Chapter Title: Income Distribution

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requirements, rediscounts, and open market operations. However, the government does continue to have considerable influence over the allocation of bank credit. It has intervened heavily to restructure industries which built up overcapacity during the Big Push. As was shown in table 11.8, this implied a shift in credit allocation bank to heavy industry during 1985.

Thus, Korea has made some steps toward financial market liberalization in equalizing borrowing costs across industries. Furthermore, as Cole and Cho (1986) point out, the expansion of the only partially regulated NBFI has contributed to a de facto liberalization of the overall financial system. However, authorities have proceeded cautiously, continuing to influence credit allocation. In this sense, the policy shifts may have been more a matter of degree than an "about face" in direction. This viewpoint is advanced by Y. C. Park (1985a). It is too early to evaluate the results of the liberalization, or to attempt to draw lessons from the experience. Korea may soon have some interesting lessons to teach about the economic consequences of a controlled financial liberalization.

12   Income Distribution

As we have studied in detail in previous chapters, Korea underwent a successful macroeconomic adjustment while maintaining high rates of growth. In many cases, rapidly expanding developing countries have been able to achieve remarkable increases in per capita incomes, but one of the costs has been the deterioration of an already skewed income distribution. Consequently, the gains have bypassed a large part of the population. This chapter examines distributive aspects of Korea's experience from the 1960s to the 1980s.

There have been a number of studies of income distribution in Korea. We will refer to them throughout the chapter. Those focusing on the first half of Korea's rapid growth (through the early 1970s) include Adelman and Robinson (1978), Rao (1978), Renaud (1976) and Mason et al. (1980). The studies consistently found that income was equitably distributed in Korea relative to other developing countries, and that Korea's economic growth did not require or result in a deterioration. In fact, the rapid economic growth fueled by expansion of labor-intensive export sectors was widely believed to have improved the distribution of income during this period. However, later studies caused considerable concern among policymakers because they seemed to show a noticeable deterioration of income distribution during the 1970s. See, for example, Choo (1977), Szall (1981), and Jung (1982).

Ideally, our discussion would review measures of income inequality from the early 1960s to the present so as to examine changes during the economic development. Unfortunately, available studies do not provide consistent time series over the entire period. We have chosen to rely extensively on estimates from Choo (1977, 1978, 1985) because they provide consistent series over the longest time period (1965–82). The EPB uses Choo's figures as official figures. They are also quoted in the World Bank's World Development Reports. Data on income distribution typically suffer from a number of shortcomings, and Korean data are no exception. While there are certainly problems with existing statistics, it is reassuring that there is a general consensus—most of the other studies mentioned portray similar trends.

Figure 12.1 shows Choo's estimates of Gini coefficients and of the decile distribution ratio (the ratio of the income share of the bottom 40 percent to that of the top 20 percent, henceforth denoted as DDR). We follow Choo in identifying four time periods which are evident from the graph: an initial stage, a second period of slight improvement (1965–70), a third period in which the distribution of income deteriorated (1970–76), and a final period in which the deterioration was reversed (1976–82).

This chapter is divided into five remaining sections. The next four sections examine the four time periods. In each case, we discuss the probable factors which contributed to changes in distribution. The final section turns to a comparison of Korea with other countries. Using cross-country data, we examine the widely held view that Korea has maintained one of the most equitable income distributions among developing countries.
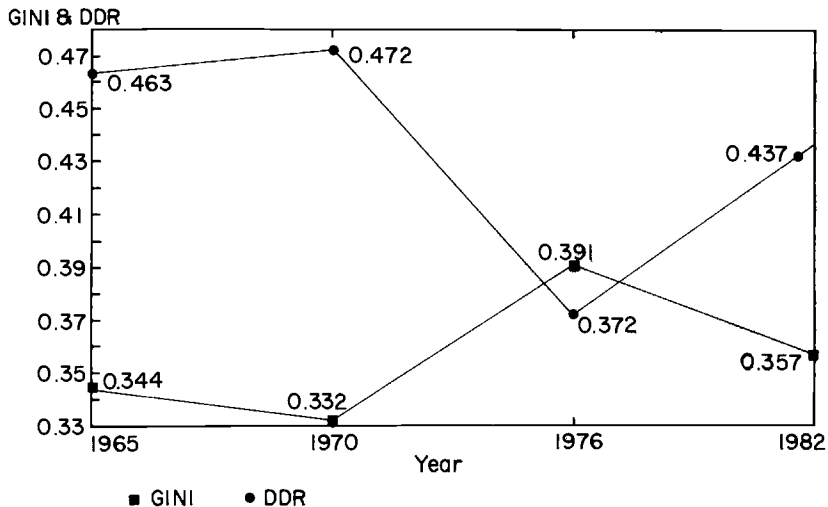
GINI & DDR

Fig. 12.1   Measures of income inequality: Gini coefficients and decile distribution ratios (DDR)

12.1 The Initial Stages

A consensus view is that Korea began its rapid industrialization with a relatively equitable distribution of income. As one indication, in table 12.1 we compare Gini coefficients for selected countries.[1] In addition to Korea and other developing countries at early stages of development, we have included figures for Japan and the United States. With the exception of Yugoslavia, the only socialist country represented, Korea has the lowest coefficient. It is substantially below the measure for other developing countries, and comparable to the measure for Japan. The rest of this section investigates some of the social and historical factors which are widely believed to explain the relative equality at the initial stages of Korea's development.

12.1.1 Homogeneous People

In many countries, a significant portion of the inequalities in the distribution of income are associated with cultural, religious, and social differences in the population. In contrast, Korean society is extremely homogeneous, without ethnic minorities, distinct military or bureaucratic classes, or divisive political loyalties. Income differences arising from these factors have been essentially nonexistent.

12.1.2 Japanese Colonization

During the Japanese occupation, ownership of property and accumulation of wealth by Koreans was severely limited. About 90 percent of the nation's industrial assets were managed by the Japanese. Most Koreans were poor,

Table 12.1   Gini Coefficients at Initial Stages of Development

| Country	Year	Gini
Yugoslavia	1963	0.33
Korea	1964	0.34
Japan*	1963	0.35
India	1953	0.40
U.S.*	1963	0.42
Sri Lanka	1963	0.45
Panama	1960	0.49
Philippines	1961	0.50
Venezuela	1962	0.52
El Salvador	1961	0.53
Taiwan	1953	0.55
Brazil	1960	0.56
Mexico	1963	0.56
Colombia	1964	0.57
Peru	1961	0.59

Source: Ahluwalia and Chenery (1974, 42).

*These figures are from Renaud (1976, 11).

essentially relegated to second-class citizens. With the withdrawal of the Japanese after the Second World War, most of the assets which had been owned by the Japanese came into the hands of the Government. These assets were then distributed to the private sector over a period of more than a decade.

12.1.3   Land Reforms

After World War II, the economy of South Korea was critically tied to agriculture, so that equality in the distribution of income depended largely on the distribution of agricultural assets, especially land. Therefore, extensive land reforms after the war played a central role in flattening the distribution of wealth. These reforms are often viewed as the key factor in explaining Korea's relatively equitable distribution.

Reforms under the auspices of the U.S. military government, beginning in 1947, focused on the redistribution of government-owned and vested land. In 1949 the newly established Korean government undertook the redistribution of land owned by big farmers and absentee landlords.[2] The substantial impact of these reforms can be seen in figure 12.2. The main beneficiaries were the tenants to whom the land was distributed. In 1947 only 17 percent of rural households fully owned the land they farmed. By 1960 this figure had risen to 74 percent. There are no available data to compare the size distribution of farm income before and after the two land reforms. However, the change in the structure of land ownership strongly suggests an
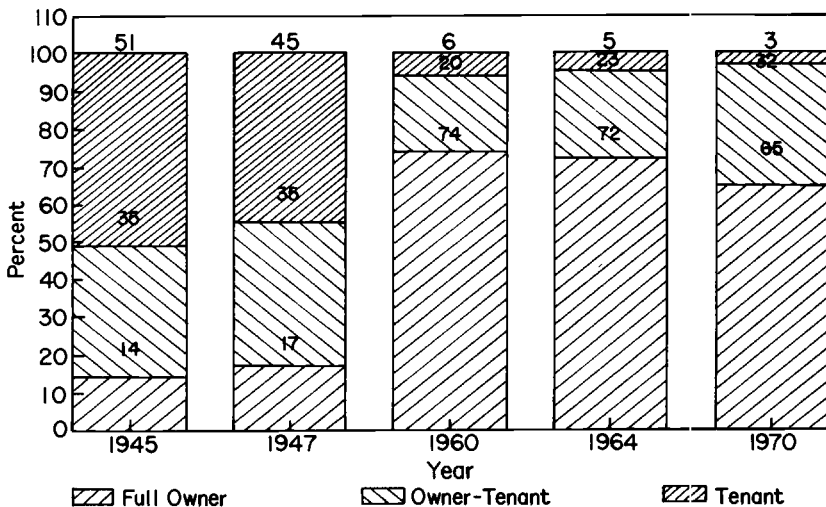
Fig. 12.2   Land ownership composition of rural households
Source: Mason et al. (1980, 298).

improvement in the distributive equity within the agricultural sector as a result of the reforms.

12.1.4   Korean War

Korea experienced another "wholesale redistribution" of material wealth and capital in the Korean War (1950–52). Over 40 percent of the manufacturing facilities and 20 percent of the net capital stock were destroyed. The presumption is that the damages were especially detrimental to the upper echelons, where the ownership of these assets was concentrated and, therefore, that one effect of the war was to flatten the distribution of nonagricultural assets. Also, as is often the case during war, the terms of trade turned in favor of the relatively poor agricultural sector and against the nonagricultural sector. This is also believed to have decreased intersectoral inequalities.

12.1.5   Illegally Accumulated Wealth

Large amounts of wealth had been accumulated by a favored few during the 1950s. The beneficiaries included individuals who had profited during wartime business activities and corrupt officials of the Syngman Rhee regime who had profited from disposing public and vested property, from bribes and tax evasion, and so on.

In the early 1960s, backed by the military, the new government took strong measures to confiscate illegally accumulated wealth. Even though the initial penalties of more than 20 billion won were reduced to 4 billion won, the total amount of confiscated wealth was significant. It represented 16.6 percent of total corporate savings in 1962 and 10.3 percent in 1963. A transfer of this magnitude also contributed, at least temporarily, to a reduction in disparity. However, the implied improvement in the distribution of wealth would have been more substantial if the transfer had come from the most wealthy owners and businessmen, many of whom were in the emerging manufacturing sectors.

12.1.6   Relatively Fluid Society

Two final factors, inherited from the colonial period, contributed to Korea's relatively equitable distribution: the Japanese system of government based primarily on cooperation and merit and a modern education system. Koreans have a strong traditional drive for learning, and enrollments at the primary, middle, and high school levels have consistently been high. Furthermore, the Korean system earns high marks for maintaining relatively equal educational opportunity.

12.2   Period of Improvement, 1965–70

Countries often experience a deterioration in the distribution of income during the early stages of development. As was shown in figure 12.1, Korea

experienced a slight improvement. The Gini coefficient fell from 0.344 in 1965 to 0.332 in 1970. In this section we examine some of the contributing factors.

12.2.1 Employment Creation

Korea's rapid growth, fueled by the promotion of labor-intensive exports, successfully provided jobs for a growing labor force, reducing unemployment and underemployment. Some key labor market statistics for 1963–70 are given in table 12.2. The figures show the rapid decrease in the unemployment rate from 8.2 percent in 1963 to just 4.5 percent in 1970. The reduction is attributable primarily to a dramatic decrease in unemployment in the nonagricultural sector from 16.4 percent in 1963 to 7.4 percent in 1970. The numbers look all the more impressive given that the reduction was achieved while the labor force was growing at an annual rate of 2.1–3.5 percent. Employment creation in the manufacturing and social overhead capital (SOC) sectors was explosive. Jobs in manufacturing grew at an average annual rate of 11.2 percent during 1963–70, while jobs in SOC grew at an average rate of 9.5 percent.

Table 12.3, in which we summarize the contribution of commodity exports to sectoral employment, is even more revealing. In manufacturing, for example, exports accounted for just 3 percent of employment in 1960. This had increased to 25 percent by 1970.

Job creation in the urban sector meant a significant improvement in the distribution of income among employees. This point is made clearly in table 12.4, in which we compare changes in Gini coefficients over time. The figures are disaggregated into three groups: rural workers, employees, and employers. The figures show that in 1965 employees were the group with the greatest within-group inequality (0.399). By 1970 the figures show considerable improvement—the Gini coefficient had fallen to 0.304, which was well below the estimate of overall inequality (0.332).

Table 12.2   **The Korean Labor Market, 1963–70 (in percentages)**

Year	Labor Force Growth Rate	Unemployment Rate			Underemployment Rate*		
		Farm	Nonfarm	Total	Farm	Nonfarm	Total
1963	2.1	2.9	16.4	8.2	6.3	1.9	4.4
1964	2.2	3.5	14.4	7.7	6.9	1.7	4.7
1965	2.3	3.1	13.5	7.4	6.2	1.3	4.1
1966	3.3	3.1	12.8	7.1	7.3	1.1	4.5
1967	2.4	2.3	11.1	6.2	6.2	0.9	3.7
1968	2.4	1.9	9.0	5.1	4.9	0.8	2.9
1969	2.8	2.2	7.8	4.8	3.2	0.5	1.8
1970	3.5	1.6	7.4	4.5	4.7	0.8	2.7

Source: EPB. *Annual Report on the Economically Active, Population Survey,* and *Major Statistics of Korean Economy,* for relevant years.

*EPD defines underemployment to be working less than eighteen hours a week.

Table 12.3   **Contribution of Exports to Sectoral Employment (in thousands of persons)**

Year	Primary		Manufacturing		SOC and Service		Whole Industry	
	Total	Exports	Total	Exports	Total	Exports	Total	Exports
1960	4,680	56	477	15	1,871	5	7,028	76
1963	4,864	96	610	39	2,158	11	7,662	146
1966	4,956	104	833	130	2,634	36	8,423	270
1968	4,907	118	1,176	199	3,972	53	9,155	371
1970	5,027	175	1,284	319	3,434	88	9,745	583

Source: Hong (1980, 84).

Note: Total employment represents total number of employed persons, while number of workers related to exports is on a man-year basis.

Table 12.4   **Gini Coefficients by Sector, 1965–82**

Year	Overall		Rural Workers		Employees		Employers	
	Gini	%	Gini	%	Gini	%	Gini	%
1965	0.344	—	0.285	—	0.399	—	0.384	—
1970	0.332	−3.5	0.295	3.5	0.304	−23.8	0.353	−8.1
1976	0.381	14.8	0.327	10.8	0.355	16.8	0.449	27.2
1982	0.357	−6.3	0.306	−6.4	0.309	−13.0	0.447	0.0

Source: Derived from Choo (1985, 12–15).

The government also initiated efforts to expand job opportunities to those who were not so easily absorbed by job creation in urban areas. For example, the underemployed constituted 6–7 percent of the total agricultural labor force. The comparable figure for the nonagricultural sector was 1–2 percent. The opposite was true of measured unemployment, which was much higher in the nonagricultural sector. The government provided additional job opportunities, primarily in the agricultural sector during the off-peak season. The public works programs included land reclamation, land improvement, reforestation, multiplication of marine resources, and feeder road construction. By the late 1960s, the underemployment rate in the agricultural sector had fallen to 3–4 percent.

In sum, the labor-intensive, export-led growth generated enough new jobs to absorb the growing labor force as well as the unemployed nonagricultural workers. The government made deliberate efforts to reduce underemployment in the agricultural sector. Employment opportunities continue to be a very important factor in explaining Korea's relatively equitable distribution.

12.2.2   The Terms of Trade

Existing evidence suggests that although differences between the relatively poor rural sector and the wealthier industrial sector have contributed to overall inequality, between-group inequality has traditionally been much less

important that within-group inequality in Korea.[3] The evidence also points to some narrowing of the differences during the 1960s.

One development which is consistent with a reduction in the intersectoral inequity during this period is the trend in the terms of trade between the primary and manufacturing sectors. We take the wholesale price index (WPI) for agricultural and marine foods as a proxy for prices in the primary sector, and the WPI for other goods as a proxy for manufacturing prices. The figures are given in table 12.5. The table also provides the weights of each sector to show the changes in the economic structure. While the share of the primary sector fell by nearly 50 percent, from 34.5 to 17.8 percent, its prices increased more than fivefold from 1960 to 1971. The other goods price index only tripled over the same period. With the exception of 1964–65, the terms of trade continually moved in favor of the primary sector. The government also contributed a little to improving the living standards of the rural population. Although its primary focus was the promotion of industrialization during the 1960s, it did undertake the following measures to help farmers. It helped to settle usurious debts incurred by farmers. It increased the availability and supported the prices of chemical fertilizers, insecticides, and water pumps. It also introduced high-yield rice and cash crops. These policies helped to increase productivity and to improve the living standards of the lower income classes in the agricultural sector.

12.3 Period of Deterioration, 1970–76

As discussed in the introduction, the distribution of income deteriorated substantially in the 1970s. The Gini coefficient increased by 15 percent from

Table 12.5   **Trends in the Terms of Trade between the Primary and Manufacturing Sectors**

| Year | Agricultural and Marine Foods | | Other Goods | | Terms of Trade | |
	WPI	Weight (%)	WPI	Weight (%)	1	2
1960	100.0	34.5	100.0	65.5	—	—
1961	118.3	33.1	110.5	66.9	1.07	1.07
1962	128.7	31.8	120.7	68.2	1.07	1.00
1963	188.7	30.4	135.2	69.6	1.40	1.31
1964	240.0	29.0	185.2	71.0	1.30	0.93
1965	243.5	27.6	208.2	72.4	1.17	0.90
1966	266.1	25.7	225.0	74.3	1.18	1.01
1967	292.6	23.8	236.4	76.2	1.24	1.05
1968	330.0	21.8	251.7	78.2	1.31	1.06
1969	383.1	19.9	262.8	80.1	1.46	1.11
1970	434.8	17.9	284.1	82.1	1.53	1.05
1971	530.0	17.8	300.3	82.2	1.76	1.15

Source: Derived from BOK, *Economic Statistics Yearbook,* various years.

Note: Terms of trade 1 was calculated using the WPI of 1960 as the base. Terms of trade 2 was calculated using the WPI of the preceding year as the base.

0.332 in 1970 to 0.381 in 1976. The deteriorating trend was also clearly reflected in a public survey conducted by Hoon Yu (1979), which is summarized in table 12.6. Most of the respondents believed that there was a severe gap between the wealthy and the poor groups in the society. In this section, we examine some of the factors which are likely to have led to the increased inequality.

12.3.1   Growth of Big Business

As a catalyst for economic growth, the Korean government thought it advantageous to promote the growth of business conglomerates so as to take advantage of economies of scale and to generate rapid growth and ample employment opportunities. The government provided large export firms with various incentives and preferential arrangements. It made disproportionately large amounts of domestic and foreign capital available at lower interest rates and negotiated abroad for foreign capital. It provided other financial incentives including tax reductions and/or exemptions. It also provided large firms with various kinds of technical and infrastructure support.

While these incentives certainly helped to encourage exports, they also led to the concentration of economic activity among a few private conglomerates, the *chaebol*. Figure 12.3 illustrates the increased concentration during the 1970s. As a percentage of GDP, value added accounted for by the *chaebol* roughly doubled between 1973 and 1978. Table 12.7 shows that concentration was especially great in the manufacturing sector. Value added of businesses in manufacturing controlled by the largest five *chaebols* reached a staggering 18.4 percent of GDP by 1978, and by the largest forty-six, 43.0 percent of GDP. Even more striking is the fact that the figure grew at an average annual rate of 35.7 percent, more than twice the average annual GDP growth rate, which Sakong (1980) lists as 17.2 percent. D. M. Kim (1979, 288) estimates that inequality arising from the manufacturing sector accounted for 45.6 percent of the overall inequality in 1971, but increased to 63.8 percent by 1977.

These developments had severe effects on small businesses. The shortage of capital reduced rates of productivity and decelerated the growth of value added. As a result, intersectoral inequality among employers deepened

Table 12.6   Views on the Level of Income Inequality in Korea

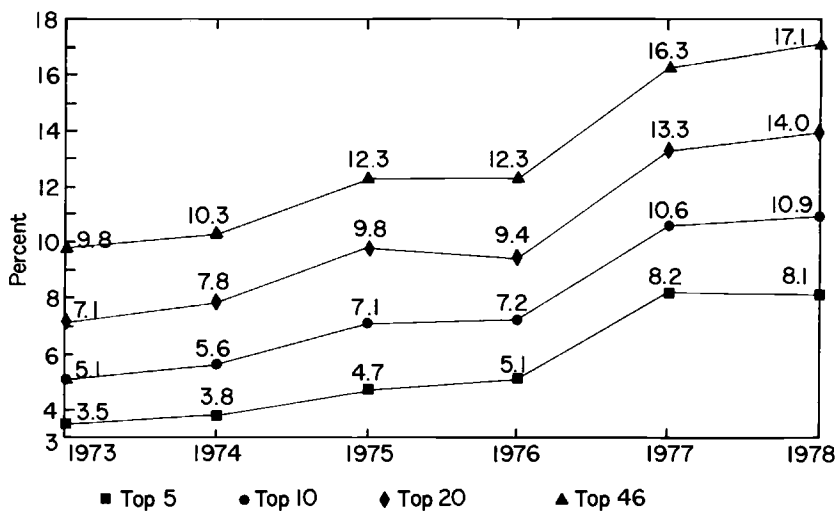| Response	Percentage of Respondents
Extreme inequality	45.0
Strong inequality	41.5
Moderate inequality	11.3
Little inequality	1.9
No inequality	0.2

Source: Yu (1979, 45).

Fig. 12.3   Value added by conglomerates (% GNP)
Source: Sakong (1980, 5).

greatly. As was shown in table 12.4, the Gini coefficient for employers increased by 27.2 percent from 0.353 in 1970 to 0.449 in 1976. Choo's (1978) Theil decomposition analysis also revealed that inequality among employers was the largest component of overall income inequality in this period.

12.3.2   Rural-Urban Migration

The rapid growth of income and the greater employment opportunities in urban areas resulted in a large continuous migration from rural to urban areas. Szalls (1981) points out that the number of workers in rural areas increased by only 0.5 percent annually during 1970–79, while the number in

Table 12.7   Value Added by *Chaebols* in the Manufacturing Sector

| | Value Added | | |
| | Percentage of GDP | | Annual Growth[a] |
Chaebols	1973	1978	1973–78
Top 5	8.8	18.4	35.7
Top 10	13.9	23.4	30.0
Top 20	21.8	33.2	27.5
Top 46	31.8	43.0	24.4

Source: Sakong (1980, 6).

[a]Compounded annual rate of growth.

urban areas increased by 6.1 percent. However, the increased labor force in urban areas was primarily an increase of low-skilled workers with low wages.

Figure 12.4 presents the results from Suh's (1980) study on poverty trends in Korea during 1965–76. The figure reinforces the finding that urbanites were the main beneficiaries of the rapid industrialization during the 1960s. The percentage of urban households classified as poor decreased from 54.9 percent in 1965 to 16.2 percent in 1970.[4] However, the figure rose to 18.1 percent in 1976. More revealing is the fact that the distribution of the poor shifted dramatically toward the urban areas during the 1970s. In 1970 only 28.1 percent of the total poor households were in urban areas. This figure had increased to an astonishing 61 percent only five years later.

It is also important to point out that income inequality deepened in the industrial sector. As shown in table 12.8, the distribution has been less equitable in the nonagricultural sector than in the agricultural sector, and increasingly so. The nonagricultural DDR was 80 percent of agricultural DDR in 1970, and had fallen to 66 percent by 1976. This sectoral difference implies that the exodus from rural to urban areas contributed to an increase in overall inequality.

The influx into urban areas also caused serious difficulties and bottlenecks as the social infrastructure failed to keep pace with growing needs. Problems emerged in the areas of housing, health, education, transportation, cultural
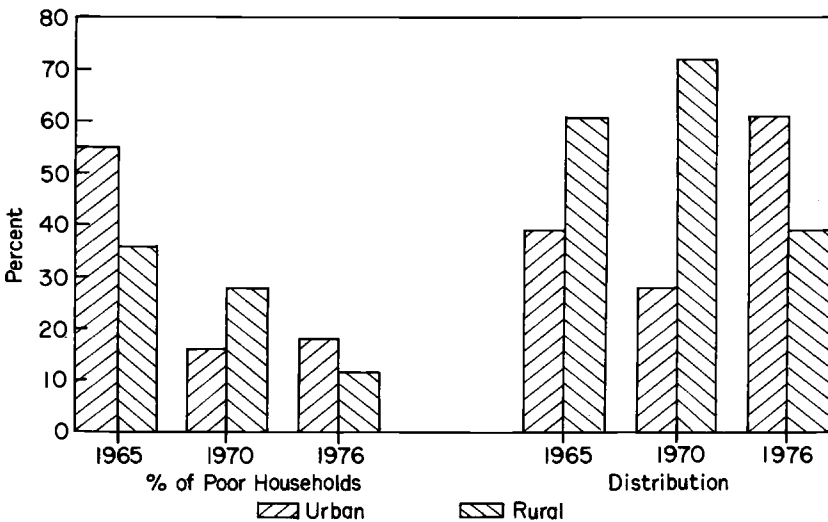
Fig. 12.4   Poor households: percentage of total households and urban-rural distribution
Source: Suh (1980, 30).

Table 12.8   **Income Inequality by Sector***

Year	Agriculture			Nonagriculture		
	Gini	DDR	Theil (%)	Gini	DDR	Theil (%)
1965	0.29	0.59	36.0	0.41	0.30	55.9
1970	0.30	0.55	24.5	0.35	0.44	63.1
1976	0.33	0.48	24.6	0.42	0.32	69.4
1982	0.31	0.54	13.6	0.37	0.41	84.9

Source: Choo (1985, 12–16).
*The balance is the Theil share of between-sector inequality.

facilities, and recreation. Shortages in housing, for example, contributed to rampant speculation in real estate, with the relatively privileged classes capitalizing on the opportunities. Overemphasis on growth with inadequate attention to the development of infrastructure meant that available services were poorly distributed, with the upper income groups in urban areas receiving a disproportionate share. This also contributed to a deterioration in the pattern of distribution.

12.3.3   The Reduction of Unemployment

In the previous section, we noted that during the 1960s, rapidly declining unemployment and underemployment rates especially reduced intrasectoral inequality between employees. However, both rates seemed to reach minimum levels at the beginning of the 1970s. Employment hovered around "full employment" throughout the 1970s until the crisis of 1980. Thus, there is little evidence that the labor-intensive, export-led growth continued to generate improvements in the intrasectoral distribution of income during this period.

12.3.4   Government Control of Labor

In order to maintain competitiveness in world markets, the government exercised tight control over labor activities in key export industries. For example, it is widely believed that the leaders and the activities of labor organizations have been severely restricted. Strikes are forbidden in industries involving foreign capital. Labor has limited negotiating power in those industries under the heaviest control. Consequently, wages are kept artificially low in these industries compared to elsewhere in the economy. Table 12.9 presents average (1976) wages in manufacturing as a percentage of the wages in a number of sectors. Manufacturing, which accounts for over 90 percent of export production, has by far the lowest wages. For example, the average manufacturing wage was less than 40 percent of the average wage in industries related to electricity, gas, and water. Strict control of labor activities and suppression of wages in export-oriented manufacturing

Table 12.9   Wages in Manufacturing Industry as a Percentage of Wages in Other
              Industries, 1976

Other Industries	Manufacturing Wages
Electricity, gas, and water	38.7
Finance, insurance, real estate, and business service	42.9
Construction	44.8
Social and personal service	52.5
Wholesale and retail trade, and hotels and restaurants	68.7
Mining	78.2
Transportation, storage, and communication	80.4

Source: EPB, *Major Statistics of Korean Economy,* 1986, p. 277.

industries seems to have contributed to greater wage dispersion during the
1970s.

12.3.5   Inflation Rates

Korea experienced relatively high rates of inflation during the 1970s,
especially after the first oil price shock. The annual inflation rate averaged
19.8 percent. This inflation especially hurt relatively poor, fixed wage
earners because wages are not indexed in Korea, but benefited the relatively
more wealthy property owners. Of particular note was the rapid rise in
housing prices in the mid-1970s when speculative real estate investment was
at its peak. Many of the low wage urban workers were unable to find
housing, even on a temporary basis. Inflation also seems to have widened the
income gap between the middle and the lower working classes.

12.4   Renewed Improvement, 1976–82

The trend toward increasing income inequality seems to have reversed
during the late 1970s and early 1980s. The Gini coefficient declined from
0.391 in 1976 to 0.357 in 1982, while the DDR rose from 0.371 to 0.431.
This section discusses some of the structural and macroeconomic factors we
believe contributed to this improvement.

12.4.1   The Wage Structure

As we saw in table 12.4, the most important factor in explaining
improvements in the overall distribution of income was an improvement in
its distribution among employee households. The Gini coefficient for
employee households declined by 13 percent from 1976 to 1982. The
coefficient for rural households fell by 6.4 percent, while that for employer
households hardly changed.

Since wages and salaries constitute about 90 percent of employee income,
convergence of wages/salaries among different groups of employees
provides strong evidence for an improved distribution among employee

households. Table 12.10, in which we disaggregate wages according to occupational category, provides strong evidence of such a convergence—there was a drastic shift in the wage structure during 1976–82. While wages in relatively high paying categories (managers, professionals, and technicians) increased substantially relative to other categories during 1971–76, this trend reversed during 1976–85. For example, the average wage of managers was almost five times that of production workers in 1976, but had fallen to 3.4 times that of production workers by 1984. Table 12.11, in which we disaggregate wages by level of education, shows a similar pattern. The wage gap between people with different levels of education had declined continuously since the mid-1970s.

Reasons for the declining wage differential come from both the demand and the supply side. After the great expansion of heavy industry and of large firms in manufacturing, construction, and finance during the Big Push of the 1970s, there was a slowdown in the growth of demand for managers and skilled workers. Furthermore, a nationwide increase in the level of education expanded the relative supply of skilled and highly educated workers.

Table 12.10   **Relative Wages by Occupation (production workers = 100)**

Year	Professionals/ Technicians	Managers	Clerical	Sales	Service
1971	280	428	243	140	107
1975	266	458	215	123	104
1976	291	474	222	112	103
1980	243	395	162	89	100
1981	230	367	163	96	100
1982	241	345	158	134	102
1983	241	343	155	129	101
1984	235	336	153	128	101

Source: Park and Castaneda (1987, 33).

Note: Wages include regular pay, overtime, and bonus payments.

Table 12.11   **Relative Wages by Education (primary school = 100)**

Year	College/ University	Junior College	High School	Middle School
1975	306	200	154	109
1977	305	206	148	106
1979	280	187	135	104
1980[a]	256	170	127	100
1981	256	168	127	100
1982	252	151	126	100
1983	245	146	124	100
1984	240	145	121	100

Source: Park and Castaneda (1987. 34).

[a]From 1980 on, middle school and below = 100.

12.4.2   Price Trends for Agricultural Goods

Figure 12.5 shows that prices of agricultural goods rose more quickly than those of nonagricultural goods. This trend was accompanied by a government agricultural policy which maintained a relatively stable ratio of the prices paid by farmers relative to the prices received by farmers. Also, Choo (1985, 22–23) mentions that the ratio of off-farm to total income of small, land-owning farmers increased from 43.5 percent in 1976 to 62.3 percent in 1982. There has also been an increase in average farm household income as a percentage of average urban household income, which has helped to raise the relative living standards of poor rural households.

12.4.3   Inflation and Capital Gains

Stabilization policies in the early 1980s concentrated attention on combating inflation. The impressive results can be seen in table 12.12. Since inflation tends to distribute income to property holders and profit earners, the arrest of inflation is likely to have had a positive influence on distribution.

The government also took steps to control windfall capital gains. A fiscal reform introduced higher rates of taxation for capital gains and revenues from real estate than for other types of income. The measures seem to have discouraged the rampant, nonproductive, speculative investments in real estate which we have argued contributed to the deteriorating position of the poor during the mid-1970s.
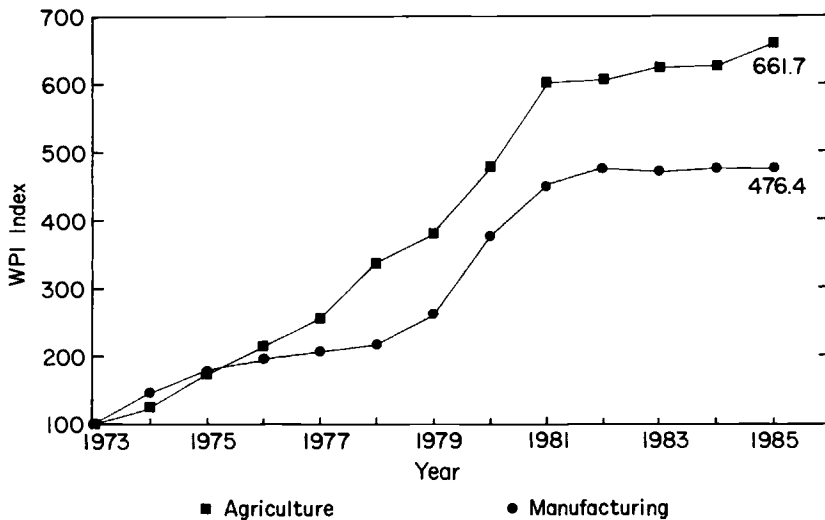

Fig. 12.5   WPI by sector, 1973–85 (1973 = 100)
Source: Bank of Korea (1986, 221).

Table 12.12   WPI and Seoul CPI Trend, 1974–83

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
WPI	42.1	26.5	12.2	9.0	11.6	18.8	38.9	20.4	4.7	0.2
CPI	24.3	25.3	15.3	10.1	14.4	18.3	28.7	21.3	7.2	3.4

Source: EPB, *Major Statistics of Korean Economy,* 1986, pp. 206–10.

12.4.4   Welfare Policies for the Urban Poor

Prior to the mid-1970s, there had been little serious government effort toward improving welfare programs and implementing welfare laws for the poor. Policymakers directed their concern to economic growth and industrial development, hoping that the fruits of growth would spread to the lower income groups. The government was involved in small-scale social welfare programs that had been initiated by foreign agencies.

Over time, the government became more actively involved in social welfare. It began to set and enforce guidelines and laws; for example, increasing minimum wages and promoting better working conditions and social welfare facilities, etc. It is difficult to ascertain the magnitude of the redistributive measures. However, table 12.13 does indicate that policymakers became increasingly involved in social and distributive aspects of growth. Total expenditure on social welfare programs rose from just 20 percent of total expenditures in the 1970s to over 30 percent in 1980.

12.5   International Comparisons

We conclude this chapter with a discussion of income distribution in Korea vis-à-vis the distribution in other countries. There have been a number of other cross-country comparisons. Although the studies are typically conscious of the importance of different stages of development and different levels of income, one can draw only limited conclusions because of the unreliability and inconsistency of available data. The analysis presented here is certainly

Table 12.13   Trends in Government Social Welfare Expenditures (in billions of won)

Category	1974		1978		1982	
Education	154.7	(12.9)	605.0	(13.7)	1,980.5	(17.0)
Health	13.1	(1.1)	68.3	(1.5)	140.6	(1.2)
Social Security	61.8	(5.1)	189.2	(4.3)	991.5	(8.5)
Housing	16.2	(1.3)	55.0	(1.2)	383.4	(3.3)
Others	11.2	(0.9)	37.0	(0.4)	77.9	(0.7)
Total	257.0	(21.4)	954.5	(21.7)	3,573.9	(30.7)

Source: Suh and Yeon (1986, 5).

Note: Expenditure as a percentage of total government expenditures is in parenthesis.

no exception. Nonetheless, the findings are interesting and indicative. Our comparisons are based on data from the World Bank and the IMF.

We begin by using Kuznets' well-known "U-Shaped Hypothesis" as a framework to make comparisons across countries. The hypothesis states that as a country develops, the distribution of income tends to improve only after an initial phase of deterioration. One indicator of Korea's relative position comes from a comparison of Korean data at various stages of development to the U-shaped curve estimated from a cross section of countries. We use the ratio of the income share of the poorest 20 percent of the population to the income share of the richest 10 percent (denoted as RATIO) as a measure of inequality. GNP per capita is used as a proxy for the level of economic development. The figures are listed in ascending order of GNP per capita in table 12.14.

The patterns of income distribution are illustrated in figure 12.6. The plot does offer some support for the U-shaped hypothesis. In general, countries with mid-range GNP per capita tend to have lower RATIOs than countries with lower GNP per capita. There is no doubt, however, that the countries with the most equitable distribution are those with the highest income per capita.

We explore the relationship more formally by regressing the measure of inequality on GNP per capita. The resulting estimates (using ordinary least squares) are given below, with t-statistics in parentheses.

$$\text{RATIO} = 1.280 - 0.344 \cdot \log(\text{GNP/Capita}) + 0.025 \cdot \log(\text{GNP/Capita})^2$$
$$(4.259)(-4.156) \qquad\qquad (4.591)$$

$$\overline{R}^2 = 0.506; \ \text{Standard Error of Estimate} = 0.065;$$
$$\text{Durbin Watson} = 2.212; \text{number of observations} = 47.$$

All of the coefficients are significantly different from zero. The estimates do indeed imply a U-shaped relationship. This is evident from figure 12.6 which shows both the actual and the estimated RATIO for each country as a function of its GNP per capita. For all four years included, Korea's actual RATIO is substantially greater than the estimate for Korea's income level.

A second comparison is to examine the relationship between rates of growth and the distribution of income. This is done in figure 12.7, which plots the RATIOs against each country's average GNP growth rate over the five-year period ending in the year in which the RATIO was obtained. Although the figure indicates considerable diversity, even among countries with similar rates of growth, there seems to be a negative overall correlation between the two variables. The straight line in the figure represents the estimated RATIOs obtained from an OLS regression. Again, the four RATIOs for Korea are well above the estimated "norm." This is particularly true of the figure for 1970.

As mentioned at the outset, these findings are based on relatively simplistic analysis with faulty data. They should be interpreted with caution.

Table 12.14   **International Comparison of Income Distribution**

| Country	Year	GNP per Capita in 1980 (U.S. $)	Average GNP Growth (for last 5 years)	% Income Owned by Bottom 20% (A)	% Income Owned by Top 10% (B)	A/B Ratio
Bangladesh	1977	119.0	7.2	6.2	32.0	.19
Nepal	1977	169.1	2.8	4.6	46.5	.10
Sri Lanka	1970	201.5	7.9	7.5	28.2	.27
India	1976	217.1	3.0	7.0	33.6	.21
Tanzania	1969	253.0	4.8	5.8	35.6	.16
Sierra Leone	1969	322.0	6.3	5.6	32.8	.17
Kenya	1976	336.0	5.8	2.6	45.8	.06
Sudan	1968	355.0	2.6	4.0	34.6	.12
Egypt	1974	370.0	2.9	5.8	33.2	.17
Indonesia	1976	424.0	8.4	6.6	34.0	.19
Philippines	1971	555.3	5.2	5.2	38.5	.14
Korea1	1965	572.3	6.5	5.8	25.8	.22
Thailand	1976	604.3	7.0	5.6	34.1	.16
Zambia	1976	710.0	3.5	3.4	46.3	.07
Brazil	1972	728.0	9.3	2.0	50.6	.04
Korea2	1970	834.6	12.7	7.3	25.4	.29
El Salvador	1977	975.0	5.4	5.5	29.5	.19
Turkey	1973	1,095.7	6.8	3.5	40.7	.09
Mauritius	1981	1,135.0	3.1	4.0	46.7	.09
Peru	1972	1,154.2	4.6	1.9	42.9	.04
Malaysia	1973	1,171.3	9.4	3.5	39.8	.09
Costa Rica	1971	1,238.0	6.8	3.3	39.5	.08
Korea3	1976	1,330.2	9.6	5.7	27.5	.21
Panama	1970	1,454.7	7.1	2.0	44.2	.05
Korea4	1982	1,657.5	5.4	6.9	28.1	.25
Mexico	1977	1,833.2	5.5	2.9	40.6	.07
Portugal	1974	2,062.7	7.2	5.2	33.4	.16
Argentina	1970	2,605.8	4.3	4.4	35.2	.13
Venezuela	1970	2,924.0	4.9	3.0	35.7	.08
Ireland	1973	4,406.0	5.5	7.2	25.1	.29
Hong Kong	1980	4,578.6	8.9	5.4	31.3	.17
Trinidad	1976	5,003.4	4.1	4.2	31.8	.13
Spain	1981	5,037.0	2.0	6.9	24.5	.28
Israel	1980	5,146.7	2.6	6.0	22.6	.27
Italy	1977	5,920.0	3.1	6.2	28.1	.22
New Zealand	1982	7,242.0	1.2	5.1	28.7	.18
Japan	1979	8,684.0	4.7	8.7	22.4	.39
U.K.	1979	9,242.0	0.8	7.0	23.4	.30
France	1975	9,501.0	4.0	5.3	30.5	.17
Finland	1981	10,138.0	3.5	6.3	21.7	.29
Belgium	1979	10,144.0	1.9	7.9	21.5	.37
Australia	1976	10,283.0	3.4	5.4	30.5	.18
Netherlands	1981	10,536.0	0.2	8.3	21.5	.39
West Germany	1978	11,228.0	2.0	7.9	24.0	.33
Canada	1981	11,445.0	2.6	5.3	23.8	.22
Denmark	1981	11,457.0	−1.3	5.4	22.3	.24
U.S.	1980	12,838.0	3.2	5.3	23.3	.23
Sweden	1981	13,364.0	1.1	7.4	28.1	.26
Norway	1982	13,452.0	3.0	6.0	22.8	.26
Switzerland	1978	14,916.0	1.4	6.6	23.7	.28

Source: World Bank.
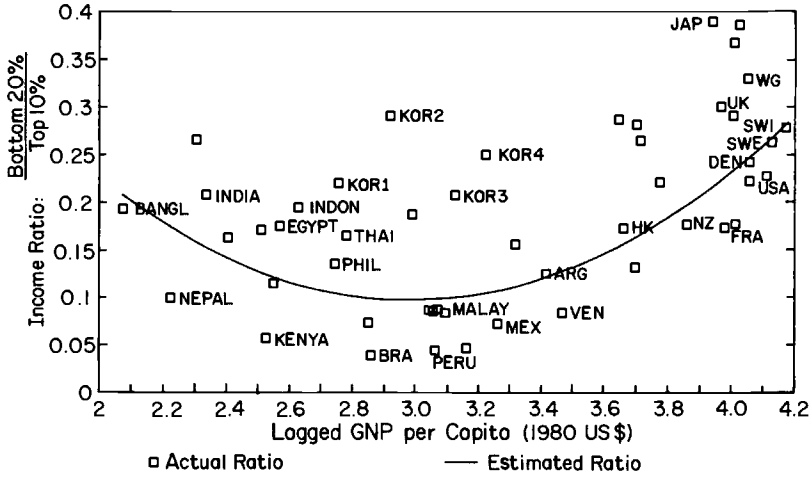
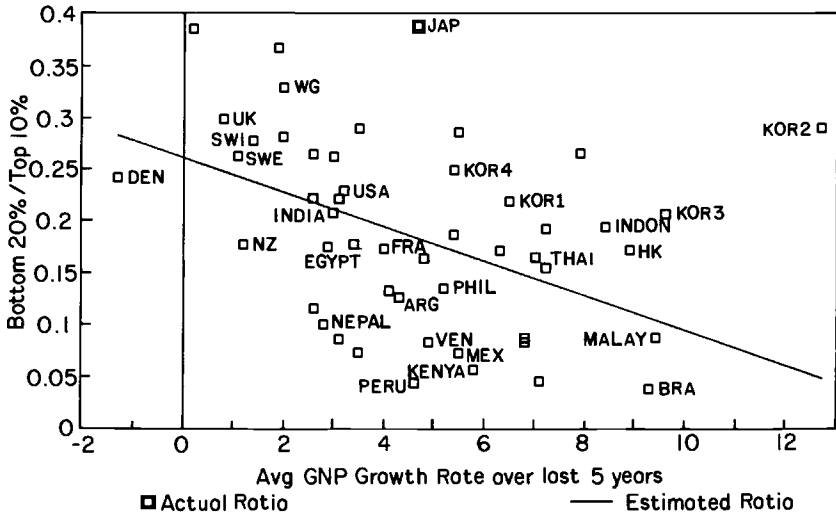**Fig. 12.6   Income ratio versus GNP per capita**

Fig. 12.7   Income ratio versus average GNP growth over last five years

However, it seems difficult to refute the view that Korea's distribution of income has remained far better than the distribution in other countries at similar levels of development. Although Korea did experience a period of deteriorating distribution during its development, the conclusion that Korea achieved rapid growth rates with relative equity by international standards seems fairly certain.