.2
9. Grain	3.3	Petroleum products	1.9	Fishing products	2.3
10. Animal fur	3.0	Synthetic resin products	1.7	Petroleum products	2.0
Total	62.0		69.9		81.9

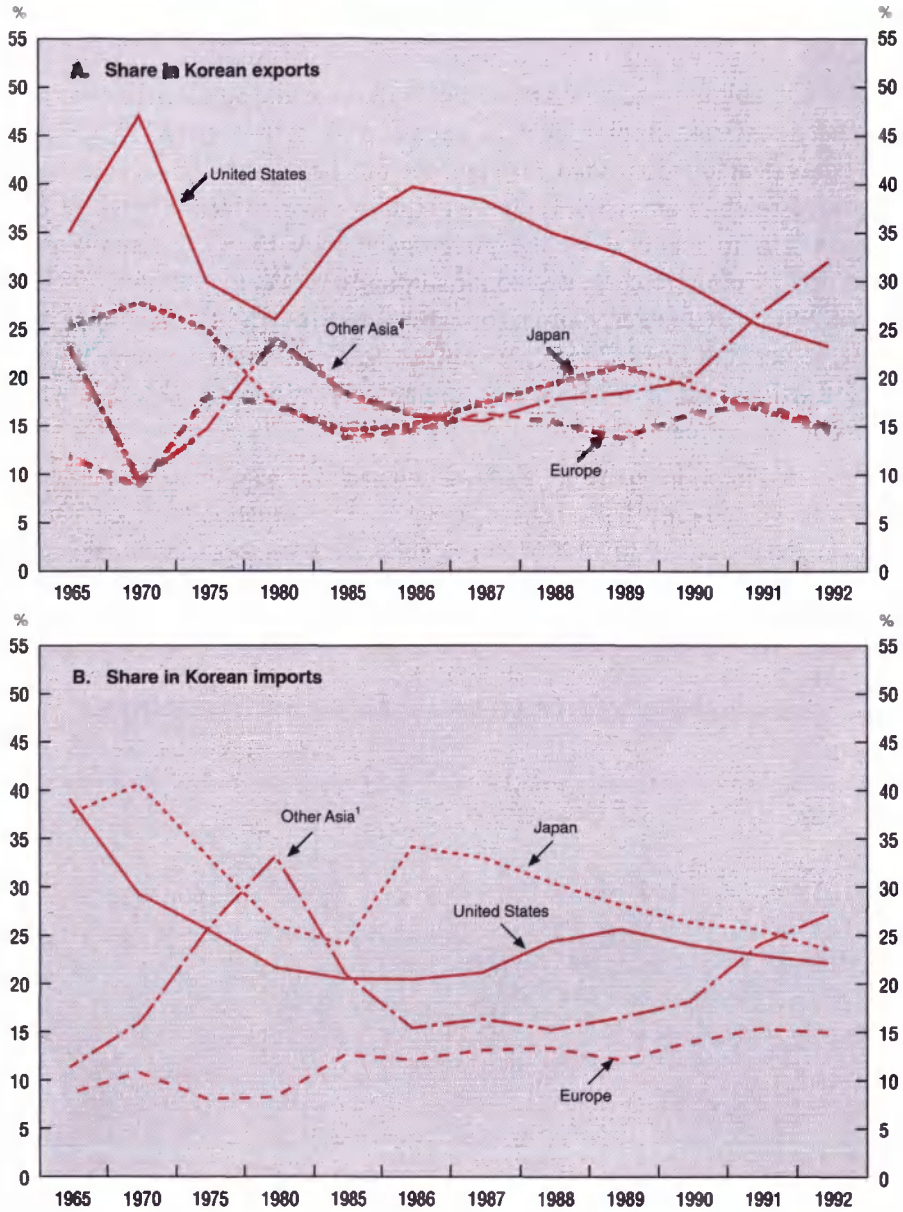
Source: Sakong (1993).

exports. Since 1961, the share of technologically-advanced goods has increased from 2 per cent to 60 per cent. Firms have shown considerable flexibility in changing the commodity structure of exports, more than in comparable countries.

Until 1990, the United States was the most important export market, while Japan has been the major supplier of imports (Diagram 5). Since 1986, however, the importance of these markets has fallen significantly. In 1992, Asian countries excluding Japan ranked first in both exports and imports, reflecting the emergence of China as a major trading partner and rapid growth elsewhere in the region.

The fast expansion of foreign trade played an important role in economic development. In addition to the static allocative efficiency gains, foreign trade made it possible to establish manufacturing plants sufficiently large to capture economies of scale. Exports also accelerated growth by promoting the establishment of new industries and the acquisition of new technology. Exporters relied on foreign buyers for product-design technology and for product improvement. This was particularly important since foreign direct investment, a common source of technology transfer in many countries, was relatively unimportant in Korea.

Diagram 5. **DIRECTION OF TRADE**

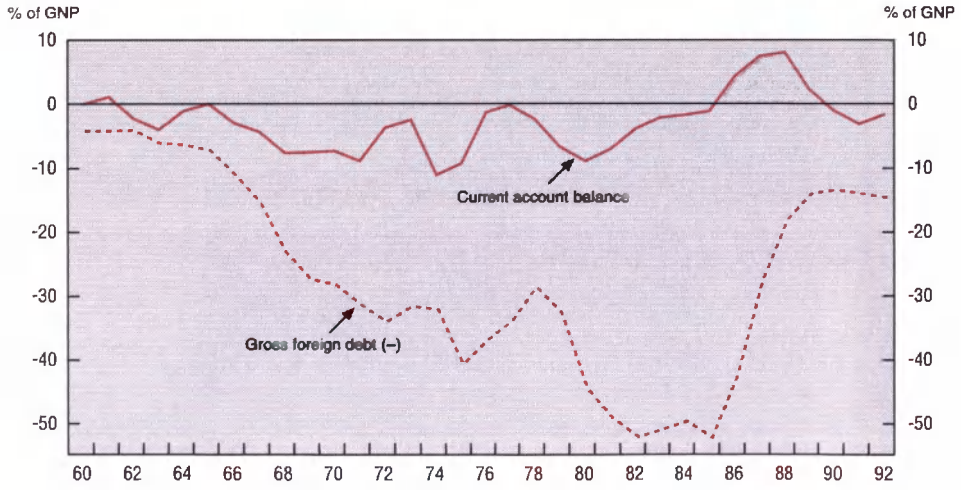


1. Including Middle East.
Source: Sakong (1993).

There were trade and current-account deficits in every year from 1966 to 1985.[12] The deficits were financed primarily by foreign borrowing (Diagram 6), with additional borrowing (about a quarter of the total) used to augment foreign reserves. The ability to borrow abroad helped to ease the adjustment to terms-of-trade changes. Gross foreign debt reached a peak at just under $50 billion in 1985, equivalent to more than 50 per cent of GDP. Although Korea was the fourth-largest debtor among developing countries, foreign debt was never of any major concern to creditors as the government took timely measures to limit foreign debt. The large current-account surpluses between 1986 and 1989, coupled with strict exchange controls, brought the debt-export ratio down from a peak of 30 per cent in 1987 to 6 per cent in 1991. Although the current account has since swung back into deficit, net foreign debt amounts to less than $10 billion, about 3½ per cent of GDP.

Foreign direct investment (FDI) accounted for less than 15 per cent of capital inflows and only 1 per cent of gross capital formation between 1962 and 1990 (Table 4). Until 1980, half of Korea's industrial sectors were closed to FDI. In the open sectors, FDI was discouraged by export requirements and foreign

Diagram 6. **CURRENT ACCOUNT BALANCE AND GROSS FOREIGN DEBT**



Source: IMF; Sakong (1993).

Table 4. **Capital inflow and domestic investment**

Millions of dollars, per cent

	Capital inflow [1]	Foreign direct investment	Loans			Foreign direct investment as a percent of:		
			Public	Commercial	Total	Total loans	Fixed capital formation	Capital inflow
1962-66	309	17	116	176	292	5.8	0.7	5.5
1967-71	2 262	96	811	1 355	2 166	4.4	1.1	4.2
1972-76	5 989	557	2 389	3 043	5 432	10.3	2.4	9.3
1977-81	14 798	1 666	5 751	7 381	13 132	12.7	1.9	11.3
1982-86	13 059	1 040	6 690	5 329	12 019	8.7	0.8	8.0
1987-90	9 571	3 228	2 907	3 436	6 343	50.9	1.3	33.7
Total 1962-90	45 988	6 604	18 664	20 720	39 384	16.8	1.3	14.4

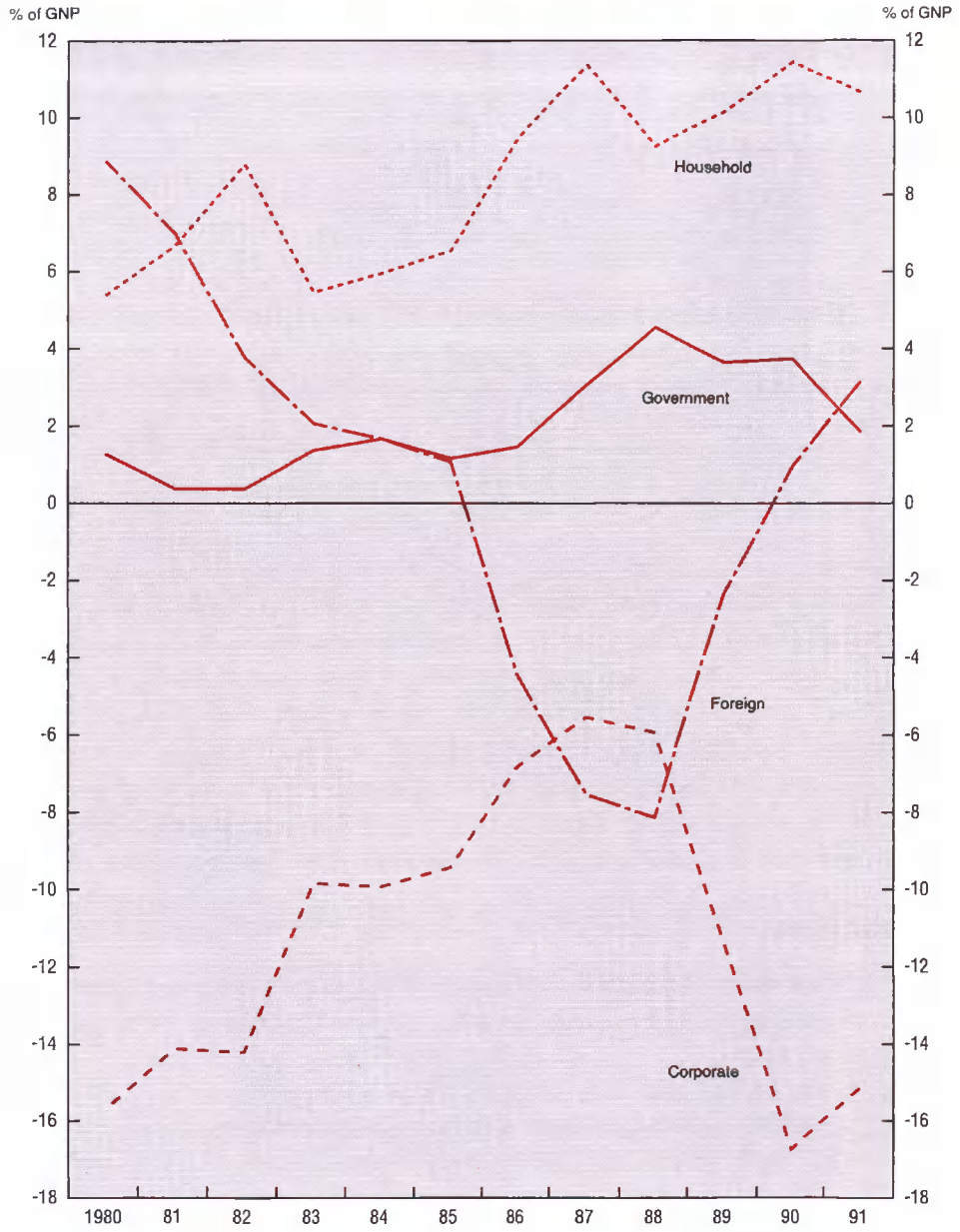
1. Capital inflow equals foreign direct investment plus total loan.
Source: Sakong (1993).

equity share limits that were strictly enforced by the government. The value-added of all foreign affiliates in Korea remained less than 2 per cent of GDP during the 1980s. FDI has increased since the easing of regulations in 1982; more than 60 per cent of the inflow of $8 billion during the past 30 years was invested between 1987 and 1991. While the service sector attracted the biggest part of FDI in the second half of the 1980s, manufacturing accounts for about 70 per cent of total FDI inflows since 1962. Japan and the United States are the most important foreign investors in Korea, accounting for more than 70 per cent of the total.

Internal balance

The counterpart of the current external deficit prior to 1986 was a persistent excess of domestic capital formation over the level of saving. The national savings ratio, however, increased sharply from around 10 per cent of GDP in 1960 to 36 per cent in 1986. The main source of the increase was a sharp rise in the personal saving rate, which reached 19 per cent of disposable income in 1986. A turnaround of regulated interest rates from a level below to a level above inflation occurring during the early 1980s probably contributed to the increase in the saving propensity. Between 1982 and 1987, domestic saving was also boosted by an exchange-rate-induced surge of corporate sector profits, leading to a

Diagram 7. **FINANCIAL BALANCES BY SECTOR**



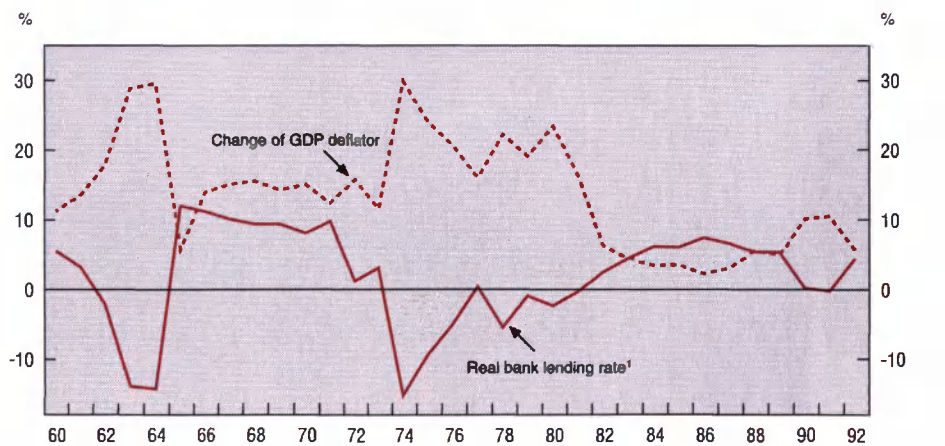
Source: Bank of Korea.

marked reduction in the corporate sector deficit. When domestic demand and output rose in the period after 1987, there was pressure on domestic resources. Inflation rose and international competitiveness weakened. Corporate profitability declined markedly but rapid demand growth kept investment growing. As a result, the corporate financial balance worsened and the current account moved into deficit.

Inflation was high until the early 1980s. Between 1954 and 1981, the GDP deflator remained above 10 per cent in all except three years. Indeed, during the period of most rapid growth from 1963 to 1979, the annual increase in the GDP deflator averaged 17 per cent (Diagram 8). Inflation was especially high following the first oil shock in 1973. Various administrative controls to limit price increases were introduced at different points in time. Government-directed investment programmes in heavy industries added to inflationary pressures during the HCI drive.

Within two years the stabilisation policies adopted in 1980 had reduced inflation. In the remaining five years of the liberalisation period, 1982 to 1987,

Diagram 8. **INFLATION RATE AND REAL BANK LENDING RATE**



1. The real bank lending rate is defined as the nominal lending rate less inflation measured by change of the GDP deflator.

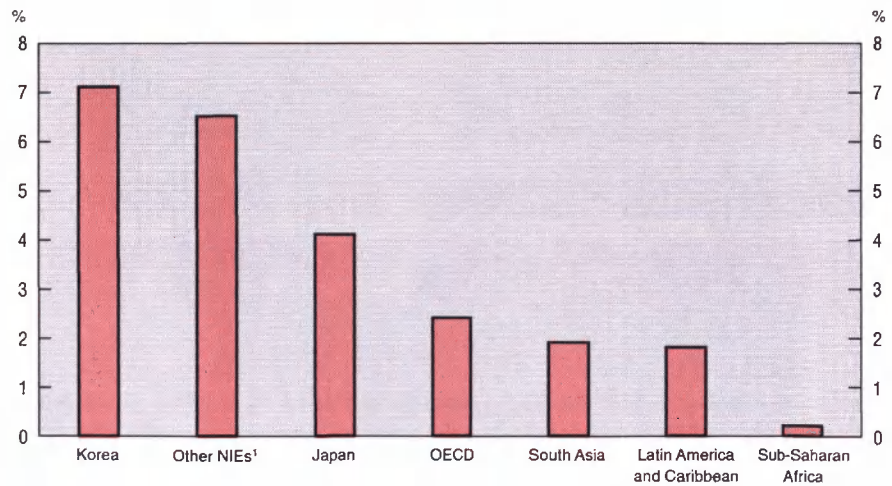
Source: Bank of Korea.

the annual rise in the consumer price index averaged 2¾ per cent. In 1989 and 1990, the government reduced its budget surplus by stepping up spending on infrastructure and housing, thus reversing a slight slowdown that had occurred in economic growth in 1989. The shift in priorities away from inflation control towards stimulating growth entailed an acceleration of the GDP deflator to more than 10 per cent in 1990 and 1991. A stabilisation programme helped to reduce inflation in 1992.

An international comparison of the economy

By any standard, Korean economic growth during the past 30 years has been remarkable. Between 1965 and 1990, per capita GDP increased at a 7 per cent annual rate. The Korean performance compares favourably with other developing regions, including other fast-growing economies in East Asia (Diagram 9). Rapid growth allowed per capita income to converge from 5 per cent of the U.S. level in

Diagram 9. **AVERAGE ANNUAL GROWTH OF GNP PER CAPITA**
1965-1990



1. Taiwan, Hong Kong and Singapore.
Source: World Bank (1992), Bank of China.

1960 to 29 per cent in 1992, exceeding that of Turkey and almost on par with Portugal and Greece.[13]

Despite the relatively low level of income, Korea has many of the characteristics of an advanced country (Table 5). The manufacturing sector accounts for a relatively large share of output and its share of exports is higher than in any OECD country except Japan and Switzerland, reflecting a lack of natural

Table 5. **The Korean economy in perspective**

Item	Unit of measurement	OECD (1992)			Korea	
		Maximum	Minimum	Average	1992	Rank[1]
A. Size						
Area	Thousand km^2	9 976.0	3.0	133.6	99.0	17
Population	Millions	255.1	0.3	36.1	43.7	8
Employment	Millions	117.6	0.1	15.7	18.9	7
GDP	Billion US$	5 880.1	6.6	762.6	296.8	10
B. Structure						
Exports	Per cent of GDP	58.0	7.6	23.7	25.8	6
Manufactured exports/ total exports[2]	Per cent	97.6	6.5	69.3	92.8	3
Net public debt[3]	Per cent of GDP	123.4	–17.2	35.7	–5.5	15
Government expenditure[4]	Per cent of GDP	67.3	32.2	48.4	24.5	22
Gross fixed investment[2]	Per cent of GDP	31.7	15.4	21.0	35.8	1
Enrolment in tertiary education[5]	Per cent	75.0	14.0	35.7	39.0	7
Population under 15[5]	Per cent	35.2	16.2	20.0	24.8	3
Fertility rate[6]		3.3	1.3	1.8	1.8	12
Population growth rate	Per cent	2.0	–0.1	0.6	0.9	8
Life expectancy	Years	79.2	67.3	76.3	71.7	24
C. Performance						
Average inflation (1987-92)[7]	Per cent	15.3	2.2	5.2	7.1	5
Average GDP growth (1987-92)	Per cent	4.8	–0.5	2.2	7.7	1
GDP per capita	US$	35 105	1 879	20 405	6 798	24

1. Position of Korea in a group of 25 countries consisting of the 24 OECD countries and Korea.
2. 1991.
3. Data are available for only 15 of the OECD Member countries. The figure for Korea is the net debt of the central government. Local governments are not allowed to borrow.
4. General government. Data are available for 21 of the OECD Member countries.
5. 1990.
6. Births per 1 000 women.
7. Change in CPI, 1987-92. Turkey is excluded.

Source: OECD; World Bank; IMF; Bank of Korea.

resources. Education is important in Korea, which would rank seventh in the OECD in the percentage of young people enrolled in tertiary education. The rapid increase in living standards in Korea accelerated its demographic transition. Declines in both death rates and birth rates have left the population growing at slightly more than that of the OECD average; and population density is higher than in any OECD country and second highest in the world.[14]

In other respects, though, Korea is significantly different from OECD countries. The public sector is relatively small. Despite devoting as much as 5 per cent of GDP to defence, the share of government expenditure in GDP is lower than in any OECD country, helping the government remain a net creditor, a position shared by only two OECD countries. The size of the public sector is likely to expand as Korea continues to introduce social welfare programmes. The share of investment in GDP is substantially higher than in any OECD country.

Despite rapid change in the composition of output and employment, the sectoral structure of the economy differs in several respects from that of a typical OECD country (Table 6). In 1992, the share of agriculture in total output and

Table 6. **Sectoral composition of GDP and employment, 1992**[1]

Korea and OECD average

Per cent

Sectors	GDP		Employment		Relative labour productivity[2]	
	Korea	OECD average	Korea	OECD average	Korea	OECD average
Agriculture, livestock, fishing and forestry	7.6	5.2	15.9	9.4	48	56
Mining (including petroleum)	0.4	2.1	0.4	0.5	100	423
Manufacturing industry	27.3	25.0	25.2	24.6	108	101
Construction	15.2	7.7	8.7	9.2	175	84
Utilities	2.1	3.4	0.4	1.1	525	311
Commerce, restaurants and hotels	10.1	17.5	22.4	22.5	45	78
Transportation and communication	7.2	8.3	5.3	7.8	136	107
Financial services, insurance and real estate	16.6	21.0	6.0	10.2	277	206
Community services	13.4	9.7	15.7	14.9	85	66
Total economy	100.0	100.0	100.0	100.0	100	100

1. 1992 for Korea, latest available year for other countries. Due to data limitations, the average, which is an average of individual OECD countries, excludes Iceland and Switzerland.
2. Relative to average productivity.

Source: Bank of Korea; OECD.

employment was significantly higher than the OECD average. Construction's share of output, which was increased by a large housing construction programme, was double the OECD average. Despite some recent decline in the relative size of the manufacturing sector, its share of GDP is still higher than the OECD average. The sectoral pattern of relative labour productivity is similar to that in the OECD area, but the gap between the low productivity sectors, agriculture and distribution, and high productivity sectors is larger.

The impact of government policy on development

Korean economic development was accompanied by extensive government intervention in the form of trade restrictions, subsidies and credit allocation. The impact of these policies remains an issue of controversy between two schools of thought, commonly labelled as neo-classical and revisionist.[15] The neo-classical interpretation stresses the importance of getting the economic fundamentals right and attributed Korea's outstanding performance to its high level of investment, its sound fiscal policies, its heavy investment in education and its relatively high degree of openness to world markets. The revisionist interpretation, in contrast, stresses the importance of government intervention in guiding the economy. According to this view, the government was able to improve the market outcome and accelerate economic growth by deliberately distorting prices and incentives.[16]

Government policies to promote heavy and chemical industries have influenced the structure of the economy, the most prominent case being the steel industry. Some commentators have therefore described Korean policies as an example of successful intervention to promote infant industries.[17] Other industries, such as electronics, have developed with much less government guidance. Some industries, especially chemicals and allied areas, have had difficulty in becoming internationally competitive and were in need of more support.

It is difficult, though, to see major changes in economic performance during periods of markedly different economic policies. Indeed, during the past 30 years economic growth averaged between 7 and 9 per cent in each of the four successive policy regimes. This remarkable stability suggests that underlying economic fundamentals rather than changing industrial policy regimes constituted the key to Korea's favourable economic performance, a conclusion supported by a recent World Bank study.[18] It is relevant to note, however, that some of the favourable

fundamentals are either the direct outcome of policies, *e.g.* small size of the public sector and public debt, or are influenced by policy, *e.g.* levels of investment in physical and human capital.

The policies used to influence the allocation of resources between industries, such as taxes, subsidies, credit rationing and import restrictions, have also been widely used by less successful developing countries. To the extent that economic development has been inhibited by such policies, it has obviously been less so in Korea. According to Amsden, "government discipline over business has enabled subsidies and protection to be less than elsewhere and more effective".[19] The emphasis on exports provided some rationality and discipline over government intervention, while the pressures of international competition promoted efficiency in the private sector.

Although the export-oriented strategy appears to have mitigated the distortionary effects of intervention, by 1980 the government was concerned about adverse effects of extensive intervention on economic efficiency. Indeed, the growth of total factor productivity in the favoured capital-intensive industries almost ceased during the HCI drive, contrasting with continued growth of about 1½ per cent in light industry. This, coupled with problems of excess demand and over-investment in certain favoured sectors which had emerged in the wake of the HCI drive, prompted the government to initiate a process of reducing intervention and regulation, a policy that was continued throughout the 1980s and that is the foundation of the recently announced five-year plan.

III. Recent trends and prospects

The economy appears to be in a recovery phase from the 1992-93 growth recession, Korea's sharpest downturn since 1980. The recovery is being led by increased construction and equipment investment. These two components of demand had been particularly affected by the 1991 economic stabilisation programme introduced to slow the overheated economy. The ensuing slackening of output growth was accompanied by a decline in inflation and a reduction in the current-account deficit. With the unemployment rate still rather low, the pick-up in economic activity risks accelerating the rate of inflation, which after two years of relatively slow economic growth has remained uncomfortably high at 5 to 6 per cent.

The 1992 economic downturn

The conjunctural weakness during 1992-93 was a reaction to previous unsustainably rapid growth. Supported by favourable external factors, GNP grew by 40 per cent between 1985 and 1988. The upswing showed some signs of slackening in 1989, when growth dropped 1 per cent below the rate of potential growth. The government sought to prolong the upswing, primarily by increasing public investment. Central government expenditure was increased by 22 per cent and a large housing construction programme was started. The budget deficit widened by 2 per cent of GNP between 1989 and 1991. These policies helped boost growth in 1990 and 1991 to above 8 per cent. Signs of overheating quickly reappeared. The unemployment rate fell to 2.4 per cent in 1990. By the end of 1990, inflation as measured by the consumer price index accelerated to over 9 per cent (Table 7). The current account, which had been in surplus between 1986 and 1988, moved steadily into deficit, reaching about 3 per cent of GDP by 1991.

The stance of policy was markedly tightened during 1991. Short-term interest rates rose to 19 per cent and the expansion of broad money slowed down

Table 7. **Prices and wages**

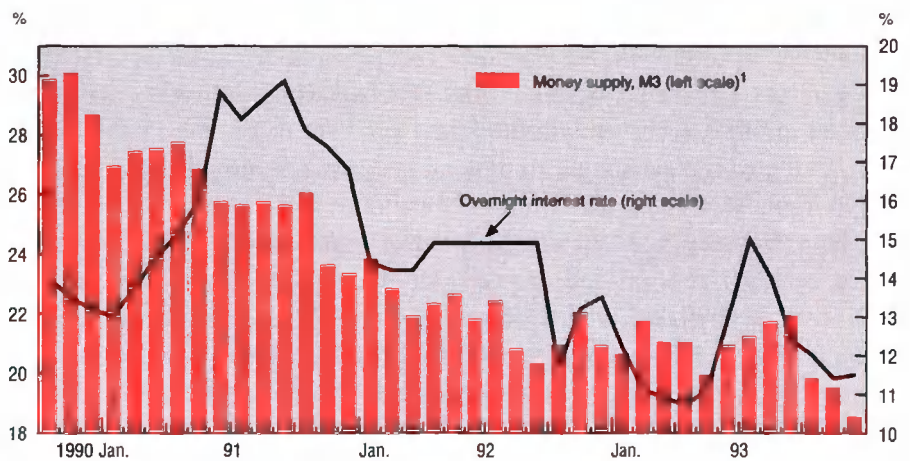
Percentage change year-over-year

	1990	1991	1992	1992: 1H	1992: 2H	1993: 1H	1993: 2H	December 1993
GDP deflator	10.7	11.1	6.2	6.8	5.9	..	..	–
Export prices	2.9	3.8	2.6	2.9	2.4	2.1	2.8	2.7
Import prices	–1.0	–0.3	1.4	–0.8	3.8	4.5	2.5	2.0
Consumer prices	8.6	9.3	6.2	7.1	5.4	4.7	4.9	5.8
Food	10.0	12.4	6.1	8.0	4.5	2.5	7.4	8.0
Non food	7.6	7.9	6.2	6.6	5.8	5.7	4.9	4.7
Producer price of manufactures	2.4	3.9	1.9	1.4	2.4	2.1	1.0	0.8
Average manufacturing earnings	20.2	16.9	15.7	17.7	13.9	11.4	–	7.8[1]

1. October.

Source: Bank of Korea, *Monthly Statistical Bulletin.*

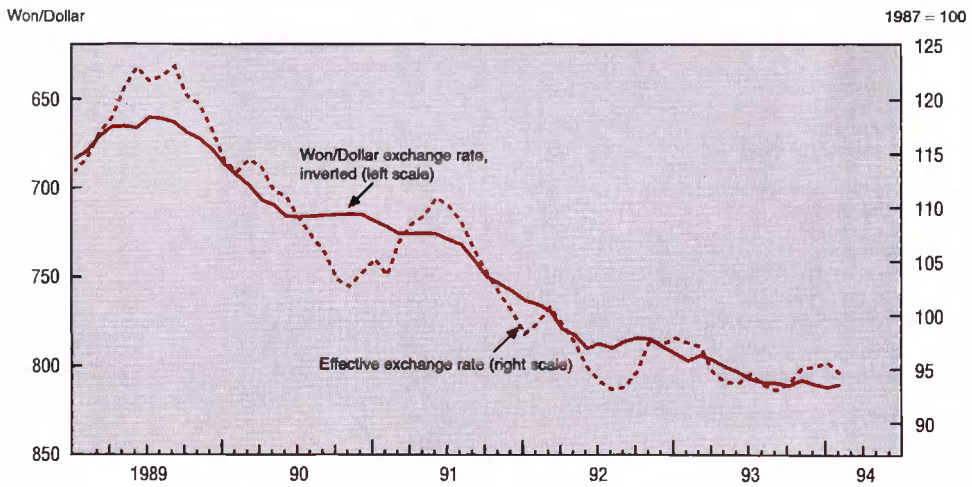
Diagram 10. **SHORT-TERM INTEREST RATE AND THE GROWTH OF BROAD MONEY**



1. Percentage change over 12 months.

Source: BanK of Korea.

Diagram 11. **NOMINAL AND EFFECTIVE EXCHANGE RATES OF THE WON**



Source: OECD.

during the year (Diagram 10). Fiscal policy was also tightened. By the beginning of 1992, the growth of nominal demand had moderated markedly and the trend of prices flattened. With monetary targets being kept unchanged, short-term interest rates started to fall and by the end of the year had dropped to 13 per cent. In the 1992 budget, the increase in central government nominal expenditures was limited to 9.5 per cent with the deficit targeted to fall from 1.9 per cent to 1.0 per cent of GNP. This target was met despite a shortfall in government revenue from original budget projections. Administrative measures were also taken to restrain demand: approvals for construction projects were subjected to a quota system. The tightening of policy was initially accompanied by a reversal in the downtrend of the effective exchange rate, which rose by over 10 per cent in the first half of 1991 before sliding down again (Diagram 11).

Domestic demand

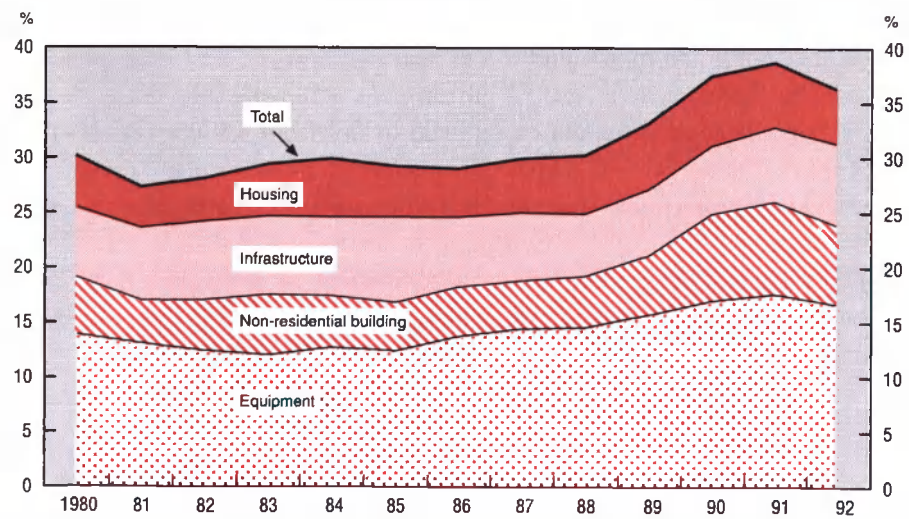
Under the influence of tighter policy domestic demand started to weaken in 1991 (Table 8). Reduced profitability and higher interest rates led to a stabilisation in the level of non-residential building and a moderation of growth of equipment investment. In 1992, investment in both of these components fell. The

Table 8. **Recent trends in demand and output**[1]

	1989	1990	1991	1992	1993
	Share in GNP	Year-on-year per cent change			
Private consumption	57.1	10.3	9.5	6.6	5.7
Government consumption	9.7	8.9	8.5	7.6	2.9
Fixed investment	33.1	24.0	12.6	–0.8	3.6
Final domestic demand	99.8	14.7	10.5	3.9	4.7
Exports goods and services	38.8	4.2	11.8	11.0	11.2
Total final demand	138.6	11.8	10.8	5.6	6.3
Inventory change[2]	2.9	–1.0	0.0	0.0	0.0
Total demand	141.5	10.6	11.4	5.1	5.4
Imports goods and services	41.5	14.4	19.2	5.1	6.7
Statistical discrepancy[2]	0.8	0.2	0.0	0.0	0.0
Gross domestic product	100.8	9.2	9.1	5.1	5.5
Factor income from abroad[2]	–0.8	0.1	0.0	–0.1	0.1
Gross national product	100.0	9.3	9.1	5.0	5.6
Components of fixed capital formation					
Equipment	15.7	18.4	12.1	–1.1	0.3
Non-residential building	5.9	17.7	0.3	–8.9	14.9
Infrastructure	6.1	11.3	25.1	11.9	–4.0
Housing	5.4	61.5	13.0	–6.7	10.5

1. At constant 1990 prices. Tables in the statistical annex are at constant 1985 prices.
2. Contribution to demand.
Source: Bank of Korea.

Diagram 12. **THE SHARE OF INVESTMENT IN GNP**



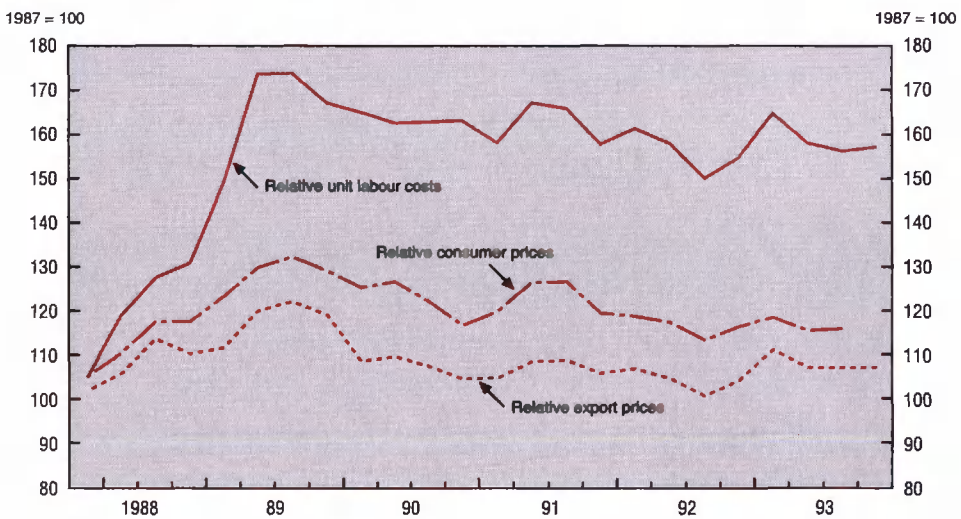
Source: Bank of Korea.

downturn was accentuated by the extent to which investment had run ahead of demand. Despite these falls, the share of investment in GNP remained high by historical standards (Diagram 12). Infrastructure investment remained buoyant throughout. Housing investment declined markedly, reflecting reductions in the granting of building permits as well as the ending of the first government housing programme. Consumption growth also slackened due to a marked slowdown in earnings and weaker spending propensity in the face of falling land and stock prices. Contrary to 1991, the sluggishness of domestic demand growth was accentuated in 1992 by a much reduced build-up in stocks.

The external sector

The weakness in total domestic demand in 1992 was partially offset by buoyant exports which benefited from the fall in the effective exchange rate and the related improvement in the competitive position of manufacturing industry (Diagram 13), but even more so from strong demand in China and South-east Asia. The buoyancy of these nearby markets and relative weakness elsewhere have led to a marked geographic re-orientation of exports (Table 9).[20] Indeed, the

Diagram 13. **MEASURES OF INTERNATIONAL COMPETITIVENESS**



Source: OECD.

Table 9. **Growth of exports by region**

Per cent change in US dollars

	1988	1989	1990	1991	1992	1993
United States	16.9	–3.6	–6.2	–4.1	–2.5	0.3
Japan	42.3	12.1	–6.1	–2.2	–6.1	–0.3
European Community	23.0	–8.5	22.7	9.6	–4.9	2.0
China	76.4	17.5	33.7	71.4	164.7	94.1
Asean	55.0	30.4	27.4	48.3	20.8	8.9
Total	28.3	2.8	4.2	10.5	6.6	7.3

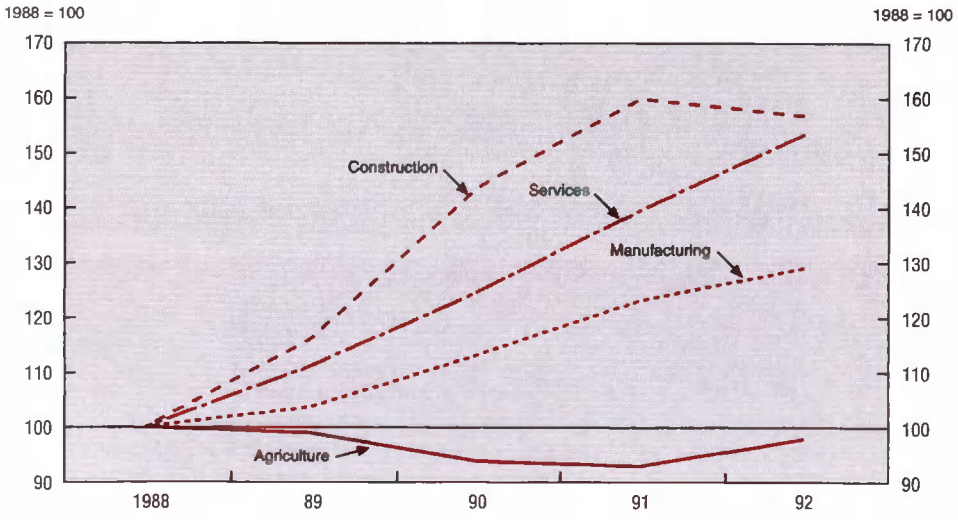
Source: Ministry of Trade, Industry and Energy.

dollar value of exports to other markets declined in 1992 and South-east Asia has become a larger market for Korea than the United States.

Output

The slowdown in total aggregate demand has hit imports more than domestic output. Thus, while the rate of growth of total demand declined by almost 7 percentage points between 1990 and 1992, output growth dropped by just over

Diagram 14. **SECTORAL OUTPUT TRENDS**



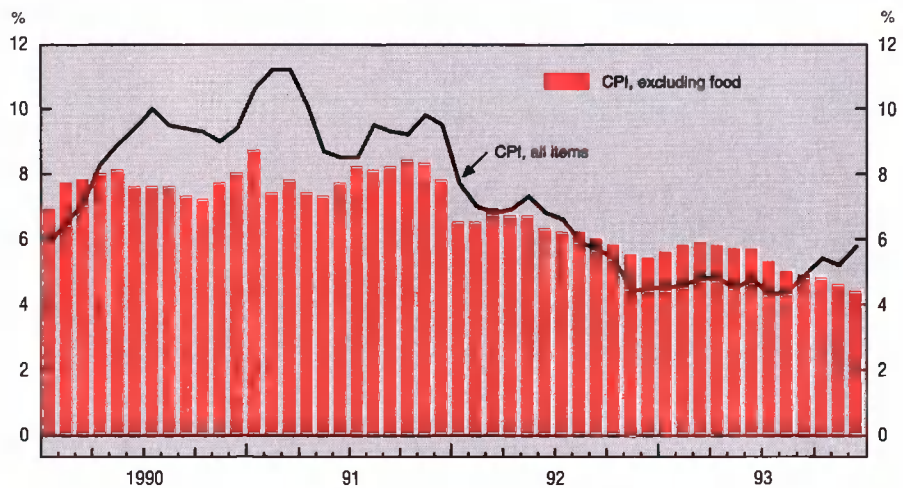
Source: Bank of Korea.

4 points to a rate slightly less than 5 per cent in 1992. The slower than normal growth of imports was mainly related to the decline in equipment investment. The slowdown of domestic output was spread across all major sectors of activity except agriculture where output accelerated despite a decline in rice production (Diagram 14). The fall in construction was especially pronounced after a long period of rapid growth. The comparatively moderate slowdown of growth in the service sector was concentrated in wholesale and retail trade.

Labour market and inflation

The slowdown in demand in 1991-92 had little immediate impact on the labour market. Employment growth stayed at 3 per cent in 1991 as in the previous six years. In 1992, employment still increased by as much as 2 per cent. As the participation rate of women stopped rising, this was sufficient to keep the unemployment rate for the year close to its cyclical low of 2.3 per cent. Manufacturing employment shrank, with its share in total employment dropping to one-fourth. While the number of labour disputes remained unchanged in 1992, the estimated production losses increased by 60 per cent.

Diagram 15. **CONSUMER PRICE INFLATION**
Year on year, percentage change



Source: Bank of Korea.

The rate of inflation, as measured by increases in the consumer price index, fell from just over 9 per cent at the beginning of 1991 to about 5 per cent at the end of 1992 (Diagram 15). However, the extent of the slowdown is somewhat exaggerated by this movement. Food prices were particularly high at the end of 1990 and beginning of 1991 due to a poor harvest and the absence of sufficient imports to moderate price increases. The pressure on prices eased significantly as harvests returned to normal in 1991 and 1992. Consequently, the slowdown in the rate of increase of non-food consumer prices was much less marked. Moreover, a considerable part of the slowdown is due to the freezing of certain public sector tariffs in January 1992, notably those for public transportation. The growth in negotiated wage settlements, which had been 10 per cent in both 1990 and 1991, slowed in 1992 to just under 6.5 per cent, remaining roughly constant in real terms. The growth in average manufacturing earnings also decelerated in nominal terms, slowing to 16 per cent in 1992 from 17 per cent in 1991.

Current account

The sudden drop in import growth, after five years of double-digit expansion, sharply reduced the trade deficit from $7 billion in 1991 to about $2 billion in 1992 (Table 10). The decline of the trade deficit was partly offset by a larger

Table 10. **The balance of payments**
Billions of US dollars

	1988	1989	1990	1991	1992	1993
Exports of goods	59.6	61.4	63.1	69.6	75.2	81.0
Imports of goods	48.2	56.8	65.1	76.6	77.3	78.9
Trade account	11.4	4.6	–2.0	–7.0	–2.1	2.1
Transportation and travel, net	0.7	–0.3	–1.3	–2.7	–3.3	–3.6
Other services, net	2.6	1.8	1.8	2.1	1.8	2.6
Investment income, net	–2.1	–1.3	–1.0	–1.0	–1.1	–1.3
Invisible trade balance	1.3	0.2	–0.5	–1.6	–2.6	–2.3
Transfers, net	1.4	0.2	0.3	–0.2	0.2	0.7
Current account	14.2	5.0	–2.2	–8.7	–4.5	0.5
Long-term capital	–2.7	–3.4	0.5	4.2	7.2	8.8
Short-term capital	1.3	0.1	3.3	0.0	1.1	–2.0
Errors and omissions	–0.6	0.7	–2.0	0.8	1.1	–0.7
Reserves (increase –)	–8.8	–2.9	0.4	1.1	–3.4	–3.1
Reserves (level)	12.4	15.2	14.8	13.7	17.2	20.3
Reserves (months of imports)	3.1	3.2	2.7	2.1	2.7	3.1

Source: Bank of Korea.

deficit on services. The increased number of Koreans travelling overseas during the past several years has boosted the deficit on travel. Despite the increased imbalance in services, the current account was almost halved to the equivalent of 1.5 per cent of GDP. Net long-term capital inflows increased sharply in 1992, despite a decline in foreign direct investment. The increase was due to the opening of the Korean stock market to foreign investment and the rise in Korean firms' securities denominated in foreign currencies.

1993 developments and the outlook to 1994

Policy developments

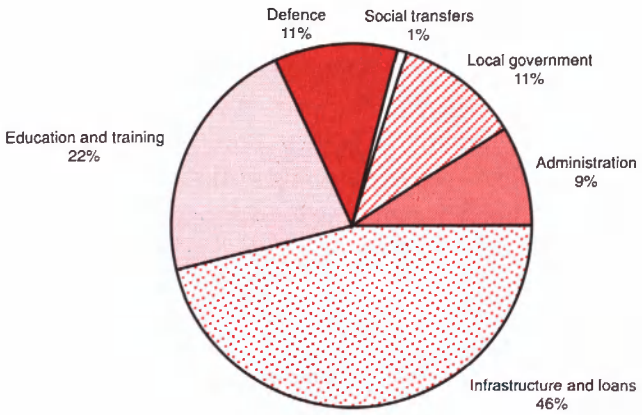
After taking office in February 1993, the government announced a more expansionary stance of monetary policy in its "100-day plan". This was immediately followed by a reduction of the official discount rate to 5 per cent and a reduction in regulated bank deposit rates two months later. Market interest rates are not directly linked to official rates but nevertheless declined, dropping below 11 per cent by April 1993. At that point, money growth (M2) moved above the upper target rate (17.5 per cent) and the central bank started to reduce rediscounts, and tightened conditions for repurchases. As a result, the cost of overnight money rose sharply to 19 per cent by August, dampening business confidence as shown in the FKI survey. The abolition of anonymous bank accounts, which was decided in August, brought the risk of an increase in cash holdings. The central bank stepped up in two stages the supply of funds to the markets, which lowered short-term interest rates to their April level. Growth in M2, in the meantime, continued above target rates, at over 20 per cent. In November, the second-stage interest rate liberalisation was implemented. Bond yields continued to decline, reaching 13 per cent by the end of the year.

The 1993 budget continued the fiscal restraint that had started in 1992. Despite below potential growth, the borrowing requirement was projected to decline from 0.7 per cent to 0.5 per cent of GNP. In the first four months of the year, the deficit was higher than planned due to the front-loading of construction expenditure decided in the 100-day plan. The budget appropriations imply a reduction in the relative importance of current expenditure on staff, defence and transfer payments and a rising share of spending on education and investment

(Diagram 16). Overall government expenditures were budgeted to increase by 17.5 per cent. The tax burden was projected to rise from 19.4 per cent to 19.6 per cent of GDP. Most of the increase in the revenue share was expected to result from the higher contribution rate to the National Pension Scheme, whose surplus was expected to rise by W 1.4 trillion (0.6 per cent of GNP). The budget deficit, excluding the pension fund surplus, was estimated to remain stable at 1.5 per cent of GDP.

The 1994 budget attempts to improve the conditions for economic growth by changing both taxation and expenditure policies. On the revenue side, the marginal tax rates on incomes exceeding 1.5 times average earnings will be reduced by between 3 and 5 percentage points to a range of 27 to 45 per cent. For lower income earners, the annual tax exemption for overtime earnings will be increased by half to W 2.4 million (the equivalent of about $3 000). Inheritance and gift taxes are to be reduced by 5 points while the corporate tax rate will be reduced by 2 points. Against this, taxation on petroleum products will be raised significantly and the lower exemption limit for the payment of VAT will be

Diagram 16. **CONTRIBUTIONS TO THE 1994 BUDGETED INCREASE IN REAL GOVERNMENT EXPENDITURE**[1]



1. Increase in nominal expenditure appropriations deflated by the GDP deflator.
Source: Economic Planning Board of Korea.

raised. The gap between the tax rates on imported and domestic liquors is to be reduced. Overall, the package of tax changes is expected to raise revenues by W 1 trillion (0.4 per cent of GNP), bringing the tax burden to 20.2 per cent of GNP. On the expenditure side, the restructuring effort continues. Infrastructure spending is planned to rise by 30 per cent (0.6 per cent of GNP), the same increase set for spending on science and technology (Table 11). In contrast, the growth in defence expenditure is to be cut to below 10 per cent and the envisaged growth of civil service pay has been limited to 6 per cent.

Despite the relaxation of policy, economic growth in the first half of 1993 remained sluggish at less than 4 per cent year-on-year. Fixed investment and orders for machinery continued to decline, reflecting a lack of business confidence. Uncertainty about the policies of the new government may have also

Table 11. **Budgetary developments**

Billion won

	1993 budget	1994 budget	Change
A. Revenues	38 050	43 250	13.7
Taxes	36 762	41 537	13.0
Internal taxes	31 512	35 623	13.0
Transport taxes	1 744	3 039	74.3
Customs duties and others	3 506	2 875	–18.0
Non-tax revenue	1 288	1 713	33.0
B. Budget expenditures by function	38 050	43 250	13.7
Defense	9 572	10 490	9.6
Education	7 416	8 240	11.1
Social development	3 505	3 916	11.7
Economic development	7 666	9 379	22.3
General administration	4 521	4 692	3.8
Grants to local government	4 413	4 726	7.1
Others	957	1 807	88.8
C. Major items			
Social overhead capital	4 680	6 077	29.9
Agriculture, forestry and fisheries	4 484	5 320	18.6
Small and medium-sized firms	1 101	2 100	90.8
Science and technology	862	1 138	32.1
Education	748	1 004	34.1
Social welfare	2 766	3 352	21.2
Environment	307	413	34.5

Source: Economic Planning Board.

affected business confidence. Retail sales showed some signs of picking up but automobile sales were weak. Overall, consumption growth remained moderate.

In the third quarter of 1993, investment in machinery and equipment grew for the first time in more than a year, while building activity accelerated following the removal of administrative limits on construction in January 1993. Export growth remained buoyant, aided by a depreciation of the real effective exchange rate that primarily reflected the appreciation of the yen. Exports of automobiles, steel and telecommunications equipment recorded particularly sharp increases (Table 12). In contrast, exports of clothing and footwear declined, partly as a result of increased competition from China. The continued strength of total exports suggests that firms have been able to absorb the sharp increase in relative unit labour costs by sustaining a high level of investment. Strong demand from China and South-east Asia also helped maintain export growth. Import growth remained weak. As a result, the trade and current-account deficits fell by more than $3 billion from their corresponding 1992 levels with the current account moving into slight surplus for the first time since 1989.

The recovery in the second half boosted the annual growth rate for 1993 to slightly over 5 per cent. Growth may thus have been slightly faster than in the

Table 12. **Recent trends in exports**

First eleven months of 1993 compared to the same period of the previous year

	1992 share	1993 share	Export growth
Passenger cars	3.1	4.6	56.6
Telecommunications	3.0	3.5	22.4
Office machinery	4.0	4.3	16.6
Household appliances	1.4	1.5	12.6
Steel products	5.6	5.9	11.0
Textiles	8.9	9.1	8.8
Petroleum products	2.1	2.2	7.7
Semi-conductors	10.2	9.9	2.9
Radios	1.6	1.4	–4.4
Television sets	2.0	1.8	–5.1
Apparel	8.9	7.6	–8.6
Footwear	4.2	2.9	–26.9
Total exports	100.0	100.0	6.7

Source: Bank of Korea, *Monthly Statistical Bulletin.*

preceding year despite two dampening factors – unusually cold weather and the August announcement that real names must be used in financial transactions. Inflation, however, slightly exceeded the official target of 5 per cent despite the restraining effect of relatively stable food prices. The pressure on the labour market eased further, contributing to a moderation of wage growth. The seasonally-adjusted unemployment rate had edged up to 3 per cent (3.5 per cent in the non-farm sector) by mid-1993 before stabilising in the second half of the year.

The outlook to 1994

The factors responsible for the turnaround in mid-1993 can be expected to sustain growth in the 6 to 7 per cent range in 1994. The prospects for strong investment growth appear bright, particularly in sectors which have experienced buoyant export demand. With the impact of the introduction of the real-name system for financial transactions receding, business confidence has recovered. In addition, the slowdown in wage growth should end the squeeze on profits. While declining wage gains make an acceleration of consumption unlikely, the wealth effects from the surging stock market, which has reached its highest level in three years, may well sustain consumption growth at the 6 per cent rate recorded in 1993.

Positive growth impulses should also come from the external side. The significant structural change towards more advanced products seen in 1993 is likely to continue in 1994. The improvement in the world conjuncture should promote a steady increase in exports. China can be expected to remain an important source of demand for Korean products. As imports are likely to recover with the pick-up in investment, continued strong export growth is unlikely to prevent a small current account deficit emerging.

IV. Markets for goods and services

This chapter is the first of five that look at the functioning of particular markets or segments of the economy. It examines the structure of the manufacturing sector before reviewing policies that influence the level of competition either through monopoly and fair trade policy, or through external trade and agricultural policy.

Market structure

The manufacturing sector is dominated by large firms. In 1989, enterprises with more than 300 workers accounted for 40 per cent of employment and produced more than half of the value-added in manufacturing. Nevertheless, the average number of workers in manufacturing firms declined from nearly 60 in 1987 to less than 50 in 1990. There is evidence of an increasingly competitive structure: 37 per cent of sales in 1992 were in markets where the top three firms had a market share of less than 50 per cent compared to only 26 per cent of sales in 1981 (Table 13).

The concentration of economic power, however, has remained one of the most important issues in Korea, reflecting concerns about efficiency and equity.

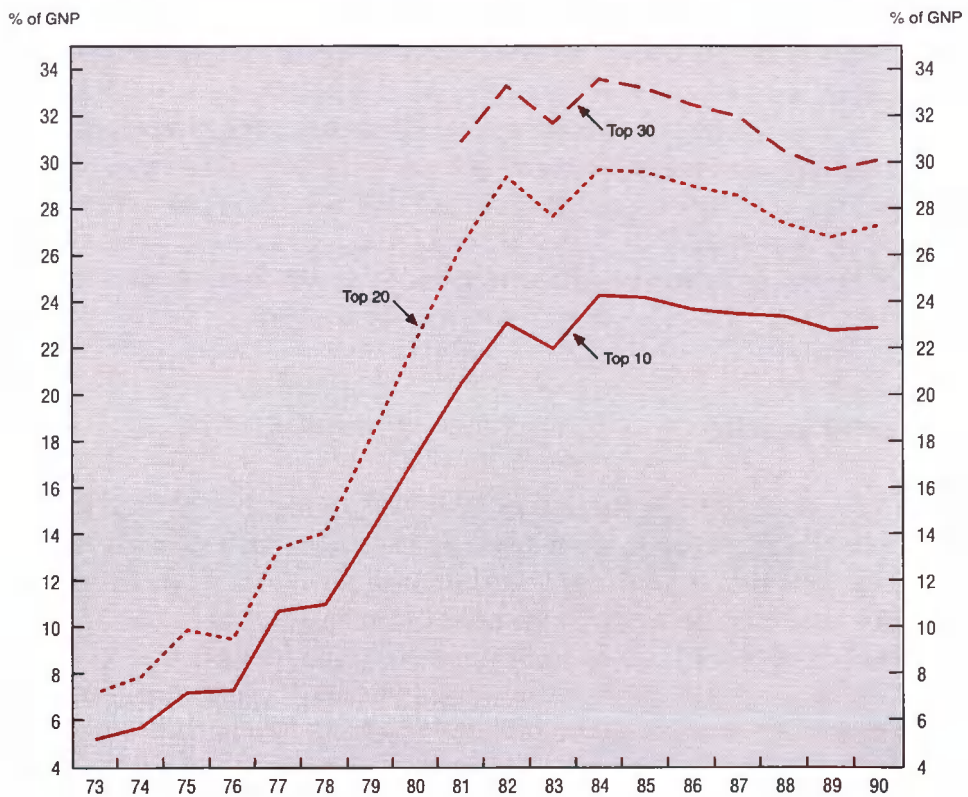
Table 13. **Market structure**
Per cent of the value of shipments

	1981	1983	1985	1987	1989	1990
Concentrated[1]	73.9	74.8	69.9	64.8	62.7	63.7
Competitive	26.1	25.2	30.1	35.2	37.3	36.3

1. Concentrated markets are defined as those where the top three firms had a market share of more than 50 per cent of the value of shipments. Competitive markets are those where the top three firms have less than 50 per cent.
Source: Economic Planning Board; Fair Trade Commission.

Attention is focused on the power of the *chaebols*, which are multi-company business groups operating in various markets under common entrepreneurial and financial control. In 1992, 78 groups and their 1 056 subsidiaries were defined as *chaebols* under the Fair Trade Act.[21] Most are family-owned and tightly controlled by the owners. In 1992, about half of the total paid-in capital of the top 30 groups was held by a majority individual shareholder, his relatives or other companies within the group. Many of the conglomerates are reluctant to go public: only 14 of the 55 companies in the Samsung group, for example, are listed. While Korean law does not allow holding companies, and each company

Diagram 17. **THE SHARE OF *CHAEBOLS* IN MANUFACTURING VALUE-ADDED**



Source: Sakong (1993).

of a group is legally independent, *chaebols* are characterised by centralised planning and co-ordination.[22]

Some conglomerates, such as Hyundai and Samsung, were established prior to Korea's economic take-off in the 1960s, while others, most notably the Daewoo group, were founded later. Their period of most rapid growth was during the HCI drive in the 1970s. The share in manufacturing output of the 20 largest groups increased from 7 per cent in 1973 to 29 per cent in 1982 (Diagram 17). Although nearly 60 per cent of their value-added came from manufacturing, they also have companies in the construction and service sectors. The relative importance of the *chaebols*, however, has declined slightly after peaking in 1985. In 1990, the four largest groups – Samsung, Hyundai, Lucky-Goldstar and Daewoo – accounted for over half of total output by the *chaebols*.

The conglomerates have played a major role in Korea's economic development. While their role reflects the performance of their founding entrepreneurs, the *chaebols* were also favoured by government policies. During the HCI drive in the 1970s, they received preferential access to bank loans. The government relied on the existing conglomerates to develop heavy and chemical industries because they had the organisational and technological abilities to compete with foreign enterprises. Nevertheless, the legacy of government assistance combined with the conglomerates' large earnings from real estate has led many to question the legitimacy of the *chaebols'* strong position in the economy.

Competition policy

Competition policy in Korea dates from 1980. During the 1970s the government relied on price controls to limit price increases by firms with market power. The Price Stabilisation Act of 1973 enabled the government to set standard prices of major goods and services with the usual distortionary effects of dual pricing, deterioration of product quality and chronic shortages. The Act was revised in 1979. At present, price controls are limited primarily to petroleum products, utility tariffs and public transport charges.[23]

The Monopoly Regulation and Fair Trade Act of 1980 provided the legal basis for the establishment of the Fair Trade Commission (FTC). The intention was to improve the market structure by reducing the concentration of economic

power and to prevent restrictive business practices. The Act gives the FTC certain powers to remedy abuses by "market-dominating firms" in a large number of product areas.[24] The FTC can, for instance, order prices to be reduced or restored to previous levels in the event of finding an abuse. Since 1981, the Fair Trade Act has also prohibited anti-competitive mergers and acquisitions. The prohibition does not apply, however, if the FTC deems a merger or acquisition necessary to rationalise an industry or to strengthen its international competitiveness. The FTC disapproved only two of the 2 300 mergers reported to it from 1981 to 1992.

Competition policy remains focused on the *chaebols*, reflecting concern that their large size could lead to market power abuse. Of the 140 types of products that were produced by market-dominating firms in 1993, the conglomerates accounted for 95. Their size and economic importance has, on occasion, prompted the government to assist them in case of difficulty. Since 1987, the government has imposed regulations to limit the groups. Cross-equity investments between firms belonging to the same *chaebol* are forbidden and the total amount of capital investment by one company in another domestic firm is limited to 40 per cent of the investing company's assets.[25] Ceilings on bank credit to the top thirty conglomerates imposed in 1986 significantly reduced their share of total bank lending. In July 1992, the Finance Ministry froze cross-payment guarantees between subsidiaries of the large conglomerates. The latest policy approach has been to encourage the specialisation of the *chaebols* in three core businesses, which are granted exemptions from bank credit limits. The conglomerates, though, are able to declare new businesses as core companies every three years.

There is little evidence of collusive behaviour between the *chaebols*. Indeed, one of the reasons for Korea's economic success may have been the "fierce and even cut-throat rivalry that characterises every successful Korean industry. At least four or five companies compete in every major industry, often including a subsidiary of each of the leading *chaebol* (Table 14)."[26] Nevertheless the FTC has issued, on average, fifteen correction orders (or recommendations for correction which only differ from orders in a procedural sense) per year over the period 1981 to 1993. In addition a further ten warnings per year have been issued but these are generally for insignificant violations or violations that have ceased. In case of repetition, though, a correction order would be issued. Most of the

Table 14. **Estimated number of competitors in selected industries**

Automobiles[1]	3	Television sets:	
Capacitors	45	Black and White	14
Cathode ray tubes	3	Colour	12
Cement	9	Synthetic fibres	13
Computers	31	Cotton spinning	23
Construction[2]	480	Worsted spinning	26
Footwear[3]	221	Woollen spinning	55
Motor vehicle radio and cassette receivers	18	Fabrics	2 046
Pianos	3	Garments	3 270
Printed circuit boards[4]	200	Dyeing and finishing	144
Semi-conductors[5]	21	Tires	5
Shipbuilding[6]	250	Travel goods	328
Steel[7]	13	Video cassette tapes	4
Wigs	25		

1. Three Korean firms (Hyundai, Daewoo and Kia) produced passenger cars. One firm, Daewoo Motor Co., has a 50:50 joint venture with General Motors. Daewoo retained most of the management rights.
2. Number of firms licensed as general contractors.
3. 26 firms with more than five production lines accounted for 51.5 per cent of the total.
4. Seven firms accounted for about 70 per cent of the market.
5. Thirteen firms were domestic and eight firms were joint ventures. There were also eight majority-owned foreign subsidiaries.
6. Four firms (Hyundai, Daewoo, Samsung and KSEC) accounted for 90 per cent of the nation's total production capacity.
7. POSCO is the only integrated iron and steel mill in Korea.

Source: Porter (1990).

offenses dealt with by the FTC have been for unfair trading practices rather than abuse of monopoly power.

Government regulation appears to be one reason for the continued advantages of the conglomerate form of business organisation in Korea. The groups are well-positioned to benefit from the discretionary application of rules on market entry and location, restructuring, foreign direct investment and technology licensing. They are also better able to exploit tax and credit arbitrage opportunities created by government policy. The use of interventionist tools to limit the size of *chaebols* seems unlikely to accelerate their demise, given their past success in benefiting from regulations. Further deregulation of financial markets and a less interventionist approach by government would result in more equal competition between the conglomerate form and other corporate structures. Current anti-conglomerate policies seem, on balance, more related to the distributional consequences of the concentration of economic power than with efficiency.

Bankruptcy rules and procedures are an important aspect of competition policy. The liquidation and restructuring of failing small-and medium-sized firms is based on commercial law. The government, however, has intervened heavily in the restructuring of large companies. Under the 1985 Industrial Development Law, nine industries have been classified as industries in need of rationalisation. Restructuring has often taken the form of forced mergers supported by loan write-offs, credit rescheduling and new loans, sometimes at preferential rates. Efforts to aid ailing firms also occur outside the framework of the 1985 Law. In June 1992, for example, the Ministry of Finance helped arrange a won 130 billion ($165 million) commercial bank loan package to the Sammi Group to bail out Sammi Steel.

Further efforts to strengthen the role of competition policy were made through the introduction of additional amendments to the Fair Trade Act. In 1990, the FTC was made an independent administrative agency. The independence of the FTC should promote stricter enforcement of competition law. In addition, the penalties for uncompetitive trade practices were increased.

Trade policy

Competition has also been promoted by the reduction of trade barriers. The official development strategy initially included both import restrictions and export promotion measures. Since the early 1980s, steps have been taken to dismantle barriers to imports and to reduce export promotion measures. This policy – undertaken on a unilateral basis, though sometimes under pressure from major trading partners – was aimed at improving the efficiency and competitiveness of the domestic economy. Import liberalisation has reduced overt protection of manufactures to levels comparable to those found in OECD countries, but has left the agricultural sector heavily protected. Major outstanding issues include the trade impact of domestic regulatory laws and import bans on certain Japanese products.

Progress in reducing trade barriers

The first five-year schedule of tariff reductions, which began in 1984, reduced tariffs on manufactured goods from an average of 21 per cent to 17 per

cent by 1988. Trade liberalisation accelerated following the current-account surpluses of 1986 to 1988. A second five-year schedule of tariff reductions begun in 1988 further lowered the average statutory tariff rate on manufactured products to 8 per cent by 1992 though only three-quarters of tariff lines were bound (Table 15). The planned reduction in 1994[27] will reduce rates on industrial products to levels comparable to those in the OECD area and the extent of binding may rise to 90 per cent once the Uruguay Round is implemented. Tariff revenues on manufactured products fell faster than the statutory tariff (Table 15).[28] The import licensing requirement was made automatic for almost all manufactures by 1988. The decline in tariff levels was accompanied by reduced dispersion. Large variations in the level of protection was a legacy of the HCI drive, which favoured certain industries. In 1988, only one-fourth of tariff rates were set below 10 per cent. At present, almost 94 per cent of tariff rates are fixed below 10 per cent.

The overall decline in tariffs has not prevented significant temporary increases in tariffs in certain limited areas. Tariffs on a number of fishing products were raised from 10 per cent to 100 per cent at the end of 1993 while tariffs on some textile items were raised from 8 per cent to 50 per cent. Moreover, some of the temporary adjustments made in 1992 for one year (such as that for PC components) have been prolonged into 1994. The government announced the following criteria for the imposition of temporary tariffs at the end of 1992: if import volumes more than double in three years, if imports are more than 50 per cent of the domestic market and if the foreign-domestic price differential is greater than twice the tariff on the product. Safeguards provisions compatible with GATT rules were introduced in 1987. Since then, twenty-two industry relief

Table 15. **The level and dispersion of tariffs for manufactured products**

	1978	1982	1988	1990	1992	1994
Statutory tariffs[1]	40.8	32.9	18.3	9.7	8.4	6.2
Light industries	14.9	14.3	10.5	12.7	..	..
Heavy industries	24.5	21.0	12.8	13.5	..	..
Actual tariffs[2]	25.1	21.2	12.4	10.0	..	..

1. The statutory tariff is that listed in the tariff schedule.
2. The actual tariff is tariff revenue as a percentage of imports. It takes into account the tariff drawbacks that are available.
Source: Yoo (1991); Ministry of Finance.

petitions have been filed, resulting in the imposition of import restrictions in ten of the cases. Korea has initiated eleven anti-dumping investigations since 1986; seven of the cases, including one which was the subject of a GATT panel, resulted in the imposition of definitive duties. No countervailing duty has ever been imposed by Korea. However, approximately one-fifth of Korean exports to developed countries in 1991 were subject to non-tariff barriers such as quotas and voluntary export restraints. Moreover, the government has been obliged to use export controls to ensure compliance with international agreements restricting shipments of certain products.

Financial incentives for exporters were reduced in tandem with the liberalisation of trade barriers. According to the GATT, there are no significant direct export subsidies. The export credit system, though, can result in the preferential availability of export financing. The terms and conditions of post-shipment export loans are consistent with OECD guidelines. Export credits, which were subsidised prior to 1982, are now extended at market-related interest rates by financial institutions. A duty drawback scheme provides for the rebate of tariffs and indirect internal taxes levied on all imported materials used in the production of goods for export.

Remaining issues in trade policy

The trend towards liberalisation is expected to continue. In 1989, Korea chose to forgo the use of trade barriers to safeguard its balance of payments position (Article 18 of the GATT). Consequently, all remaining trade barriers will be removed or brought into conformity with GATT rules by 1 July 1997.

As tariffs have been lowered during successive GATT rounds, non-tariff barriers, which also maintain domestic prices above import prices, have become the most serious impediment to trade in many countries. Korea has 45 individual regulatory laws in such areas as quality standards, health and safety, which apply to domestic as well as imported goods. Korea is a signatory to the MTN Agreement on Technical Barriers to Trade and the government uses the provisions of the Agreement as a basis for establishing domestic standards when appropriate. The implementation of these laws potentially affected imports of more than 1 800 products according to a 1987 estimate.[29] This may give a misleading impression as to the extent of protection since imports of many of the products may not in fact be affected by the laws. In 1988, a government task force

recommended changes in 23 of the laws to reduce their impact on trade and most of their recommendations have been implemented. Electronic and processed agricultural products are the items primarily affected by remaining regulations. The Electrical Products Safety Control Act, for example, requires approval of 338 electrical products prior to importation. According to the GATT, regulatory standards still result in cumbersome procedures. The government began to implement a deregulation programme which encompasses international trade and started to simplify import-export procedures.

One important non-tariff barrier is the "diversification" programme, which is intended to shift purchases of targeted items away from countries having a large surplus with Korea, primarily Japan. The deficit with Japan, which amounted to 2.7 per cent of GDP in 1992, has long been a major concern in Korea. Imports from Japan of 258 items, including automobiles and electronic appliances, are banned. This managed trade approach to reducing bilateral imbalances results in inefficiencies in the sourcing of inputs and weakens intra-industry links. Recognising the high economic costs of this programme, the government recently decided to reduce the number of banned items by half over the next five years and to simplify the licencing procedure for other Japanese goods.

Since 1986, Korea has used a "localisation" programme to promote the domestic production of 1 737 products, which are mainly machinery and machine parts, components for electronic products and transportation equipment. This programme is also aimed primarily at reducing the bilateral trade deficit with Japan. Potential producers of products on the list, which is based on private sector recommendations, are eligible for government loans. These loans, which amounted to W 521 billion ($710 million) between 1986 and 1991, are estimated to have generated output which displaced about $3.7 billion of imports in 1991. The subsidy element in the loans is estimated at less than $10 million a year between 1986 and 1991.

For certain products, non-tariff barriers appear to result in significant differences between world prices and domestic prices net of tariff (Table 16). The differences are particularly marked in electric machinery, transport equipment, professional and scientific equipment and certain chemical industries, probably as the result of the ban on Japanese imports in these areas.[30]

Table 16. **Tariffs and price differentials for selected manufacturing industries**[1]

	Statutory tariff	Actual tariff	Price differential	Price differential
		1988		1990
Products with price differentials greater than actual tariffs				
Clothing	28.7	17.4	15.9	29.7
Industrial chemicals	15.9	10.1	11.5	12.4
Other chemicals	19.4	14.6	25.8	27.3
Oil refinery	9.8	8.5	9.9	9.0
Petroleum products	0.7	0.8	3.0	2.2
Plastic products	18.6	13.4	20.1	19.5
Non-chemical machinery	18.5	10.1	20.5	18.2
Electric machinery	19.9	20.4	20.6	31.1
Transport equipment	18.8	7.8	13.5	13.6
Professional scientific equipment	21.0	10.7	22.0	20.6
Miscellaneous manufactures	21.5	10.5	13.0	14.3
Products with price differentials the same or less than tariffs				
Textiles	19.0	11.7	8.1	5.4
Footwear, leather	19.9	9.8	9.8	..
Wood	17.1	13.7	8.2	3.4
Furniture	19.5	9.2	4.2	4.2
Pulp, paper	18.2	14.4	8.4	8.4
Printing	3.1	4.2	3.1	1.8
Rubber products	18.8	12.2	10.5	12.6
Pottery, china	25.5	18.9	7.7	7.7
Glass	19.3	12.2	11.1	10.7
Other non-metallic	17.9	13.5	8.9	5.1
Iron and steel	11.6	7.0	2.3	2.7
Non-ferrous metals	18.1	12.3	7.0	4.9
Fabricated metal	20.1	12.6	7.6	8.8

1. Obtained from a price survey conducted in 1990.
Source: Yoo (1991) for 1988 and GATT (1992) for 1990.

Agricultural trade policy

Agricultural production is highly protected with the result that few agricultural imports are able to compete with domestic production. Korea is completely self-sufficient in rice, pork, chicken and milk, together accounting for 50 per cent of domestic agricultural production; there is little trade in temperate fruit or vegetables which represent an additional quarter of domestic output while almost three-quarters of barley is domestically produced. The principal items of domes-

tic production that are subject to some international competition are beef, corn and soya beans. The wheat market has been completely liberalised since 1990. Imports of these four items account for almost half of food imports. Despite the trade restrictions, food imports run at 1.5 per cent of GDP and Korean food imports are larger than those in all but ten OECD countries.

The principal instruments for maintaining self-sufficiency are outright import bans coupled with tariffs and low quotas for those items that are subject to international competition. In addition, there are major government programmes to support domestic grain prices. The budget of the Ministry of Agriculture amounts to almost 10 per cent of total government expenditure while there is also a substantial programme of subsidised lending.

The extent of the protection and government aids to agriculture can be summarised by two measures: the producer subsidy equivalent (PSE) and the consumer tax equivalent (CTE). These two measures evaluate the subsidies paid to farmers on the basis of the world market prices for the output of the farm sector. The measures take into account the impacts of trade restrictions, direct government subsidies and government aids to agriculture. For measuring the burden on consumers, the relevant tax rate equivalent has been calculated on the basis of consumer expenditure valued at world market prices – rather than on the basis of actual consumer expenditure as is usually done. However, expressing the tax equivalent in this way makes the calculated tax rate comparable to the tax rates on other products. Any calculation of PSEs is approximate, since it is difficult to make correct comparisons between prices for domestic production and prices on the world market. Moreover, world market prices depend on the level of producer subsidies. Thus, a marked change in PSEs would change world prices. Nevertheless, the indicator shows the broad pattern of protection and subsidy for agriculture and indicates how subsidies are financed.

Producer subsidy equivalents and consumer tax equivalents have been calculated for Korea[31] (Table 17). Ten products were evaluated, covering most food products with the exceptions of vegetables and fruit. Though the methodology used may differ slightly from that of the Secretariat, the results suggest that the producer subsidy equivalent is greater in Korea than in any OECD country and twice that of the average OECD country. The subsidies are largely financed by consumers with the result that consumer prices for the ten considered products are over three times higher than world market prices, a level that is exceeded only

Table 17. **Farm protection in Korea and selected OECD countries**[1]

	Producer subsidy equivalents			Consumer tax equivalents		
	1979-85[2]	1986-89	1990	1979-85	1986-89	1990
	Per cent of output			Per cent consumers' expenditure (valued at world prices)		
Australia	11	12	11	6	11	9
Austria	30	47	46	35	92	82
Canada	30	44	41	30	44	35
European Community	35	47	48	35	75	69
Finland	57	71	72	75	226	231
Japan	64	74	68	59	110	92
New Zealand	23	15	5	9	8	8
Norway	71	76	77	43	146	178
Sweden	42	55	59	43	138	170
Switzerland	67	78	78	72	99	113
United States	26	37	30	23	27	23
Average of above	41	50	49	39	89	92
Korea	65	78	96	127	150	213

1. The data for Korea have not been calculated by the Secretariat according to a standardised methodology; comparisons between Korea and OECD countries are shown indicatively.
2. The data for Korea refer to 1982 to 1985.

Source: OECD countries: OECD, *Agricultural Policies Markets and Trade*, (1990, 1991). Korea: GATT, *Trade Policy Review for Korea*, (1992).

by Finland in the OECD area. For rice, the tax rate was nearly 500 per cent with the result that prices for consumers were nearly six times the level of world market prices.

The existing support regime for rice has become increasingly difficult to maintain. It has relied on an import ban as the primary method for keeping prices high, together with a government purchasing policy that ensures that not all of the high producer prices are reflected in consumer prices. In particular, the government has purchased second quality rice of the new high-yielding (tongil) varieties. These varieties are not well accepted by the consumer and so have required a large government subsidy to find purchasers. In recent years, though, production has exceeded consumption (at the regulated price level) and so government-owned stocks have increased. With demand for rice falling slowly over time, the imbalance between supply and demand seems likely to grow at existing prices. Faced with falling consumer demand for tongil rice and with stocks equivalent to five months of consumption, the government decided in 1992, that

it would no longer purchase tongil rice. In 1991, purchases of other types of rice were already about 20 per cent of production and the ban on purchasing tongil rice is likely to generate increased output of other varieties. The growing extent of government purchases has raised the cost of grain intervention to 0.7 per cent of GNP.

Other sectors of the domestic agricultural market are protected by import quotas and intervention programmes. The protection extends to the food-processing industries such as meat and dairy products. These two sectors, which provided about 1 per cent of total manufacturing output, probably have negative value-added when their outputs are evaluated at border prices.[32] There has been some reduction in tariffs for agricultural and fishery items where domestic competition is limited.

There has been some opening to international competition even in areas where there is domestic production, notably in wheat and beef. The liberalisation of the wheat trade started in 1984 and was completed in 1990. Over the period there has been a steady decline in domestic production. The consumer tax equivalent for wheat flour is now only 6 per cent. The beef market has been partly opened through a quota administered by the government. Imports accounted for about 50 per cent of consumption in 1990. Despite this, there was only a slight fall in consumer tax equivalents from the high levels of the mid-1980s. Even though there has been a substantial increase in the import quota since 1987, this was not enough to meet the increase in the demand for beef, with the result that the real price has risen by over 60 per cent.

The government has announced a series of policy initiatives for the next five years. The grain support programme will be reviewed so as to reduce the excess of the government purchase price over the government sale price. Agricultural promotion zones will be established in which it will be possible to raise the current maximum farm size from 3 hectares to 10 hectares.[33] Investment in farm mechanisation and modernisation will be increased while agricultural R&D is planned to increase to 1 per cent of agricultural output in 1998 from 0.2 per cent in 1991. There will also be improvements in the infrastructure in rural areas so as to increase the possibilities of alternative employment.

The announced policies go some way towards making Korean agriculture more efficient. However, there must be considerable doubts as to whether Korea needs increased agricultural production. In 1990, the gross cost of agricultural

intervention amounted to 7.4 per cent of GDP, including both the transfers from government and consumers. The welfare loss stemming from such intervention has been estimated at 1.7 per cent of GDP.[34] While the original purpose of agricultural policies was to maintain output for security reasons, the principal (unstated) function of the intervention would now appear to provide income support for a progressively ageing farm population. The re-allocation of labour from the rural area to non-farm activities has, in the past, raised the overall productivity level of the economy. Due to demographic trends the farm population will continue to shrink, even though migration from the land will be much reduced. A move to a more productive use of land may offset some of this reduced labour input.

V. The labour market

The labour market has undergone profound changes during the past 30 years, moving from one in which rural self-employment was the norm to one where most jobs are provided by industry and service enterprises. This chapter examines the factors which have influenced labour supply and demand, including an assessment of the impact of institutional change and of policies on the level of unemployment and the determination of wages.

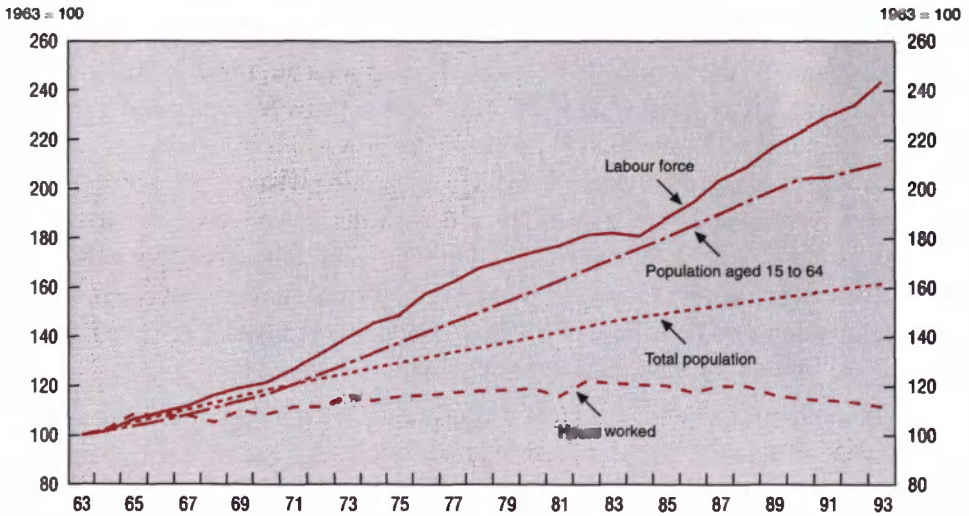
Labour supply

Quantitative aspects

The total labour force more than doubled over the past 30 years (Diagram 18). The rapid growth of the working age population was the main factor behind this increase, reflecting high fertility rates in the 1950s and 1960s. The labour force participation rate also rose between 1960 and 1980 as increased participation by women more than offset a small decline on the part of men (Table 18). There was a marked fall in the participation of men under the age of 25 as the number of students in tertiary education increased sharply. The share of female teenagers in education also increased but this was more than outweighed by the growing participation of women over the age of 20.

From the mid-1970s the overall participation rate first fell and then stabilised with the drag from rapidly expanding tertiary education offsetting the continued strong labour market entries of women and elderly people. Although the share of women in the labour force has grown substantially between 1960 and 1990, the participation rate for women is still substantially lower than on average in the OECD area over most age brackets but close to rates found in Ireland, Italy and Spain.

Diagram 18. **THE GROWTH OF POPULATION AND LABOUR FORCE**



Source: Economic Planning Board of Korea.

Table 18. **Participation rates by age and sex**

	1970	1980	1990
Total	57.6	59.0	60.0
Male	77.9	76.4	73.9
Female	39.3	42.8	47.0
Age group 15-19	–	30.6	14.5
Male	47.3	27.3	10.7
Female	43.7	34.4	18.6
Age group 20-24	–	63.1	62.7
Male	77.3	76.5	59.9
Female	47.3	53.5	64.5

Source: Economic Planning Board, *Korea Statistical Yearbook* (several issues).

The quality of the labour force

The period of rapid economic growth started with a population that was well-educated by the standards of most developing countries. Primary school education was almost universal with only 5 per cent of the work-force without school attendance in the early 1960s. The provision of education greatly expanded during the next three decades, with a progressive move to universal education for the under-15 age group and then nearly universal for the 15 to 17 age group (Table 19). By 1993, all primary school leavers progressed to middle school while 98 per cent of middle school students went onto high school although neither middle school nor high school are compulsory. By 1990, 35 per cent of the population had received a high school education.

The rapid expansion in secondary education does not appear to have been at the expense of quality. Standardised international tests suggest that Korean children out-perform children from most other countries in the area of mathematics and science (Table 20). Other reports suggest that Korean children also have a lead in problem-solving abilities. The good performance may be linked to the relatively long school year: high school students work for over 1 200 hours per year compared to less than 900 hours in some OECD countries. In addition, many

Table 19. **Education indicators**

		1960	1970	1980	1990
		Thousands			
Kindergarten	5	n.a.	22	66	415
Elementary school	6-11	3 623	5 749	5 658	4 869
Middle school	12-14	528	1 319	2 471	2 276
High school	15-17	273	590	1 696	2 283
Tertiary education	18+	101	201	625	1 511
		Per cent of age-group			
Kindergarten	5		1.8	4.1	55.4
Elementary school	6-11		100.7	102.9	100.9
Middle school	12-14		51.2	95.1	96.3
High school	15-17		28.1	63.5	86.8
Tertiary education	18+		8.8	16.0	37.6

Source: Korean Educational Development Institute, *Educational Indicators in Korea* (1993).

Table 20. **Comparative educational performance**

Correct responses on a standardised test
Per cent

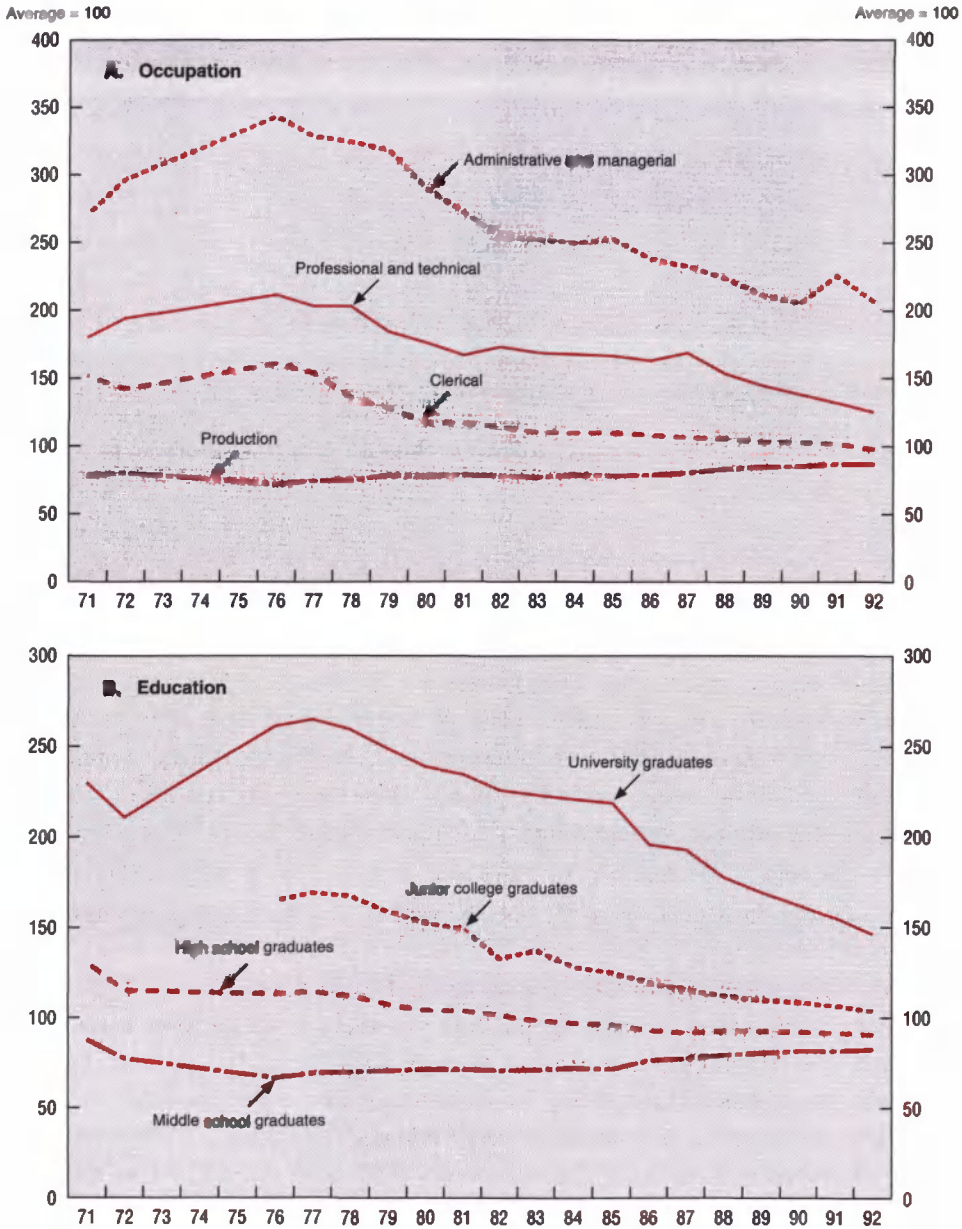
	Age 9		Age 13	
	Maths	Science	Maths	Science
Korea	74.8	67.9	73.4	77.7
Switzerland	n.a.	n.a.	70.8	73.7
France	n.a.	n.a.	64.2	68.6
Italy	64.4	61.2	64.0	69.9
Canada	59.9	62.8	62.0	68.8
Scotland	65.7	62.2	60.6	67.9
England	55.5	54.8	60.6	68.7
Ireland	55.8	57.7	60.5	63.3
Spain	61.9	61.7	55.4	67.2
United States	58.4	64.7	55.3	67.0

Source: Ministry of Education.

high school students enrol in private institutes for further lessons. Educational costs are contained through large class sizes. In 1992, primary schools had on average 40 pupils per class and at secondary level there were 50 pupils per class. The pupil-teacher ratio was lower: 33 in primary schools and 23 in secondary schools. The emphasis of the curriculum on the absorption of facts, though, has been criticised and is being gradually shifted. This trend has been encouraged by changes in the admission requirements for universities.

The number of students in four-year colleges and universities nearly doubled during the 1980s. By 1991, the share of the 18 to 21 age-group in higher education had reached 42 per cent, a level as high or higher than in most OECD countries with the exception of Canada and the United States. By 1990, the share of college graduates in the adult population had risen to 12 per cent from 6 per cent in 1980. Although the expansion of tertiary education has reduced the pay premium for advanced education, the earnings of university graduates are still more than twice those of middle school graduates (Diagram 19). Moreover, in 1987, administrative and managerial workers were paid three times as much as production workers, a considerably larger differential than in Japan or the United States. If the positive wage premium reflects differences in quality of the labour supply, it would appear that the improvement in the quality of the labour force

Diagram 19. **SALARIES BY OCCUPATION AND EDUCATION**



Source: Sakong (1993).

between 1980 and 1990 offset the quantitative slowdown of growth in the non-agricultural labour force.

Labour demand

The number of employed people in the non-farm sector increased by over 12 million in the 30 years to 1993 (Table 21). Although the rate of growth of employment has diminished progressively, the net creation of non-farm jobs

Table 21. **The structure of employment**

	1963	1970	1980	1990
	Thousands			
Mining	57	109	124	81
Manufacturing	610	1 268	2 972	4 847
Public utilities	14	23	43	71
Construction	193	281	841	1 339
Transport	212	337	618	922
Distribution and hotels	906	1 436	2 625	3 920
Finance, insurance, real estate	76	120	332	935
Government and other services	756	1 198	1 493	2 630
Non-farm sector	2 824	4 772	9 048	14 745
	Per cent of non-farm employment			
Mining	2.0	2.3	1.4	0.5
Manufacturing	21.6	26.6	32.8	32.9
Public utilities	0.5	0.5	0.5	0.5
Construction	6.8	5.9	9.3	9.1
Transport	7.5	7.1	6.8	6.3
Distribution and hotels	32.1	30.1	29.0	26.6
Finance, insurance, real estate	2.7	2.5	3.7	6.3
Government and other services	26.8	25.1	16.5	17.8
Non-farm sector	100	100	100	100
	Per cent of manufacturing employment			
Food	15.1	13.4	9.0	7.1
Textiles and clothing	31.9	31.0	30.9	22.0
Chemicals	14.9	11.0	13.2	14.4
Basic and fabricated metals	6.9	7.4	8.9	10.0
Machinery and transport equipment	11.1	12.7	20.5	30.3
Other manufacturing	20.0	24.4	17.5	16.2
Total manufacturing	100	100	100	100

Source: Pilat (1993).

during the 1980s still averaged 570 000 per year. This increase was greater than that in all but two OECD countries and the average annual growth rate was three times that experienced in the OECD in the same period. At the beginning of the economic take-off, the demand for labour grew fastest in the manufacturing sector. Its employment share peaked in 1989 and has fallen slightly since. Within the industrial sector there has been a continuing trend towards employment in the medium capital-intensity industries such as machinery, transport equipment and electronic goods at the expense of labour-intensive activities such as textiles and clothing. The most capital-intensive industries, chemicals, petroleum products, basic metals and public utilities, have had a relatively stable share in total industrial employment. The most notable change in employment demand in the 1980s was the rapid growth of employment in financial and business services.

The structure of employment still differs in some important respects from that of a typical OECD country. As noted in Part II, the share of total employment is high in agriculture and in the distribution, restaurant and hotel sector. Labour productivity in these two areas is only one-third the level in the remainder of the economy, pointing to important potential sources of future gains in productivity. Self-employment and family employment are more prevalent than in most OECD countries, and there is also a large number of casual workers employed on a daily basis. These latter three categories account for close to 40 per cent of total non-farm employment,[35] reflecting strong features of a dual labour market.

Unemployment and real wages

In the 1960s, the rapid growth in demand in the non-farm sector was matched by increased supply, keeping real wage growth broadly in line with labour productivity. During the second half of the 1970s, real wages increased twice as fast as productivity, raising labour's share of income from 40 per cent in 1970 to almost 50 per cent by the end of the decade. After a period of relative stability during the early 1980s, the demand for labour began increasingly to outstrip supply. As a result, the unemployment rate fell to an historically low level of 2½ per cent in 1988 and remained near that rate through 1992 (Table 22).

The rapid fall in unemployment had profound consequences in the labour market. Real wages again grew markedly faster than labour productivity (Dia-

Table 22. **Unemployment rates by category of employee**

	1980	1988	1992
	Per cent of labour force		
Total	5.2	2.5	2.4
Male	6.2	3.0	2.6
Female	3.5	1.7	2.1
Age 15 to 24	11.5	7.2	7.7
Age 25 to 59	3.4	1.9	1.6
Age 60+	0.3	0.2	0.3
Elementary or middle school-leaver	3.8	1.3	1.1
High school-leaver	9.3	3.6	3.3
College or university leaver	6.2	4.7	3.5

Source: Ministry of Labour.

gram 20). Between 1986 and 1992, the excess growth was 40 per cent. As a result, the rate of return on equity in manufacturing industry fell from 20 per cent to 6 per cent, while the rate of return on total capital declined from 10.5 per cent to 7.5 per cent. In addition, the low level of unemployment appears to have been a major factor behind the acceleration in inflation. The experience of the 1970s and 1980s suggests that a level of unemployment below 3½ per cent is associated with an acceleration in inflation while unemployment above 4 per cent is associated with a deceleration in inflation. Likewise, the relationship between real wages, productivity and joblessness suggests that at an unemployment rate of about 3½ per cent the share of labour in national income tends to remain stable.

The so-called "natural" or "equilibrium" rate of unemployment in Korea thus appears to be significantly lower than the rate estimated for most OECD countries, a notable exception being Japan. A number of particular labour-market practices have tended to keep unemployment low while making wages highly responsive to changing labour demand conditions. The first is the absence of unemployment benefits. The second is the extremely wide dispersion of wage levels between industries. According to one study, the dispersion of wages was 25 per cent higher than in Japan and North America, and 2½ times higher than the average in OECD Europe. The absence of any minimum wage legislation until 1988 was probably also a contributing factor. The interaction of these factors meant that labour market participants with low productivity were able to find employment, albeit at low wages, rather than remaining unemployed. High

Diagram 20. **THE REAL WAGE GAP AND THE UNEMPLOYMENT RATE**

1. Defined as the ratio of real wages to labour productivity.
Source : OECD.

labour turnover, though, tends to raise unemployment, in particular relative to Japan and some other Asian economies. Workers and employers are rarely linked by lifetime contracts. However, labour turnover is relatively low in major enterprises. As a result, the elasticity of manufacturing employment relative to output is closer to that of the United States and some European countries than to that of Japan. Much of the labour turnover is accounted for by people who have worked short periods with a company. Such high turnover may be one of the reasons for the relatively high youth unemployment rates.

The relatively high sensitivity of wages to changes in unemployment[36] may be partly explained by the importance of bonus payments that, at least until 1987, responded more to economic variables, such as sales and profits, than did regular wages and overtime payments. Bonuses, which are paid four times a year, have become an increasingly important element of labour remuneration. During the past five years, though, the bonus system has become more rigid, with the payment fixed in line with basic wage payments. A recent survey by the Korean Employers' Federation reported that one-third of firms have started paying a productivity-based bonus in addition to the regular bonus.[37]

Institutional structures

The Constitution of Korea states that "workers have the autonomous right of organisation, collective bargaining and collective action in order to improve working conditions". Korea's 1.7 million union members in 1992 were represented by 7 527 labour unions organised on the basis of enterprise, region or type of business. Membership is concentrated in large enterprises; only 3 per cent of firms with less than 100 workers are unionised compared to more than 80 per cent of firms with more than 500 workers. Unions are affiliated with 20 national industrial federations, which together constitute the Federation of Korean Trade Unions (FKTU). The Korean labour movement is centred around the FKTU, which was founded in 1960 and takes a moderate stance on labour issues. Government officials (other than blue-collar workers) and teachers are not allowed to participate in unions and political activities by unions are prohibited.

While the constitution permitted union activity, the government exercised effective control over labour-management relations during the 1970s. Union autonomy was limited further by close links between business and some union leaders. The ability of labour to stage legal strikes and engage in collective bargaining was severely restricted. The strikes that did occur were usually illegal and were concentrated in periods of political unrest. In the absence of autonomous unions, collective bargaining was the exception rather than the rule prior to 1987. Unions appear to have had no effect on relative wages. Labour disputes were usually ended by direct government intervention.

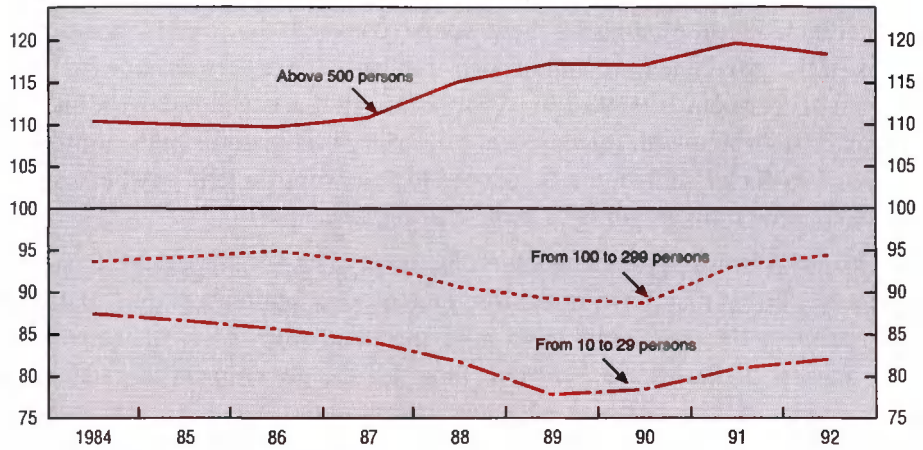
The economic liberalisation programme adopted in 1980 did not include the development of labour market institutions such as unions. Union membership stagnated between 1980 and 1986 at about 8 per cent of employment. Following the 1987 declaration, which had called for democratic reforms, legal changes were enacted that facilitated the creation of unions. Government controls over strikes and collective bargaining were ended. The power of the government to dissolve unions or disqualify union officers was limited. Labour laws were amended in 1986 to allow local unions to entrust negotiations to their national federations, which generally prompts employers to form counterpart bargaining associations. In textiles, for example, about one-third of wage bargaining takes place at the industry level.

Following these changes, the number of union members rose by 74 per cent, bringing their share in the non-agricultural labour force to 13 per cent by 1989. With the withdrawal of the government as the final arbitrator of labour-management relations, the labour market experienced a serious disruption with numerous labour disputes, many of them violent. There were 2 600 strikes during the two months following the June 1987 declaration, more than the total during the preceding 25 years. Total days lost rose to 7 million in 1989. Since then, however, the number of strikes, and days of work and production lost through strikes have declined steadily. In 1990, there were 169 days lost per 1 000 employees, a level comparable to the United States, Canada and the United Kingdom.

One consequence of the recent strength of the labour movement has been an increase in the relative wage in manufacturing, the sector most heavily unionised. Prior to 1987, manufacturing wages were 15 to 20 per cent below the national average. Under the prevalent seniority wage system, age is a more important determinant of wages than schooling or job performance. This helps to explain the relatively low average wage in manufacturing during most of Korea's post-war history. Indeed, at the end of the 1980s the average tenure and age of workers in the manufacturing sector was three and six years less, respectively, than in the service sector. In 1991, partially as the result of union action, manufacturing earnings have risen to 92 per cent of the national average, a 10 percentage point increase in a decade. A second result of the increase in union activity and its concentration in large enterprises has been a widening gap between the wages paid by large and small firms (Diagram 21). The low-wage sector, which consists primarily of small firms in labour-intensive industries such as textiles, apparel, leather and food, have faced difficulties in recruitment at wage rates that allow adequate profitability.

Some unions have been established outside the structure of the FKTU, forming a separate national association (Chonnohyop) which was however declared illegal in 1990. Labour laws prohibit prospective unions from seeking to represent workers who already belong to another union, thus complicating the creation of new unions. The law is aimed at preventing the establishment of numerous unions within one enterprise, which may lead to internal labour disputes and hamper the effective functioning of unions. Another law bans third-party intervention in labour disputes.

Diagram 21. **DIFFERENCES IN WAGES BY COMPANY SIZE**
Average = 100



Source: Ministry of Labour.

Wage bargaining is held each spring resulting in an annual contract that begins in July. Each year the FKTU announces a target for wage increases, which serves as a basis for negotiations. The employer counterpart to the FKTU, the Korea Employers' Federation, also proposes a wage increase that is usually based on productivity gains. The debate at the national level only sets the context for the actual wage bargaining that takes place at the firm level between management and single-company unions. Decentralised bargaining may be one factor behind the large dispersion in relative wages. It also reduces the likelihood of industry- or region-wide strikes in the event of labour disputes.[38]

The role of government

Incomes policy

In the wake of social and political unrest, wage increases were particularly high in 1987. Though labour disputes have subsided since, the upward pressure on wage levels has remained strong in the face of low unemployment. Concerned

about nominal wage increases of more than 15 per cent in 1987 and 1988, the government has attempted to change wage bargaining procedures. Its proposal to establish a national wage board similar to that in Singapore was rejected by the unions. Seeking to establish a new social compact that would damp wage increases, the government recommended that basic wage increases be limited to less than 10 per cent in 1990 and 1991. Although the negotiated wage increase was basically in line with this norm, total earnings increased significantly more. In 1992, the official guideline was reduced to 5 per cent for total pay but earnings growth exceeded this target by a large margin.

Government wage policy would, thus, seem to have little influence on wage settlements. Firms may have officially granted wage settlements that conformed to government demands, but have paid increased allowances in response to labour market pressures. Such actions have led the government to encourage a simplification of remuneration packages in the hope that this would serve to moderate wage inflation.

Improving the relevance of education to the labour market

The expansion of higher education in the 1980s has meant that the new arrivals in the labour market tend to be highly qualified. The government has set in place policies which should improve the fit between the skills and knowledge of those leaving full-time education and the demands of the economy. The curriculum is being changed to favour the teaching of science and mathematics. Middle and high school education will become completely free. Greater emphasis will be placed on vocational high schools by raising their share of students from 35 per cent to 50 per cent. Vocational high school students are supposed to use the extra year of school to combine on-site training with classroom instruction. Most graduates of general high schools are expected to proceed to university. At present, those general high school graduates that do not go to university have more difficulty finding employment than the graduates of vocational high schools. The better vocational high school students will be able to proceed to higher education as the number and scope of the two-year vocational junior colleges is to be expanded. At the university level, subsidies will be provided to the private sector colleges (which account for 75 per cent of total enrolment) as a means to raise the proportion of science and engineering graduates to 55 per cent of the total from 40 per cent in 1992. The quality of private sector colleges will

also be monitored through the introduction of an accreditation system. Scholarships to allow more children from poor families to attend universities, which are generally operating on a fee-paying basis, are to be introduced. Families, at present, devote about 8 per cent of their household budget to education for their children.

Better training for the labour force

Another form of government intervention in the labour market is the provision of public training institutions and the requirement that private enterprises with more than 150 employees either train their own employees or pay a levy (0.67 per cent of their payroll on average) to the government. The proportion of firms opting to pay the training levy has steadily increased from 33 per cent, when the system was introduced in 1977, to 80 per cent by 1992. Out of 2 700 companies, 500 train their own employees, while 2 200 firms – mainly smaller ones – have opted to pay the training levy. The rate of the levy was meant to correspond to the cost of in-plant training. In reality, the revenue from this levy covers no more than half of the costs of running the government training institutions. Total government expenditure on training is about W 170 billion, almost 0.1 per cent of GDP. In total, 180 000 people completed training courses in 1992. Most were trained in the private sector either using in-plant facilities or in authorised training facilities. Only 26 000 completed courses in public sector establishments but the duration of these courses was about twelve months compared to about four months in the private sector.

Unemployment benefit and minimum wage and other labour legislation

The government will introduce an unemployment benefit programme in 1995 following the passing of the Employment Insurance Act in 1993. A worker will not be eligible to obtain benefits unless he has worked for twelve months in the previous eighteen months. There will be an initial period of two weeks for which no benefits will be paid. The duration of the benefit period will be between one and seven months. The scheme will be financed jointly by employers and employees and is expected to balance over a period of years. The initial cost of the scheme is likely to be 1.5 per cent of the payroll split equally between

employers and employees. The new Act also allows the government to subsidise firms to avoid fluctuations in employment.

Minimum wage legislation was introduced in 1988. At first, it applied only to manufacturing. Now it applies to all firms employing ten or more workers. The minimum wage is W 227 000 (W 1 005 or US$1.25 per hour), about one-fourth of average monthly earnings and one-third of basic wages since about 30 per cent of total earnings are in the form of bonuses and overtime. The minimum wage has had little impact in the manufacturing sector. It has had more of an impact in the informal service sector. The rate of increase of the minimum wage has been considerably slowed since 1989; in 1992 and 1993 it was kept below that of earnings. As a result, the minimum wage is now paid to just over 1 per cent of the labour force. Nevertheless, it appears to have had some negative impact on job openings for young people as between 1988 and 1992 the youth unemployment rate rose slightly to just under 8 per cent while that for prime age labour fell to 1.6 per cent.

The government has also intervened to improve the employment situation of women. In 1988, discrimination against women was prohibited. The male-female wage differential had been one of the largest in industrialised countries in 1980. By 1990, average earnings of women increased to 55 per cent of male wages up from 43 per cent a decade earlier. Legislation had been introduced to require large firms to provide child-care facilities for women employees. However this law was repealed as it was found that employers became reluctant to hire young women. Instead, tax incentives have been offered to encourage the provision of child care facilities.

There is a national job placement service run by the Ministry of Labour, which offers placements, guidance and training support. It seems to be relatively ineffective as it accounts for less than 2 per cent of new hirings and less than half of those who register with the service found jobs. The employment services of the local and provincial authorities are much more effective, placing 90 per cent of those who register. Private agencies, which have over 1 000 offices compared to the 52 offices of the national service, manage to place 90 per cent of job applicants who register with them. These agencies, the majority of which charge fees, are mainly active in placing service sector workers.

VI. Financial sector developments and policies

Financial markets have been subjected to wide-ranging controls which have only partially been dismantled over the past decade. The government has used interest rate controls and quantitative credit targets to control monetary growth and to direct credit to favoured areas. The present structure of the financial system dates from 1972 when the government extended its control to the informal credit market, creating new institutions to take over its role. A broader range of financial instruments and markets have been allowed from 1980 onwards, enlarging possibilities for price arbitrage. A move, in 1988, to free all bank lending rates completely from government controls was, however, abandoned but new measures of deregulation were announced in 1991.

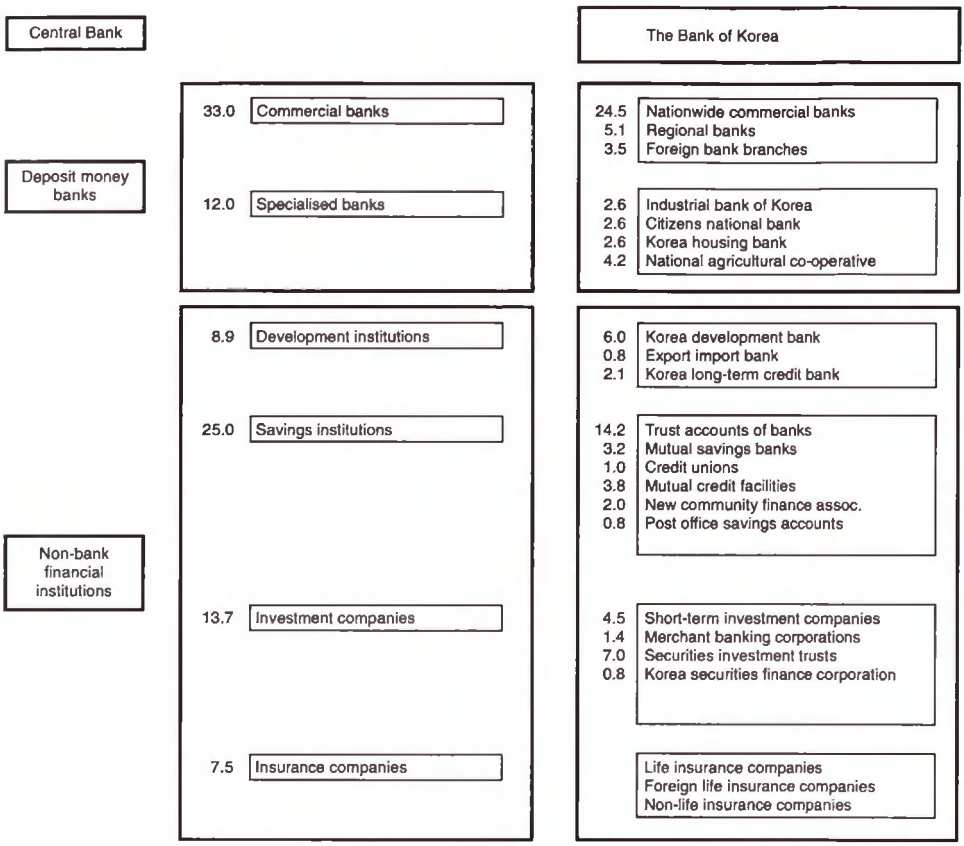
The present government has introduced a detailed plan for further deregulation of financial markets in 1993 and a progressive opening of the financial system to international capital markets. Apart from efficiency gains for the economy at large, it is expected that the availability of more market-based monetary control instruments will render monetary policy more effective. The authorities are, however, concerned that deregulation and opening of the market might result in capital inflows putting pressure on the money supply or the exchange rate; that the end of discretionary allocation of credit would raise borrowing costs for highly leveraged corporations; and finally, that interest margins in the banking system would be squeezed. Partly in response to these concerns, the four-stage plan is to be phased over five years.

Financial institutions

The financial system comprises several layers with different degrees of regulation and control mechanism (Diagram 22). At the apex is the Ministry of Finance which jointly with the central bank (the Bank of Korea) regulates the

Diagram 22. **THE STRUCTURE OF THE FINANCIAL SYSTEM IN KOREA 1992**

As percentage of total liabilities



Source: Bank of Korea.

next tier consisting of commercial and specialised banks, whose functions are defined by law. The next tier consists of the non-bank financial intermediaries (NBFIs). The products and interest rates of these institutions are generally less strictly regulated than those of banks and they are subject to less control by the central bank. Finally, there is a securities market with two segments, a large stock market and a growing market in debt instruments.

Deposit money banks

The commercial banking system consists of fourteen nation-wide banks, ten regional banks, six specialised banks and 75 foreign bank branches. Domestic commercial banks have branch networks across the nation, or, in the case of regional banks, within provinces. Their main activity lies in short-term lending, with the need for long-term funds often met by rolling over or renewing short-term loans. The main sources of funding for domestic commercial banks are retail deposits, while borrowing from the central bank has been a relatively large, but declining, source of additional finance. The commercial banks, privatised in 1957, were brought back under government majority ownership in 1961. They were privatised once again in the early 1980s. However, until 1993 the government regulated the appointment of all bank presidents. Banks, in principle, are not allowed to carry out securities business, although some exceptions have been granted.

The six specialised banks have been established by law and are directed and supervised by the government. They are subject to the same interest rate controls and reserve requirements as commercial banks. Unlike commercial banks they can borrow government funds. However, the specialised banks compete with the commercial banks in attracting deposits from the public, and these constitute their main source of funding.

Foreign banks have been allowed to establish branches (not subsidiaries) since the late-1960s.[39] They receive domestic deposits but in addition are funded by the supply of local currency from the Bank of Korea (BOK) under risk-free swap arrangements, introduced as a means of stimulating capital inflow. Foreign banks have also been allowed to issue certificates of deposits up to certain limits which have been raised in several steps. They are subject to lending restrictions based on the amount of local branch equity capital, which can only be increased with the permission of the BOK although this requirement is procedural rather than substantive. The government has been moving towards a policy of national treatment of foreign bank establishments, implying both a reduction of their preferential treatment and of discriminatory restrictions.[40] In fact, they are now subject to the same legislation as national banks and operate under almost *de facto* national treatment.

Non-bank financial intermediaries

Most NBFIs were established in the 1970s, when the government attempted to reduce the importance of the informal credit market by allowing the creation of new institutions. At the time, informal credit accounted for more than one-third of all credit extended in the economy. Informal market contracts were declared invalid and private savings and investment institutions were established with new and less regulated financial instruments to attract funds which previously had gone to the informal market. In view of the importance of creating a formal financial market, the new NBFIs were granted a favourable regulatory regime. Their regulated borrowing and lending rates were set above those permitted for banks and they were not subjected to the same degree of control of their asset portfolio. All new NBFIs were in the private sector. With the exception of development institutions, the NBFIs are able to offer higher interest rates, face lower entry barriers, can offer a wider range of financial instruments and have more leeway in managing their assets. The most important among these institutions are the investment and finance companies. They engage in activities, such as the purchase and sale of commercial paper, and are funded mainly by borrowings from other financial institutions and cash management accounts. More competition was introduced in the non-banking sector when commercial banks were given permission to undertake trust business and to provide instruments that were very similar to long-term deposits.

The securities market

Since 1968, when the Capital Market Promotion Act entered into force, the government has actively promoted the domestic stock market. This was done both by introducing a number of tax incentives (such as favourable taxation of corporate income and capital gains) and by limiting the access of certain enterprises to bank credit above certain levels. Large companies were directed to issue shares at below-market prices, the proceeds of which had to be used to repay bank loans. As a result, the stock market expanded vigorously;[41] the number of listed companies rose from 34 in 1968 to 688 in 1992. Total market value of stocks rose from 4 per cent of GDP in 1968 to 41 per cent in 1992. With a total market capitalisation of $107 billion at end-1992, only thirteen OECD markets were larger. The market is supervised by a Securities and Exchange Commission.[42]

The debt market originally developed as a government bond market but there has not been a large supply due to conservative fiscal policies. Corporate bonds have been issued since 1972. These bonds are of short maturity and three-quarters are guaranteed by banks. Non-guaranteed bonds have been steadily increasing their market share since 1980. The Finance Ministry adjusts and smooths the quantity of bonds that may be issued. Certificates of deposit and commercial paper exist as well but the Ministry of Finance has not yet allowed the issuance of floating rate notes. The volume of business sector debt instruments outstanding is slightly above the capitalisation of the equity market ($113 billion versus $107 billion as of end-1992), as is the annual trading volume ($127 billion versus $113 billion in 1992).

Financial sector policies

Throughout the 1970s, the government used its financial institutions, above all the commercial and specialised banks, to direct credit at preferential rates to strategic industries, such as steel, shipbuilding, machine tools and chemicals. Deregulation was not pursued vigorously. However, by the early 1980s it had become clear that several of the favoured sectors had performed badly, leaving commercial banks with significant non-performing loans.

At the beginning of the 1980s, financial markets were deregulated to a limited extent. The government adjusted its financial sector strategy to achieve the following goals: financial stability and the re-establishment of monetary control; increasing credit flows for industrial restructuring and for small- and medium-sized firms, while limiting the access of conglomerates to credit; reliance on market forces to improve resource mobilisation and allocation; and opening of financial markets to benefit from foreign competition and expertise.

To meet these objectives, new financial instruments were permitted. Interest rates for some money and capital market instruments (interbank rates and corporate bonds) were freed. The dispersion of preferential interest rates was reduced. Competition was enhanced by reducing restrictions on the scope of business for existing banks as well as non-bank financial institutions, by privatisation of the commercial banks, and through permission to several new commercial banks to enter the market (Tables 23 and 24). The impact of these measures on the

Table 23. **Chronology of financial sector reform 1980-1991**

	Interest rate liberalisation	Restructuring of the financial system	Internationalisation
1980	Repurchase (RP) agreements introduced for securities companies.		
1981	Certificate of deposit (CD) market expanded. Interest rate of call market and Commercial Paper (CP) market partly liberalised.	Commercial banks allowed to expand retail banking services, including household checking accounts, automatic deposits of monthly salaries and payment of public utilities. Commercial banks privatisation started.	Limited indirect investment in the Korean stock market through special international investment funds started. Foreign securities companies allowed to open representative offices in Korea. Korea securities companies allowed to establish representative offices overseas.
1982	Some preferentially low rates on export financing loans abolished. RPs opened to commercial banks.	The General Banking Act revised to provide the denationalised banks with more autonomy in dealing with their own managerial affairs. Entry barriers for non-bank financial institutions lowered. A new commercial bank established.	
1983	RPs opened to Post Offices.	A new commercial bank established. Privatisation of commercial banks completed.	
1984	Ceilings on interbank call rates and issuing rates of unguaranteed corporate banks lifted. Banks allowed to vary their interest rates autonomously within a given margin according to a borrower's creditworthiness. The nationwide commercial banks, local banks, and the Korea Exchange Bank allowed to issue CDs. Cash Management Account (CMA) introduced.		Restriction on foreign direct investment relaxed: the negative list system was modified and the automatic approval system was adopted for manufacturing projects that have less than 50 per cent foreign equity, do not seek tax incentives, and whose amount is less than $3 million.
1985	Companies allowed to issue convertible bonds (CB), bonds with warrants (BW) and depository receipts in international capital markets under guidelines set by the government. The maximum issue was restricted to 15 per cent of the outstanding shares of the issuing company, and an individual foreign investor was limited to acquiring, at most, 3 per cent of any company's outstanding shares through the exercise of bond conversion or subscription rights.		Restrictions on activities of foreign banks eased; foreign banks were granted access to the rediscount window of the Bank of Korea on the same terms as local banks and were permitted to engage in trust business, excluding the specified money trust and the non-money trust.

Table 23. **Chronology of financial sector reform 1980-1991** *(cont'd)*

	Interest rate liberalisation	Restructuring of the financial system	Internationalisation
1987	Exchange Equalisation Bonds issued. Minimum denomination of CDs lowered (W 100 million to W 50 million).		Domestic life insurance market opened to foreign life insurance companies.
1988	Comprehensive interest rate liberalisation plan announced (but halted mostly reversed in early 1989). 1) Interest rates on loan from banks and non-bank financial intermediaries, other than interest rates on loans subsidised by government funds fully liberalised. 2) A prime rate system was introduced. 3) Interest rates on CDs, RPs, CP, financial debentures and corporate bonds fully deregulated. 4) Yields on fund-type instruments, such as cash management accounts, corporate money trusts, household money trusts, and pension trusts liberalised. 5) Interest rates on time deposits with maturities of more than two years at banks, postal savings and credit unions, and on mutual time and savings deposits with maturities of over one year at mutual savings and finance companies liberalised. 6) The "new" commercial paper and conventional commercial paper merged into one, creating a consolidated CP.		A detailed plan for the internationalisation of the capital market during 1989-92 announced (implementation as scheduled). 1) During 1989-90 the government would continue to expand indirect investment opportunities with the enlargement of the foreign investment funds and an increase in overseas security issues by domestic corporations; relax restrictions on trading in converted stocks; relax limitations on foreign shareholdings in domestic securities companies; and allow a greater number of foreign securities companies to open representative offices in Korea. 2) In 1991, foreign securities companies will be permitted to open branch offices in Korea on a reciprocal basis. 3) In 1992, direct foreign investment in the domestic market will be allowed to a limited extent and restrictions on investment in foreign securities and entry into the overseas securities business by Koreans will gradually be relaxed. Domestic institutional investors permitted to invest in foreign stock markets (up to $30 million by securities companies and $10 million by insurance and investment trust companies) only for their own account.
1989	Bankers' Acceptances (BA) introduced. The minimum maturity of CDs reduced from 91 days to 30 days.	Three new commercial banks established. The Korean Exchange Bank granted permission to change its status from a specialised bank to a nationwide commercial bank.	U.S. dollar call market established.

Table 23. **Chronology of financial sector reform 1980-1991** *(cont'd)*

	Interest rate liberalisation	Restructuring of the financial system	Internationalisation
1990	Direct sales of Monetary Stabilisation Bonds (MSB) to retail investors introduced and minimum trading unit of MSBs reduced from W 10 million to W 1 million. The maturity period of MSBs extended to two years. Ceiling on CDs issues and interest rates on CDs increased. Coupon rates of new corporate bond issues with a maturity of over three years deregulated.	Banks allowed to underwrite privately placed corporate bonds.	The "market average exchange rate" (MAR) system adopted. Matching investment funds established and equity linked overseas bond issues increased significantly.
1991	A four-phased schedule for the full liberalisation of interest rates announced.	Law to convert investment and finance companies into *i)* banks, *ii)* securities companies, or *iii)* money market broker promulgated.	Four foreign securities companies allowed to establish branches. Use of proceeds from sales of converted shares from CBs and BWs for reinvestment in other domestic securities allowed. Restriction on activities of foreign banks in Korea eased significantly. 1) Easing of restrictions on multiple branching. 2) Increase in the ceiling on foreign banks' paid-in capital. 3) Increase in local currency funding opportunities for foreign banks. 4) Permission to participate in full range of trust business.

financial position of financial institutions was often softened through changing regulation of their scope of business.

The government continued to set most interest rates administratively. Monetary policy was put on a slightly more market basis by the abolition of direct tools of monetary control such as credit ceilings. The BOK relied on the administrative allocation of bonds, reserve requirements and rediscounting in its conduct of monetary policies. However, quantitative limits were placed on credit to conglomerates and banks were required to meet minimum credit targets for small- and medium enterprises.

Table 24. **New financial instruments introduced since 1980**

	Money market businesses		
	Banks	IFCs and MBCs	Security companies
1981		Commercial paper (CP)	
1982	Sales of commercial bills RPs (government and public bonds)		
1983			
1984	Certificate of deposit issuing	Guaranteed CP Cash management account CB brokerage	CP brokerage CD brokerage
1985			
1986			
1987	Corporate Trust Account		Bond Management Fund

Note: IFCs: Investment and finance companies. MBCs: Merchant banking corporations.

A new policy, announced in December 1988, envisaged a number of measures to deregulate interest rates. Actual deregulation has fallen short, however, of what was provided for in the 1988 plan. Most bank and non-bank lending rates were to be decontrolled, except lending rates for funds provided by the government. Other deregulated rates were those on money market instruments (CPs, CDs and large repurchase agreements), corporate bonds, financial debentures and asset management accounts and funds. Controls remained in force on most deposits, excluding some long-term deposits. To limit the flow of funds from the regulated to the unregulated sector, restrictions were slightly tightened on asset management accounts and funds while there was no further deregulation of the minimum transaction unit for commercial paper and ceilings on the handling of CDs. The principal reason for the abandonment of the 1988 reform plan was the strong rise in market interest rates during the economic upswing of 1988 to 1990. The gap between administratively-set interest rates and market rates widened, creating pressure from those who benefited from preferential access to regulated credit to abandon the liberalisation process. In August 1991, a new four-stage plan to deregulate interest rates was announced, which included many elements that had also been included in the 1988 programme (Table 25).

Table 25. **The first phase of the 1991 financial reform**

	Interest rate deregulation		
	Loans	Deposits	Bonds
Step 1			
November 1991	Bank overdrafts		Corporate bonds > 2 years
	Commercial bills	Commercial bills and CDs with maturity longer than three years.	
	Commercial paper	Large denominations	
		Trade bills	
		Commercial bills	
Step 2			
November 1993	All loans	Time deposits > 2 years	Corporate bonds < 2 years
	Except policy loans		Financial debentures, MSBs, government and public bonds > 2 years
	Product deregulation		
Stage 1			
1993	Expand CD quota for foreign banks and extend permissible maturity.		
	Treat foreign firms as residents for stock investment.		
	Permit FX hedging of capital by foreign securities firms.		
	Extend permissible maturities of call money.		
	Lessen documentation required on forward currency deals.		
	Widen won-dollar fluctuation range.		

Following the downturn in the stock market at the beginning of 1990 a stock market stabilisation fund was established with the purpose of slowing the fall in share prices. Its initial volume was W 4 trillion, or about 4 per cent of total market capitalisation and rose as high as 10 per cent of market capitalisation before falling back to its original share of market valuation. It is financed by both financial institutions and listed companies. A Guarantee Stock Fund of W 2.6 trillion was established, financed by investment trust companies. Its purpose is to guarantee a minimum return of 10 per cent per annum to its investors.

Linkage with international capital markets

The regulation of the domestic financial sector is matched by extensive controls on capital account transactions, based on the Foreign Exchange Control Act of 1961. The restrictions have been motivated by concerns about "inefficient" use of "scarce" foreign exchange, capital flight and undermining of monetary control. While the Act originally forbade all transactions that were not explicitly permitted, the regulatory authorities are now establishing a negative list of prohibited or controlled transactions. In 1988, remaining controls on current-account transactions were abolished.

The opening of the capital market to international flows has proceeded since 1981 in a series of small steps. The path of liberalisation has in part been influenced by macroeconomic policy goals. In the beginning of the 1980s – when domestic credit was scarce and the government sought to diversify the country's foreign liabilities – inflows of foreign capital were encouraged, essentially through the establishment of closed-end Korea country funds and by permitting Korean firms to issue bonds and depository receipts in international markets. When the current account surplus of the late 1980s stimulated an increase in the domestic money supply, the government relaxed limits on outflows of capital, enabling domestic financial institutions to underwrite and invest in foreign securities. When the current account swung back into deficit in 1990, the authorities opened the stock market to foreign investment, with the maximum foreign ownership of a quoted company set at 10 per cent.

Short-term international capital flows have been liberalised less than long-term capital flows. Strict regulations remained in force until 1992 concerning the dates by which payments for exports had to be repatriated and imports had to be paid for. Justification for purchases of foreign currency were required. Non-residents were not allowed to hold won bank accounts and the open positions of banks in the foreign exchange market were strictly controlled. The exchange rate system has been changed several times. In 1981 the fixed exchange rate against the dollar was replaced by a system relying on a basket of currencies and other unspecified considerations for the management of the nominal exchange rate. In March 1990, the government moved to a "market-average" system, under which the exchange rate was allowed to move freely within a daily band of 0.4 per cent around the weighted average exchange rate of the previous day. The current width of the band is 1 per cent. International banking transactions of residents

and non-residents for non-commercial transactions are strictly controlled as is foreign borrowing by residents. Non-resident participation in domestic bond markets is forbidden.

Regulation and its impact

The importance of financial flows

Given the size of the external financing requirement of corporations, reform of the financial sector is particularly important for the efficient functioning of the Korean economy. During the past fifteen years, the large financial deficits of corporate and quasi-corporate non-financial enterprises have been mainly covered by funds from the personal and government sectors, supplemented at the beginning of the period by considerable inflows from the foreign sector (Table 26). The full extent of financial intermediation in the economy is masked by looking at the financial balances, as a portion of personal saving is intermediated to finance housing investment, though this flow is discouraged. The ratio of personal debt to disposable income is slightly less than 70 per cent, much lower than in OECD countries. By contrast, the size of the corporate deficit is far larger than that in most OECD countries where self-financing is more prevalent. The high and persistent external financing requirement means that the corporate sector is vulnerable to interest rate shocks.

Over the 1980s, the principal reason for the high corporate financing requirement has been the high corporate investment ratio. Corporate fixed investment has averaged between 40 and 50 per cent of gross value added and was 42 per cent in 1990. This compares with business sector investment ratios of about 20 per cent in Japan and around 15 per cent in other major OECD countries. Despite this high level of investment, the ratio of tangible fixed assets to value added in the manufacturing sector is, at 1.4, rather low by major country standards. Although the stock market is now well developed, debt has remained the primary source of external finance, exceeding companies' net worth four times on average at the beginning of the 1980s, falling to three times net worth by 1992.

Historically the high reliance on debt[43] partly reflects low perceived default risk by firms, which could generally count on government assistance in times of

Table 26. **Financial flows between sectors**

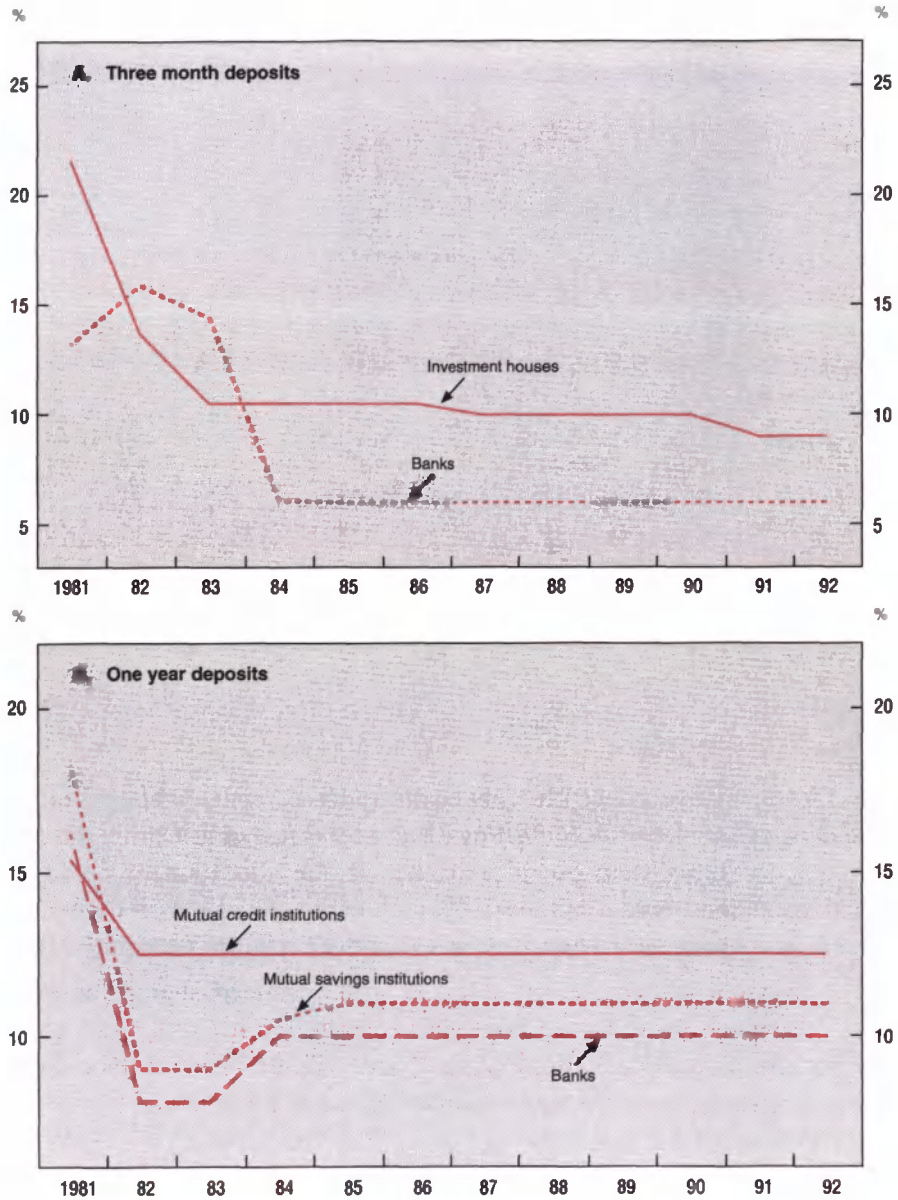
	National sources and uses of funds			
	Per cent of GNP			
	1980-84	1985-89	1990	1992
Sources				
Personal	6.6	9.8	11.5	10.8
Government	1.1	3.1	3.8	1.0
Foreign	5.1	–4.6	1.7	1.0
Corporations	12.8	8.9	17.1	13.2
	Financing account of private sector corporations			
	Per cent of total capital raised			
Banks	24.3	24.6	18.1	19.4
Quasi-banks	22.2	16.5	19.3	21.6
Insurance companies	4.7	3.6	6.6	5.2
Bonds	14.7	15.3	28.1	18.7
Commercial paper	6.0	8.4	4.3	9.6
Abroad	6.1	2.1	7.3	8.2
Equity	22.0	29.5	16.3	17.3
	Per cent of GNP			
Identified capital raising	25.3	20.2	29.6	23.0

Source: Bank of Korea.

distress. Until relatively recently debt-equity ratios of conglomerates tended to exceed those of smaller firms, reflecting easier access to credit. During the 1980s, however, small firms were given preference in the allocation of credit from financial institutions. As a result, by 1990, their debt-equity ratios exceeded those of larger ones which meanwhile had increased their reliance on equity issues.

The average debt-equity ratios for all firms declined sharply during the 1980s. This reflects the reduced bias against equities as a result of the interaction of the tax regime with declining inflation[44] and – probably more importantly – the simultaneous boom of the equity market. As the share of policy loans in total credit declined and the non-bank and capital markets rapidly developed, firms turned increasingly to the equity markets to fund themselves. However, when inflation accelerated towards the end of the 1980s and the stock market slumped, it again became more attractive to issue debt.

Diagram 23. **REGULATED DEPOSIT RATES AT BANKS AND NON-BANKS**



Source: Bank of Korea.

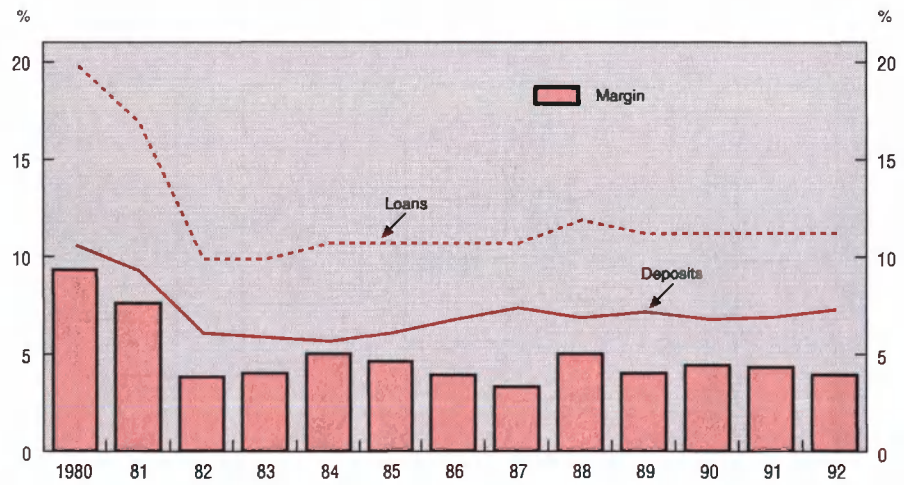
Interest rate policy

Regulated interest rates

The government and the Bank of Korea jointly set the rates of interest on bank and non-bank deposits. Following the success of the stabilisation plan of the early 1980s, nominal interest rates were reduced but by less than the fall in inflation. As a result, the real rate of return on one-year bank deposits became positive, averaging 4.5 per cent in the period 1982 to 1989. Since then until 1992, interest rates were rarely changed. Regulated interest rates remained in favour of non-bank intermediaries as they were allowed to pay more for deposits than banks: about 4 points more for three-month deposits and 2½ points more for one-year deposits (Diagram 23).

The terms of lending by the deposit money banks (DMBs), comprising commercial and specialised banks, were regulated by the government. As with deposit rates, lending rates have rarely been changed in the past decade (Diagram 24). The only element of deregulation was to allow DMBs to vary charges

Diagram 24. **AVERAGE DEPOSIT AND LENDING RATES OF COMMERCIAL BANKS**



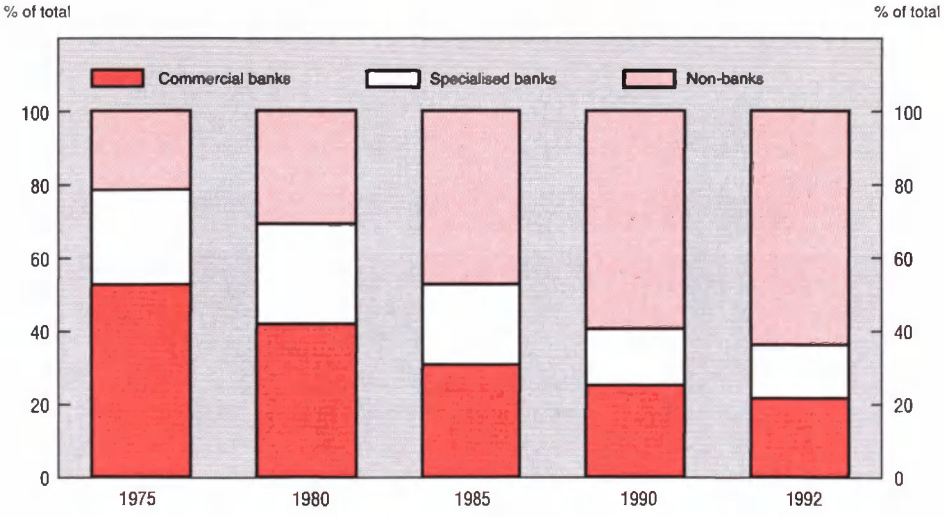
Source: Bank of Korea; OECD.

according to the credit worthiness of the borrower. The level of lending rates has been sufficient for the banks to obtain a substantial margin between their borrowing and lending rates (Diagram 24). Moreover, it was a common practice to ask for compensating balances to be held against loans granted at below market rates of interest.

The impact on financial institutions

The higher returns allowed in the non-bank sector meant that these institutions gained substantial market share both in the 1980s and 1990s, a trend that also reflected the initial weakness of some banks (Diagram 25). In 1992, the DMBs held only 36 per cent of deposit liabilities as compared with over 70 per cent in the 1970s. Loans by DMBs declined as a share of total credit from 67 per cent in 1979 to 45 per cent in 1992, though remaining stable at about 40 per cent of GDP. The downward movement in the share of banks became so pronounced by the mid-1980s that they were allowed to undertake trust business through special accounts classed with non-bank intermediaries. This form of account

Diagram 25. **SHARES OF FINANCIAL INTERMEDIARIES**



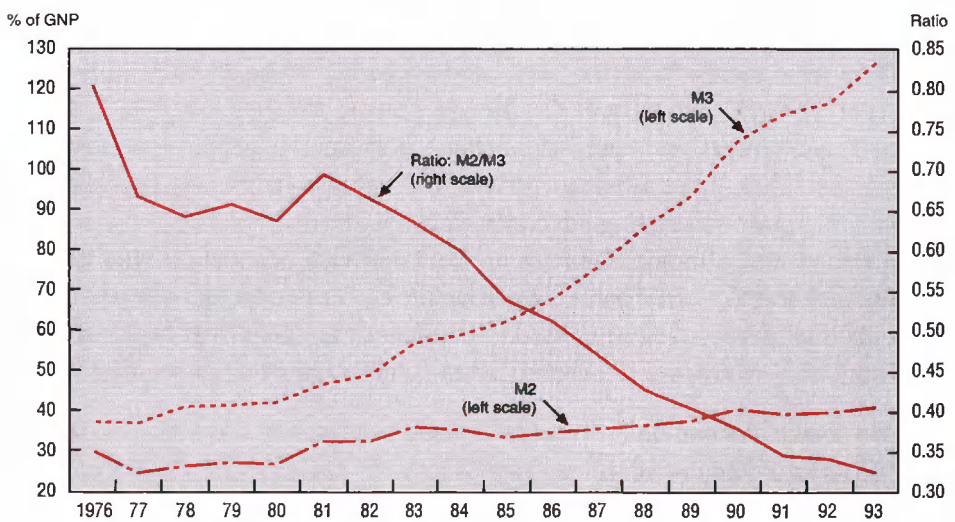
Source: Bank of Korea.

grew rapidly. In 1984, money in trust represented only 5 per cent of the domestic liabilities of deposit banks; by 1993 the share had risen to over 40 per cent.[45]

The growth in non-bank financial activities resulted in the ratio of M3[46] to GNP rising from 49 per cent in 1980 to 115 per cent in 1990 (Diagram 26). The ratio of M2 to GNP rose more moderately, from 34 to 40 per cent, reflecting continuing control of bank deposit rates. While intermediation through the deposit money banks is thus relatively limited compared with most OECD economies, total intermediation through financial institutions as measured by M3 is comparable to that in OECD countries.

Increasing recourse to cashless forms of payment lowered the ratio of currency to deposits from 19 to 12 per cent between 1980 and 1991, while the share of demand deposits in total deposits increased from 31 to 38.2 per cent over the same period to meet transaction requirements. The ratio of currency to GDP is similar to that in many OECD countries and quite distinct from highly cash-based developing economies.

Diagram 26. **MONEY SUPPLY**



Source: Bank of Korea.

The development of alternative markets

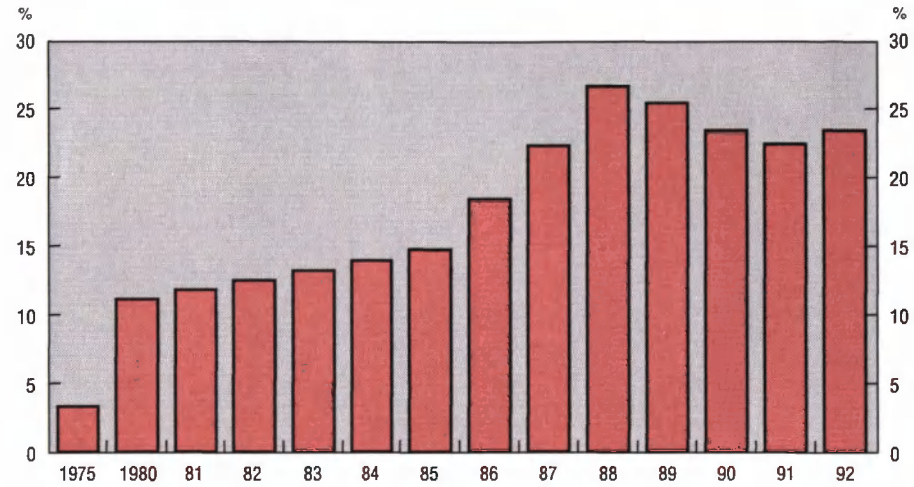
The rapid expansion of the NBFIs required the existence of profitable investment opportunities for them. These were found in the securities market to a greater extent than in the loan market. The NBFIs have therefore a markedly different portfolio structure to that of banks. By the beginning of 1993, NBFIs invested 30 per cent of their assets in securities (other than equities), three times as much as banks.

The NBFIs have used two major security markets: that for corporate bonds and that for money market instruments. The short-term maturity structure of these markets optimally matched the liability structure of the NBFIs. The most common government instrument in these markets has an average maturity of less than one year and a maximum maturity of only two years. Similarly, most corporate bonds have a maturity of less than three years. Interest rates on the secondary market for these instruments are deregulated. Access to the corporate bond market is restricted as the authorities set annual limits on the issuance of such securities. During the 1980s, the corporate bond market grew faster than the outstanding stock of corporate borrowing. By 1989 this market had attained a level equal to almost 25 per cent of the private domestic credit market, thereby doubling its share in total corporate financing (Diagram 27).

Short-term money markets have grown rapidly in the 1980s, rising from 6 per cent of GNP in 1980 to over 30 per cent by 1989 (Table 27). The two dominant instruments in these markets are commercial paper and monetary stabilisation bonds, issued by the private and public sectors respectively. The absence of secondary trading in commercial paper has resulted in a lack of market transparency, though the rates are set by private negotiation with brokers and thus respond to market forces. Even before the deregulation of interest rates on commercial paper, rates were market-determined as the NBFIs required compensating balances when they intermediated commercial paper at regulated rates.

The corporate bond and commercial paper market thus provide an outlet for NBFI funds at a market-determined rate of interest. The markets also constitute a significant source of funds for private enterprises. Indeed, at the beginning of 1993, the outstanding borrowing of private enterprises from these two markets was almost as much as their borrowing from banks.

Diagram 27. **CORPORATE BONDS AS A SHARE OF PRIVATE SECTOR CREDIT**



Source: Bank of Korea.

Table 27. **Money market trends**

Billion won

	1980	1985	1989	1992
Private sector				
Call Market[1]	179	433	1 152	2 370
Commercial paper	2 083	7 396	18 268	19 584
Repurchase agreements	130	2 563	2 138	5 017
Negotiable CDs	0	1 081	1 856	11 943
Bankers acceptances	0	0	1 041	3 201
Total	2 392	11 473	24 445	42 115
Public sector				
Treasury bills	150	0	2 500	1 580
Monetary stabilisation bonds	3	504	17 305	20 264
Total	153	504	19 805	21 844
Private and Public	2 545	11 977	44 260	63 959
Per cent of GNP	6.9	15.3	31.2	27.8

1. Daily average balances; daily average balances for December in 1989 and 1992.
Source: Bank of Korea.

Table 28. **Financial markets in a comparative perspective**

Per cent of GDP, 1991

	Korea	United States	Japan	Germany	France	United Kingdom
Monetary Market						
Currency/deposits	11.7	13.6	8.3	12.5	9.8	5.7
M_2	40.4	58.2	112.0	65.5	49.9	94.5
M_3	115.0	73.3	–	56.8	76.4	96.1
Stock Market						
Stock market value	46.8	57.3	99.1	25.5	28.7	89.0
Number of quoted companies	669	6 599	2 071	649	873	2 006
Stock market turnover	69	59	55	265	38	32
Price earning ratio	21.5	14.1	31.0	12.6	9.3	10.9
Share of ten largest companies	31.2	15.4	18.7	39.4	26.6	25.4

Source: Bank of Korea, *Economic Statistics Yearbook*; IMF, *International Financial Statistics*; IFC, *Emerging Markets*.

The equity market has been a further source of finance limiting the importance of the regulated financial sector. While stock market capitalisation had barely changed its share of GDP of about 6 per cent during the 1970s, it grew very rapidly between 1985 and 1989. Even after a sharp fall in equity prices in 1989, the Korean stock market capitalisation as a share of GDP at the end of 1991 ranked above most OECD countries, although well below major stock market countries such as the United States, the United Kingdom and Japan. In absolute size, the Korean market is comparable to that of Sweden. Market concentration is not significantly different from that in several OECD countries with the largest ten listed companies accounting for a third of market capitalisation in 1990 (Table 28). Stock market regulations limit daily price fluctuations. However, this does not appear to have affected trading negatively. Relative to market capitalisation the turnover is among the highest in the world, surpassed only by Germany among OECD economies.

Non-price credit allocation

The authorities used several ways to allocate rationed bank credit. Several state-owned banks (such as the Korea Development Bank and the Industrial Bank of Korea) grant loans for specific policy purposes. Commercial banks relend

money supplied by the government, while the government, itself, makes loans through the budget. Central bank rediscount facilities to the commercial banks represent another instrument, with the relevant rediscount rate often well below commercial bank deposit rates. At the end of 1992, commercial bank borrowing from the BOK amounted to slightly over 20 per cent of their domestic deposits. As a result of this dependence, and other regulations, a substantial amount of discretionary power remains in the hands of the authorities.

Since 1985, the significance of directed flows has declined relative to total credit flows but much less so relative to GNP[47] (Table 29). In addition to policy loans, banks are obliged to lend a minimum proportion of new credit to small- and medium-sized enterprises – 45 per cent in the case of the nation-wide

Table 29. **Loans through government-controlled banks and funds**

Billion won

	1980	1985	1990	1991	1992
Industrial loans					
Industrial Bank	971	2 727	6 693	7 805	8 942
Development Bank	3 105	6 913	12 736	15 689	17 739
EXIM Bank	511	3 349	2 367	2 931	2 479
Long-term Development Bank	0	962	3 290	4 084	4 918
Bank of Korea	2 715	9 641	11 604	13 551	16 998
Total of above	7 302	23 592	36 690	44 060	51 076
as per cent of GNP	19.9	30.2	21.4	21.3	22.2
as per cent of private sector credit	28.8	30.7	18.1	17.4	17.1
Other sectoral loans					
Housing Bank	813	2 318	6 873	8 615	10 802
Agriculture Banks	1 365	3 695	9 937	11 471	13 290
Total of above	2 178	6 013	16 810	20 086	24 092
as per cent of GNP	5.9	7.7	9.8	9.7	10.5
as per cent of private sector credit	8.6	7.8	8.3	7.9	8.0
Total	9 480	29 605	53 500	64 146	75 168
as per cent of GNP	25.5	37.9	31.2	31.0	32.7
as per cent of private sector credit	37.3	38.6	26.3	25.3	25.1
Memorandum:					
Borrowing of above banks from government	298	4 345	6 080	6 850	7 724
as per cent of GNP	0.8	5.6	3.5	3.3	3.4
as per cent of private sector credit	1.2	5.7	3.0	2.7	2.6

Source: Bank of Korea, *Economic Statistics Yearbook* (several issues).

commercial banks. On the other hand, bank lending to the major 30 conglomerates is subject to a ceiling.

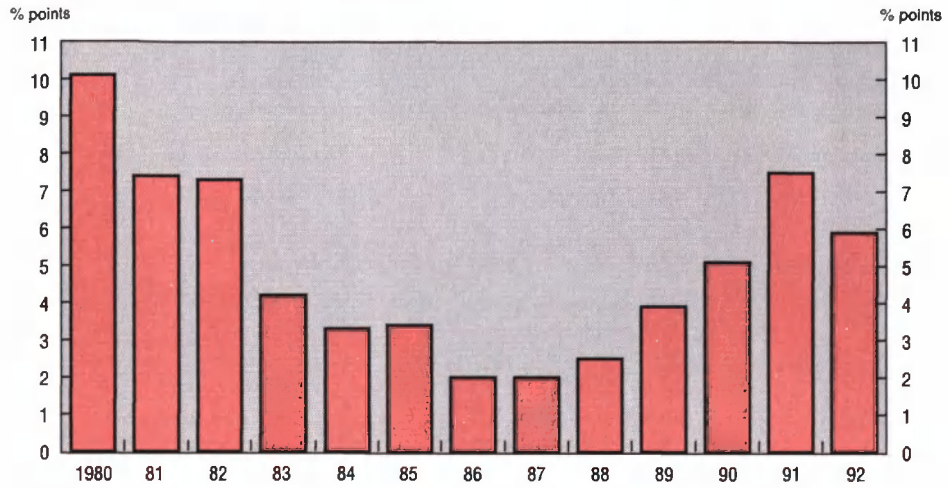
In practice, the impact of these administrative powers on the allocation of credit may have been rather limited for several reasons. First, conglomerates manage their finances very tightly from the centre. This allows them to reallocate funds within their group of companies irrespective of official policy priorities. Second, conglomerates are able to borrow from non-financial sources such as suppliers benefiting from small company loans.[48] Finally, until 1993, bank deposit accounts could be opened under assumed names. Funds thus become untraceable.

The extent of distortions in the banking system

Regulation of interest rates and financial flows imposes economy-wide costs through the promotion of activities that might otherwise be unprofitable. One clear cost lies in the banking system itself. A large interest rate spread between deposits and loans may generate an over-supply of banking services or low productivity in the production of banking services. However, in comparison to other OECD countries the spread does not appear to be particularly large. Part of the spread in Korea is appropriated by the central bank through the imposition of high non-remunerated reserve requirements. Another cost lies in the promotion of economic activities that are financed on favourable credit terms and where the implicit subsidy is borne by bank depositors. The scale of the transfers is difficult to gauge. Market interest rates would be different after deregulation, so that estimates of transfers based on actual market rates can only be approximate. The gap between regulated rates and market rates of interest has, moreover, varied considerably (Diagram 28).

The regulated bank lending rates of interest below market-clearing rates have given certain sectors favoured access to credit. During the 1980s, the dispersion of preferential interest rates was greatly reduced. While nominal lending rates to manufacturing varied by as much as 10 percentage points in the 1970s (Table 30), they were unified in the early 1980s. Lower rates are still applied to agricultural credit but the subsidy element has also been reduced. Consequently, the observed spread of interest costs between industries and sectors has narrowed quite substantially (Table 31); the standard deviation of borrowing costs declined from 3 per cent to 2 per cent over the decade to 1992.

Diagram 28. **THE GAP BETWEEN FREE MARKET AND REGULATED BANK LENDING RATES**



Source: Bank of Korea.

Table 30. **Selected interest rates**

Per cent

Source/Purpose	1969	1974	1979	1980	1982	1991
Commercial Banks						
Discount or bills up to 1 year	24.5	15.5	18.7	24.5	10.0	10-11.5
Exports	6.0	9.0	9.0	15.0	10.0	10.0
Intermediate goods purchased in foreign currency	6.0	9.0	9.0	15.0	10.0	
Equipment loans for:						
Export industries	–	12.0	15.5	21.0	10.0	
Machinery industries	12.0	12.0	15.0	21.0	10.0	
Korea Development Bank						
Power, shipbuilding, coal	7.5	7.5	7.5	7.5	10.0	10.0
Industries: equipment	12.0	12.0	15.0	21.0	10.0	10-11
Loans from foreign funds	9.1	9.0	9.1	9.1	7.5	Libor + 2
Industry Bank						
Equipment for medium industries (own funds)	20.0	15.5	19.0	24.5	10.0	10-12.0
Equipment for medium industries (government funds)	12.0	10.0	13.5	19.5	10.0	10.0
Equipment for medium industries (foreign funds)	8.0	8.0	8.5	8.5	12.7	12.17-13.11

Source: Bank of Korea, *Economic Statistics Yearbook* and *Monthly Economic Statistics.*

Table 31. **Average borrowing cost by industry**

Per cent

	1982		1987		1992
Electricity	5.8	Electricity	6.8	Transport	7.4
Real Estate	11.4	Entertainment	9.5	Electricity	7.6
Basic metals	11.7	Basic metals	10.0	Entertainment	9.1
Entertainment	14.0	Wood	10.0	Basic metals	9.8
Fishing	14.6	Transport	10.0	Mining	10.8
Mining	15.0	Mining	11.8	Chemicals	11.4
Wood	15.2	Construction	11.8	Non-metallic	11.8
Other manufacturing	15.4	Fishing	12.0	Paper	12.0
Machinery	15.7	Real Estate	12.4	Textiles	12.4
Textiles	16.0	Textiles	12.6	Construction	12.8
Transport	16.1	Paper	12.6	Machinery	13.0
Non-metallic	16.1	Machinery	12.7	Fishing	13.3
Construction	16.1	Chemicals	12.9	Other manufacturing	13.4
Chemicals	18.1	Other manufacturing	13.3	Wood	13.6
Distribution	18.4	Non-metallic	13.3	Real Estate	13.8
Food	18.9	Distribution	14.9	Distribution	14.0
Paper	19.2	Food	15.0	Food	15.0
Mean	15.2		11.9		12.1
(Standard Deviation)	(3.1)		(2.0)		(2.1)
Memorandum item:					
Bank lending rate	10.0		10.8		11.3
Corporate bond rate	17.3		12.8		17.2

Source: Bank of Korea, *Money Flow*.

The industries with the lowest borrowing costs appear to be those directly linked to the government and with easy access to international capital markets (electricity, transport and communication, mining and basic metals). The chemical industry and the machinery industries (two significant components of the industries favoured in the HCI drive) do not appear to have had significantly lower than average borrowing costs. The average cost of credit to businesses at the beginning of the 1980s, when rates were most regulated, considerably exceeded the regulated bank lending rate. The fastest-growing manufacturing sub-sectors of the 1980s – electronics, machinery and transport equipment – received by far the largest share of credit but their revealed financing costs were above average.

In addition to the subsidy which borrowers indirectly receive from depositors, the government sector provides additional support through preferential loans and through central bank rediscount credit. The government has W 18 trillion of loans and long-term securities in its portfolio and the central bank has outstanding loans and discount credits of about W 17 trillion, some at a discount rate of only 7 per cent. If all the discounts and loans were made at the normal rediscount rate, the extra interest rate charge would have been almost 0.5 per cent of GNP.

The area most adversely affected by the regulation of lending rates has been the personal sector which has been unable to borrow large amounts to finance consumption or housing construction. For individuals the possibility of arbitrage between different lending markets has also been extremely limited. As a result, they have been forced into inefficient methods of financing housing investment or certain consumer expenditure.

Monetary and exchange rate policy

The progressive liberalisation of financial markets and the existence of different regulatory regimes applying to non-banks have posed problems for the conduct of monetary policy. The domain controlled by the central bank (the banks) has become increasingly marginalised by the growth of the non-bank financial intermediaries – including the banks' trust accounts. The control variable used by the Bank of Korea (M2) has become increasingly irrelevant, falling from 70 per cent of the wider measure (M3) in 1980 to under 33 per cent in 1993. Moreover the banks operated in a price-controlled market which meant that the use of interest rates to control the money supply was of limited relevance. The new markets were however increasingly governed by interest rates and not dependent on the central bank for rediscounts or obliged to keep high reserves at the Bank of Korea. Until the mid-1980s, the Bank had no appropriate open market instrument at its disposal.

Serious conflicts between monetary and exchange-rate policy did not occur prior to the mid-1980s. In the first half of the 1980s, access to foreign borrowing was controlled; there was little possibility for capital inflows and the current-account was in small deficit. However, in the mid-1980s the current-account moved into surplus. Although the exchange rate was allowed to appreciate, there was an accumulation of reserves, which put pressure on the money supply.

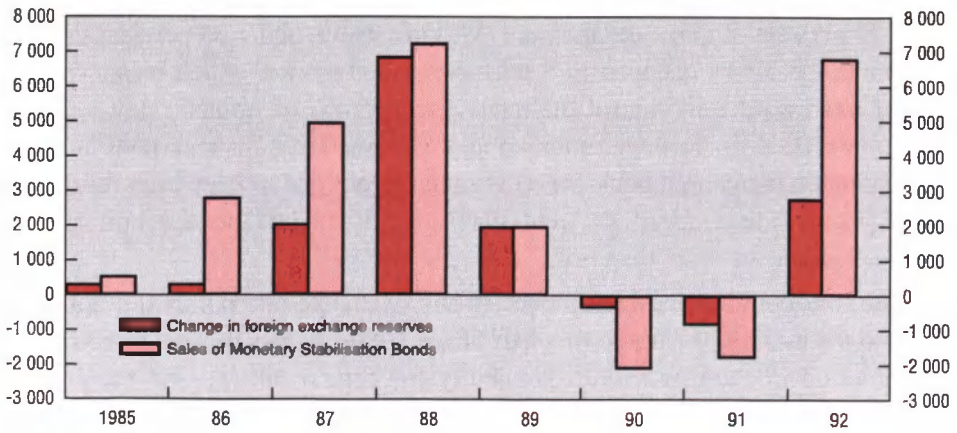
Reserve ratios were increased but this proved insufficient to absorb the excess liquidity.

The conflict was partially resolved by the introduction of a new tradeable short-term instrument: the monetary stabilisation bond (MSB). This bond was issued in order to offset the impact of the reserve increase on the money supply. The objective was met: the issuance of MSBs almost exactly matched the increase in official reserves (Diagram 29). In 1992, a further increase in official reserves occurred which the Bank again "financed" by the issuance of MSBs.[49]

The combination of heavy issuance of MSBs, variation in reserves requirements and a regulated bank credit market allowed the Bank of Korea to continue its policy of regulating both the quantity of money and its price – or at least the price at which some borrowers had access to bank credit. Since 1983, the growth of the money supply exceeded the annual BOK target only in three years, including a slight overshoot in 1993 (Table 32). However, it proved increasingly difficult to sterilise the inflows of foreign currency through MSB sales. First, the quantity of MSBs issued had become uncomfortably large, amounting to more

Diagram 29. **THE INCREASE IN FOREIGN EXCHANGE RESERVES AND SALES OF MONETARY STABILISATION BONDS**

Billion won



Source: Bank of Korea.

Table 32. **Money supply targets and outcomes**

Per cent increase

	Target	Actual	Monetary Stabilisation Bonds as per cent of M_2
1979	25	26.8	–
1980	20	25.8	–
1981	25	27.4	–
1982	20-22	28.1	–
1983	18-20	19.5	0.7
1984	11-13	10.7	2.3
1985	9-14	11.8	1.8
1986	12-18	16.8	9.6
1987	15-20	18.8	20.3
1988	18	18.8	31.4
1989	16-18	18.4	29.5
1990	15-19	21.2	22.2
1991	17-19	18.6	16.1
1992	18.5	18.4	21.1

Source: Kang (1990); Bank of Korea.

than 30 per cent of M2 in 1988 (Table 33, column 3). Secondly, the costs of the issuance grew even more rapidly as the rate of return on foreign currency deposits fell further below domestic rates.[50] In order to moderate the cost of issuing MSBs, the BOK has forced financial institutions, in the past, to buy the bonds at below market rates of interest with the gap amounting to as much as 300 basis points on occasion (Table 33).

Table 33. **Primary and secondary market yields on monetary stabilisation bonds**

Per cent

	Issue market	Trading market
1987	12.5	12.9
1988	12.7	14.8
1989	13.0	15.2
1990	13.0	15.6
1991	13.0	17.8
1992	13.0	15.8

Source: Bank of Korea.

The financial liberalisation plan

In 1993, the government introduced a five-year programme for financial liberalisation that aims to overcome the inefficiencies introduced by the non-price allocation of credit both in the economy as a whole and in the financial sector itself. The plan consists of a four-phase programme to liberalise first interest rates on lending and then interest rates on deposits (Table 34). At the

Table 34. **Stages in the 1993 financial reform plan**

		Domestic money markets	
		Interest rate deregulation	Monetary management
1993	**Loans**	Only policy loans to remain regulated.	M2 targets to become more flexible.
	Deposits	Time deposits > two years.	
	Bond	Corporate bonds < two years. All financial debentures, MSBs and government and public bonds.	MSBs sold at market rates.
1994-1995	**Loans**	Policy loans eligible for BoK discount deregulated.	BoK loan rate becomes flexible. Monetary target to be examined.
			Call market functioning to be improved. Limits on automatic rediscounts to be imposed.
			Monetary policy to be broadened linking money supply, interest rates and exchange rates.
	Deposits	Short-term deposits deregulated. Restriction on types and quantities of large denomination short-term marketable products eased.	
		MSB backing for trust deposits lowered.	
	Money market	Short-term products diversified.	
1996	**Loans**	Policy loans eligible for interest subsidies deregulated.	Market-based open-market operations introduced.
	Deposits	All remaining deposits including low denomination CDs with maturities of less than two years, except demand deposits, are deregulated. Market-related products to be introduced.	Reserve deposit ratios reduced. Reserve asset system will be considered as a replacement.
		MSB backing for trust deposits abolished.	
	Money market	New short-term products studied.	
1997	**Deposits**	Study and plan for liberalisation of demand deposit rates and restrictions on products.	

Source: Ministry of Finance.

same time, the government envisages a gradual freeing of long and then short-term international capital movements (Table 35). The reform of domestic financial markets will be accompanied by a change in the methods of monetary control away from control based on quantitative methods towards control based on open-market operations. The extent of direction of credit will also be reduced. Within each phase of the deregulation plan, both for domestic markets and for interna-

Table 35. **Stages in the 1993 capital account liberalisation plan**

		Long-term capital flows
1993	**Portfolio**	Outward limits raised for institutional investors. Public allowed to purchase foreign stocks through trusts. Limits on inward investment in 5-percent foreign-owned businesses lessened.
	Borrowing	Notification only of foreign corporate borrowing. Deferred payment period for imports of raw materials for export extended. Foreign high-tech enterprises allowed to borrow short term.
1994-1995	**Portfolio**	Inward stock ownership limits raised. Definition of non-residents narrowed.
	Borrowing	International organisations will be allowed to issue won-denominated bonds in domestic market. Non-residents will be allowed to purchase convertible bonds of small and medium-sized enterprises and government or public bonds in the primary market.
1996-1997	**Portfolio**	Inward stock ownership limits raised.
	Borrowing	Direct inward purchase of non-guaranteed long bonds floated by small businesses. Commercial borrowing allowed (if interest rates are comparable). Deferred payment for imports extended.
		Short-term capital flows
1993	**Exchange rate**	Fluctuation margin widened to ± 1.0 per cent.
	Position limits	Limits equalised between banks based on equity capital.
	Documentation	No longer required for transactions under $300 million. Third currency forward contracts freed. Limit increased for forward won transactions.
	Forward transactions	After-the-event documentation.
	Non-resident won	Non-interest-bearing transferable accounts permitted, won settlement of trade transactions up to $100 000.
1994-1995	**Exchange rate**	Fluctuation margin widened again.
	Non-resident won	Settlement limit raised.
1996-1997	**Exchange rate**	Floating rate introduced.
	Position limits	Focus shifted to prudential control of banks' exposure.
	Documentation	Normal transactions will be completely exempted from underlying documentation requirements, but the principle of real demand will be maintained.
	Non-residents won	Invisible transactions will be partly settled in won.

Source: Ministry of Finance.

tional transactions, the speed of implementation will depend on economic circumstances.

Interest rates

In November 1993, the government implemented the first phase of the five-year plan. All lending rates of banks and NBFIs were completely liberalised, except for the so-called policy loans, which account for 20 per cent of total bank loans. Previous financial reforms have never advanced to this stage. The 1988 reform was introduced at a time when free market rates were rising in the face of buoyant economic activity and strong inflation pressure, with the result that the changes were quickly rescinded. At present, the demand for credit is low while at the same time the authorities seem prepared to let monetary targets be overshot. In the short-term, the deregulation of credit should not result in major upward pressure on interest rates in the regulated sector. To the extent that credit demand moves back to banks from NBFIs, there should be some fall in market-related lending rates in that sector.

Deposit rates are to be deregulated at a slower pace than lending rates. In November 1993 only long-term time and savings deposits were deregulated in line with the plan. There will then be a phased reduction in regulation of shorter maturities. The dates by which each maturity will be deregulated are not yet determined. However by the end of 1996, only the interest rate on demand deposits will remain regulated. During this period, the regulations governing the type and quantity of new banking products which can be offered will be gradually reduced.

The direction of credit will be progressively reduced during the liberalisation period. The responsibility for new policy loans will be transferred to the government or government-owned banks and interest rates on policy loans will be deregulated. Indeed in the 1994 budget, policy-based lending of W 600 billion (2 per cent of GNP) will be fiscally supported. The limits on credit to large enterprises will be increased but ending the obligation of banks to lend a specified portion of their assets to small businesses will only be considered in 1997 (Table 34). Large companies have alternative financing modes to bank credits. For them the major efficiency gain from this reform will be the end of having to seek prior administrative approval for investment projects involving equity participations and real estate.

Conduct of monetary policy

The movement towards a deregulated banking system requires reform of the conduct and operation of monetary policy. This is recognised in the plan. The Bank of Korea will no longer be able to rely on the administrative allocation of central bank bonds at below market rate in order to control the money supply. Nor can the central bank continue to allow automatic rediscounting of approved bills and loans at below market rates of interest if it wishes to move to market-based control of interest rates and the money supply. It will also be even more difficult to continue to oblige banks to make interest-free reserve deposits at the central bank while non-banks have no such requirement.

The liberalisation plan sets out the stages in the movement to a market-based system of monetary control. The first stage will be to move to auctions of the main monetary control instrument (MSBs). The BOK discount rate will then become more "flexible" (*i.e.* will move closer to market rates of interest) during the period 1994 to 1995 and automatic rediscounts will be reduced. Finally reserve requirements will be lowered in 1996.

So far, only the timing of the movement to a market-based system of monetary control has been established. The BOK has stopped allocating monetary stabilisation bonds by administrative action. It auctioned about three-quarters of the MSBs issued after the introduction of auctions in April 1993, the remainder being bought by institutions at the price established by the last auction. Rediscounts remain automatic, though a quota system will be introduced in the first quarter of 1994 to restrict the automatic right to rediscounts at preferential rates of interest. The quota of each bank will be related to the value of its rediscount-based loans over a historic period. Gradually more emphasis will be laid on interest rates in order to use the rediscount facility as a means of monetary control. The reform of monetary management will require improvements in the functioning of the call market so that all markets become fully interconnected and movements in the overnight call market influence expectations through the maturity range. At present, the call market is not regarded as a key indicator of interest rates. The need for such an improvement is recognised in the plan and the workings of the call market will be strengthened. The liberalisation plan allows for the introduction of other instruments such as interest rate and bond futures and options by the end of 1995.

Capital account liberalisation

In parallel with the deregulation of the domestic market the liberalisation plan also involves the progressive liberalisation of capital flows and foreign exchange controls in four steps over five years. By 1997, a significant part of the capital account transactions will have been freed from government intervention. This contrasts to the situation in 1992, when there were restrictions on 89 per cent of the items in the OECD code for capital account liberalisation compared with an average of 17 per cent for all OECD countries. The plan envisages a greater liberalisation of long-term capital flows than of short-term capital flows. Within long-term flows, controls on outflows of residents will be lifted first while for inflows, transactions by residents will be freed first followed by transactions of non-residents.

Short-term capital flows

The liberalisation measures on short-term capital are primarily aimed at easing foreign trade transactions. The need to present documentary proof of such transactions will be progressively phased out; settlement in domestic currency will be allowed within certain limits; non-residents may keep unremunerated transferable won bank accounts and the maximum delay for paying for imports will be increased. The forward market in won will continue to be limited to the hedging of underlying transactions. The permissible fluctuation margins for the exchange rate will be progressively widened until the rate is allowed to float freely in 1996. Several elements of the first phase of decontrol were implemented in October 1993. The requirement to produce documentation for the purchase of foreign exchange and for forward transactions not involving the won were eased. Importers and exporters are now exempted from the requirement to produce documentation while foreign exchange transactions of less than $3 million are also exempt.

Long-term capital flows

The number of industries in which foreign direct investment is permitted will be steadily increased. By the end of 1995, restrictions will only remain on a few industries. There will be a progressive dismantling of outward capital controls on portfolio investment. By 1995, all restrictions on outward investment will be abolished. In contrast, inward portfolio controls will remain but will be

gradually eased. Companies are now allowed to borrow abroad in bond markets for certain purposes with notification prior to the event. By 1995, international organisations will be allowed to issue won bonds in the domestic market and non-residents will be able to purchase newly-issued government or public sector bonds. They will also be allowed to purchase convertible bonds of small- and medium-sized enterprises. By 1997, commercial loans from non-resident banks will be permitted. This move will, however, be made dependent on certain economic conditions relating to the balance of payments and domestic and international interest rate differentials.

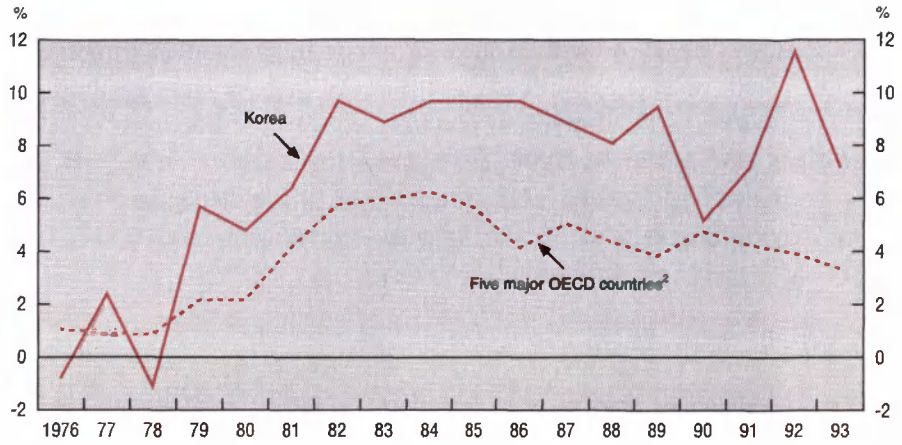
The impact of liberalisation

The liberalisation plan moves considerably faster on domestic financial deregulation than on foreign capital flows. This sequencing is to minimise pressure on the exchange rate and is in accordance with recommendations generally made in studies of financial reform and stabilisation programmes. The case for such sequencing, though, seems less compelling for Korea, where fiscal policy is under control and inflation has been stabilised at a rate not much above the OECD average. In contrast, the process of reform in Latin America in the late 1970s and early 1980s had involved the correction of large fiscal deficits and controlling runaway inflation. Nonetheless, there are few examples of financial reform and capital liberalisation that have not been accompanied by exchange rate appreciation.

An appreciating exchange rate need not be an adverse factor in economic development. The terms of trade improve with beneficial effects for real national income. Prices and costs come under downward pressure, thus preserving the strength of the currency. Moreover, Korea's integration into the world savings and investment market would serve to bring the high level of real interest rates down towards levels in major OECD countries (Diagram 30). Investment would be stimulated, thus replacing the demand that would be lost if exports were crowded out by a higher exchange rate.

The deregulation of the domestic financial markets and the liberalisation of international capital flows implemented will lead to important changes in the way capital markets operate in Korea. Domestically, the government will have withdrawn from the direct setting of interest rates on the assets and liabilities of financial institutions. Internationally, foreign direct investment will have been

Diagram 30. **REAL INTEREST RATES IN KOREA AND OECD COUNTRIES**[1]



1. Ten-year government bonds in the OECD area, corporate bonds with a maturity of up to three years in Korea.
2. United States, Japan, Germany, France, United Kingdom.
Source: Bank of Korea; OECD.

largely freed from administrative control. In some areas, though the liberalisation will be far from complete. Non-residents will have limited access to domestic bank credit and will not be able to open interest bearing transferable deposit accounts, nor will they be allowed to invest freely in the stock market. Domestically, banks will still have to direct a large part of their loans to small- and medium-sized businesses. Thus, from the point of ensuring flows of funds towards most productive use, some distortions will remain. Nevertheless, the implementation of the current plans represent a decisive step towards a market-based financial system.

VII. Housing market

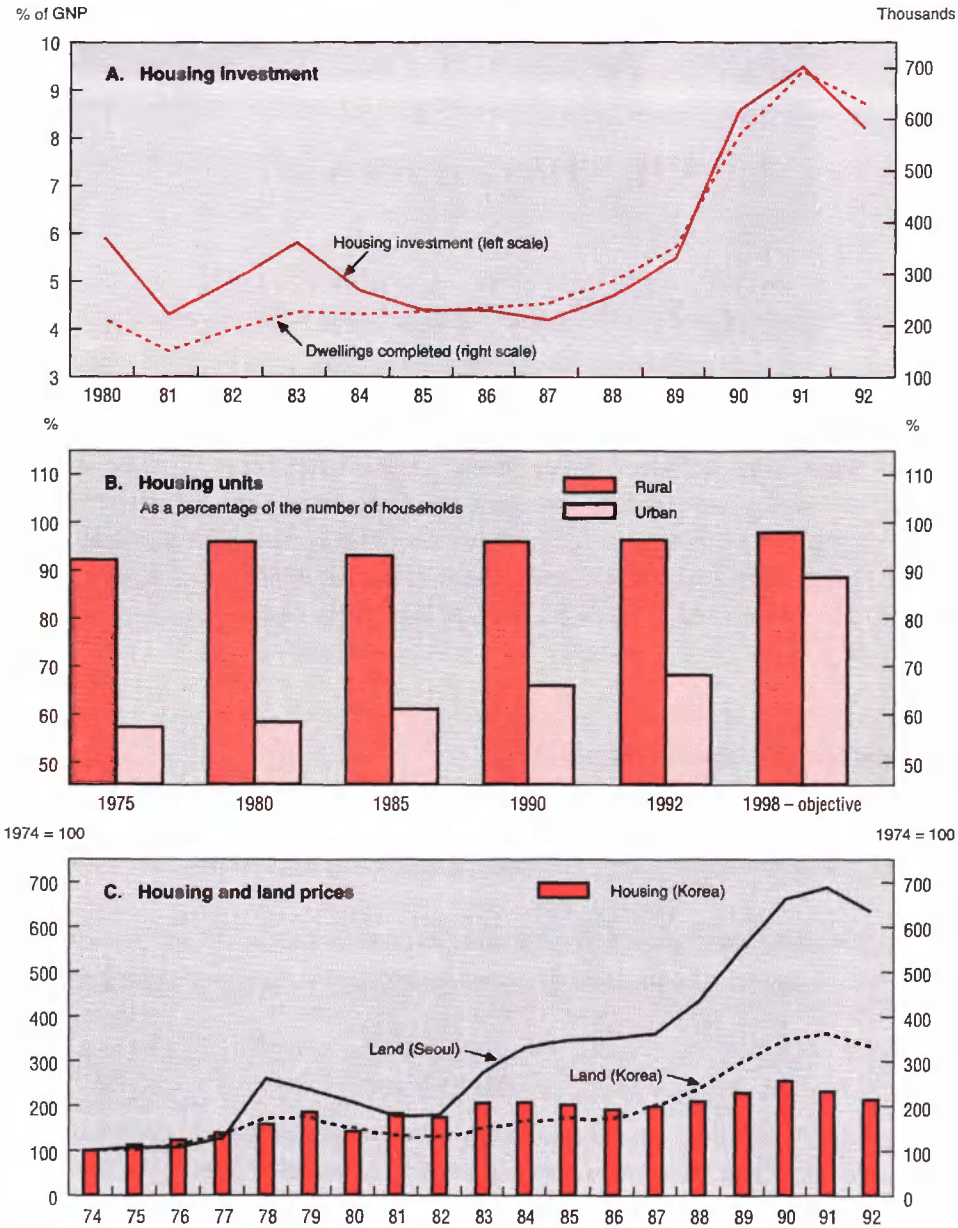
Housing accounts for a large share of household expenditure and is an important source of consumer welfare. The development of land value also affects the distribution of gains from economic growth. These factors have led many governments to intervene in housing markets. In Korea, the government has implemented a strict land control policy which is now in the process of being relaxed. Most large-scale land development and construction projects have been carried out by the government with new dwelling units sold at below-market prices in order to keep the cost of housing low. The government has controlled housing finance by granting rationed credit at preferential terms. A variety of methods have been used to manage the resulting excess demand for new housing and credit.

Housing supply and demand

Government policy has been aimed at expanding the supply of housing through public sector agencies. The housing stock has grown twice as fast as the population (3 per cent against 1.5 per cent) and the habitable surface area of the average dwelling has risen by 3½ per cent per year to reach 75 square metres in 1985 and 84 square metres in 1990. In urban areas, the typical dwelling unit of just over 80 square metres housed just under two households on average, with floorspace of slightly more than 10 square metres per person compared to around 30 square metres in major European OECD countries.

For a number of reasons the growth of the housing stock has been outstripped by the steep rise of demand for new housing. The fall in family size and the movement towards one-generation households have led to a significant decline in household size, with the number of households rising about 2 per cent per year faster than the population. In addition, the movement of population from rural to

Diagram 31. **HOUSING INDICATORS**



Source: Bank of Korea, Economic Planning Board of Korea.

urban areas has led to serious regional and local supply/demand mismatches. As a result, only 54 per cent of urban dwelling units were occupied by one household in 1985. There has been an apparent preference to share accommodation in large dwelling units rather than have exclusive use of a smaller unit. Indeed, the ratio of households to dwelling units in urban areas remained virtually stable between 1970 and 1990 (Diagram 31, panel 2), while the floor space per person almost doubled.

Government housing policy changed markedly in 1988 with the launching of the 1988-1992 construction plan. This five-year plan envisaged the construction of 2 million units, raising the annual rate of growth of the housing stock from 3 per cent to 5 per cent per year. In the event, more than 2.5 million units were constructed, increasing the number of dwellings by almost 40 per cent and doubling the share of GDP devoted to housing (Diagram 31, panel 1). The current five-year plan envisages the construction of 2.8 million units. Meeting this objective would raise the ratio of dwellings per urban household to almost 0.9 by 1998.

Land development policy

The government has exercised control over the housing market by a rigorous system of land-use control. The use of land is governed by a number of laws such as the National Land Use and Management Law and other more specific laws. The power to zone land and to approve each change of land use was given to the Ministry of Construction with some powers being devolved, more recently, to local authorities. In addition to normal zoning controls, several urban land acts have led to the creation of greenbelts within the major urban areas and open spaces between major cities. Within these greenbelts, the urban planning law forbids change of land use.

As a result of these planning restrictions, the supply of residential land in urban areas has fallen increasingly short of rapidly growing demand. While the population living in cities more than doubled between 1973 and 1988, the supply of residential land rose by only 60 per cent. Korea is one of the most densely populated countries in the world with large mountainous areas limiting the supply of land for building. Nevertheless, in cities almost three times more land is used for arable farming than for dwellings (Table 36). Even in Seoul, the land devoted

Table 36. **Structure of land use in 1988**

Percentage of total surface

	Korea	Cities	Seoul	*Of which:* Seoul Greenbelt
	Percentage of total surface			Per cent of total Seoul
Residential	1.9	8.9	32.9	1.1
Arable	22.6	24.2	10.2	4.5
Forest	66.3	48.3	27.6	17.8
Others	9.2	18.6	29.3	4.1
Total	100	100	100	27.5
Total area (sq. km.)	99 237	8 740	605	167

Source: Ministry of Construction.

to arable farming is almost one third of the area devoted to dwellings. About half of this arable land was outside the area designated as greenbelt. In the city areas of the Seoul Metropolitan area, the greenbelt represents over 40 per cent of the total land. While much of this is forest, there is nevertheless a substantial supply of arable land that could be used for housing. The greenbelt policy has led to an increase in the number of long-distance commuters, necessitating significant infrastructure expenditure.

The bulk of land development has been undertaken by public sector entities. The Korea Land Development Corporation, the Korea Housing Corporation and local governments accounted for about 60 per cent of all land development in the period 1978 to 1992. In certain years the public sector share rose to 80 per cent. The land corporation was established after a 50 per cent rise in housing prices in 1978. The Ministry of Construction only grants large-scale development permits to the public sector. The private sector is generally restricted to small-scale land development. While the share of the public sector in land development is high and is matched by a similar share in the supply of new housing, most of the construction work is contracted to the private sector. Public sector enterprises account for one quarter of all housing construction.

The objective of the housing and land corporations has been to supply housing and land at reasonable prices and, thus, to lessen ''speculation''. Housing policy is to ensure that newly constructed houses and apartments are sold at controlled prices reflecting historic costs rather than market prices. In the event

that a private developer cannot make a profit at the controlled price, land may be sold by the government corporation to the developer at less than market value. With unit prices set at below-market levels, excess demand for new houses is absorbed by the ''bond bidding'' system, whereby the price-controlled dwellings are allocated to those households which offer to purchase the biggest quantity of low-interest bearing government bonds. However, there is a ceiling on allowable bids. Thus the government does not capture all of the surplus value. For housing developed by the public sector (40 per cent of the total), rationing is achieved by sales being made only to people who have held low interest deposits of a certain size with government housing banks for a minimum length. In the Seoul metropolitan area, the price-controlled houses or apartments are sold at a discount of 70 per cent of their[51] market value. In other areas, the discount is about 30 per cent. Resale of these price-controlled dwellings usually generates significant capital gains, given the initial discount and rising market prices. As a result, individuals cannot sell a price-controlled dwelling unit from the public sector within two years of purchase, a shorter interval than was in force before 1991.

Housing finance

Mortgage finance is strictly controlled by the government and total outstanding credit is low relative to GDP. Almost 85 per cent of all housing credit is provided by two government sources: the Korea Housing Bank (KHB) and the National Housing Fund (NHF). Private sector banks did not participate in the housing credit market until 1988 given the low profitability of regulated housing loans and had made only a small incursion into the market by 1991. Mortgages represented 5 per cent of their assets. Despite rapid growth of loans by the two government institutions in the late 1980s, the total stock of housing loans amounted to no more than 9 per cent of GDP in 1990, up from 7 per cent in the mid-1980s, compared to 28 per cent in France and the United Kingdom and 44 per cent in the United States. Loan financing is also small compared to the value of new residential construction. Typically new loans cover between 60 and 100 per cent of the value of new construction in most OECD countries, but in Korea, the rise in outstanding loans represents just over 40 per cent of the value of new construction.

The loans granted by the two government housing institutions are at preferential rates of interest and are aimed at financing either new houses or property that is less than ten years old. The loans are financed by the bidding-bond system mentioned above, and by voluntary savings schemes carrying low interest rates. In 1990, the rates charged to borrowers by the NHF were 10 per cent or only 5 per cent in certain cases, while the KHB charged 11.5 per cent. By comparison, the market rate of interest, as measured by corporate bond markets, was 16.5 per cent. However, KHB loans are limited to 25 per cent of the value of the dwelling unit purchased and have to be repaid over five years, while the NHF provides loans of up to 40 per cent repayable over up to 20 years.

The bulk of finance provided by the KHB and NHF is for owner-occupied property. Although credit is available for rental property at a rate of interest of 3 per cent, the housing units so financed are subject to rigorous rent control, which discourages preferential loan finance of private rental housing. To fill this gap, the government launched a major public building programme for low-rent dwellings. Previous research has indicated, though, that public rental property for low-income earners was sometimes occupied by relatively high-income earners.

Growing demand for housing and the presence of a repressed financial sector have led to innovative solutions for financing the purchase of houses. Besides the traditional owner-occupied sector and the very small rental sector, which is dominated by the public sector, the most common tenure is a form of short leasehold – the ''*chonsei*'' system. With a *chonsei* lease, the tenant gives a deposit, representing a large fraction of the value of the dwelling, to the landlord at the beginning of the lease, thus providing finance to the landlord. The deposit is returned at the end of the lease. In exchange for the deposit, the tenant is allowed to occupy the dwelling rent-free. The size of the deposit is large – typically half the value of the dwelling – and can be varied during the validity of the lease. Owner occupiers are often faced with the need to supplement their saving and the credit obtained at favourable rates by turning to the informal ''curb'' credit market, where excess demand for credit is satisfied. Interest rates in this market have been extremely high. The size of deposit demanded through the *chonsei* system also relates closely to the return in the curb market. There appears to be a complex linkage between the lack of housing financing possibilities, the use of the *chonsei* system, the prevalence of shared accommodation and the system of taxation. Owner occupiers have shown a certain preference to

finance part of the acquisition costs through sharing their accommodation with tenants in a way that provides a tax-free imputed income rather than a taxable cash income. Tenants have accepted the *chonsei* system because it implied a higher rate of return than available in the regulated banking system.

Taxation of housing and land

The emphasis placed by the government on stopping land speculation has led to a structure of local property taxation that favours the holding of property at the expense of property transactions. The bulk of taxation from land is provided by transaction-based acquisition and registration taxes, set at 2 and 3 per cent respectively of either the market price or the officially assessed value of the property.[52] These two taxes are paid to local authorities and account for 75 per cent of total taxation levied on housing. Annual local property taxation is small and is also based on the assessed price of the property. It generates less than 1 per cent of total tax revenues compared to 3 per cent in France, almost 11 per cent in the United States and 5 per cent in Japan (Table 37, first panel). Since 1990, the property tax rate for a given owner increases as the number of units held nationwide increases. At the national level, most property income escapes taxation as the bulk of private sector housing generates no cash income because dwellings are either owner-occupied or occupied rent-free under the *chonsei* system.

Capital gains taxation on housing is also low, even though tax rates range from 30 per cent to 75 per cent (Table 37, second panel). Revenues average less than one-fifth the yield from housing transaction taxes. In 1985, only 15 per cent of transactions were taxed and most of these at the lowest rate. This reflects the fact that capital gains are only taxed if there is a relatively short gap between the sale and purchase of a property.[53] Moreover, capital gains are based on "announced values" which are lower than actual values. A new tax on unrealised capital gains was introduced in 1990, applying to certain forms of non-residential land. This tax is discretionary in that it concerns corporate-owned land not held for "proper" business purposes with the land value being based on the announced value. A special tax on large development projects, payable to local authorities, has also been introduced. The new five-year plan envisages a progressive increase of the assessed price, by up to 40 per cent per annum, to bring it to the market price by 1996.

Table 37. **The yield of property taxation**

	Per cent of GDP		Per cent of total taxes	
	1980	1990	1980	1990
Property holding tax				
United States	3.0	3.2	10.1	10.8
Japan	1.4	1.6	5.3	5.2
Germany	0.2	0.4	0.4	1.0
France	1.3	1.5	3.0	3.4
United Kingdom	3.7	4.1	10.6	11.1
Korea	0.3	0.4	2.0	1.9
	1982	1992	1982	1992
Other property taxes in Korea				
Acquisition tax	0.4	0.7	2.5	3.5
Transfer tax	0.4	0.9	2.5	4.2
Excess land value[1]	0.1	0.5	0.9	2.4
Other property taxes[2]	0.1	0.3	0.4	1.2
Total property taxes	1.3	2.8	8.3	11.3

1. Capital gains tax.
2. Inheritance and donation tax.
Source: OECD, *Revenue Statistics*; Korea, Ministry of Finance.

Property ownership

The principal form of housing tenure is owner occupation (Table 38). The predominance of such a form of housing tenure may be largely attributable to the steady appreciation of the value of land. Indeed, between 1975 and 1992 the annual increase in the real price of land amounted to as much as 4 per cent. Housing has also been the primary means by which households have accumulated assets, given low or negative real returns on financial assets and the absence of pension wealth until the creation of a national pension scheme in 1988. The unfavourable tax and regulatory regime appears to be the major reason for the absence of a private rental market and also explains the prevalence of the leasehold (*chonsei*) system.

Although the tax system favours holding property rather than trading it, the second-hand property market is quite active. In 1982, the average time spent by

Table 38. **Ownership and tenure of housing**

Per cent

	1975	1980	1985	1990
Korea				
Owner occupier	63.1	58.6	53.6	49.9
Pure leasehold *(chonsei)*	17.3	23.9	23.0	27.8
Mixed leasehold/ rental	15.5	15.3	19.8	19.3
Other	4.1	2.0	3.6	4.0
Cities				
Owner occupier	44.2	43.0	41.3	40.5
Pure leasehold *(chonsei)*	30.7	35.5	31.1	64.6
Mixed leasehold/ rental	21.6	19.9	24.6	22.5
Other	3.4	1.6	3.0	2.4

Source: Ministry of Construction.

owner occupiers in their respective dwellings was less than four years. This means that about 15 per cent of the housing stock changes hand each year, compared to new construction of about 6 per cent per year. Most moves appear to be related to the purchase of increased space and amenities rather than to geographic moves. People in rented or *chonsei* accommodation also move rather frequently, with the average lease somewhat below two years. These short tenure periods suggest that labour mobility is not adversely affected by a repressed housing market.

Housing prices

With the supply of urban land for residential use restricted and rising less rapidly than urban population, prices both of land and housing have risen significantly in real terms (Diagram 31, panel 3). Even after the recent, unprecedented, fall in nominal land prices, real land prices are still 160 per cent higher than a decade ago and have risen by more than twice as much in the Seoul area. In 1992, the cost of an average apartment (84 square metres) was 7.5 times average

annual earnings and as much as nine times earnings in Seoul. These price/income ratios are probably higher than in any OECD country. The rise in real land prices has tended to make income distribution less even as land ownership is much more concentrated than income from employment. Legislation was introduced in 1990 to put a ceiling of 600 square metres on individual land ownership in the Seoul area and 900 square metres elsewhere and the *chaebols* have been required to sell excess land holdings or, otherwise, face high taxation.

Concluding remarks

Government intervention in the housing and land markets has not yet resolved the fundamental problems of providing reasonably priced accommodation for the population. Government policies have created distortions and generated substantial income transfers to certain groups. Apart from buoyancy of demand and natural shortage of land, high real land prices reflect restrictive land policies rather than speculative land holdings.

The increased emphasis given to housebuilding in the 1988 to 1992 period and the continued high priority attached to the improvement of housing conditions in the current five-year programme should gradually ease the situation. Land-zoning policy could be used to lower land prices, permitting rationing devices and price controls for new dwellings to be reduced. The two-tier market for new and existing housing would then gradually disappear. With the stock of dwellings rising, a more market-based system will be required, including a greater role for the private sector in providing housing.

There are currently only limited plans to adopt a more liberal financing system. The banking sector is still restrained from entering the mortgage market which continues to be dominated by housing loans from government banks at subsidised interest rates. Such subsidies tend to increase the price of land for all purchasers while favouring the individual who has access to preferential credit.

VIII. The public sector

Structure of the public sector

The public sector in Korea is small: in 1991 general government expenditure and taxation[54] amounted to 20 per cent of GNP, well below the lowest spending and taxation levels of OECD countries. Public enterprises account for less than 2 per cent of employment, though this understates the role of public enterprises in the economy as public financial institutions manage a significant portion of total financial flows and as their share in value-added is 10 per cent.

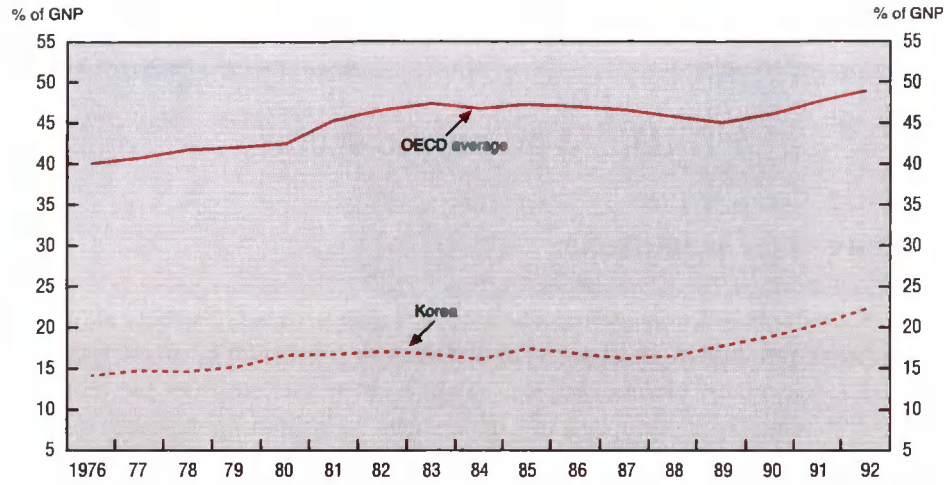
The public sector consists of the general government and public enterprises. Since except for the railways and the post offices nearly all public enterprises are managed at arms length from the government, only transfers between them and the government are included in the analysis. The social security sector is consolidated into the central government accounts but its activities are shown separately. The national health insurance schemes are regarded as part of the private sector,

Table 39. **The size of central and local government**
1992, per cent of GNP

	Central	Local	Total
Revenue			
Tax and social security	15.4	3.7	19.1
Charges	0.3	1.5	1.8
Property income	(1.5)	(0.2)	(1.7)
Expenditure			
Outside government	11.2	10.7	21.9
Transfers to local government	5.3	0.0	0.0
Net lending	2.5	0.2	2.7

Source: Ministry of Finance.

Diagram 32. **GENERAL GOVERNMENT EXPENDITURE IN KOREA AND THE OECD**



Source: Bank of Korea; OECD.

even though membership and contributions are mandatory and benefit levels are set by the government. Only transfers from the government to health insurance schemes are shown in the government accounts.

The central government makes nearly all decisions about taxation. Of the overall tax burden, four-fifths is raised at the national level. All local tax rates are set by the central government and are uniform throughout the country (Table 39). Local government, however, accounts for slightly over 50 per cent of total government expenditure. Government expenditure had remained a relatively constant share of GNP until 1988 before rising somewhat (Diagram 32).

Central government

The finances of the central government are divided into a general account and a number of special accounts and funds. The general account covers the principal activities of the government both on the revenue and expenditure side. Most special accounts have been set up to finance a specific activity through transfers from the general account, through earmarked tax revenue or through

borrowing. The most important of the special accounts is the Fiscal Investment and Financing Special Account (FIFSA), modelled on the Japanese Fiscal Investment and Loan Programme, but the FIFSA is included in the overall budget in contrast to the Japanese account. The account receives deposits from the postal savings system and from the various government pension and other funds. It also receives the dividends paid to the government by public enterprises and the proceeds of the sales of equity stakes in government enterprises. The account lends to non-commercial government enterprises and finances investment activities of the central government.

The special enterprise accounts are used to manage the railways and post offices and also the grain intervention system. The inclusion of these accounts in the budget means that the level of both government revenue and expenditure is inflated somewhat relative to OECD countries.[55] A list of the special accounts and special funds is included in the annex, together with an indication of their size.

The special funds are controlled by the executive and do not need to be passed through the National Assembly. These funds, such as the National Housing Fund, and in the past, the National Investment Fund, have been responsible for the lending programmes of the government. In many cases, the lending activities of the funds have been financed through savings schemes and the issuance of marketable bonds. The budget which is approved by the National Assembly does, though, reflect the major part of government receipts.

Budgetary discussion focuses on changes in the general and special accounts. In recent years, expenditure passing through special accounts has been rising relative to general account expenditure. At the same time, transfers from the general account to special accounts and between special accounts have been increasing, giving rise to double counting and making analyses of budgetary trends difficult. In the 1993 budget, the general account represented about 63 per cent of total expenditure, the enterprise accounts represented 6 per cent and other special accounts the remainder. The initially published data do not show government borrowing separately. It is treated as revenue for the general account. The creation of a consolidated unified budget in 1979 was meant to increase transparency and assist budget impact analysis. The fact that this new form of budget presentation does not appear until some five months after the initial budget draft, reduces, however, its usefulness.

Local authorities

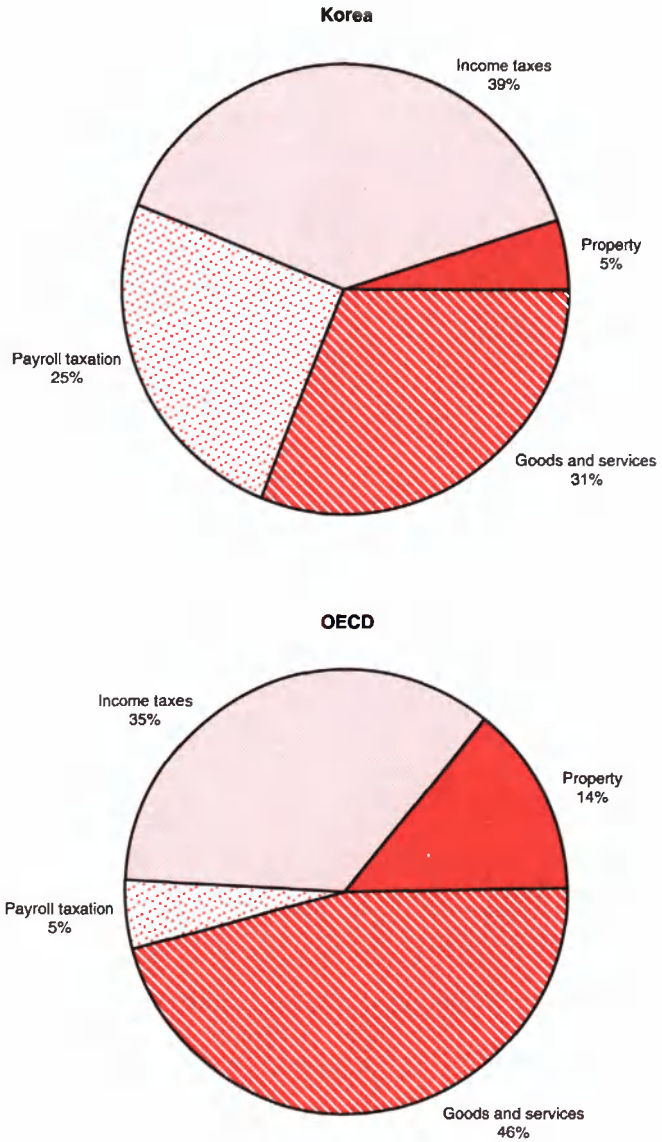
Local authorities are divided into three tiers. The first tier consists of provinces and autonomous cities, the second of districts in the autonomous cities and of counties or cities in the provinces. The lowest level is the town, township or village with functions limited to record keeping.

Until 1991, local government was closely controlled by the central government. All high-level staff in local authorities (mayors, county supervisors and provincial governors) were Ministry of Home Affairs employees.[56] Local assemblies were elected for the first time in 1991. Originally the government planned that the heads of local governments were to be elected in 1992 but the elections were postponed. Even in the new system, central government will send second-ranking officials to local government in order to give expert assistance. Moreover, half of local government expenditure is financed by grants from national government. Some 20 per cent of local expenditure is financed by local taxes with rates uniform across the country and set by the central government. Local government borrowing is strictly controlled by the Ministry of Home Affairs.[57]

Structure of taxation

Taxes on consumption and property are the most important sources of government revenue. Together these two forms of taxation account for almost 60 per cent of total tax receipts, considerably more than in a typical OECD country (Diagram 33). The share of consumption taxes was even higher a decade ago. It has fallen as the importance of selective consumption taxes has been reduced following the introduction of a widely based VAT. Most revenue in this category is now obtained from taxes on petroleum, tobacco and liquor. In addition, the weight of custom duties, which were still the second biggest source of taxation ten years ago, has fallen markedly. The share of property taxation has increased, especially since the introduction of new land taxes in 1990. Income-related taxes and contributions have also grown in importance mainly reflecting the introduction of a national pension system.[58] The principal taxes, apart from income and corporate taxes, are shown in Table 40.

Diagram 33. **THE STRUCTURE OF TAXATION IN KOREA AND THE OECD**



Source: Ministry of Finance; OECD.

Table 40. **Principal non-income taxes**

Per cent

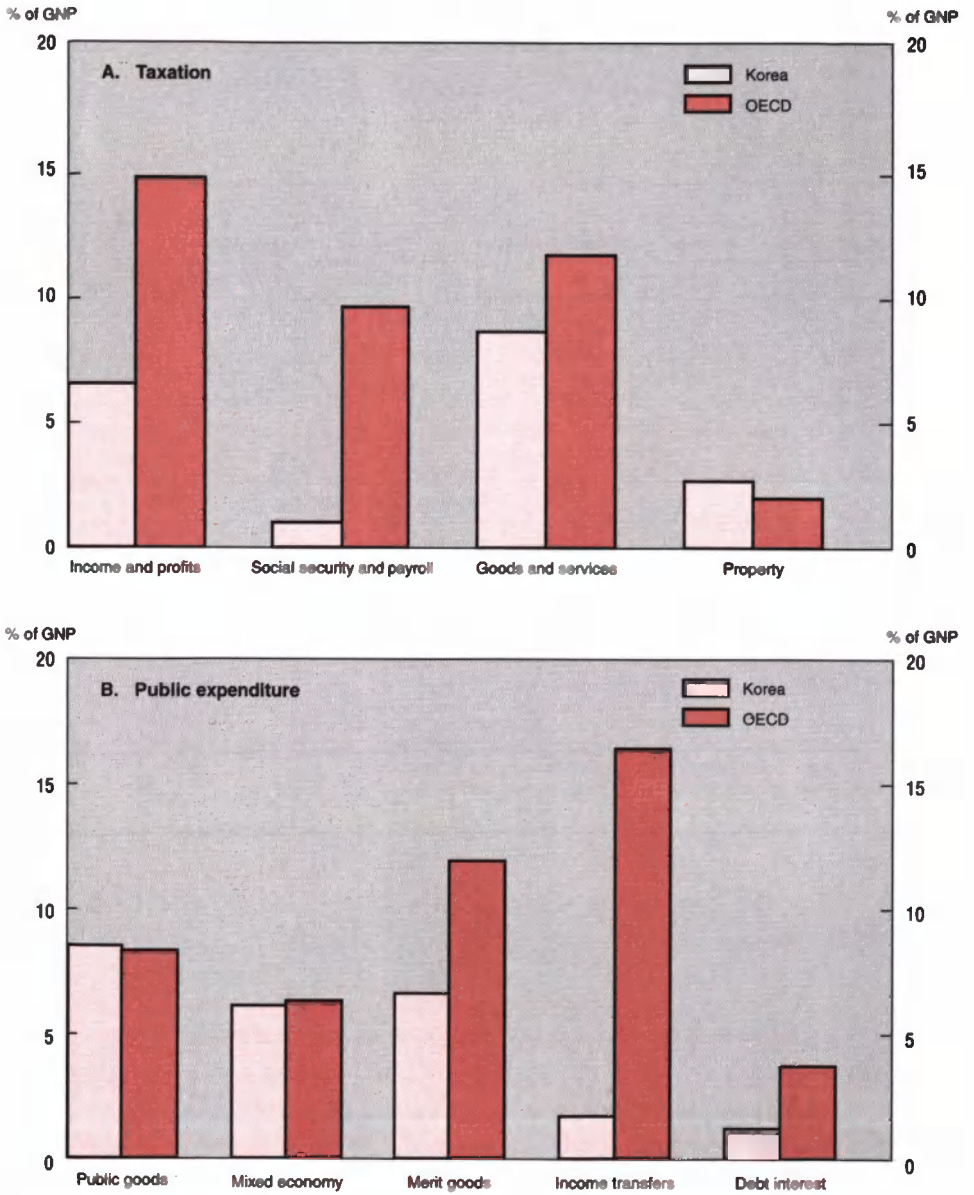
National taxes		
Capital gains tax	60	Holding period < 2 years.
	30	Holding period > 2 years.
Asset revaluation tax	3	Levied when companies revalue assets in their balance sheets.
Excess profit tax	100	Levied on the excess over the controlled price of certain commodities.
Inheritance and gift tax	10-60	
Special excise taxes	10-100	Certain consumption items.
Liquor taxes	Up to 150	
Telephone tax	10	Supplements VAT.
Stamp tax	–	Variable amount.
Securities transaction	0.2	Transactions between non-residents are exempted.
Value added tax	10	Food, medical and cultural products are exempted.
Customs duties	10	Average tariff rate in 1992.
Local taxes		
Acquisition tax	2	Real Estate.
	10	Real estate in major cities.
	15	Luxury items (cars, etc.)
Transfer tax	3	On change of title.
Property tax	Variable	Based on assessed value of real estate.
Automobile tax	Variable	According to the category of vehicle.
Farmland tax	Up to 55	Progressive tax on income from certain products.
Butchery tax	1	On value of slaughtered meat.
Horse race tax	12	On value of bets.
Tobacco tax	–	–

Source: Ministry of Finance.

Income taxation

Income and corporate taxation as a share of GNP is relatively low in Korea (Diagram 34). The income tax schedule has a high threshold (about half of the average earnings) with the marginal tax rate rising slowly from a low initial level (Table 41). As a result, most taxpayers are in the first tax bracket (5 per cent marginal rate) that extends to four times average earnings. Such taxpayers are faced with an effective marginal income tax rate of only 3.8 per cent. The highest tax rate (50 per cent) is reached at about 65 times the level of average earnings.

Diagram 34. **TAXATION AND PUBLIC EXPENDITURE LEVELS IN KOREA AND THE OECD**



Source: Ministry of Finance; OECD.

Table 41. **The structure of income tax**

	Principal deductions	
	Thousand won	Multiple of average earnings
Couple	1 140	0.12
Two children	960	0.10
Earned income	2 500	0.26
Total deductions for a family	4 500	0.47

Tax rates

Marginal tax rate	Effective marginal tax rate[1]	Income threshold	
Per cent	Per cent	Million won	Multiple of average earnings
5	3.8	0	0
10	10.8	4	0.4
20	21.5	8	0.8
30	32.2	16	1.6
40	43.0	32	3.2
50	53.8	64	6.4

Interest and dividends

	Marginal tax rate	Effective marginal tax rate[1]	Income threshold[2]	
	Per cent	Per cent	Million won	Multiple of average earnings
Unlisted company dividend	25	26.9	0	0
All other income	20	21.5	0	0

1. Includes the proportional earned income deduction and local residence tax.
2. There is only one marginal tax rate for this category of income.
Source: Ministry of Finance.

Dividend and interest income is taxed on a separate schedule. In the case of taxpayers owning less than 1 per cent or 100 million won of an equity issue or 3 per cent of a bond issue the rate is constant and independent of other income. For other shareholders and bondholders, such income is aggregated with other income. A tax credit is available for part of the corporate taxation paid on distributed dividends and can be offset against other tax liabilities. As the tax credit is only partial, income taxation is somewhat higher on equity income than

on interest income but the absence of capital gains tax on quoted equities probably more than offsets this discrimination.

Corporate taxation has been used on a selective basis as an instrument of industrial policy. In the past, tax rates were differentiated according to activity or industry. Such policies were progressively abandoned in the 1980s. The current system differentiates tax deductions according to particular functions regardless of industry, though a small residual discrimination in favour of manufacturing and mining has been maintained (Table 42). The principal incentives are an investment tax credit of 10 per cent, a tax allowance of 2 per cent of overseas sales, a tax credit of 10 per cent on technological development expenditure and a credit of 8 per cent on investment in research and development facilities. In addition, expenditure of manufacturing companies for technological development are deductible from taxable income within a limit of 3 per cent of sales. Foreign companies investing in high technology areas are accorded a favourable tax regime during the first five years.

Taxation on personal income and payrolls is relatively low, which combined with significant indirect taxation has favoured savings over consumption. On the other hand, taxes on dividends and interest income are high relative to taxation of other forms of income – at least up to income levels eight times average earnings.[59] Beyond that income level the taxation of property income is also relatively low. The counterpart to the positive incentive features of the tax system is a lack of equity.

Table 42. **The structure of corporate taxation**

Per cent of taxable profits

	Corporate tax	Residence tax	Total
Taxable profits less than 100 million	20.0	1.5	21.5
Taxable profits more than 100 million	34.0	2.55	36.55

Note: The corporate tax system is separate from the income tax system. Shareholders receive a tax credit of an amount equal to 17/99 of dividends for the corporate taxation already paid on their dividends.

Source: Ministry of Finance.

Structure of public expenditure

Total public expenditure's share of GNP is less than half the level found on average in OECD countries and is even below the levels in low expenditure countries such as Australia, Japan and the United States. Expenditure on health and social transfers are particularly low. While total government expenditure in real terms increased by 540 per cent over the past two decades, its share of GNP has risen only slightly.

If public expenditure is broken down into five functional components – public goods, provision of basic economic services, merit goods, income transfers and debt service – it can be seen that in Korea public expenditure is concentrated on the first two categories *i.e.* on traditional state activities such as the provision of defence, law and order and public administration as well as transportation and communications infrastructure (Diagram 34, second panel). These activities account for a similar share of GNP in the average OECD country. The principal differences lie in the categories of merit goods (especially health) and, even more so, income transfers. These differences reflect the high priority given, until recently, to promoting economic development. There was less concern with the distribution of income.

The system of social protection in place prior to the mid-1980s had been introduced at the beginning of the 1960s and it had the following components and basic features: *livelihood assistance*, covering those unable to provide for themselves;[60] *veterans assistance* covering about 0.3 per cent of the population; *industrial accident insurance* covering mining and manufacturing industries with risk-related premia paid entirely by the employers; and minimum compulsory *lump sum retirement* benefits paid by employers on the basis of one month salary for each year of service. Most social expenditure categories that are commonly found in OECD countries are to be found in Korea as well. Although currently low, such welfare expenditure is likely to increase significantly in the next decade.

Pensions

Following a long period of deliberation, a national pension scheme was introduced in 1988. Prior to that date, the only obligatory financial provision for retirement was through the above mentioned lump sum payments by employers

Table 43. **Pensions as a per cent of final income**

Income quartile	Contribution period (years)		
	20	30	40
1st	57	89	100
2nd	46	72	100
3rd	34	54	74
4th	25	41	57

Source: Economic Planning Board.

on the retirement of their employees. This scheme had been introduced in 1961 and was obligatory for all firms with over ten employees. Employers were encouraged to create reserve funds to fund the eventual expenditure and could charge 8.5 per cent of their payroll as a business expense.

The new national pension scheme covers all employees in firms employing five or more people and replaces in part the lump-sum retirement obligations of employers. The new scheme contains no retroactivity, so pensions payments will not be due before 2003. Members of the scheme who retire with less than 15 years of contributions will be entitled to a refund of their contributions together with interest. The scheme also provides various additional benefits to cover invalidity, survivors and orphan benefits.

The present scheme requires 20 years of contributions to qualify for a pension equal to 40 per cent of the reference salary, rising to 80 per cent of income after 40 years of contributions. The pension scheme will have an important redistributive impact because the reference salary will be the average of the retirees own salary and average national earnings while contributions are income related (Table 43).

Contributions and finances

When the plan was introduced, a phased increase in contributions was announced and the calendar of these increases has been respected (Table 44). Given its recent introduction and the absence of pension provision for people currently over age 50, the scheme has had rising surpluses in its first years of operation (Table 44).

Table 44. **The contribution rate to the National Pension Plan**

Per cent of salary

	1988	1993	1998
Employee	1.5	3.0	3.0
Employer[1]	1.5	3.0	6.0
Total	3.0	6.0	9.0

1. The employer is allowed to pay half of his contribution from reserves created under the previous retirement legislation.
Source: Economic Planning Board.

Investment policy of the Fund

The National Pension Fund is obliged to invest its surplus in certain assets. Part of the fund must be deposited with the FIFSA account and the remainder invested with insurance companies which, in turn, must divide the pension funds between government bonds, corporate bonds and equities. With the exception of the money that is invested in general government funds, the investment guidelines try to ensure that the counterpart to the pension surplus will be additional investment rather than government consumption. Indeed, the major project financed by the fund so far has been the creation of new low income housing, on a much larger scale than had been possible prior to 1988. The pension fund will have a rising surplus in the next few years, 1 per cent of GNP in 1993, probably attaining 2 per cent of GNP by 1998 with its financial assets by that time probably reaching 7 per cent of GNP.

Coverage of the Fund

The number of people contributing to the National Pension Fund is relatively limited (Table 45). The numbers, however, increased in 1991 and 1992, after the limit for firm membership was reduced from ten to five employees. There are still categories not covered, such as self-employed, family workers and people employed in small enterprises, especially in the distribution sector. The government has considered widening the coverage of the scheme. One option would be to expand the existing funded scheme with the self-employed paying both the employee and employer contribution. Another option may be to cover half the cost via general taxation as in the case of the medical insurance fund.

Table 45. **The National Pension Plan**

Financial data

	1988	1989	1990	1991	1992	1993[1]
	Million won					
Employees contributions	254	315	418	491	608	1 231
Employers contributions	253	313	416	494	615	1 249
Benefits	0.3	6	43	111	217	377
Administration	..	1	11	40	13	33
Primary balance	507	621	780	834	993	2 070
Interest	21	84	185	295	439	489
Surplus	528	705	965	1 129	1 432	2 559
Assets	528	1 233	2 198	3 327	4 759	7 318
Surplus: per cent of GNP	0.4	0.5	0.6	0.6	0.6	1.0
Assets: per cent of GNP	0.4	0.9	1.3	1.6	2.1	2.9
	Coverage of the scheme (thousands)					
Members	4 433	4 521	4 652	4 769	5 021	–
Private sector employment						
Total employment	–	16 331	16 822	–	–	–
Permanent employees	–	7 465	7 820	–	–	–
Members as per cent of						
Total employment	–	28	28	–	–	–
Permanent employees	–	61	60	–	–	–

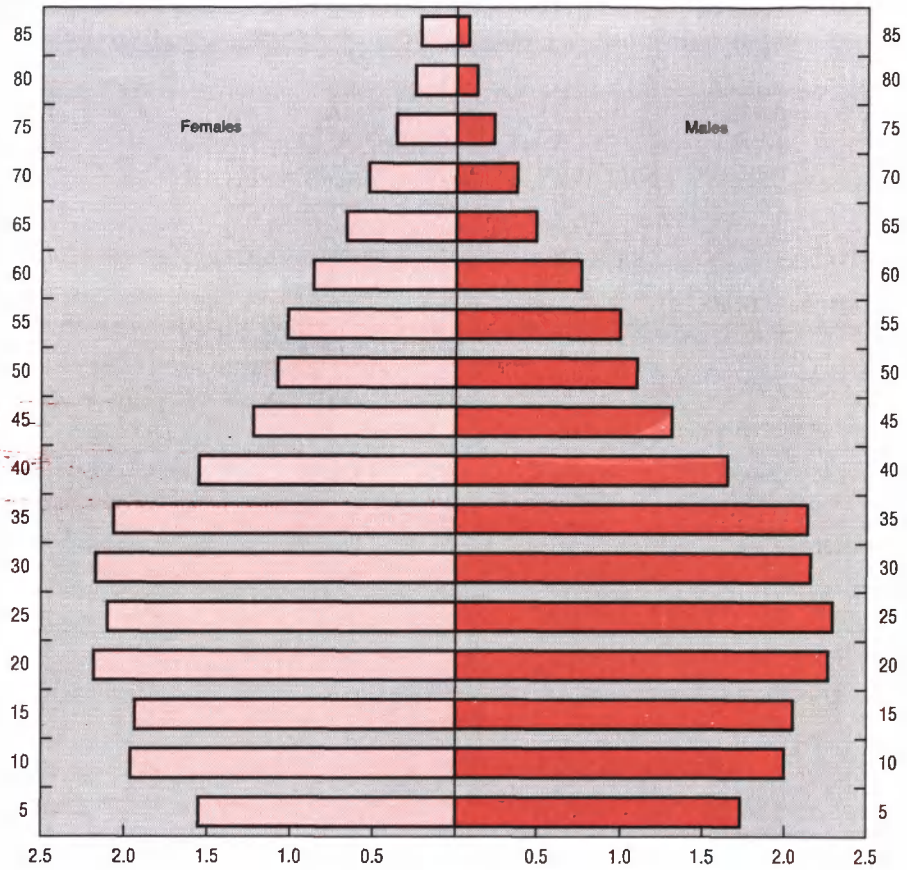
1. Estimated.
Source: Economic Planning Board.

Future sustainability of the Fund

The population is moving through a double demographic transition. Rapid population growth and a low life expectancy in the past have meant that there are significantly fewer people in the retired age group than in the prime age group (Diagram 35). As the age distribution will change only gradually, the next two decades or so will see a rapid accumulation of pension funds wealth, creating favourable conditions for the economy to increase its capital stock. Over the longer run, higher life expectancy coupled with the fall in fertility that has occurred is bound to raise the ratio of old-age dependents to contributors. A fall in cohort size is, so far, only evident in the under 10 age group so that there is a long time period available for adjustment.

Diagram 35. **POPULATION IN 1990 BY AGE**

Millions



Source: National Statistics Office of Korea.

Even allowing for the high rate of return on investment in Korea (the Pension Fund has earned a 8 per cent real rate of return in recent years), it seems unlikely that a contribution rate of 9 per cent of salary would be sufficient to fund a pension scheme that pays on average a pension equivalent to 80 per cent of earnings after 40 years work. Moreover, as the economy matures, real rates of

return are likely to fall. When the fund was created, initial projections suggested that it would be exhausted by the second decade of the next century. Action may now be required to ensure long-term financial equilibrium of the fund, either through raising contributions or lowering benefit rates or delaying benefit payments until 65.

Health care

The public provision of medical care is a recent development in Korea. The transition to universal health care coverage has been well managed. There has been no major increase in costs and total expenditures have been kept in check. This section reviews the structure of public provision of medical care, looks at the features that appear to have kept costs under control and finally looks at likely future problems.

The development of public provision

Until 1977, there was no public provision of medical care and between 1977 and 1989 such provision was very limited. Despite this initial absence of public health care, total current expenditure on health-related items accounted on average for 4 per cent of GNP between 1960 and 1977 and remained at that level up to 1992. Life expectancy, moreover, rose from 52 years in 1960 to 72 years in 1991.

There were four major stages in the development of universal public medical care. The first was the introduction of compulsory health insurance in firms with more than 500 employees in 1977. At the same time medical aid was introduced for people whose income was less than 8 per cent of that of an average industrial worker (approximately $80 per month). The insurance scheme was widened to civil servants and teachers in 1979, to firms with more than ten employees in 1982 and finally to all employers and to rural and urban self-employed in 1988 and 1989. At this point, coverage was universal, since retired people were regarded as dependents of their children.

The structure of the existing system

The medical insurance scheme is run either by firm-based insurance societies or by community-based societies in the case of the self-employed. Each society is required to break even by charging a payroll-based contribution that is

shared equally by employees and employers. There are more than 400 health insurance societies. Some are too small to benefit from adequate risk-pooling. Health risks are not spread evenly across members of different societies as reflected in different contribution rates. In the case of the societies covering the self-employed, the government provides a 50 per cent subsidy. Benefits are provided on a fee for service basis. The level of fees is set by the Ministry of Health and is uniform for all schemes.

The structure of the reimbursement scheme is designed to reduce the risk of over-use of medical facilities. On average, the payment by the individual amounts to half of total expenditure. The proportion paid by the individual increases in certain cases where the government wishes to discourage the utilisation of medical facilities. Even the medical aid scheme for those with incomes of less than $80 per month requires payment by the individual of 50 per cent of the total cost.

Expenditure developments

The use of high co-payments appears to have limited the growth of medical expenditure. The quantity of medical care dispensed per person did not significantly increase between 1987 and 1991 (Table 46). Out-patient visits per person insured only increased by 10 per cent. In-patient bed-days per insured person have also been stable. Judged by the data from the medical insurance schemes, there appears to be little tendency for costs per unit of treatment to increase significantly faster than the GNP deflator. Over the past five years, the health deflator has cumulatively increased only 3 per cent more than the GNP deflator. The 1993 budget, moreover, suggests that the trend of moderate increase in medical expenditure continued.[61]

Aggregate spending by the health insurance and the medical aid schemes currently amounts to less than 1.5 per cent of GNP. Since the introduction of universal health care, the level of medical consumption expenditure has amounted to about 4 per cent of GNP. This low ratio, by comparison with most OECD countries, includes considerable spending on items which are completely outside the medical insurance scheme such as ginseng, over-the-counter medicines and herbal/oriental medicines. The share of government expenditure on health was less than 2 per cent of GNP in 1991 (Table 47).

Table 46. **National health care**

	1977	1986	1987	1988	1989	1990	1991
Numbers covered (millions)							
Medical aid	2.1	4.4	4.4	4.3	4.2	3.9	2.9
Medical insurance	3.2	19.4	21.3	29.3	39.3	40.5	40.8
Total	5.3	23.7	25.6	33.6	44.2	44.4	43.7
As percentage of population	15	58	62	80	100	100	100
Treatment per person covered							
In patient (bed days)	–	0.53	0.55	0.51	n.a	0.63	0.65
Out patient (visits)	–	6.33	6.54	5.99	n.a	7.31	7.25
Financing of medical treatment (billion won)							
Insurance scheme	–	764	897	1 284	1 784	2 432	3 261
Medical aid	–	2	18	106	224	365	486
Per cent of GDP							
Insurance scheme	–	0.84	0.85	1.01	1.26	1.42	1.58
Medical aid	–	0	0.02	0.08	0.16	0.21	0.24
Final expenditure on health (billion won)							
Households	–	3 371	3 963	4 675	5 530	6 709	8 068
Non-profit institutions	–	189	210	247	285	332	391
Government	–	125	140	182	202	243	295
Total	–	3 685	4 313	5 104	6 017	7 284	8 754
Per cent of GNP	–	4.1	4.1	4.0	4.2	4.2	4.2

Source: Ministry of Health and Social Affairs, *Yearbook of Health and Social Statistics* (1990, 1992).

Table 47. **Government expenditure on health**

Billion won

	1986	1987	1988	1989	1990	1991
By level of government						
Central government	123	146	251	388	587	748
Local government	18	26	28	30	44	49
General government	141	172	279	418	631	797
Major programmes						
Central government						
Medical aid	57	81	94	103	151	173
Subsidies to self-employed	21	18	106	224	365	486
Civil service	–	–	–	–	–	–
Other	0.2	0.4	0.4	0.4	–	–
Local government						
Medical aid	18	26	28	30	44	49

Source: Economic Planning Board.

Problems in health care

The principal problem facing the government is how to improve the health of the community while containing the cost for health care. Available health indicators suggest that there is considerable scope for improving the average health of the population (Table 48). Infant mortality, tuberculosis, the incidence of communicable diseases and deaths through injuries are well above the levels in the major OECD countries. They are even considerably higher than in OECD countries with a similar income level such as Greece and Portugal. Environmental factors may account for some of the difference (poor housing conditions increasing risks of tuberculosis and long hours of work increasing injuries), but it may be that the high co-payments required, especially under the medical aid scheme, act as an effective deterrent to the purchase of medical care. Life expectancy, though, has been increasing.

The current medical training programme should increase the number of doctors substantially but there would appear to be a significant shortfall in the number of hospital beds compared to OECD countries (Table 49). However, as a large part of hospital care is provided by the private sector with overall fees set on a cost-plus basis, the supply should expand along with demand.

Table 48. **Comparative health indicators**

	Infant mortality	Mortality rates		Tuberculosis
		Communicable diseases	Injuries	(annual incidence)
	Per 1 000	Per 1 000 000		
Korea	16	113	194	162
United States	9	54	58	10
Japan	5	51	41	42
Germany	7	35	45	18
France	7	40	70	16
Italy	8	38	39	25
United Kingdom	7	49	31	10
Greece	10	51	48	12
Portugal	11	70	78	57

Source: World Bank, *World Development Report* (1993); OECD, *Health Database.*

Table 49. **Supply of health care 1992**

	Doctors per 1 000 000	Hospital beds per 1 000 000
Korea	730	300
United States	2 380	530
Japan	1 640	1 590
Germany	2 560	570
France	2 890	930
Italy	470	750
United Kingdom	1 400	630
Greece	1 730	510
Portugal	2 570	420

Source: World Bank, *World Development Report* (1993).

Fiscal policy

A prime objective of fiscal policy has been the achievement and preservation of a high rate of government saving to finance both improvements in the public infrastructure and the provision of subsidised credit to government-supported areas of activity. This strategy was initiated during the period 1964 to 1968 when the tax system was overhauled and its administration passed to an office for National Tax Administration. These reforms boosted the savings of the general government sector, on a national accounts basis, to above 6 per cent of GNP. This level was maintained throughout the past two decades with slight falls only during recessionary periods. Following the introduction of the National Pension Plan, government savings have risen to about 8 per cent of GNP. Such a policy contrasts markedly with that of most OECD countries where, with the notable exception of Japan, public sector savings are small or negative (Table 50).

Government investment runs at a somewhat higher level than in most OECD countries (about 4½ per cent of GNP in the 1980s rising to 6 per cent in 1992), though the difference is not as marked as for savings. Despite relatively high investment, the general government sector is showing a rising financial surplus, averaging 1 per cent of GNP in the first half of the 1980s and amounting to

Table 50. **General government saving and investment**[1]

(averages 1980-1991)

Per cent of GDP

	Korea	OECD
Savings	6.5	–0.8
Fixed investment	4.5	3.0
Financial balance	2.0	–3.8
Memorandum item:		
Central government lending	2.2	0.7

1. National accounts basis.

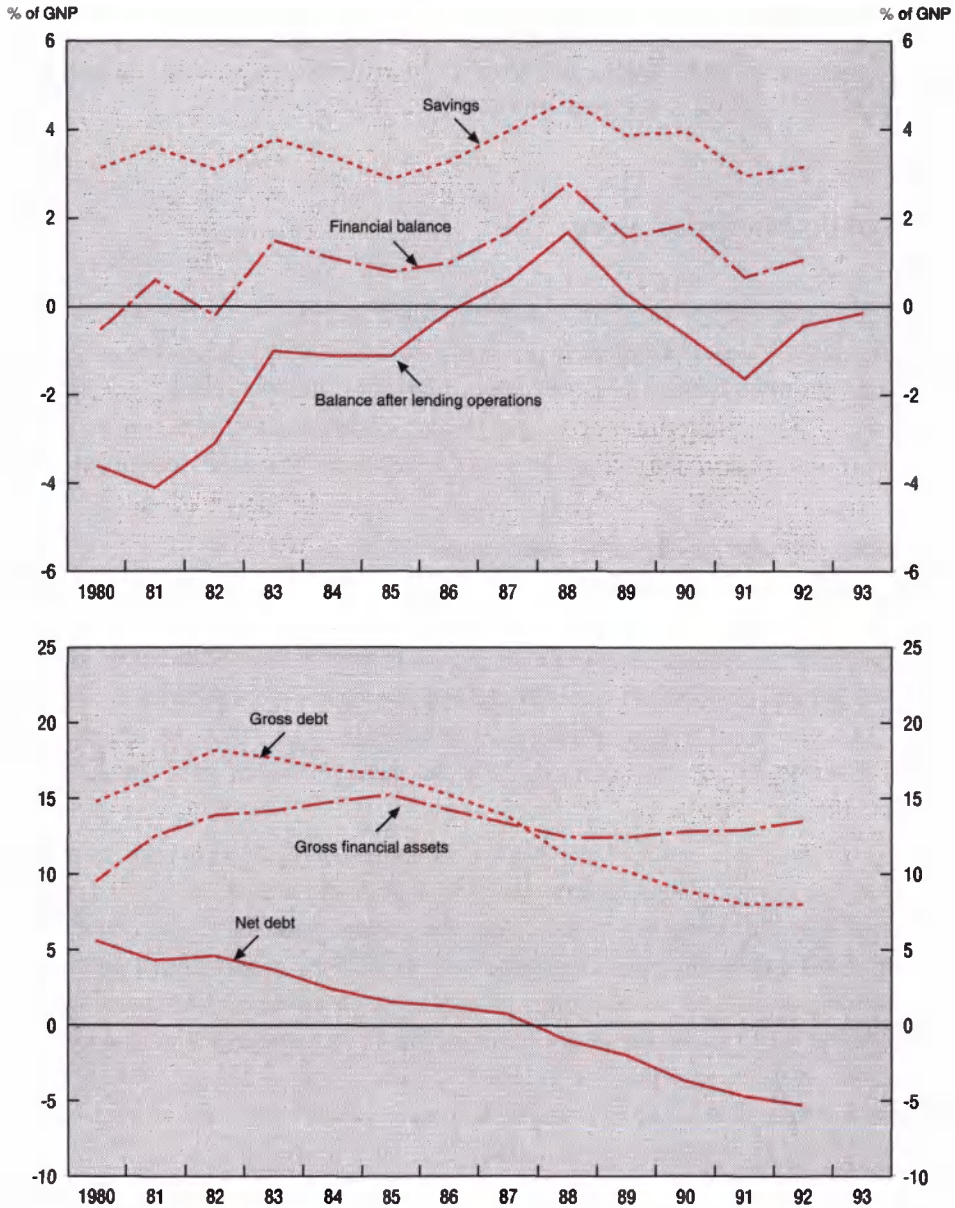
Source: OECD, *Analytic Data Base;* IMF, *Government Finance Statistics*; Bank of Korea, *Economic Statistics Yearbook.*

almost 3 per cent of GNP from the second half of the 1980s onwards. The financial surplus has been used to maintain a large lending programme both to public enterprises and to the private sector. General government lending averaged about 2.5 per cent of GNP in the first half of the 1980s and fell to about 1.5 per cent in the second half of the 1980s. Recently it rose to over 2.5 per cent in 1990 as activity in the housing programme peaked but then dropped to under 2 per cent of GNP.

The general government deficit has been small as most, or in certain years, all of the public lending programmes could be financed out of current receipts. In the first half of the 1980s, the borrowing requirement amounted to about 1 per cent of GNP; in the second half of the decade there was a net repayment of debt followed by a return to net borrowing in 1991 and 1992. General government debt was kept broadly stable in nominal terms over the ten years to 1992. The movement in the general government accounts reflected a progressive reduction of the central government deficit during the early 1980s followed by a three-year period of surplus and declining net debt (Diagram 36, first panel). This movement was reversed in 1989 with the central government deficit amounting to about ¾ per cent of GNP in 1992. In 1993, the central government budget is projected to be broadly in balance.

Despite the recourse to borrowing during most of the past decade, gross central government debt has fallen from a peak of 17 per cent of GNP to under 10 per cent by the end of 1992 (Diagram 36, second panel). During the same

Diagram 36. **FISCAL AND DEBT INDICATORS FOR CENTRAL GOVERNMENT**



Source: Ministry of Finance.

period, the government acquired financial assets through its lending programme which has been stepped-up since 1989. Total assets are larger now than gross debt. By 1992 the net creditor position of the government had increased to almost 5 per cent of GNP.[62] Local government borrowing is strictly limited and amounted to less than 2 per cent of GNP in 1992.

The public enterprise sector

The public enterprise sector has contributed a fairly constant share of GNP over the past 30 years (around 10 per cent). Institutionally, the sector is divided into four groups each with a different degree of independence: government enterprises, government-invested enterprises, government-funded corporations and the (non-consolidated) subsidiaries of government-invested enterprises.

The status of different public enterprises

Government enterprises have the closest link to the government. They are managed directly through the unified budget with their revenues and expenditures included in total government expenditure and revenue. The two major enterprises run in this way are the post office and the railways. The other two enterprises, which cover government procurement and the management of intervention in the grain market, are small.

Government-invested enterprises are the largest of the four groups, comprising 23 corporations. These enterprises have a large degree of managerial autonomy and only the transfers to and from the government enter into the unified budget. Government-invested enterprises can be further subdivided according to four functional activities: financial, industrial, policy-related and promotional. The financial institutions serve as important channels through which the government provides preferential loans to selected areas of the economy. Amongst the industrial corporations, the electricity company is now partially owned by the private sector. The policy-related enterprises meet objectives in the domain of land, housing and infrastructure investment (see Housing Market chapter). The final group of promotional enterprises is, in reality, part of government administration and is small.

Table 51. **Relative size of public enterprises**

Percentage of total business sector

	1975	1980	1985	1990
Value added	7.2	9.1	9.3	9.4
Gross investment	33.2	27.6	18.4	8.9

Source: Bank of Korea.

Government-funded enterprises have a variable status in that some are jointly owned by the government and the private sector while others are jointly owned by the government and government financial enterprises. The EX-IM Bank and the Korea Exchange Bank, while nominally independent of the government, are actually public sector financial enterprises. The subsidiaries of government-invested enterprises are either "lame ducks" acquired by the public sector in the past to prevent bankruptcy or genuine subsidiaries of other government enterprises.

The list of enterprises controlled by the government shows that the role of the public sector in commercial activities is now rather limited, mainly confined to public utility activities, reflecting considerable structural change during the past two decades. Public enterprises now account for a much larger share of value-added than employment, due to the capital-intensive nature of public utilities (Table 51). The share of enterprises in overall investment has fallen and is now less than 10 per cent of total gross investment. The run-down of the public share in manufacturing output reflects the sale of industrial and financial enterprises in the early 1980s.[63]

The development of the public enterprise sector

Government-invested enterprises were subjected to extensive reform in 1984 when a system of quantitative and qualitative performance reviews was introduced. The changes have resulted in improved profitability of these enterprises and a substantial reduction of their dependence on external finance (Table 52).

The government introduced a new privatisation plan in 1987. It envisaged complete privatisation of those enterprises that had met objectives for which they

Table 52. **Financing of public sector non-financial enterprises**

	1975	1980-84[1]	1985-89[1]	1990	1991	1992
	Billion won					
External financing from						
Equity markets	283	706	840	865	1 866	586
Banks	26	181	181	345	639	-179
Quasi-banks	121	476	-1	729	1 332	1 277
Bonds	19	565	469	1 903	3 274	3 679
Abroad	168	345	-155	-374	-333	312
Other	194	827	770	704	1 888	2 344
Total	811	3 098	2 105	4 207	8 656	8 019
	Per cent of GDP					
External finance	8.0	6.1	2.0	2.5	4.2	3.5
of which: equity	2.8	1.4	0.8	0.5	0.9	0.3
Internal finance	2.2	5.6	6.8	8.4	7.8	..
Total financing	10.2	11.7	8.8	10.9	12.0	..

1. Annual averages.
Source: Bank of Korea, *Financial Flow.*

had been set up, and partial privatisation in cases where the enterprise was still considered of public interest. The objectives of the plan have been only partially met. The completely privatised companies were small, covering less than 10 per cent of total employment in the government enterprise sector. One manufacturing company changed from government majority control to government minority.[64] The major change actually implemented was the sale of a 21 per cent stake in the Korea Electric Power Corporation (KEPCO) and, more recently, the sale of a minority stake in the telecommunications corporation. A new round of privatisations was announced by the government in December 1993. The government is considering privatising 57 of the 103 state-run enterprises, including stakes in companies which were taken over because of insolvency.

The remaining issues related to public enterprises concern the nature of regulation and the extent of competition to which these industries should be subjected. In the telecommunications sector, competition has been allowed in international calls, value-added services and mobile telephony. There is a plan to introduce a second carrier into the local and domestic long distance network in

the near future. In electricity, private generation has been allowed. There is, as yet, no independent regulatory regime for telephones and electricity. The widening of the terms of reference of the Fair Trade Commission to allow it to investigate public utilities has recently been announced, though.

Three relatively small government enterprises have been granted special international trade privileges or are part of an industry that benefits from restrictive trade regimes. Korea Gas is a monopoly purchaser and distributor of imported liquefied natural gas. Korea Coal benefits from an import quota system that restricts imported anthracite to slightly over 10 per cent of the domestic market despite import prices being lower than domestic prices. It also benefits from significant subsidies. Korea Tobacco has been charged with the sound development of the tobacco and ginseng markets. The company is the only authorised importer of leaf tobacco. Since 1988, its monopoly over the tobacco trade has been lessened as registered traders have been able to import foreign cigarettes.

IX. Conclusions

An appraisal of past policies

With a per capita income of more than $7 000 in 1993, Korea is no longer a ''developing'' country. Its transformation from one of the poorest countries in the world only 40 years ago to an industrialised country has been amongst the most rapid in the world. The most important factors behind this success story have been an early, policy-induced, export orientation, a high and rising rate of national savings, a commensurate high level of investment in physical assets and human capital, and, last but not least a highly motivated labour force, willing to work hard to acquire new skills and to adapt flexibly to changing labour demand conditions. The priority given to private sector developments over public sector developments, together with sound fiscal policies, enabled Korea to avoid many of the problems seen in developing countries. The negative influences of interventionist policies often found in other countries have been limited because success in international markets has generally been the criterion by which policies have been evaluated in Korea. The emergence of Korea as a major trading nation has been accompanied by a progressive reduction in government intervention in foreign trade. Industrial policy has also been re-oriented towards a less discriminatory approach in part as a reaction to the problems which had arisen from the drive towards heavy industries in the 1970s.

The need to change policies

With the almost twelve-fold growth in the absolute size of the economy in the past 30 years, policies of administrative guidance and discriminatory regulation are not only difficult to implement but have also become increasingly unsuitable for ensuring a continued fast pace of economic development required

to catch up with the most advanced industrial nations. With markets becoming bigger and goods more sophisticated, and with the number of companies growing and demand becoming more volatile and difficult to predict, more emphasis should be put on private sector initiatives with increasing reliance on signals from the market. The re-allocation of labour to more efficient uses will be a key to maintaining rapid growth in the next decade, along with improving technology and the easing of regulations which tend to impede the necessary transformation of the economy. Deregulation, especially in financial markets, will enable Korea to use domestic savings more efficiently, to benefit from lower borrowing costs abroad and to draw on foreign savings, thereby promoting investment and growth.

Stabilising the macroeconomic foundation

The strong demand pressure on resources had led to a high and accelerating rate of inflation in the second half of the 1980s, calling for a shift of policy priority from growth to stability. Money supply growth was reined back in 1991 and 1992, and interest rates first raised and then only allowed to drop back in line with the fall in inflation. Enterprises had to adjust to the rapid growth of real earnings, which outstripped labour productivity advances by as much as 40 per cent between 1987 and 1992. As investment in more capital-intensive lines and methods of production increased, the share of business investment in output attained a record high in 1991, followed by a sharp drop of investment growth in 1992. Many labour-intensive products are now beginning to be out-sourced to foreign plants, notably in China. However, thanks to strong demand in Asia, especially in China, the growth of total exports in 1992 was twice that of world trade and the current account deficit fell to 1½ per cent of GNP. Despite this favourable export performance, real growth of GNP slowed to just under 5 per cent in 1992 – or 2 percentage points below the estimated rate of potential output.

Concerned about the growing slack in the economy, the authorities eased the stance of monetary policy at the beginning of 1993. During the spring and summer, the authorities appeared unclear about the extent to which monetary growth should be allowed to exceed the government target and the central bank withdrew liquidity from the market, with short-term rates peaking at almost

19 per cent. Following the abolition of false-name bank and security accounts in August, the authorities calmed fears about potential shortages of liquidity by permitting the growth of money supply to stay above 20 per cent and letting short-term interest rates fall back to slightly above 11 per cent.

Fiscal policy has remained conservative, with continued emphasis on maintaining a high level of saving. Including government lending, the 1993 budget deficit is likely to be close to the initially proposed level of only slightly over 1 per cent of GNP. Gross government debt remains under 10 per cent of GNP and on a declining trend, and is exceeded by government financial assets. Moreover, the quality of government spending has been kept high, with a rising share of expenditure on education, training and infrastructure investment.

Despite the easier monetary stance and some decline in the effective exchange rate, economic activity remained sluggish in the first half of 1993 before showing signs of renewed buoyancy. For the year as a whole, GNP growth was about 5 per cent, with the rate of unemployment at the end of the year, however, only ½ percentage point above the all-time low of 2½ per cent experienced in 1992. Inflation has slowed down under the influence of weak demand growth, remaining, however, high for what is the starting point of a new economic upswing. The non-food component of consumer prices is rising at about 5 per cent year-on-year compared with an average increase of 3 per cent in the OECD area. The growth of earnings remained high in the first half of the year, but has since slowed sharply with the growth of real earnings falling significantly below the trend increase of labour productivity. Reflecting strong export growth, the current account moved into a small surplus. Foreign exchange reserves have risen sharply due to continued strong capital inflows.

The trough of the growth recession has already been passed. With current accommodating monetary policies and government expenditure budgeted to rise by almost 14 per cent, albeit to be entirely financed by higher indirect taxation and contributions, GNP growth is widely expected to pick up in 1994, perhaps even returning to its previous trend rate of 7 per cent. While a resumption of fast growth will boost business and consumers' confidence it also risks rekindling inflation expectations. It is therefore important to maintain downward pressure on both wage and price inflation via cautious monetary policy.

Inflation in 1993 seems to have been kept broadly in line with the official target of 5 per cent. The target of 3 per cent for consumer-price inflation set for

1997 in the current five-year plan would, however, seem difficult to achieve if the economy is heading for a longer period of upswing. Of course, in an economy with large differences in sectoral productivity growth, the gap between the overall rate of inflation and that for the productivity-leading and wage-setting manufacturing sector is bound to be large. For this reason, it would seem reasonable for Korea to aim at near-stability of prices in the tradeable goods sector with aggregate cost inflation then being a reflection of differential productivity growth and related domestic terms of trade shifts between the internationally-competing and the domestically-oriented sectors of the economy. Reducing the volatility of inflation is as important as achieving domestic cost stability in tradeables. Policy swings need to be moderated compared to the past when gains on inflation, acquired with difficulty, were lost within a few years. The government, therefore, should not allow the pending economic upswing to give rise to any significant acceleration of inflation, standing ready to tighten policies well before the economy has regained full-capacity levels. To reduce the inflation-proneness of the economy and to lay the foundations for sustainable high rates of growth, it is also important that competitive forces in both goods and factor markets be further strengthened.

Strengthening external and domestic competitive forces

The opening of domestic markets to international competition needs to be completed. Competitive pressures in the goods market have increased considerably with the progressive dismantling of tariff barriers and import licensing restrictions in the past five years. Tariff levels are now similar to those of most OECD countries although a few have been drastically raised since 1992. Inward investment in the manufacturing sector has been liberalised and a progressive opening of other sectors of the domestic economy is to be encouraged over the next three years. Government procurement is to be opened to foreign competition. With liberalisation of tariffs and licences, the remaining barriers are in the non-tariff area. One notable remaining trade barrier is the complete ban on the imports of 258 Japanese products. Protecting the domestic market against Japanese imports lowers the incentive to produce competitive products, putting Korean exporters as a disadvantage *vis-à-vis* Japanese products in third markets. The government intends to phase out restrictions on half of the products now

banned in the next five years but the remaining restrictions would still represent a significant non-tariff barrier to trade and should therefore be quickly removed. Other restraints to foreign trade that should be eased occur in areas such as labelling, safety regulations, customs clearance regulations and administrative delays, the granting of retail licences and the "frugality" drive which attempts to reduce the consumption of "luxury" items, many of which are imported.

The economy can also be made more efficient by a further opening of agriculture to the world market. In agriculture too, import bans have been used as a method of protection. The rice market has been completely closed and in other areas competition is limited by import quotas. The long-term interest of the economy is to stop supporting the use of land, capital and labour in the agricultural sector where productivity is much lower than in the non-farm sector. The Korean offer, in the Uruguay Round, to introduce tariffs, albeit at extremely high rates, on nine basic agricultural products to replace quantitative restrictions, and the intention to remove gradually quantitative restrictions on other products is thus welcome. The government also agreed at the end of 1993 to allow a limited amount of rice imports. This move should be followed by a gradual reduction of intervention prices and increases of the quota on rice imports. A start has been made in the 1994 budget by increasing the intervention price for rice by less than the rate of inflation. The share of agriculture in budget expenditure has almost doubled over the past 20 years, while the share of the population engaged in agriculture has almost halved in the same period. A move away from protectionist measures and production subsidies towards direct income support, notably for older farmers, would reduce costs to society. Likewise, public investment in agriculture should be reduced, as it is unlikely to be optimal from a resource allocation point of view to invest in a sector where domestic prices are significantly higher than world prices.

Domestic competition policy has focused on the role of the *chaebols* in the economy rather than on the abuse of monopoly power. These enterprise groupings have been at the centre of economic development for the past two to three decades – although small enterprises still produce 40 per cent of exports. Perhaps the most important constraint the *chaebols* face is the administrative control exercised over their investment plans and real estate purchases. In addition, the anti-monopoly law allows the government to regulate the prices of many of their products. Some of these controls have just been eased: the three core subsidiaries

and business lines, which the *chaebols* may choose, will be exempted from credit and administrative controls over new investment in plant and real estate. However, with all new activities subject to these controls, the government retains the right to influence the diversification programme of these conglomerates notwithstanding the fact that the five largest are operating on a world-wide basis. An economically more efficient policy would give the *chaebols* complete freedom to determine their activities. This considerable power over private companies is not only at variance with the concept of a free-market economy but may also put domestic firms at a disadvantage relative to foreign companies, which can now more freely compete on the domestic market either through imports or through direct investment. The emphasis of competition policy should therefore be moved towards preventing actual abuse of market power either by *chaebols* or other enterprises, stressing efficiency as a goal rather than the present concern over the size of conglomerates as such, and possible implications for equity.

The government has extended the powers of the Fair Trade Commission to look at public utilities. Given that the government intends to sell further stakes in the electricity monopoly and has just sold a stake in the telecommunications monopoly, regular monitoring of these ex-public utilities may be required. The distribution sector, in addition to agriculture, represents a significant source of labour for future economic expansion. One way of releasing low-productivity labour will be the removal of impediments to the establishment of supermarkets and the creation of an independent retail sector. Towards this end, the government should ease land-zoning restrictions and other restrictive regulations. The present opening of the distribution and hotel sector to foreign direct investment is also a welcome step towards introducing more competition in these sectors.

Deregulating domestic financial markets

In order to ensure the efficient allocation of capital, the government is implementing a programme of phased deregulation of domestic financial markets. The first stage of the financial liberalisation plan was completed in November 1993 when all lending rates were freed, except those granted through commercial banks or through government financial institutions for specific officially-defined purposes (*i.e.* ''policy loans''). As a result, all loans made by non-bank institutions are now deregulated and only 30 per cent of loans made by

banks remain subject to regulation. Banks are also free to pay market rates of interest on longer term deposits. At present, 60 per cent of deposits at banks and almost 40 per cent of deposits at non-banks are still subject to regulation. Deregulation of interest rates on these deposits and on policy loans will take a further four years. In part, this hesitant approach to deregulation reflects the desire to prevent upward pressure on lending rates while protecting deposit margins of the commercial banks. The welcome decision by the government that real names be used in all financial transactions, however, is a new factor that needs to be considered in deciding the speed with which deposit rates are to be deregulated. An appropriate response may be to consider speeding-up the deregulation of deposit rates and allowing financial institutions the freedom to introduce new products. With progressive deregulation, there will be a need for stronger prudential supervision of financial institutions. The expertise developed by bank supervisors could usefully be extended to non-bank financial institutions.

The financial plan envisages a considerable change in the methods of monetary control from administrative regulation towards control based on open-market operations. The plan envisages a phasing out of the forced allocation of both central bank and government bonds. It also foresees the eventual termination of automatic central bank rediscounts at preferential rates of interest and the reduction in unremunerated reserve requirements on banks. By the end of 1993, the central bank no longer obliged financial institutions to purchase bonds at below market rates of interest. Bond prices are now set by auction with the central bank subsequently supplying the market with as many bonds as required at the auction price. The planned move to end automatic rediscounts of credit to small- and medium-sized business, however, will not be based on a market solution. Instead, preferential rediscounts will be allocated on a quota basis, with the quota progressively being reduced in line with reserve requirements. Thus, for some considerable time, a non-competitive element will remain in the relationship between the banking system and the central bank. A quicker movement to ending such rediscounts would require the funding of such policy loans by the government through the budget.

Controlling monetary growth through interest rates reinforces the role of market-determined interest rates. In particular, the importance of the inter-bank call market will be increased. Rather than being a secondary source of funds, this market should become the leading determinant of lending and deposit rates, with

a broader range of maturities and instruments available for trading. The recently announced consolidation of government borrowing into one type of instrument with a range of maturities should also facilitate the conduct of monetary policy as it will improve the liquidity of the government bond market and generate a wider range of actively traded bond maturities. Market participants need to be assured that there will be no return to the previous monetary control system that relied on the forced sale of government or central bank bonds to financial institutions.

While most lending rates have been deregulated, some elements of the old credit allocation system will remain at the end of the liberalisation period. Banks will still be required to make 45 per cent of their loans to enterprises employing fewer than 250 people and the granting of credit to the thirty largest *chaebols* will remain controlled to a certain extent. While this latter control may have been more apparent than real in the past, the deregulation plan will not end the policy of limiting cross-guarantees between different companies in the same grouping nor the policy of reducing the debt-equity ratio of these groups. Given that capital always tends to move towards the highest available return, such forms of intervention and control may not be very effective, while imposing considerable transactions costs on those economic agents who try to circumvent the regulations.

Deregulating international capital flows

The proposed liberalisation of domestic financial markets will be accompanied by a step-wise liberalisation of international capital flows. Controls on capital inflows have kept interest rates significantly above those in major OECD countries, both in nominal and real terms. With strict limits on the ability of residents to borrow abroad and non-residents to invest in the country, and with high returns on capital, high interest rates have been necessary to balance domestic savings and investment. The present liberalisation plan provides for a gradual movement towards the abolition of controls on capital flows by 1997. Foreign ownership of domestic bonds will only gradually be liberalised, though domestic enterprises will be able to borrow abroad with fewer constraints. Even by 1997, limits on foreign ownership of equities will remain in place, though there is a commitment to increase the share of a given quoted company that can be owned by foreigners from the current 10 per cent. Non-resident ownership of convertible

won bank accounts will remain limited as will the settlement of foreign bills in won by residents.

The liberalisation plan gives priority to easing the outflow of capital over the inflow for fear that allowing massive net capital inflows would either put excessive upward pressure on the exchange rate or the money supply growth. The authorities are clearly concerned that even the existing inflow of capital might result in an unduly sharp increase in the money supply if the exchange rate were fixed. The recent issuing of interest-bearing central bank bonds to withdraw undesirable liquidity increases has almost completely eliminated central bank profits. A policy of increasing the compulsory reserve requirements of banks would also be difficult to implement given that banks represent only a relatively small part of the overall financial system. An alternative policy would be to accept some appreciation of the won while permitting domestic borrowers to benefit from lower financing costs abroad. Some appreciation of the won would have several beneficial effects, including a real income gain for the Korean population, downward pressure on inflation and an acceleration of the shift from low-productivity to more technologically-advanced products. To the extent to which the current foreign balance weakens, the room for pushing up the GNP share of investment will increase with positive consequences for future real growth. A faster liberalisation of capital imports would also reinforce the movement of liberalisation on the domestic financial market.

Altogether, the plans for financial deregulation, domestic and external, constitute a well-designed and coherent programme, the sequencing of which builds on the experience of other countries. In contrast to false starts in the past, it is important that this programme be implemented in full, and at a pace which leaves markets in no doubt that the process will be irreversible. Although the reform plan is open to considerable interpretation, it appears that even if the plan is fully implemented by 1997, the Korean financial system will still have a higher degree of official control than is found in most OECD countries. Further steps would therefore be needed to complete the process of deregulation. Occasional market volatility is an inevitable risk in the adjustment towards a more market-oriented system and, should it occur, it ought not to be met by renewed attempts to impose controls. Another likely feature of the adjustment period is instability in the demand for money. This means that, in setting monetary policy, the monetary authorities should be prepared to monitor a number of indicators other than the

targeted monetary aggregate, including other aggregates of money or credit, nominal and real interest rates, the exchange rate and a range of inflation data.

Reform of the housing and land market

Reform of the housing finance market, which is dominated by two government institutions, is not part of the current financial deregulation programme. The rules concerning the sale of mortgage-backed securities will be eased somewhat but consideration should also be given to ways and means of increasing competition in the financing market and of strengthening the role of prices in matching supply with demand. A more flexible housing finance system should reduce some of the adverse features of the housing market, where, for example, tenants have to finance a significant part of the property which they rent. However, reform of housing finance would have to proceed carefully in order to avoid over-borrowing by households. The next few years may be an ideal time for reform because the government is increasing the supply of housing units under its five-year housing programme. As a result, the number of housing units should approach the number of households by 1998 for the first time. Such an increase in supply might dampen price pressures arising from a reform of housing finance.

The reform of land zoning, recently introduced, should be built on in such a way that it reduces the number of small-sized farms in urban areas and encourages the transfer of agricultural land to residential use. Earlier policy moves have aimed to restrict speculation by limiting the amount of land that an individual, or corporation, is allowed to own. With growing urbanisation, this policy seems unlikely to result in a major reduction in land values. The government should therefore reconsider the distribution of gains from increased land values between owners and the whole of society. A large proportion of the gain arising from the transfer of land from agriculture to residential use is captured by the government, though in metropolitan areas most of this gain is transferred to the first-time purchaser of price-controlled housing units. However, little of any subsequent gain in value is taxed by the government. Most taxation on housing and land occurs when transactions take place. There is little recurrent taxation of housing. Property taxation is low and there is no taxation of the imputed income of owner-occupiers. Given the need to raise the national tax burden over the next few years

in order to finance large infrastructure investments, the government may wish to implement the proposal made in the five-year plan to increase property taxation.

Keeping the labour market flexible

The rapid pace of structural change, necessary to sustain the swift convergence of Korean living standards to those of the most advanced OECD countries, requires a well-functioning labour market, that responds flexibly and quickly to changing macro- and micro-supply and demand conditions. In the past, the Korean economy has maintained internationally low rates of unemployment but it is of some concern that the growth of wages has been slow to respond to the current period of sluggish growth. In large measure the stickiness of high wages may be seen as an aftermath to the excessive boom conditions in the late 1980s but the greater strength of labour and trade unions following the democratisation of 1987 seems also to have played a role. Relatively high wage premia are being paid in large enterprises and enterprise groups, exerting upward pressure on wages and prices elsewhere in the economy. To the extent that the relative bargaining powers of the two sides of industry have permanently changed, it is all the more important that competitive forces be strengthened in imperfect product markets in order to reduce the scope for rent sharing and excessive wage pressure arising in high-productivity growth sectors of the economy. At the same time it is important to allow demand and supply to determine the wages on the lower end of the pay scale. To the extent that on minimum income considerations the resulting remuneration of low and unskilled labour is felt to be insufficient, the problem should in the first instance be addressed via active labour market policies, notably the provision of appropriate training, with direct income transfers remaining a possible second line of attack.

While some increase in the rate of unemployment consistent with stable inflation may have to be accepted, care has to be taken that social legislation in support of the unemployed and of other disadvantaged groups in the labour market does not unduly reduce the incentives to work, acquire new skills, and more generally, not adversely affect the availability for jobs. On the other hand, with growing urbanisation, loosening family ties and greater labour-market turnover, the government will have to meet growing claims for introducing or expanding active and passive labour-market support schemes. Here, the Korean

government is in a favourable position compared to more advanced countries in that it can draw useful lessons from the experience, both positive and negative, of other countries. As a general observation, moral hazard and disincentive related problems can best be avoided or at least minimised if support schemes are run on a self-financing basis, and if the drawing of benefits is made clearly less attractive than gainful employment, with some control over spending criteria and eligibility exercised by those who finance the scheme. The present government plan to introduce an unemployment benefit scheme in 1995 clearly meets these criteria: it will be financed equally by employees and employers; the benefit level will be much lower than in European countries, the duration of the benefits will be short and payments will only start after a waiting period of two weeks.

In order to reduce search time for job seekers and to improve the match between skills and places of work offered and demanded, the efficiency of the existing system of job placement and counselling needs to be improved, calling for the removal of remaining restrictions on private labour market agencies. Greater incentives should be given to firms to undertake their own training, supplemented by demand-oriented public professional training and retraining facilities, preferably to be jointly financed by business and labour. At present, most firms prefer to pay a levy to the government rather than training their own labour force. Even so, the quality of the Korean labour force and the educational level of new labour market entrants have been steadily improved. The emphasis laid on mathematics and science in secondary schools will be further increased. This could be aided by lowering the age of transfer to secondary education and the entry age for compulsory schooling. The stress put on vocational education at the high school level will be increased with the proportion of vocational students rising to 50 per cent, but it is important that the general educational content of these vocational courses be kept high. There is probably scope for reflection as to whether it is best to reduce class sizes at the primary and secondary level, which are high relative to OECD countries, or to lower the starting age further, a task that would be made easier as the numbers of primary school children continues to fall. The greater emphasis given to technical subjects at schools should also help in achieving the goal of increasing the share of science and technology graduates to 55 per cent of the total from the current 40 per cent. Labour market imbalances, notably the high level of initial unemployment amongst four-year college graduates, especially those from arts subjects, may help in achieving this target. It

is noticeable in this context that the graduates of two-year colleges appear to integrate better into the labour market than the graduates of four-year colleges.

Public sector issues

The pressures to increase social expenditures that will arise as the economy advances will need to be carefully controlled so as to preserve a high rate of public-sector saving. The introduction of the national pension scheme has set a good precedent since pensions will only be paid on a funded basis as contribution rights build up. The recent increase in contributions has added to government savings. It is important that the existence of a surplus in this fund should not result in an increase in government consumption financed by loans from the pension fund. Real assets or claims on other countries need to be transferred to future generations in order to create additional income to pay for future pensions. The emphasis given to the growth of investment in recent budgets suggests that government consumption and transfers will be limited, as does the recent decision to widen the scope of private sector instruments in which the fund can invest. In order to limit future claims on tax-financed welfare benefits, the coverage of the pension scheme should be broadened to include the self-employed and those in very small firms. However, the link between contributions and benefits should be retained with no subsidy being paid from general taxation. Health care is now universally available but health indicators are still lagging behind OECD countries with similar income levels. While improvements in housing and environmental standards may result in some amelioration in health standards, an increase in overall health expenditure would still seem needed. In this context the government may wish to consider lowering the high co-payments required even from poor patients to cover their individual health care costs.

The move away from administrative control and guidance in areas other than those belonging to the domain of social policy will have to be accompanied by pervasive reforms of government institutions and policy practices as well as changes in mentality and attitudes of bureaucrats and government officials. The government plan of freezing the number of civil servants will require major efforts to retrain the government work force for new tasks and responsibilities. Increasing reliance on market mechanisms means less government involvement in the actual running of the economy but on the other hand calls for greater

attention in the formulation, design and the implementation of macroeconomic and systemic policies. Thus, for a proper assessment of fiscal policies it is important that a timely presentation of budgets be made not only according to administrative criteria but also in relevant economic terms, allowing an appropriate analysis of the impact on demand, capital markets and the overall balance of the economy. There is great awareness within the public administration of the changes which are needed in order to attain the two major objectives of public sector reform: maximising the government's efficiency while minimising its size.

Summing up

The transformation of Korea from a war-torn, poor underdeveloped country in the early 1950s to an important industrialised trading nation by the early 1990s has been impressive. However, in order to continue catching-up with the more advanced high-income countries, the institutional and policy environment which has assisted in the favourable past performance of the Korean economy needs to be changed. The current five-year programme of comprehensive reforms in the area of domestic and foreign trade and finance goes a long way to meeting these new requirements, but it is important to assure market participants at home and abroad that the reform process is irreversible and that deadlines will be met or even advanced. The potential benefits which Korea can draw from increased competition and integration in the world economy are great, in particular if the wide-ranging experience of countries which are ahead of Korea in this process is fully exploited in policy design and implementation.

Notes and references

1. In this report, Korea refers to the Republic of Korea unless otherwise stated.
2. Amongst the vast and growing literature on Korea, the following have been used as main sources: Sakong (1993), Haggard *et al.* (1990), Kwon (1990), World Bank (1987) (1993), Amsden (1989), Rhee, Ross-Larson and Purcell (1984), Westphal (1990) and Yoo (1990).
3. Westphal and Kim (1982).
4. The reasons for the HCI drive are discussed in detail in Yoo (1990).
5. Policy loans are loans extended by the government often at preferential interest rates, either through government-owned commercial banks, special development banks or by privately-owned banks benefiting from preferential refinancing terms with the Bank of Korea.
6. Estimate by Taewon Kwack which is cited in Yoo (1990).
7. Based on purchasing power parity prices, GDP is estimated to have increased by a factor of 5.4 between 1962 and 1988 (Summers and Heston, 1991).
8. Some argue, however, that the official statistics are biased towards equality due to the exclusion of low and high income households from the sample prior to 1977 and under-reporting of investment income. Such authors argue that the level of actual inequality worsened during both the 1970s and 1980s (Yoo Jong Goo, 1990).
9. Kuznets' U-shaped hypothesis postulates that growth initially results in an increase in inequality followed by a later improvement.
10. Commission on the Public Concept of Landownership (1990).
11. In comparison, TFP growth increased at an annual rate of just over 3 per cent in Japan during the period of rapid development between 1953 and 1973, accounting for just over one-third of output growth.
12. In 1977, Korea had a nominal current-account surplus of $12 million, primarily as a result of earnings on Middle East construction projects.
13. These comparisons are made using current exchange rates, which underestimate the level of income in Korea.
14. Excluding city economies, such as Singapore and Hong Kong.
15. A summary of the neo-classical and revisionist schools is provided by Wade (1993).
16. This interpretation is advanced in Amsden (1989), who stresses the importance of "getting relative prices wrong".

17. Westphal (1990).

18. The study included Japan, Korea, Taiwan, Hong Kong, Singapore, Thailand, Malaysia and Indonesia (World Bank, 1993).

19. Amsden (1989). This statement seems more consistent with the neo-classical view (that Korea succeeded because it had less severe distortions) than Amsden's own revisionist view that government intervention to get prices "wrong" was the key to success. This inconsistency is pointed out in Wade (1993), p. 293.

20. Growing economic links were one of the factors leading to China and Korea establishing diplomatic relations in 1992.

21. Under the Fair Trade Act every business group with combined assets (on a consolidated basis) of W 400 billion ($513 million) was, until 1993, considered a chaebol. According to the new rules adopted in April 1993, the top 30 conglomerates are defined as *chaebol* and subjected to the special rules of the Fair Trade Act.

22. Steers, Shin, and Ungson (1989), pp. 34-41.

23. According to some observers, though, the Government is still able to "exert considerable influence in pricing decisions" and "can effectively control the prices of domestic and foreign goods" (Price Waterhouse, 1992), p. 48.

24. A market-dominating firm is defined as one with a market share of more than 50 per cent for any product with gross domestic output in excess of W 50 billion. In addition, any firm that is one of three enterprises that together control more than 75 per cent of the market is designated as a market-dominating firm. The FTC annually identifies the firms that meet these criteria. In 1993, 335 firms fell under these criteria in 140 product areas.

25. This rule was established in 1987. In April 1992, the FTC announced W 1.82 billion ($2.3 million) in fines on twelve companies (belonging to six *chaebols*) that failed to comply within the five-year grace period.

26. Porter (1990), p. 473.

27. The second five-year tariff reduction plan was extended to 1994 when the cuts planned for 1990 were deferred for one year to offset the loss of fiscal revenues resulting from the abolition of the Defence Tax.

28. The actual tariff rate is the ratio of import duty to the value of imports and takes into account the tariff drawbacks given to exporters and certain domestic users. The statutory rate, therefore, is substantially higher than the actual rate.

29. World Bank (1987).

30. These results are based on a detailed price survey comparing prices of the same goods on the domestic market with world market prices. A price differential greater than the actual tariff is evidence of a non-tariff barrier to trade.

31. The figures for PSEs and CTEs have been taken from the GATT trade review of Korea. This publication, in turn, quoted an article, "Government intervention in South Korean agriculture", J.A. Evans in *World Agriculture*, June 1991.

32. GATT (1992), p. 152.

33. The ceiling on land holding was introduced in the 1949 Land Reform Act. The objective was to ensure that as many farm labourers were able to become owner farmers as possible. Since then, it has been illegal to rent land for farming, though loopholes have resulted in about 20 per cent of farm land being exploited by tenants.

34. GATT (1992), p. 149.

35. National Statistical Office (1992).

36. According to a study by Ito and Kang (1989), a 1 percentage point increase in the unemployment rate leads to a 1.3 per cent change in wages.

37. Nabi (1991), p. 13.

38. Calmfors (1993), pp. 39-41.

39. In addition to branches, foreign banks have 24 representative offices.

40. Among the privileges enjoyed by foreign banks have been a lower threshold for compulsory lending to small- and medium-sized enterprises and higher individual lending ceilings, exemption from the obligation to hold Monetary Stabilisation Bonds and other liquidity control measures. The discriminatory restrictions on foreign banks had included limitations on branching and exclusion from membership in the clearing house but these were lifted in July 1991 and July 1992 respectively. Their lending limit has been raised by allowing increases in their equity capital. Foreign banks have been granted access to rediscount facility on the same terms as domestic banks.

41. The Korea Stock Exchange (KSE) is the only stock exchange. It is a privately incorporated association composed of member securities companies. Most of the trading on the KSE (98 per cent in 1992) is in equities. In addition to the trading on the main exchange, there has been an officially organised over-the-counter market since April 1987, which was created to provide mainly small- and medium-sized unlisted enterprises with an opportunity to raise funds through the securities markets. In addition there is an unorganised market for much of the secondary trading in bonds which occurs over the counter of securities companies.

42. The Securities and Exchange Commission (SEC) was established under the SEC Law of 1962 and is responsible for the supervision of the Korea Stock Exchange, securities firms and other companies engaged in the securities business. The Ministry of Finance is responsible for general security market policy.

43. High debt-equity ratios may be overstated as assets are generally only revalued when legal requirements for a revaluation are met such as a rise in the wholesale price index of 25 per cent since the last revaluation or when the asset was acquired.

44. Nominal interest payments are an offset to taxable income, while dividend payments are taxed, albeit at preferential rates. As inflation declines the real value of the deductibility is reduced so reducing the attractiveness of debt.

45. In addition, banks act as custodians of money managed by other institutions. This money is not a liability of the bank.

46. M3 is defined as M2 plus deposits with non-bank financial institutions, CDs, Repos, commercial bills and debentures of non-bank financial institutions. Deposits with these institutions are by far the largest component accounting for over 90 per cent of the non-bank liabilities included in M3.

47. Directed credit has several components. The first is loans by specialised government-owned banks that generally specialise in one area of lending. The government also provides a small amount of funds to the commercial banks for specific programmes. These funds have dropped to 1.3 per cent of bank liabilities in 1991. The central bank also provides significant funds to the commercial banks.

48. Since the policy of favouring small firms was introduced in the early 1980s, the ratio of receivables to payables of small manufacturing firms has steadily increased. Broadly the numbers are consistent with the view that large firms have extended more inter-firm credit, when central bank rediscounts, to which they may have had preferential access, were plentiful. They reduced inter-company loans when rediscounts fell in importance.

49. The amount of MSBs issued was even bigger than the rise of reserves because the Bank also absorbed extra liquidity generated by the expansion of its preferential rediscount credits.

50. By 1992, the seignorage profits of the Bank of Korea had almost completely disappeared. Despite having W 18 000 billion of non-interest bearing liabilities in 1992, sufficient to generate seignorage of W 3 000 billion (1¼ per cent of GNP), the Bank of Korea made a profit of only W 60 billion.

51. In both cases, the purchase price is paid by instalments during the construction period, narrowing the discount relative to the current market value.

52. The "assessed" price is set by the national tax administration and is generally lower than both the "officially announced" price set by the Ministry of Construction on the basis of a sample of transactions and the actual market value.

53. Three years for owner-occupied housing, five years for rented housing, eight years for agricultural land and ten years for all other property.

54. The figures refer to expenditure and taxation on a national accounts basis; on a consolidated budget basis the expenditure figures would be about 3 per cent of GNP higher as the budget data treats income from charges as revenue whereas the national accounts treats them as negative expenditure.

55. Only one OECD country (Austria) now includes the postal and railway revenue in its budget in this fashion.

56. For a fuller discussion of the role of local government see Son (1992).

57. Most of the small amount of local government debt is the result of obligatory deposits that car purchasers must make with the local government and which carry below market rates of interest.

58. The contributions to the system are calculated on the basis of the wage bill and are paid in equal parts by employees and employers.

59. Prior to 1993, the use of anonymous bank accounts, through the false-name system, meant that avoidance of taxation on investment income was common.

60. In 1991 about 5 per cent of the population received such benefits and also qualified for medical aid.

61. The budget allowance for the self-employed health insurance scheme has only been increased by 5 per cent.

62. The diagram somewhat overstates the net creditor position of the government as many of the government financial assets carry below market rates of return and therefore are worth less than their nominal value.

63. The privatisation programme of the early 1980s moved six public enterprises and the commercial banks into the private sector. An earlier privatisation programme (1968-1973) provided for the sale of eleven public enterprises including Korea Air and a major steel company. Other public enterprises had mainly been established under colonial rule and were nationalised after 1945.

64. The movement of the Pohang Iron and Steel Company (POSCO) from being a government enterprise to being a privately-owned company was symbolic even though the government continues to hold directly or indirectly 35 per cent of the equity. POSCO was established by the government during the Heavy Chemical Industry drive. It quickly became one of the largest integrated steel producers in the world.

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STATISTICAL ANNEX

Selected background statistics

	Average 1982-92	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
A. Percentage changes												
Private consumption[1]	8.6	6.5	9.1	7.6	6.4	8.0	8.3	9.8	10.9	10.3	9.3	6.4
Government consumption[1]	7.4	1.0	3.4	1.5	5.6	10.8	6.9	9.4	9.7	8.9	9.4	8.8
Gross fixed capital formation[1]	12.6	10.4	17.8	10.9	4.7	12.0	16.5	13.4	16.9	24.0	11.8	–1.8
Total domestic demand[1]	9.7	6.2	9.7	9.0	5.5	9.1	11.0	11.5	14.1	13.0	11.8	2.2
Exports of goods and services[1]	11.2	4.5	19.2	7.9	4.5	26.1	21.6	12.5	–3.8	4.2	9.8	9.8
Imports of goods ans services[1]	12.0	3.0	12.0	7.4	–0.6	17.8	19.4	12.8	16.3	14.4	17.5	2.9
GDP[1]	9.3	7.3	11.8	9.4	6.9	12.4	12.0	11.5	6.2	9.2	8.5	4.8
GDP price deflator	5.9	6.9	4.9	4.0	4.1	2.8	3.6	5.9	5.3	10.7	11.1	6.2
Industrial production	11.7	5.5	16.4	15.5	4.1	22.1	20.1	13.4	3.0	8.9	8.6	4.8
Employment	2.8	2.5	0.9	–0.5	3.7	3.6	5.5	3.2	3.8	3.0	3.0	1.9
Compensation of employees (wages, current prices)	18.0	15.5	19.9	13.0	10.8	13.3	19.2	22.4	18.7	26.2	24.3	11.8
Productivity (GDP/employment)	6.3	4.6	10.8	10.0	3.1	8.5	6.2	8.1	2.3	6.0	5.3	2.9
Unit labour costs (compensation/GDP)	11.0	10.4	8.3	2.7	7.5	4.4	12.2	13.3	16.0	19.1	18.0	8.7
B. Percentage ratios												
Gross fixed capital formation as per cent of GDP at constant prices	31.7	27.0	28.5	28.8	28.2	28.1	29.3	29.8	32.8	37.3	38.4	36.0
Stockbuilding as per cent of GDP at constant prices	1.5	1.3	0.2	1.3	1.0	0.7	1.1	1.6	2.9	1.4	3.0	1.4
Foreign balance as per cent of GDP at constant prices	–1.2	–2.8	–0.7	–0.5	1.3	3.9	4.9	4.8	–2.8	–6.5	–9.6	–7.0
Compensation of employees as per cent of GDP at current prices	42.3	39.1	40.0	39.7	39.5	38.8	39.8	41.3	43.8	45.8	47.2	47.5
Direct taxes as per cent of household income	3.7	3.5	3.3	3.2	3.2	3.3	3.5	4.1	4.2	4.6	4.4	..
Household saving as per cent of disposable income	18.7	12.1	13.5	15.0	14.6	19.0	21.5	23.1	21.6	22.3	24.5	..
Unemployment as per cent of total labour force	3.1	4.4	4.1	3.8	4.0	3.8	3.1	2.5	2.6	2.4	2.3	2.4
C. Other indicator												
Current balance (billion dollars)	1.4	–2.6	–1.6	–1.4	–0.9	4.6	9.9	14.2	5.1	–2.2	–8.7	–4.5

1. At constant 1985 prices. Tables in the main text are at constant 1990 prices.
Source: Bank of Korea, National Statistical Office.

Table A. **Expenditure on gross domestic product**

Thousand billion won

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
A. *At current prices*												
Private consumption	30.6	34.6	38.7	43.2	47.9	52.3	58.0	66.5	77.0	91.9	109.7	123.7
Government consumption	5.5	6.3	6.9	7.3	8.1	9.4	10.7	12.5	15.1	18.3	22.2	26.3
Gross fixed capital formation	13.3	15.4	18.7	21.0	22.8	26.0	31.1	37.4	45.3	63.0	78.8	82.6
Stockbuilding	0.7	0.1	–0.3	0.7	0.8	0.5	0.8	1.9	2.4	0.8	2.5	0.5
Total domestic demand	50.1	56.4	63.9	72.1	79.7	88.2	100.6	118.2	139.8	174.0	213.1	233.2
Exports	17.3	18.8	22.7	26.1	27.9	36.0	45.1	51.1	48.8	53.5	60.8	69.4
Imports	19.7	20.2	23.0	26.0	26.9	30.4	36.4	40.6	44.8	54.4	66.1	71.8
GDP	47.5	54.4	63.8	72.6	80.8	93.4	108.4	128.0	143.0	172.7	208.2	231.7
Net factor income	–2.0	–2.3	–2.1	–2.6	–2.8	–2.8	–2.4	–1.7	–1.2	–1.2	–1.5	–1.8
GNP	45.5	52.2	61.7	70.1	78.1	90.6	106.0	126.2	141.8	171.5	206.7	229.9
B. *At 1985 prices*[1]												
Private consumption	36.0	38.3	41.8	45.0	47.9	51.7	56.0	61.5	68.2	75.3	82.2	87.5
Government consumption	7.3	7.3	7.6	7.7	8.1	9.0	9.6	10.5	11.6	12.6	13.8	15.0
Gross fixed capital formation	15.1	16.7	19.7	21.8	22.8	25.6	29.8	33.8	39.5	49.0	54.8	53.8
Stockbuilding	1.1	0.8	0.2	1.0	0.8	0.7	1.1	1.8	3.5	1.9	4.3	2.1
Total domestic demand	59.5	63.1	69.3	75.5	79.7	87.0	96.5	107.6	122.8	138.8	155.1	158.5
Exports	19.9	20.8	24.8	26.7	27.9	35.2	42.8	48.2	46.4	48.3	53.1	58.3
Imports	21.9	22.5	25.2	27.1	26.9	31.7	37.9	42.7	49.7	56.8	66.8	68.7
GDP	57.6	61.8	69.1	75.6	80.8	90.9	101.8	113.5	120.5	131.5	142.6	149.5

1. Tables in the main text are at constant 1990 prices.

Source: Bank of Korea.

Table B. **Gross domestic product by industry**

Percentage of total

	1970	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992[p]
At 1985 prices											
Agriculture, forestry and fishing	28.0	23.1	14.2	12.8	11.9	9.9	9.6	8.9	7.8	7.1	7.1
Mining and quarying	2.0	1.9	1.4	1.0	0.9	0.8	0.7	0.6	0.5	0.5	0.4
Manufacturing	13.8	20.3	26.7	30.3	31.9	33.8	34.4	33.7	33.6	33.7	33.8
Electricity, gas and water	0.8	1.2	1.9	2.8	3.1	3.1	3.1	3.2	3.4	3.4	3.5
Construction	5.7	5.7	7.7	7.7	7.2	7.3	7.1	7.8	8.8	9.1	8.5
Transport and communication	4.5	5.6	8.0	7.6	7.4	7.5	7.5	7.9	8.0	8.4	8.7
Finance and insurance, etc.[1]	9.8	9.2	11	11.8	11.7	12.1	12.6	13.2	13.7	14.1	14.9
Community services	3.6	3.5	3.6	4.1	4.1	3.9	3.8	4.1	4.1	4.1	4.3
Public administration	10.1	7.1	5.8	4.2	3.8	3.5	3.3	3.2	3.1	2.9	2.9
Non-profit household services	2.8	2.7	2.4	2.5	2.5	2.3	2.3	2.4	2.3	2.2	2.2
Import duties	1.8	2.3	3.1	2.7	2.8	3.1	3.1	3.4	3.5	3.8	3.6
(*less*) Bank service changes	0.9	1.2	1.9	2.8	2.9	3	3	3.3	3.6	3.9	4.5
Others[2]	18.0	18.5	16.0	15.2	15.4	15.6	15.4	15.0	14.7	14.5	14.5

1. Includes ownership of dwellings.
2. Others include wholesale and retail trade, restaurant and hotel and social, recreation, sanitary and related community services.

Source: Bank of Korea.

Table C. **Gross domestic product in manufacturing by industry**

Percentage of total

	1987	1988	1989	1990	1991
At current prices, factor cost					
Food, beverage and tobacco	8.6	8.1	8.7	8.7	8.7
Textiles and leather industries	17.3	14.5	13.5	12.1	10.5
Wood and wood products including furniture	1.3	1.5	1.4	1.4	1.3
Paper, paper products, printing, etc.	4.6	4.6	4.9	4.9	4.9
Chemicals, petroleum, coal, rubber and plastic products	20.6	20.9	19.9	17.1	19.3
Non-metallic mineral products except coal and petroleum	4.9	5.0	5.1	6.5	6.0
Basic metal industries	8.9	9.8	10.0	9.1	9.5
Fabricated metal products, machinery and equipment	31.5	33.5	34.9	39.0	38.7
Other manufacturing industries	2.3	1.9	1.6	1.2	1.1
Memorandum:					
Metals and chemicals	29.5	30.7	29.8	26.2	28.8

Source: Bank of Korea.

Table D. **Cost components of gross domestic product**

	1987	1988	1989	1990	1991	1992
Billion won						
Compensation of employees	43 163	52 835	62 697	79 142	98 343	109 997
Operating surplus	41 682	47 037	49 414	55 984	66 269	72 151
Consumption of fixed capital	11 034	13 269	14 710	17 226	19 923	22 169
Gross domestic product at factor cost	95 879	113 141	126 821	152 352	184 535	204 317
Indirect taxes	13 068	15 211	16 811	21 362	24 914	28 872
Subsidies	520	390	631	956	1 250	1 464
Gross domestic product at market prices	108 427	127 962	143 001	172 758	208 199	231 725
As percentage of GDP at factor cost						
Compensation of employees	45.0	46.7	49.4	51.9	53.3	53.8
Operating surplus	43.5	41.6	39.0	36.7	35.9	35.3
Consumption of fixed capital	11.5	11.7	11.6	11.3	10.8	10.9
Gross domestic product at factor cost	100.0	100.0	100.0	100.0	100.0	100.0
Indirect taxes	13.6	13.4	13.3	14.0	13.5	14.1
Subsidies	0.5	0.3	0.5	0.6	0.7	0.7
Gross domestic product at market prices	113.1	113.1	112.8	113.4	112.8	113.4

Source: Bank of Korea.

Table E. **Cost component of gross domestic product by industry**

Per cent of total

	1988			1989			1990			1991		
	Capital consumption	Compensation of employees	Operating surplus	Capital consumption	Compensation of employees	Operating surplus	Capital consumption	Compensation of employees	Operating surplus	Capital consumption	Compensation of employees	Operating surplus
Agriculture, forestry and fishing	4.3	12.1	83.7	4.4	12.6	83.0	4.8	12.3	82.9	5.9	1.4	92.8
Mining and quarying	16.3	67.8	15.8	18.6	66.9	14.6	17.7	63.7	18.5	16.7	60.8	22.5
Manufacturing	16.2	49.0	34.8	16.4	50.5	33.1	16.7	51.7	31.6	11.4	63.2	25.4
Electricity, gas and water	30.1	16.3	53.6	32.7	21.0	46.3	34.1	22.4	43.5	30.9	23.5	45.6
Construction	5.0	66.0	29.0	4.6	70.2	25.2	3.7	74.6	21.6	3.4	78.1	18.5
Distribution	3.8	25.7	70.6	3.8	25.9	70.3	3.8	26.2	70.0	3.8	26.7	69.5
Transport and communication	24.7	49.9	25.3	22.7	51.0	26.3	22.6	50.7	26.7	21.5	51.8	26.6
Finance and insurance, etc.,[1]	12.4	32.6	55.0	12.8	35.1	52.1	13.5	36.9	49.5	13.8	35.9	50.3
Community services	4.8	59.2	36.0	4.7	59.9	35.4	4.6	60.8	34.7	4.5	61.3	34.3
Public administration	4.8	95.2	0.0	4.4	95.6	0.0	4.4	95.6	0.0	4.7	95.3	0.0
Public community services	6.5	93.5	0.0	6.1	93.9	0.0	5.9	94.1	0.0	5.6	94.4	0.0
Non-profit services	6.4	93.6	0.0	6.2	93.8	0.0	6.1	93.9	0.0	6.1	93.9	0.0
Total	11.7	46.7	41.6	11.6	49.4	39.0	11.3	51.9	36.7	8.5	53.3	35.9
GDP in manufacturing by industry												
Food, beverage and tobacco	15.1	57.1	27.8	15.3	55.8	29.0	15.1	54.8	30.1	14.0	54.1	32.0
Textiles and leather industries	13.0	57.8	29.1	12.5	60.2	27.3	12.2	60.1	27.7	12.1	59.9	28.0
Wood and wood products	10.9	46.2	42.9	9.8	50.9	39.3	8.5	51.9	39.6	8.8	55.5	35.7
Paper, paper products, printing, etc.	11.3	55.5	33.2	10.7	55.2	34.0	11.2	55.5	33.2	11.3	58.2	30.4
Chemicals, petroleum, coal, rubber	13.8	38.7	47.5	13.0	41.4	45.6	17.6	49.0	33.4	15.7	43.8	40.5
Non-metallic mineral products	20.5	42.9	36.6	20.9	44.4	34.7	20.9	44.9	34.3	20.0	44.9	35.1
Basic metal industries	25.4	27.3	47.2	30.4	30.8	38.8	28.9	33.0	38.2	23.6	32.7	43.7
Machinery and equipment	17.1	55.4	27.5	17.1	55.5	27.4	15.8	54.0	30.2	14.4	54.4	31.3
Other manufacturing industries	10.0	62.6	27.3	9.8	62.3	27.9	12.9	60.8	26.3	11.8	64.5	23.7

1. Includes ownership of dwellings.

Source: Bank of Korea.

Table F. **Gross fixed capital formation**

Billion of won

	Current prices						1985 constant prices[1]					
	1987	1988	1989	1990	1991	1992	1987	1988	1989	1990	1991	1992
By type of capital goods:												
Residential building	4 493	5 968	7 867	14 755	19 594	18 773	4 340	5 264	6 466	10 440	11 931	10 733
Non-residential building	5 083	6 672	8 693	12 025	14 169	13 523	4 890	5 883	7 092	8 350	8 341	7 419
Other construction	4 700	5 578	7 218	9 642	13 507	16 963	4 532	4 960	5 871	6 637	7 955	9 258
Land improvement	1 737	1 664	1 753	2 218	2 949	3 229	1 663	1 453	1 379	1 431	1 575	1 612
Transport equipment	3 619	4 195	4 909	6 466	7 269	8 015	3 661	3 980	4 470	5 653	6 154	6 517
Machinery and equipment	11 470	13 250	14 647	17 713	21 100	21 875	10 669	12 236	14 079	16 338	18 686	18 112
Gross fixed capital formation	31 101	37 328	45 086	62 818	78 588	82 378	29 755	33 776	39 356	48 850	54 642	53 651
By kind of economic activity:												
Agriculture, forestry and fishing	2 536	2 702	4 019	4 601	5 774	..	2 427	2 355	3 400	3 465	3 984	..
Mining and quarrying	155	158	172	184	191	..	150	149	145	148	132	..
Manufacturing	10 566	12 331	14 171	17 523	19 939	..	10 034	11 439	13 031	14 945	15 742	..
Electricity, gas and water	1 671	1 466	1 704	2 418	4 196	..	1 576	1 325	1 489	1 888	2 859	..
Construction	715	831	1 051	1 649	2 373	..	700	795	934	1 279	1 670	..
Distribution	1 459	2 110	2 203	2 475	2 923	..	1 478	1 962	1 870	1 899	2 127	..
Transport and communication	3 076	3 535	4 094	5 055	5 491	..	3 035	3 328	3 843	4 538	4 879	..
Finance, insurance and real estate	6 105	8 299	10 952	20 006	25 333	..	5 824	7 126	9 117	14 474	15 750	..
Community services	688	950	1 169	1 309	1 501	..	657	887	994	1 026	968	..
Public administration	2 648	3 459	4 150	5 734	8 298	..	2 549	3 089	3 410	3 952	5 020	..
Social services	992	1 068	1 177	1 560	2 071	..	955	953	967	1 075	1 253	..
Others	431	446	398	479	692	..	415	399	327	330	418	..

1. Tables in the main text are at 1990 constant prices.

Source: Bank of Korea.

Table G. **Household appropriation account**

Billion won

	1987	1988	1989	1990	1991
Compensation of employees	43 531	53 196	63 088	79 529	98 697
Operating surplus	27 126	31 483	33 899	37 055	43 438
Withdrawals from quasi-corporate firms	514	540	486	617	708
Interest (net)	1 741	1 871	2 307	3 335	5 222
Dividends	428	514	617	1 036	1 099
Rent (net)	0	10	8	2	35
Social security benefits	1 023	1 420	1 844	2 671	3 163
Social assistance grants	476	639	754	966	1 547
Other transfers	8 142	9 588	12 716	15 293	18 349
Total income	82 981	99 261	115 719	140 504	172 258
Direct taxes	3 014	4 271	5 045	6 744	7 913
Fees and fines	181	254	300	410	539
Social security contributions	1 171	2 039	2 748	3 476	4 573
Casualty insurance (net)	3	0	2	9	2
Other transfers paid	4 702	6 049	9 437	11 713	14 024
Total deductions	9 071	12 613	17 532	22 352	27 051
Disposable income	73 910	86 648	98 187	118 152	145 207
Consumption	57 989	66 467	77 017	91 882	109 654
Saving	15 921	20 181	21 170	26 270	35 553
Savings ratio[1]	21.5	23.3	21.6	22.2	24.5
Real disposable income, percentage change	11.8	12	8.8	11.4	12.4

1. As a percentage of disposable income.

Source: Bank of Korea.

Table H. **Non-financial corporate enterprises appropriation account**

Billion of won

	1987	1988	1989	1990	1991
Receipts:					
Operating surplus	15 998	17 227	18 072	22 413	27 332
Interest	1998	2 847	3 798	4 663	6 746
Dividends	168	257	343	328	396
Rent	32	65	50	70	105
Casualty insurance claims	734	799	1 030	1 494	1 911
Current receipts, total	18 930	21 195	23 293	28 968	36 490
Disbursements:					
Interest	8 874	4 899	1 878	14 550	20 347
Dividends	744	823	1 034	1 389	1 662
Rent	520	660	836	1 101	1 317
Withdrawals from quasi-corporate firms	514	540	486	617	707
Net casualty insurance premiums	729	797	1 025	1 482	1 482
Direct taxes	2 146	2 692	3 918	4 605	5 072
Other transfers	1 106	1 165	1 610	1 603	2 085
Current disbursements, total	14 633	11 577	10 787	25 347	32 672
Saving	4 236	4 554	2 406	3 474	3 192

Source: Bank of Korea.

Table I. **General government appropriation account**

Billion of won

	1987	1988	1989	1990	1991
Receipts:					
Direct tax	5 555	7 611	9 670	11 919	13 834
Social security contributions	1 171	2 039	2 749	3 476	4 573
Other current transfers received	334	455	480	667	927
Indirect taxes	13 068	15 212	16 811	21 326	24 915
Property income	703	854	1 242	1 608	2 102
Current receipts, total	20 831	26 171	30 952	38 997	46 351
Disbursements:					
Final consumption expenditure	10 709	12 487	15 065	18 324	22 212
Subsidies	520	391	631	956	1 250
Property income	778	756	756	828	959
Social security benefits	1 023	1 420	1 844	2 671	3 163
Social assistance grants	476	639	754	966	1 547
Other transfers	383	518	646	898	1 164
Current disbursements, total	13 889	16 210	19 695	24 643	30 295
Saving	6 942	9 961	11 257	14 354	16 056

Source: Bank of Korea.

Table J. **Central government appropriation account**

Billion won

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Current receipts	6 737	8 534	9 875	11 417	12 510	13 737	15 722	18 510	22 558	25 502	31 332	35 947	41 811
Direct taxes	1 504	1 959	2 357	2 609	2 867	3 475	3 968	5 295	6 844	8 864	10 644	11 235	14 347
Household	766	1 025	1 230	1 404	1 522	1 845	2 236	2 857	3 681	4 490	5 986	6 650	8 450
Business	738	934	1 127	1 205	1 345	1 630	1 731	2 439	3 163	4 374	4 658	4 586	5 898
Indirect taxes	3 791	4 654	5 270	6 538	6 989	7 322	8 324	8 537	10 926	10 700	14 264	17 705	18 602
Social security contributions	63	73	110	131	157	207	249	314	863	1 112	1 451	1 798	2 202
Property and entrepreneurial income	1 442	1 848	2 138	2 139	2 488	2 733	3 081	4 364	3 925	4 826	4 974	5 209	6 661
Current expenditure	5 641	6 931	8 296	9 145	10 213	11 523	12 830	14 325	16 746	20 065	24 648	29 968	34 670
Consumption	2 963	3 694	4 198	4 618	4 763	5 419	5 990	6 656	7 479	8 478	10 022	11 964	13 980
Wages, salaries, etc.	1 053	1 299	1 485	1 676	1 757	1 892	2 060	2 246	2 594	3 002	3 777	4 540	5 475
Non-wage	1 910	2 395	2 714	2 942	3 006	3 527	3 930	4 410	4 886	5 476	6 244	7 423	8 504
Subsidies	26	29	79	75	414	503	416	379	744	1 267	1 609	1 183	1 090
Transfers to households	506	555	685	622	722	814	966	1 076	1 446	2 245	2 500	3 304	3 814
Transfers to local authorities	1 496	1 836	2 399	2 818	3 102	3 375	3 875	4 555	5 277	6 377	8 216	10 727	13 051
Transfers to non-profit organisations	193	224	252	296	324	384	411	486	603	843	950	1 299	1 304
Transfers, other	23	26	31	30	32	34	38	39	38	41	90	246	113
Interest paid	434	567	652	687	857	993	1 134	1 133	1 158	814	1 262	1 245	1 319
Saving	1 096	1 603	1 579	2 272	2 298	2 214	2 892	4 185	5 812	5 437	6 684	5 980	7 142
Capital receipts	120	120	108	120	93	185	119	148	332	460	757	870	945
Gross fixed capital formation	510	545	868	862	896	1 004	1 190	1 322	1 197	1 379	1 595	2 618	2 461
Stockbuilding	–	–	53	77	69	37	86	98	197	253	198	0	0
Land purchases	–	–	77	97	144	80	98	112	209	399	599	0	0
Capital transfers, government	–	–	260	276	312	343	417	759	706	1 266	1 590	3 034	3 232
Capital transfers, other	950	950	560	224	242	377	393	319	388	445	355	0	0
Capital expenditure	1 460	1 495	1 819	1 536	1 662	1 842	2 183	2 609	2 696	3 742	4 336	5 652	5 693
Financial balance	–244	228	–132	856	729	557	828	1 724	3 448	2 156	3 105	1 198	2 394
Net lending	1 120	2 145	1 542	1 519	1 570	1 530	978	1 237	1 428	1 901	4 292	4 693	4 400
Borrowing requirement	1 364	1 917	1 674	663	841	973	150	–487	–2 020	–255	1 187	3 495	2 006

Source: Ministry of Finance.

Table K. **Balance of payments**

Million US dollars

	1970	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
Exports, fob	882	5 003	17 214	26 442	33 913	46 244	59 648	61 409	63 124	69 582	75 169
Imports, fob	1 804	6 674	21 598	26 461	29 707	38 585	48 203	56 812	65 127	76 561	77 316
Trade balance	–922	–1 671	–4 384	–19	4 206	7 659	11 445	4 597	–2 004	–6 980	–2 146
Non-factor services											
Freight	–95	–195	15	802	794	992	1 091	1 041	921	1 321	1 763
Transportation	–1	–47	–715	–588	–847	–1 049	–1 184	–1 277	–1 668	–2 314	–2 788
Travel	6	110	20	178	935	1 595	1 911	955	393	–358	–523
Investment income	–37	–404	–2 103	–3 184	–3 208	–2 787	–2 020	–1 265	–955	–1 001	–1 143
Current balance	–623	–1 887	–5 321	–887	4 617	9 854	14 161	5 055	–2 179	–8 728	–4 529
Capital account	623	1 858	3 801	513	–2 374	–5 843	–1 397	–3 302	3 881	4 227	8 343
Direct investment											
Outward	0	–4	–13	–34	–110	–183	–151	–305	–820	–1 357	–1 048
Inward	66	57	6	234	435	601	871	758	715	1 116	551
Portfolio	0	0	40	982	301	–113	–483	–30	811	3 117	5 742
Other long term	435	1 125	1 823	–81	–2 607	–6 141	–2 970	–3 786	–159	1 311	1 988
Monetary account	4	151	1 890	1 255	–1 700	–5 202	–12 175	–2 453	274	3 741	–4 898
Monetary authorities	–55	–317	–231	–316	–320	–2 436	–9 309	–2 858	445	1 091	–3 414
Deposit banks	59	468	2 121	1 571	–1 380	–2 766	–2 867	405	–171	2 650	–1 484
Errors and omissions	–5	–122	–370	–880	–544	1 191	–589	701	–1 976	760	1 084

Source: Bank of Korea.

Table L. **Imports by principal commodities**

Million US dollars

	1984	1985	1986	1987	1988	1989	1990	1991	1992
Coal and coke	726	1 042	1 028	991	1 165	1 306	1 288	1 599	1 616
Crude petroleum	5 771	5 572	3 345	3 702	3 687	4 932	6 385	8 133	9 548
Organic chemicals	1 246	1 342	1 593	2 111	3 168	3 537	3 349	3 466	2 814
Plastics	467	432	633	900	1 052	1 143	1 225	1 381	1 356
Woven textiles	322	353	477	641	777	956	1 030	1 210	1 311
Non-ferrous metals	531	464	675	972	1 655	1 871	1 887	2 128	2 025
Power generating equipment	800	755	905	1 013	1 285	1 298	1 612	2 334	2 782
Metal working machinery	238	359	659	734	986	1 383	1 293	1 654	1 583
Heating and cooling equipment	207	238	415	535	579	844	983	1 126	1 085
Office machinery	404	470	782	853	1 457	1 606	1 812	1 995	1 735
Telecommunications equipment	614	545	658	822	1 065	1 011	1 093	1 284	1 377
Semi-conductors	1 295	1 129	1 660	2 545	3 591	4 073	4 559	5 309	6 011
Aircraft	301	369	559	509	1 444	1 225	1 069	1 821	1 964
Control instruments	401	468	683	841	1 139	1 401	1 570	1 811	1 776
Total of above	13 323	13 538	14 072	17 169	23 050	26 586	29 155	35 251	36 983
Other products	17 308	17 797	17 511	23 850	28 760	34 878	40 688	46 273	44 792
Total imports	30 631	31 335	31 583	41 019	51 810	61 464	69 843	81 524	81 775

Source: Bank of Korea.

Table M. **Exports by principal commodities**

Millions US dollars

	1984	1985	1986	1987	1988	1989	1990	1991	1992
Woven fabrics	1 507	1 495	2 061	2 679	3 057	3 461	4 150	5 114	5 735
Iron and steel plates	1 060	893	988	1 289	1 966	2 351	2 536	2 810	3 256
Office machinery	438	588	992	1 599	2 573	2 762	2 701	2 918	3 091
TVs	707	591	810	1 200	1 421	1 362	1 506	1 633	1 537
Radios	544	499	710	1 199	1 424	1 321	1 377	1 232	1 184
Recorders	149	344	751	1 208	1 766	1 633	1 408	1 554	1 479
Telecommunication equipment	458	528	837	1 372	1 597	1 762	1981	2 115	2 336
Household electric goods	327	311	584	906	1 274	1 085	833	1 024	1 091
Semi-conductors	1 337	1 137	1 611	2 396	3 856	4 702	5 364	6 645	7 762
Cars	174	519	1 342	2 748	3 336	2 048	1 849	2 124	2 534
Ships	4 683	5 040	1 845	1 137	1 759	1 788	2 800	4 129	4 112
Apparel	4 499	4 449	5 482	7 536	8 694	9 095	7 878	7 420	6 796
Footwear	1 351	1 534	2 059	2 755	3 800	3 587	4 307	3 835	3 183
Musical instruments	242	314	586	712	986	1 058	1 137	1 185	1 104
Total of above	17 476	18 242	20 658	28 736	37 509	38 015	39 827	43 738	45 200
Other products	11 768	12 041	14 056	18 544	23 187	24 362	25 188	28 132	31 431
Total exports	29 244	30 283	34 714	47 280	60 696	62 377	65 015	71 870	76 631

Source: Bank of Korea.

Table N. **Money and credit**

Billion won, end of period level

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
M1	5 799	6 783	6 821	7 558	8 809	10 107	12 151	14 329	15 905	21 752	24 586
Quasi-money	14 105	16 155	17 885	21 007	25 024	30 172	36 787	44 309	52 802	61 994	71 672
M2	19 904	22 938	24 706	28 565	33 833	40 280	48 939	58 638	68 708	83 746	96 259
Certificates of deposit	–	–	671	1 073	1 277	1 621	1 570	1 606	6 227	8 915	10 346
M2 plus CDs	–	–	25 377	29 639	35 110	41 901	50 509	60 244	74 934	92 661	106 604
Deposits of non-bank financial intermediaries	11 539	15 435	20 653	26 427	35 280	49 114	66 370	89 970	118 980	145 809	184 890
Total liquidity (M3)	31 257	38 032	45 726	55 450	71 594	93 638	120 359	153 831	197 847	243 956	294 844
Counterparts to M3											
Private sector credit	42 521	51 738	61 628	76 733	85 589	100 367	120 528	156 802	203 136	253 865	299 390
Public sector credit (net)	776	–122	–278	–350	5 464	6 265	3 213	3 393	3 921	5 526	8 764
Foreign sector (net)	–7 491	–9 098	–11 099	–14 828	–13 151	–5 605	4 872	7 357	7 890	3 742	6 007
less :											
Debentures issued by monetary institutions	119	204	325	260	740	1 756	2 624	3 898	4 324	4 538	4 435
Debentures issued by other financial institutions	554	692	848	939	1 183	1 518	2 735	2 664	3 502	6 306	7 646
Total liquidity (M3)	31 257	38 032	45 726	55 450	71 594	93 638	120 359	153 831	197 847	243 956	294 844

Source: Bank of Korea.

Table O. **Interest rates**

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Bank of Korea discount rate	5.0	5.0	5.0	5.0	7.0	7.0	8.0	7.0	7.0	7.0	7.0
Deposit banks											
Bill discounts	10.0	10.0	10.8	10.8	10.8	10.8	12.0	11.3	11.3	11.3	11.3
Principal lending rate	10.0	10.0	10.8	10.8	10.8	10.8	12.0	11.3	11.3	11.3	11.3
Term loans	–	–	–	–	–	–	–	–	–	–	–
Loans on installment deposits	10.0	10.0	10.8	10.8	11.0	11.0	13.0	13.0	13.0	13.0	13.0
Mutual savings institutions	16.3	16.3	15.0	14.8	14.8	14.5	*	*	*	*	*
Government institutions											
Korean Development Bank, government funds	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
National Investment fund	10.0	10.0	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
National Housing fund	–	–	–	–	–	–	–	–	–	–	–
Agricultural co-operatives	10.0	10.0	10.8	11.5	11.0	*	*	*	*	*	*
Memorandum:											
Bank guaranteed corporate bonds (3 years)	17.3	14.2	14.1	14.2	12.8	12.8	14.5	15.2	16.4	18.8	16.2
Call market rate	–	–	–	–	–	–	–	–	13.6	16.6	14.3

* Liberalized.

Source: Bank of Korea.

BASIC STATISTICS:

INTERNATIONAL COMPARISONS

BASIC STATISTICS: INTERNATIONAL COMPARISONS

	Units	Reference period[1]	Australia	Austria	Belgium	Canada	Denmark	Finland	France	Germany	Greece	Iceland	Ireland	Italy	Japan	Luxembourg	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States	Korea[11]
Population																											
Total	Thousands	1990	17 085	7 718	9 967	26 620	5 141	4 986	56 420	63 232	10 140	255	3 503	57 647	123 540	382	14 951	3 379	4 241	9 859	38 959	8 559	6 796	56 473	57 411	251 523	42 869
Inhabitants per sq. km	Number	1990	2	92	327	3	119	15	103	254	77	2	50	191	327	147	366	13	13	107	77	19	165	72	235	27	432
Net average annual increase over previous 10 years	%	1990	1.5	0.2	0.1	1	0	0.4	0.5	0.3	0.5	1.1	0.3	0.2	0.6	0.5	0.6	0.7	0.4	0	0.4	0.3	0.6	2.4	0.2	1	1.2
Employment																											
Total civilian employment (TCE)[2]	Thousands	1990	7 850	3 412	3 726	12 572	2 638	2 457	21 732	27 946	3 677	126	1 115	21 123	62 500	189	6 268	1 472	1992	4 474	12 578	4 508	3 563	19 209	26 577	117 914	18 036
Of which : Agriculture	% of TCE		5.6	7.9	2.7	4.2	5.6	8.4	6.1	3.4	24.5	10.3	15	9	7.2	3.2	4.6	10.6	6.5	17.8	11.8	3.3	5.6	47.8	2.1	2.8	18.3
Industry	% of TCE		25.4	36.8	28.3	24.6	27.5	31	29.9	39.8	27.4	30.2	28.6	32.4	34.1	30.7	26.3	24.6	24.8	34.8	33.4	29.1	35	19.9	29	26.2	27.3
Services	% of TCE		69	55.3	69	71.2	66.9	60.6	64	56.8	48.2	59.5	56.4	58.6	58.7	66.1	69.1	64.8	68.8	47.4	54.8	67.5	59.5	32.3	68.9	70.9	54.4
Gross domestic product (GDP)																											
At current prices and current exchange rates	Bill US $	1990	294.1	157.4	192.4	570.1	129.3	137.3	1 190.8	1 488.2	66	5.9	42.5	1 090.8	2 940.4	8.7	279.1	44	105.7	59.7	491.2	228.1	224.8	108.4	975.1	5 392.2	244.0
Per capita	US $		17 215	20 391	19 303	21 418	25 150	27 527	21 105	23 536	6 505	22 907	12 131	18 921	23 801	22 895	18 676	13 020	24 924	6 085	12 609	26 652	33 085	1 896	16 985	21 449	5 659
At current prices using current PPP's[3]	Bill US $	1990	271.7	127.4	163	510.5	85.2	82.2	980.4	1 151.6	74.3	4.1	37.2	919.7	2 179.9	7.3	234.8	45.8	68	82	457.3	144.6	142.1	189.7	911.8	5 392.2	309.9
Per capita	US $		15 900	16 513	16 351	19 179	16 570	16 487	17 376	18 212	7 323	16 158	10 627	15 953	17 645	19 282	15 708	13 564	16 033	8 364	11 738	16 896	20 911	3 318	15 882	21 449	7228
Average annual volume growth over previous 5 years	%	1990	3.1	3.1	3.2	3	1.5	3.4	2.9	3.1	1.7	2.7	4.4	3	4.6	4.3	2.7	0.4	1.6	4.6	4.5	2.1	2.8	5.9	3.2	3	9.7
Gross fixed capital formation (GFCF)	% of GDP	1990	22.9	24.3	20.3	21.4	17.7	26.3	21.2	21.2	19.7	19.4	19.1	20.2	32.2	25.3	21.5	19.8	18.8	26.4	24.6	20.7	27.1	22.7	19.2	16.1	36.5
Of which: Machinery and equipment	% of GDP		9.7	10.1	10.4	7.2	8.1	10	9.7	9.8	8.7	6.2	9.3	10	13.7	11	10.7	9.9	6.8	13.1	8.1	8.9	9.1	11.7 (87)	8.5	7.8 (89)	14.0
Residential construction	% of GDP	1990	4.8	4.6	4.3	6.8	3.7	7.1	5.2	5.6	5	4.4	4.2	5.2	6.1	5	5.1	4.8	2.8	4.5	5	5.5	17.9[9]	5.8 (87)	3.4	4.4 (89)	8.5
Average annual volume growth over previous 5 years	%	1990	2.4	4.6	9.5	5.2	0.8	4.8	5.8	5.2	2.3	2.1	4.4	4.3	9	11.7	5.1	2.7	–2.8	10.4	11.7	4.9	6	4.7	5.8	2.7	15.3
Gross saving ratio[4]	% of GDP	1990	19.7	26	21.8	17.4	18	23.1	21	25.2	13.8	16	23.4	19.3	34.6	60.9	25.4	16.1	24.1	26.6	22.1	17.3	33	22.2	15.6	14.4	36.0
General government																											
Current expenditure on goods and services	% of GDP	1990	17.3	18	14.3	19.8	25.2	21.1	18	18.4	21.2	18.8	15.7	17.3	9.1	16.3	14.8	16.7	21	16.7	15.2	27.1	13.3	19.4	19.9	18.1	15.3
Current disbursements[5]	% of GDP	1990	34.9	44.9	53.1	44	56.5	37.5	46.2	42.6	50.9	31.5	49.9 (87)	48.1	26.2	45 (86)	51.7	..	51.6	39.3	35.5 (88)	59.1	30.7	..	38.1	34.6 (89)	24.4
Current receipts	% of GDP	1990	35.1	46.7	49.5	41.6	56.1	41.2	46.5	43.4	34.7	34.9	43.7 (87)	42.1	34.6	52.9 (86)	49.5	..	56.2	37.6	36.3 (88)	63.9	34.2	..	40	31.8 (89)	25.0
Net official development assistance	Mill US $	1990	0.34	0.25	0.45	0.44	0.93	0.64	0.79	0.42	0.07	0.03	0.16	0.32	0.31	0.29	0.94	0.22	1.17	0.23	0.16	0.9	0.31	..	0.27	0.21	0.04
Indicators of living standards																											
Private consumption per capita using current PPP's[3]	US $	1990	9 441	9 154	10 119	11 323	8 639	8 602	10 482	9 841	5 298	9 824	5 886	9 866	10 122	11 017	9 241	8 475	8 174	5 278	7 326	8 748	11 933	1992	10 051	14 465	4 771
Passenger cars per 1 000 inhabitants	Number	1989	570	416	416	613	370	439	494	526	234	488 (85)	278	458	455	546	399	549	459	181	347	462	479	37	449	748	63 (91)
Telephones per 1 000 inhabitants	Number	1989	550 (85)	540	500 (88)	780 (88)	880 (88)	620 (85)	610 (85)	680 (88)	360 (88)	525 (83)	265 (85)	510 (88)	555 (85)	413 (85)	660 (88)	720 (88)	622 (84)	220 (88)	396 (87)	489 (83)	880 (88)	120 (88)	524 (84)	650 (84)	337 (91)
Television sets per 1 000 inhabitants	Number	1988	217	484 (89)	255	586	526	486	399	379	175	306	260	419	589	250	478	296	350	160	380	395	408	172	435	812	207 (89)
Doctors per 1 000 inhabitants	Number	1990	2.3	2.1	3.4	2.2	2.7 (87)	1.9	2.6 (89)	3 (89)	3.3 (89)	2.8 (89)	1.5 (88)	1.3 (89)	1.6 (88)	1.9 (88)	2.5	1.9 (89)	3.1	2.9	3.7 (89)	3.1 (89)	2.9 (89)	0.9	1.4 (89)	2.3	0.7
Infant mortality per 1 000 live births	Number	1990	8.2	7.8	7.9	7.2 (89)	7.5 (89)	6.1 (89)	7.2	7.5 (89)	9.1 (89)	5.9	7.6 (89)	8.5	4.6 (89)	9.9	6.9	8.3	7.9 (89)	11	7.8 (89)	5.9	7.3	6.5 (89)	7.9	9.2	17
Wages and prices (average annual increase over previous 5 years)																											
Wages (earnings or rates according to availability)	%	1990	5.6	5	3	4.3	6	8.2	3.7	4.2	16	..	5.6	6.1	3.7	..	1.7	8.1	8.7	..	8.2	8.2	..	..	8.5	2.6	15.5
Consumer prices	%	1990	7.9	2.2	2.1	4.5	3.9	5	3.1	1.4	17.4	20.2	3.3	5.7	1.3	1.7	0.7	9.4	6.2	11.3	6.5	6.2	2.5	53.7	5.9	4	5.3
Foreign trade																											
Exports of goods, fob*	Mill US $	1990	39 813	40 985	118 291[7]	127 334	34 988	26 583	216 157	409 620	8 014	1 589	23 796	170 330	287 358	..[8]	131 778	9 533	33 905	16 338	55 289	57 422	63 847	12 836	185 710	393 812	65.0
As % of GDP	%		13.5	26	61.5	22.3	27.1	19.4	18.2	27.5	12.2	27.1	56	15.6	9.8	..	47.2	21.7	32.1	27.4	11.3	25.2	28.4	11.8	19	7.3	26.6
Average annual increase over previous 5 years	%		11.9	19.1	17.1	7.8	15.6	14.3	16.5	17.6	11.8	14.2	18.1	16.6	10.2	..	14	10.6	11.2	23.5	18	13.7	18.4	9.9	12.9	13.1	15.3
Imports of goods, cif*	Mill US $	1990	38 907	48 914	120 330[7]	116 561	31 647	26 950	225 260	344 454	19 831	1 648	20 687	181 863	235 407	..	126 215	9 458	27 218	24 874	87 373	54 659	69 811	22 224	225 327	494 842	69.8
As % of GDP	%		13.2	31.1	62.5	20.4	24.5	19.6	18.9	23.1	30.1	28.1	48.7	16.7	8	..	45.2	21.5	25.7	41.7	17.8	24	31	20.5	23.1	9.2	28.6
Average annual increase over previous 5 years	%		11	18.6	16.5	8.8	11.8	15.3	16.8	16.9	14.1	12.7	15.7	14.8	12.6	..	14.1	9.6	11.9	26.5	24	14	17.8	14.2	15.5	7.4	16.2
Total official reserves[6]	Mill SDR's	1990	11 432	6 591	8 541[7]	12 544	7 445	6 779	25 851	47 729	2 398	307	3 672	44 232	55 179	..	12 289	2 902	10 777	10 182	36 008	12 644	20 541	4 252	25 201	50 791	10 419
As ratio of average monthly imports of goods	ratio		3.5	1.6	0.9	1.3	2.8	3	1.4	1.7	1.5	2.2	2.1	2.9	2.8	..	1.2	3.7	4.8	4.9	4.9	2.8	3.5	2.3	1.3	1.2	4.7

* At current prices and exchange rates.

1. Unless otherwise stated.
2. According to the definitions used in OECD Labour Force Statistics.
3. PPP's = Purchasing Power Parities.
4. Gross saving = Gross national disposable income minus Private and Government consumption.
5. Current disbursements = Current expenditure on goods and services plus current transfers and payments of property income.
6. Gold included in reserves is valued at 35 SDR's per ounce. End of year.
7. Including Luxembourg.
8. Included in Belgium.
9. Including non-residential construction.
10. Federal Government Statistics.
11. PPA = Parité de pouvoir d'achat. Les PPA pour la Corée ont été publiées dans «World Development Report», Banque Mondiale, 1992. 1989 est la dernière année disponible pour les PPA basées sur la consommation.

Sources: Population and Employment: OECD Labour Force Statistics.
GDP, GFCF, and General Government: OECD National Accounts, Vol. I and OECD Economic Outlook, Historical Statistics.
Indicators of living standards: Miscellaneous national publications.
Wages and Prices: OECD Main Economic Indicators.
Foreign trade: OECD Monthly Foreign Trade Statistics, series A.
Total official reserves: IMF International Financial Statistics.

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- to analyse specific policy issues in a medium-term context for theOECD as a whole, and to a lesser extent for the non-OECD countries.

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