

Enhancing the Efficiency of Social Expenditure in Korea

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I. Historical Review : Growth, Equity and Social Welfare Policy

1. Social Welfare Policy in the 1960s~1970s

When the First Five Year Economic Development Plan was launched in 1962, the state of Korean economy was that of a typical underdeveloped countries owing to low-income level, lack of capital and resources, and prevalence of unemployment and underemployment, especially in rural communities. With a strong political will to deliver Korea from poverty, the government, then strongly influenced by military regime, pushed for export-oriented economic development through nurturing labor-intensive industries. That is, instead of adopting redistribution policies or expanding welfare expenditures for income transfer, the government promoted the 'growth-before-distribution' development strategy that pursued alleviation of absolute poverty and reduction of unemployment by means of continuous creation of jobs through sustained economic growth.

This “growth-first” strategy, in providing welfare, reduced the government’s role to minimum while emphasizing the welfare function of individual or families and the mutual-dependence within communities. As a result, the government's expenditure in the social welfare sector during the 60s~70s fell much behind compared to the level of economic

development. Nevertheless, advanced social security systems were introduced in part during the 60s. For example, the public assistance system was put into operation in order to enhance the livelihood of the poor in 1961. And various social insurance schemes such as the Government Employees' Pension (1960), the Military Personnel Pension (1962), and the Industrial Accident Insurance (1964) were also introduced during this period.

Despite such inadequate government role as welfare provider, the rapid economic growth during the 60s made a large contribution to the reduction of the absolute poverty rate. In particular, the rapid growth of labor-intensive industries contributed to the improvement of income distribution as well as to the increase of the average national income level by successfully absorbing the unemployed population streaming in from rural communities (Choo[1992]). The equitable growth pattern of the 1960s is considered to be a representative case, which runs counter to the economic theory accounting for growth and equity trade-off in the early years of economic development, the Kuznets Curve (Adelman [1997]).

Table 1. The Changes of Major Distribution Index (1965 - 96)

	1965	1970	1976	1980	1990	1996
GDP per capita	-	\$253	\$802	\$1,597	\$5,883	\$10,548
Unemployment Rate	-	4.4%	3.9%	5.2%	2.4%	2.0%
Gini Coeff. ¹⁾	0.344	0.332	0.391	0.357	0.323	0.290
Poverty Ratio ²⁾	-	36.6%	22.8%	12.9%	7.2%	7.0%

Note: 1) Values estimated by Choo [1992]

2) Poverty ratio is the ratio of families under minimum cost of living.

Source: Quoted from Moon [1999]

However, the heavy and chemical industry drive (HCI), promoted in the early 1970s, has cast a negative influence on the existing equitable growth pattern. The stress on the growth of key capital-intensive industries inevitably increased the capital/output ratio, thereby reducing the labor share of national income. Furthermore, the distribution of wage among labor groups became more skewed due to the rising demand for highly trained manpower. Thus the income distribution structure in urban areas began to deteriorate. According to Choo (1992), Gini coefficients of household income distribution rose from 0.332 in 1970 to

0.391 in 1976. The increase in income inequality after, rather than during, the takeoff of economic development stage contrasts with the experiences of other developing countries. Moreover, the accelerated inflation of over 15% per annum and the increase of asset prices during the same period played a notable influence on the worsening income distribution. In spite of the deteriorated distribution structure, the absolute poverty rate decreased gradually and the unemployment rate remained stable at about 4%, thanks to the rapid economic growth during this period. The government's investment in the social welfare sector during this time is difficult to find except for the introduction of Medical Insurance for businesses with over 500 employees in 1977. In the early 1970s, the Korean government turned its attention to improving agricultural terms of trade by raising the real purchase prices of rice and barley. As a result, the prices of agricultural products rose more rapidly than the prices paid by farmers for non-farm products. Another major policy shift at this time was the initiation of New Community Movement (NCM), or Saemaul Movement, accompanied by major investment for rural development. From the beginning, the NCM stressed the importance of raising production and income in rural areas under the banner of modernization. The NCM was a top-down model for nation building through rural reconstruction and poverty eradication. Due to the NCM drive, the average income gap between urban and rural areas narrowed substantially during the 1970s. The average income in rural areas, which was about three quarters that of urban residents in 1970, exceeded the urban average income by 111 percent in 1975. Although the NCM has received wide criticism as being manipulative and undemocratic, it significantly contributed to the improvement of standard of living in the rural areas.

2. Social Welfare Policy in the 1980s ~ 1990s

The second oil price shock in 1979 exposed Korea's weakness in the striking macroeconomic imbalances. Faced with both high inflation and a widening deficit in the balance of payments, Korea chose to tackle the problem of external imbalance by substantially depreciating the exchange rate and adopting a flexible exchange rate system in the early part of 1980.

Table 2. Development of the Social Security System in Korea

Five-year Plan Period	Pension Insurance	Medical Insurance	Unemployment Insurance, and others
From the First Five-year Plan to the Third Plan (1962-76)	Introduction of the pension program for civil servants (1961) Introduction of the pension program for military personnel (1963) Introduction of the pension program for private school teachers (1975)		Introduction of the Industrial accident insurance program for workers employed at businesses with 500 or more workers (1964) Coverage expanded to include workers at workplaces with 16 or more employees (1976)
From the Fourth Plan to the Fifth Plan (1977-86)		Implementation of the employee medical insurance program for workers at workplaces with 500 or more workers (1977) Implementation of the medical insurance program for civil servants and private school teachers (1978) Coverage of the employee medical insurance program expanded for workers at workplaces with 16 or more workers (1986)	Coverage expanded to include workers at workplaces with 10 or more workers (1986)
The Sixth Plan (1987-91)	Implementation of the National Pension System for workers at workplaces with 10 or more workers (1988)	Introduction of the regional medical insurance program for the self-employed in rural areas (1988) Coverage of the employee expanded to include workers at workplaces with five or more workers (1988) Expansion of coverage of the regional medical insurance program to include the self-employed in urban areas (1989)	Coverage expanded to include workers at workplaces with five or more workers Introduction of the minimum wage system initially applied to the manufacturing sector (1988), and later to all industries (1990)
The Seventh Plan (1992-96)	Coverage expanded to include workers at workplaces with five or more workers (1992) Government plans to introduce a pension program for farmers and fishermen during the latter half of the plan period	Financial stability of the regional medical insurance Strengthening the institutional basis of the public health programs	Introduction of the Unemployment insurance program (1995)
(1997-)	Coverage expanded to include self-employed in urban areas (2000)		Coverage of unemployment insurance expanded to all workplaces (2000) Introduction of the minimum Living Standard Security Act. (2000)

Source: The Government of the ROK, *The Seventh Five-Year Economic and Social Development Plan 1992-96*, 1992.

Also, Korea adopted a comprehensive stabilization package including restrictive fiscal and monetary policies and investment adjustments in the heavy industries. In the early 1980s, fighting inflation was a top priority on national economic policy. Owing to efforts made by the government, Korea was able to achieve stability and growth thanks to the sharp annual growth of 8% induced by low single-digit consumer price increases and favorable export trend throughout the 1980s. Accordingly, the unemployment rate dropped to about 2% level, which in turn made a considerable contribution in the improvement of distribution and the alleviation of absolute poverty.

The shortage of manpower resulting from the continued sharp growth decreased wage differences among various occupations, industries, and educational levels while increasing the overall income level. Furthermore, these occurrences greatly improved the overall income distribution structure. Accordingly, the GINI coefficient declined to 0.290, and the absolute poverty rate to 7 percent by the end of 1996. In spite of the statistically improved distribution structure, however, there were some concerns that the actual distribution structure became worse when we take into account the deterioration of property income distribution, which was augmented by, for example, the rapid increase of land prices in the late 1980s, and was excluded from the income statistics. (Whang and Lee[1997]).

Since the late 1970s, the government pursued a comprehensive structural adjustment policy designed to revitalize the economy and bolster the competitiveness of the Korean industry. In addition, the government heightened its efforts in the area of social development. In the 1980s, the issue of social welfare received increasing attention as discontent increased among the underprivileged with accelerated urban-rural, inter-class and regional income disparities accompanying the process of rapid industrialization. This deepened social conflict and emerged as a major bottleneck to further development. Accordingly, the government's commitment toward the social policy issue was evidenced in the Fifth Five-year Plan, or Fifth Five-year Economic and Social Development Plan. The Fifth Plan clearly outlined the concept of social development by stating its objectives as to mitigate the undesired effects accumulated as a result of the past economic growth process, and to cope efficiently with the rising demands of the public for social welfare. In relation to the welfare policy, the most representative measure enacted during the

1970s was the introduction of medical insurance and medical assistance programs.

Beginning with the Sixth Republic (1988-92), issues of welfare policy came to the forefront of national politics. Following a reassessment of national priorities, the government adopted a strategy to pursue social welfare policies in conjunction with stabilization, liberalization and structural adjustment measures, which were deemed to be of greater short-term significance for the nation's growth. During this period, the government carried out various projects to improve social welfare and spur regional development. A significant institutional groundwork thus resulted in increased economic capabilities. However, in addition to prioritizing economic growth, the government sought to avoid inadvertently providing disincentives to work by over emphasizing social welfare. As a result, the government to date has not been very aggressive in fostering the welfare state. Nevertheless, the government has initiated and expanded several important welfare programs, such as the implementation of the National Pension scheme and the introduction of the minimum wage system in 1988.

The Seventh Plan (1992-96) outlines major policy objectives, such as strengthening international competitiveness of industry, improving social welfare and balanced development, and the liberalization and internationalization of the economy and laying the foundation for national unification. Among these objectives, issues directly related to social development are: development of the social security system and promotion of cultural activities, improvement of rural structure and balanced development between regions, and coping with housing and environmental problems. One major example of the new welfare system that the government introduced during this period is the legislation of the Employment Insurance Law. Employment insurance (or unemployment insurance) is one of the social insurances guaranteeing income security for a fixed period for workers when unemployed. By introducing the employment insurance system from June of 1995, Korea has been able to implement all of the core systems of social security, except for child allowances.

Korean social welfare policy has been a victim of the subordination of all other concerns to economic growth policy. Social welfare receives a low priority, compared to economic development. As shown in Table 19, health and social security expenditures by the central

government increased steadily from 1 percent of GNP in 1970 to 1.9 percent in 1995. This increase, however, was mostly due to the social insurance programs, while the share of public assistance program expenditures in GNP remained at a very low level. This data indicates that public assistance for low-income groups, on the whole, was insufficient in meeting the welfare needs of the poor. The portion of the government budget allocated to public assistance programs was small and spread out over a relatively large number of beneficiaries. However, considering the growing importance of social equity and poverty alleviation at this present stage of economic development, the government plans to significantly increase expenditures on poverty alleviation programs over the next several years.

Table 3. Trends in Social Development Expenditure (1970-95)

(unit: billion won, percent)

	1970	1975	1980	1985	1990	1995
Education	78.2 (2.8)	224.5 (2.2)	1,124.4 (2.9)	2,462.3 (3.0)	5,648.8 (3.1)	12,765.3 (3.6)
Health	6.1 (0.2)	16.4 (0.2)	78.3 (0.2)	191.9 (0.9)	568.6 (0.3)	512.1 (0.1)
Social Security/Welfare	27.1 (0.8)	85.5 (0.8)	437.9 (1.1)	779.0 (1.0)	2,691.2 (1.5)	6,361.7 (1.8)
Social security	-	-	6.5 (0.0)	722.5 (0.9)	2,072.7 (1.2)	5,741.2 (1.6)
Welfare/others	-	-	431.4 (1.1)	66.5 (0.1)	618.5 (0.3)	620.1 (0.2)
Housing and Community Amenities	1.3 (0.0)	16.0 (0.2)	191.1 (0.5)	718.5 (0.9)	3,379.0 (1.9)	5,690.5 (1.6)
Total	108.7 (3.8)	342.4 (3.4)	1,831.7 (4.7)	4,151.7 (5.1)	12,287.6 (6.8)	25,329.6 (7.1)

Note: Numbers in parentheses are percentages of GNP.

Source: Ministry of Finance and Economy, *Government Finance Statistics in Korea*, various issues.

II. Recent Development of Social Welfare Policy

1. Post-crisis Social Welfare Policy (After 1997)

Since the outbreak of the economic crisis in 1997, Korea has been plagued by deleterious social consequences: rapidly expanding unemployment, declining wages and income, growing absolute poverty, worsening income distribution, increasing educational and health risks, and rising crime and violence. The unemployment rate rose drastically from 2.5 percent in 1997 to 6.8 percent in

1998 with 1.5 million jobless. Real wages declined by 9.3 percent in 1998, the first nominal wage decrease since wage data collection began in Korea. Urban worker households curtailed their consumption by 16.8 percent in the third quarter of 1998 compared to the year prior. The Gini coefficient rose to 0.2900 in the first quarter of 1998 from 0.2449 in the last quarter of 1997. The headcount ratio for absolute poverty jumped from 3.0 percent in the fourth quarter of 1997 to 7.5 percent in the third quarter of 1998 even when excluding the unemployed from the calculation.

Although the Korean economy has started to recover, these social impacts still persist and even seem to be worsening in some areas. The headcount ratio decreased to 5.5 percent in the third quarter of 1999, but is still much higher than the pre-crisis period level. The Gini coefficient increased to 0.31 in the first quarter of 1999 and remains at around 0.30~0.32 since then. Although the unemployment dropped to 3 percent in 2002 due to rapid economic recovery, the proportion of long-term unemployed has continued increasing from 10.6 percent in 1997 to 15.6 percent in 2002.

In addition, economic upturn itself did not resolve the structural and long-term unemployment problem. The employment structure has become more vulnerable in the sense that first, the proportion of both long-term unemployment and youth unemployment has risen sharply and second, the recent increase in employment can be attributed to a rise in temporary and part-time employment. In 1999, those who were unemployed for more than a year accounted for 16.4 percent of the entire unemployed with previous work history, 6 percentage points higher than the pre-crisis period level. This implies that economic recovery itself has been unable to reduce structural unemployment, which has risen significantly. The proportion of regular workers out of total waged workers declined from 54.3 percent in 1997 to 48.4 percent in 2002. Incomplete labor market reforms will be a major obstacle to reducing both the long-term and structural unemployment rates and thereby sustaining the current recovery.

Since the outbreak of the economic crisis, the Korean government has initiated policy measures to mitigate the deleterious social consequences. Main emphasis was placed on protecting the unemployed and the poor by providing them with temporary relief programs and by strengthening the social safety nets. These include, among others, expansion of unemployment insurance, temporary aid programs, and reform of the livelihood protection program.

Unemployment Insurance

Unemployment insurance, which was first introduced in 1995, underwent a series of expansions after the crisis. Initially covering firms with more than 30 regular employees, it was expanded to cover companies with more than 10 regular employees in January 1998, and firms with more than five regular employees as of March 1998. From October 1998, all workplaces including firms with less than five regular employees and temporary/part-time workers became eligible for unemployment insurance. The minimum benefits were raised as well to a level of 70 percent of minimum wages. In addition, the minimum benefit period was doubled to 60 days in 1998, and a longer duration for benefits will be offered when unemployment exceeds a certain level. The government increased the number of people covered by unemployment insurance to 7.6 million, which represents 80 percent (about 9.5 million) of the eligible workers by the year 2002.

Public Works

Public works programs are very effective means of providing temporary income support to the unemployed without distorting their work incentives since workers are paid for their productive work; they do not merely provide a subsidy for living. As the unemployment rate soared in early 1998, the government implemented a wide variety of public works programs for the poor unemployed who were not eligible for unemployment benefits. Local governments provided temporary jobs for the unemployed in their respective regions, which included street cleaning, traffic control, parking guides, forest conservation, etc. Public works suitable for the winter season as well as for women and white-collar workers, such as deforestation, computerization, information projects, and assistance in social welfare facilities, were later added.

As the unemployment rate continued to rise, the government allocated more budget for public works programs than initially planned. The period of public works was also extended to 6 months from the previous 3 months in July 1998, and the amount paid was increased, ranging from 22,000 won to 35,000 won per day. In 1998, a total of about one trillion Korean won was allocated for public works programs, and about 438,000 people participated in these programs. The government increased the budget allocation to 2 trillion Korean won to provide work opportunities to 400,000 participants in 1999 as the unemployment situation was expected to worsen. In addition to public works programs, separate work projects were implemented for the

elderly and women who are unable to perform hard labor. Projects by local governments such as environmental protection programs were carried out with a budget of 40 billion Korean won in 1998, with 40,000 people participating for 6 months. Participants received monthly pay of 400,000 Korean won. Reflecting the decrease in unemployment rate due to the upswing in recent economic performance, the government reduced the budget for public works to 900 billion Korean won.

Legislation of the Minimum Living Standards Security Act

The social turbulence has increased the need to offer assistance to those belonging to the lower social and economic strata – those who suffered the most from the economic downturn but have not been able yet to share fully the benefits of the economic recovery. The previous livelihood protection program, however, provides support to those who are unable to work, such as the handicapped, the elderly and children. Able-bodied persons of working age, in general, are not eligible. Thus, the livelihood protection program is not intended for the unemployed, who by definition are capable of working. This strict restriction on eligibility for livelihood assistance inevitably resulted in the blind spot in the social safety net. Although the temporary livelihood assistance programs were provided to the unemployed, there were still many poor unemployed who could receive neither unemployment benefits nor social assistance. In addition, as the average unemployment duration gets longer, there arises the growing need to transform temporary programs designed to counter recent unemployment problems into more permanent ones.

In this context, the Minimum Living Standards Security Act (MLSSA) was legislated in August 1999 in response to social demand for reform of the former Livelihood Protection Act. Passage of the reform act marked a transformation in the direction of welfare policies from a policy of simple giving of alms, as provided by the Livelihood Protection Act, to a policy stressing national responsibility based on the rights of welfare recipients. Starting from October 2000, the government ensures that basic needs, including food, clothing, housing, education, and healthcare, are met for all people living below minimum living standards. In other words, all households, whose incomes do not meet the minimum cost of living, receive welfare benefits from the government that equal the difference. Housing benefits is also established to elevate housing assistance for the underprivileged. By implementing these benefits, the government seeks to

expand housing welfare policies by introducing minimum housing standards and increasing the supply of public housing.

The MLSSA not only guarantees minimum living standards for all poor people, but simultaneously provides welfare programs linked to labor. These provisions enable people living on low incomes who have the ability to work to become more self-supporting and independent. For example, low-wage earners with the ability to work who receive welfare benefits must also participate in job-training programs or other programs that contribute to the public good, such as public works. Providing these benefits, as an incentive to participate in the labor market, aims at reinforcing the independence of the poor and restoring their desire to work.

MLSSA thereby laid a firm foundation for a more systematic social safety net by encompassing all those who need livelihood protection. With the enforcement of MLSSA on October 1, 2000, coverage guaranteeing subsistence living standards was expanded to 1.5 million beneficiaries (about 3.3 percent of the total population), compared to 0.5 million in 1997. Due to the new program, the budget allocated to livelihood protection increased sharply from 0.9 trillion won in 1997 to 2.7 trillion won in 2001.

Table 4. The Changes in Livelihood Protection Budget for the Poor in Recent Years¹⁾

	1997	1998	1999	2000		2001	2002	2003	2004
Budget (unit: hundred million won)	9,002	10,640	17,467	17,477	5,065 ²⁾	31,499	32,343	33,146	35,358
People to be Protected (unit: thousand)	1,410	1,470	1,920	1,700	1,510	1,510	1,550	1,500	1,500

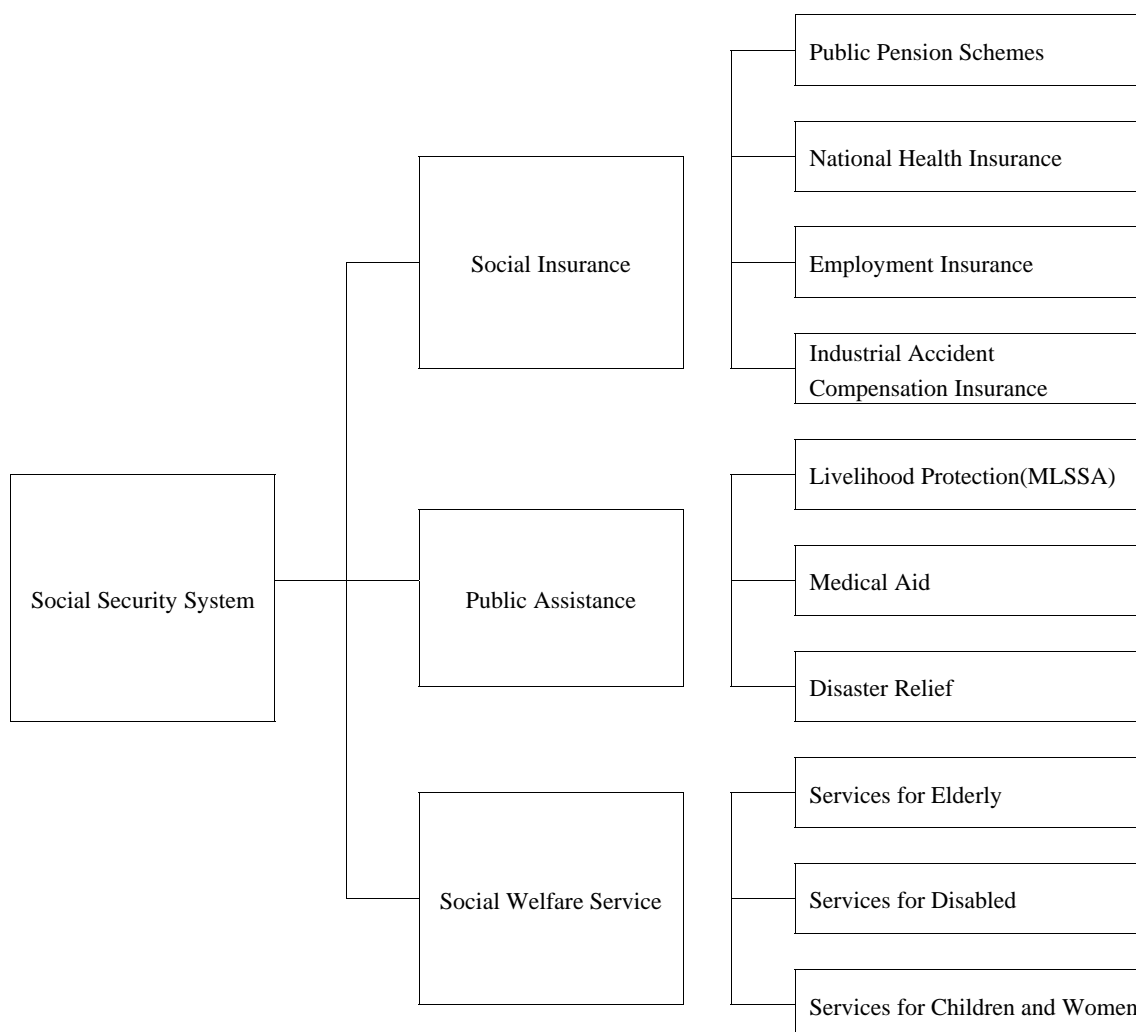
Note: 1) Aggregate total for living expense, housing, education and medical care supplement

2) Actual budget required to execute the MLSSA after October 2000.

2. Future Perspectives

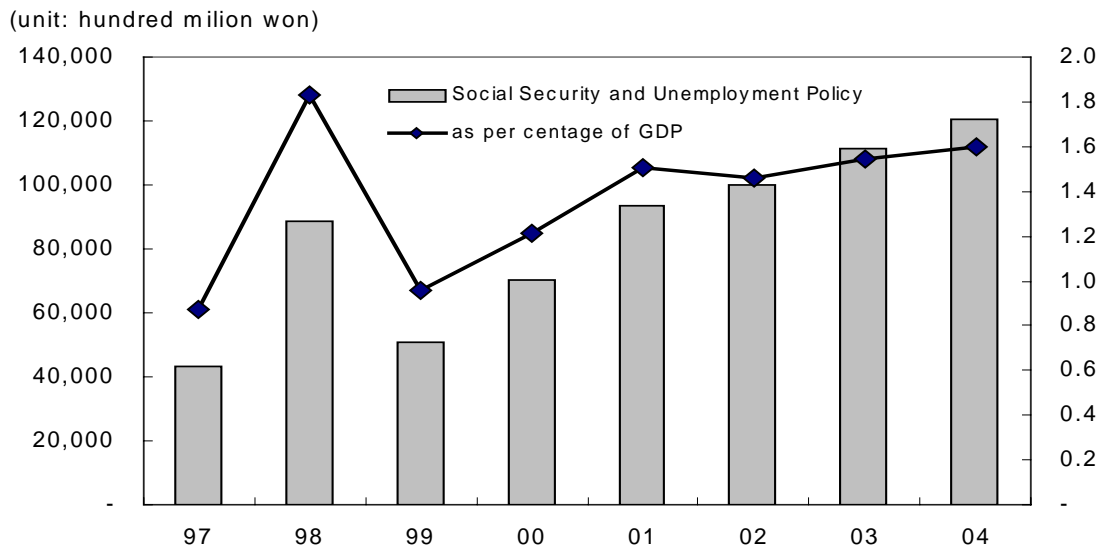
In the course of overcoming the recent financial crisis, it seems Korea has completed the work, which started in the 1960s, which is constructing the social safety net. Foundations for the 4 major social insurance systems regarding old age, health, unemployment, and industrial accidents have been established, and the foundation for the public assistance system designed to guarantee the minimum standard of living for those households below the poverty line was prepared.

Figure 1. Social Security System in Korea



Also various welfare services are continuously expanding for marginalized groups such as the aged, disabled, and the needy children. Thus, the government social expenditure grew rapidly in recent years. (refer to the figure below)

Figure 2. Increasing Tendency of Welfare Budget in Recent Years

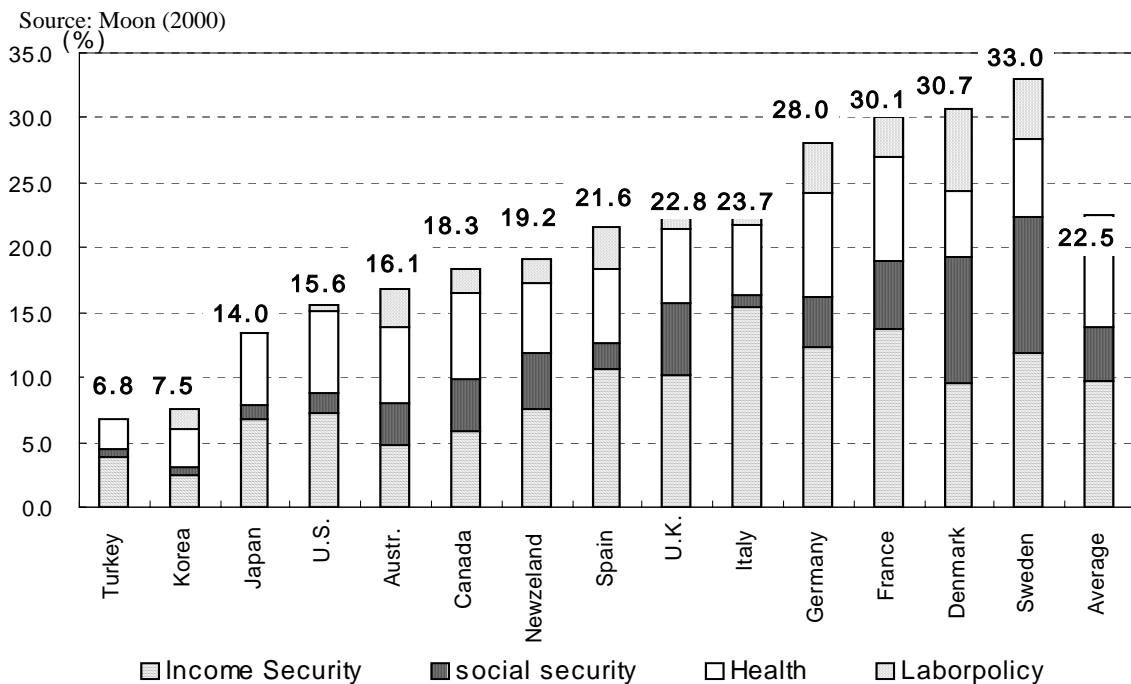


Despite the government efforts to expand social expenditure, the level of welfare expenditure in Korea still remains very low compared to advanced countries. But we should be very careful in making simple crosscut comparison with the welfare expenditure levels of other various countries. When comparing the welfare expenditure amount based on the OECD standard, we learn that the Korea's welfare expenditure level (7.5% of GDP in 1999) is only one third of the average level of the OECD member countries (22%). The welfare expenditure of a country closely depends on the people's income level and the degree of population ageing. Also, the welfare expenditure automatically increases as various social security systems become matured. Thus, when making such an international comparison, we need to appropriately control these socioeconomic and systematic differences. The current income level per capita of Korea is only about half the average level of the OECD member countries and so is the aging level. Moreover, while almost all the advanced countries introduced some sort of social security systems before World War II,

Korea began introducing various systems in earnest during the 1980s. Accordingly, when these socioeconomic differences are taken into consideration, it may be erroneous to simply interpret that the welfare expenditure level of Korea is too low by international standard.

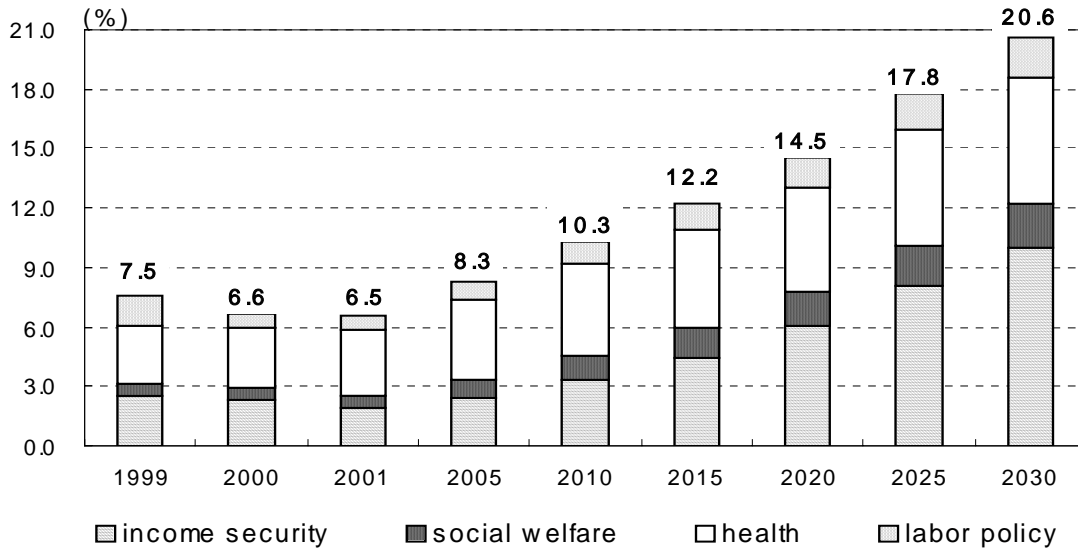
Along with the rapidly growing aging population, the national income level of Korea is gradually increasing as well. Also, various social security systems, which are in their early stages, are maturing rapidly.¹ Due to these changes, the welfare expenditure level is expected to sharply increase during the next thirty years even when we ignores the discretionary increase in social expenditure in the future. In 2020, Korea's social expenditure is expected to take up approximately 15% of GDP and over 20% in 2030. The rapid increase of social expenditure will inevitably demand more taxes and higher insurance premiums from the public.

Figure 3. Social Expenditures : International Comparison



¹ For in stance, the ratio between the numbers of contributors and recipients of the National Pension scheme was as low as 4.5 percent in 2002. However, this ratio is expected to go up to 41.9 percent in 2030, and 103.0 percent in 2060. (National Pension Corporation, 2003)

Figure 4. Outlook of Social Expenditure (2000~2030)



Source: Moon (2001)

In summary, rapid population aging and maturation of various social security programs will create growing pressure to increase social expenditures in the future. Such a trend will accelerate even more due to the recent policy shift toward emphasizing welfare enhancing role of the government. Although the government's financial position still remains relatively healthy compared to the other OECD countries, a continued expansion of social expenditures, both mandatory and discretionary, may hinder sound fiscal management and increase fiscal rigidity. Moreover, the experiences of the advanced countries tell us that it is never an easy task in a democratic society with a voting system to curtail social expenditures when needed. Therefore, to accommodate the rising demand for expanding social expenditures while keeping the total expenditures around an appropriate level, it is necessary to establish strong fiscal discipline across all the budget items, and to initiate reforms in the social security system in order to make it sustainable in an aging society.

III. Reforming the National Pension Schemes

A country's pension system serves as a basic component of its social safety net. The importance of the pension system is more pronounced in Korea than in many other countries due to its fast aging population and increasing costs to support the elderly. The old-age dependency ratio², which currently stands at 10.0 percent, is expected to rise rapidly to 18.9 percent in 2020, and 29.8 percent in 2030 (National Statistical Office). Moreover, the traditional system of old-age support within families is on the decline; and this trend will become more amplified over the next few years. Hence, strengthening public pension schemes and promoting the private pension market is one of the most urgent policy issues that Korea currently faces.

Unfortunately, however, the future of Korean public pension schemes is not bright. All four pension schemes – the national pension, government employees pension, military personnel pension, and private school teachers pension – are likely to face financial troubles in the near future. Korean public pension schemes strongly favor early contributors to the point that their benefits are much higher than their actual contributions. This imbalance between low contributions and high benefits makes the whole system financially weak and vulnerable. The military personnel pension has already been in deficit for several decades and the government employees pension is about to follow suit. The imbalance is also aggravating inter-generational equity, as the government has no choice but to either lower the benefit levels of late contributors or raise their insurance premiums to restore financial stability to the system.

For many years, experts in academia have pointed out the structural weakness and financial instability of public pension schemes and the inefficiency in fund management, and pressed for a fundamental reform of the system. But the discussion often became

² Ratio of persons aged 65 and over to persons aged 15-64.

entangled in political disputes among interested parties and the reform did not materialize. If not properly dealt with now, however, the instability is sure to result in greater economic and social burden. In this section, we will briefly review the current situation of Korea's National Pension scheme along with its problems.

1. Current State and Problems

Structural Imbalance and Financial Vulnerability

The National Pension Scheme (NPS), covering workers in establishments with 10 or more employees, was implemented in 1988. In 1992, the compulsory coverage was expanded to those firms with 5 or more employees. It was expanded further in 1995 to farmers, fishermen, and the self-employed who reside in rural areas and, finally in April 1999, to the self-employed in urban areas. This rapid expansion of coverage resulted in a sharp – about quadruple – increase in the number of participants from 4,433,000 in 1988 to 17,181,778 in 2003. However, 4,554,000 persons, approximately one fourth of the total participants, are exempt from mandatory contribution for various reasons. It would therefore be fair to say that the era of ‘national’ pension has yet to arrive.

Table 5 shows the financial state of the NPS up to 2003. The reserve has been rapidly increasing as coverage expanded and as the contribution rate rose from 3 percent to 9 percent of the payroll. The small number of pension beneficiaries also limited the growth in expenditures. The NPS reserve in 2003 amounted to 132 trillion won, about 21.1 percent of GDP. This increase in the reserve, however, does not guarantee the financial stability of the NPS in the long run. Rather, it merely reflects its early stage of development.

Table 5. Financial Trends of the National Pension Scheme

(in billion won)

Year	Revenues			Expenditures			Accumulated Reserves
	Total	Contributions	Others ¹⁾	Total	Benefits	Admin. costs	
	528.2						
	712.0						527.9
1988	1,019.3	506.9	21.3	0.3	0.3	0	1,233.3
1989	1,279.5	627.9	84.1	6.7	5.7	0.9	2,198.7
1990	1,662.8	834.0	185.3	53.8	42.6	11.2	3,327.5
1991	3,222.7	984.8	294.7	150.7	110.9	39.8	4,750.3
1992	4,341.5	1,223.4	439.4	240.0	216.5	23.5	7,611.8
1993	5,393.5	2,639.4	583.4	361.3	333.1	28.2	11,355.7
1994	6,868.7	3,325.7	1,015.7	597.6	519.1	78.5	15,955.4
1995	8,162.2	3,966.3	1,427.2	793.9	755.5	38.4	21,670.9
1996	11,661.3	4,943.6	1,925.2	1,153.2	1,117.6	35.5	27,900.7
1997	13,509.6	5,675.7	2,486.5	1,932.4	1,499.8	432.5	44,851.9
1998	15,300.5	7,840.7	3,820.6	2,479.0	2,425.5	53.6	58,361.5
1999	16,706.6	9,385.9	4,123.7	3,982.0	3,890.6	91.3	73,662.0
2000	18,176.9	10,358.9	4,941.7	1,677.6	1,588.4	89.2	90,368.6
2001	19,176.9	12,069.0	4,637.7	1,680.8	1,569.3	111.5	109,545.6
2002	20,176.9	13,818.0	5,358.9	2,043.3	1,915.3	128.1	131,515.9
2003	21,970.3	15,610.9	6,359.4	2,475.5	2,328.4	147.0	

Note: 1) Returns on investments and other miscellaneous income.

Source: National Pension Corporation, *National Pension Statistical Yearbook*, various issues.

A correct assessment of the long-run financial stability should be based on the difference between the amount of reserves necessary for all future pension payments and the actual balance held by the Pension Corporation, in other words, the volume of net implicit pension

debt. The net implicit pension debt was estimated to exceed 130 trillion won as of the end of 1998.³

The financial vulnerability of the NPS stems from its structural imbalance. The initial benefit level was initially set at 70 percent of the lifetime average income for persons with 40 years of contribution. This high level of benefit requires contribution rates of 22-24 percent, which are far above the current level of 9 percent. If this imbalance between contributions and benefits remains intact, the annual benefit payments will exceed the annual contributions by the year 2020 and the fund is likely to be exhausted around 2031 (National Pension Reform Board, 1997). To remedy this structural problem, the National Pension Reform Board was formed in 1997. Its members included government officials and private representatives. Partly following their advice, the government amended the National Pension Act in 1998. The average income replacement rate was reduced from 70 percent to 60 percent and the minimum pensionable age was set to increase gradually from 60 to 65. The contribution rate (currently 9 percent) will be adjusted every five years from 2010 on to narrow the gap between contributions and payments.

This parametric reform is expected to help restore the financial sustainability of the NPS in the long run. The National Pension Reform Board estimated that the ratio of the reserves to the annual expenditure would be 9.9 in 2040, 8.8 in 2050 and 8.7 in 2080 (Table 6). But these estimates are based on the assumption that the future contribution rate will be gradually raised upward to reach 19.1 percent in 2025. If the current contribution rate of 9 percent is sustained, the fund is expected to be exhausted by 2040. Raising the contribution rate by more than twice the current level is sure to face resistance from contributors. It may also yield negative effects on employment and productivity growth. Thus, it seems necessary to reconsider the option of reducing the benefit level further as proposed by the National Pension Reform Board.

³ The estimated volume of net implicit pension debt ranges from 130 trillion won by KDI(2004) to 30 percent of GDP by the World Bank (1999, p.25).

Table 6. Financial Prospects of the National Pension Scheme

(in trillion won, at 1995 constant prices)

Year	Reserves	Revenues	Expenditures	Reserve ratio ¹⁾ (- fold)	Dependency ratio ²⁾ (%)
1998	38.5	11.9	0.7	54.0	1.7
2000	66.8	16.7	1.4	44.8	3.0
2010	295.6	46.6	11.3	26.1	13.4
2020	758.5	106.2	42.2	17.9	23.8
2030	1,439.9	179.4	111.3	12.9	35.4
2040	1,974.2	240.6	199.0	9.9	43.6
2050	2,332.9	298.8	265.2	8.8	44.1
2060	2,810.4	371.1	316.0	8.9	10.8
2070	3,419.2	458.5	391.1	8.7	41.3
2080	4,204.0	574.0	483.1	8.7	41.1

Note: This table assumes that the average income replacement rate is maintained at 60% and that the contribution rate will be adjusted to keep the NPS in balance (contribution rates: 11.55% in 2010, 14.10% in 2015, 16.60% in 2020, and 19.10% in 2025).

1) Reserve ratio: the ratio of reserves to total expenditures.

2) Dependency ratio: the ratio of the number of pensioners to that of contributors.

Source: National Pension Reform Board (1997).

Hasty Coverage Expansion

As explained earlier, the NPS expanded its coverage in 1999 to include workers in urban areas. This sudden expansion, with insufficient preparation, left many poor, self-employed and low-income workers outside the pension system. In addition, the horizontal equity between employees and the self-employed was not properly assured due to the technical difficulty in assessing the latter group's correct income level. Incorrect assessment distorts the income redistribution among participants in the NPS. For the period of February-April 1999, the average monthly income of 4,025 self-employed persons in urban areas as reported to the authorities was 842,000 won, which was less than 60 percent of the average income of employees (1,420,000 won). It is clear that most of the self-employed

did not declare their incomes honestly. The amount of pension benefits for incumbent pensioners declined because part of it depends on the average income of all participants.⁴ Consequently, many pensioners expressed their discontent.

The Ministry of Health and Welfare (MOHW) has since increased efforts for correct income assessment. As a result, the average reported income of the self-employed in urban areas gradually increased from 842,000 to 956,000 won by the end of 1999. But their income still remains less than 70 percent of the average income of employees (Table 7). It is also far below the benchmark level suggested by MOHW (Kim, Jin-Soo, 1999).

Table 7. Average Income of Participants in the NPS by Type (1999)

(in thousand won, thousand persons)

	Total	Employees ¹⁾	Other Participants						
			Rural Areas	Urban Areas ²⁾	Type	Type	Type	Type	Type
Number of Persons	10,536	5,226	1,395	3,914	615	831	1,225	606	637
Average Income	1,130	1,386	659	956	1,406	988	838	917	747

Note: 1) Employees in workplaces with 5 or more employees.

2) : High-income self-employed : Middle-income self-employed : Poor self-employed : Employees in workplaces with 4 or less employees : Temporary and daily workers

Source: Ministry of Health and Welfare.

⁴ The decline in the average income of all participants in 1999 (11.1%) was due to the decline in real income due to the economic crisis (4.0%) as well as the adverse effect of the expansion of coverage to those in urban areas (7.1%). The Ministry of Health and Welfare responded by raising \bar{w} (Table 8) in 1999 (1,130,250 won) to the level in 1998 (1,271,595 won) (MOHW, 2000 *National Pension Payment Adjustment (Draft)*). However, this provisional response cannot solve the distortion in income redistribution.

The situation is unlikely to improve within a short period of time because of the deficiency in income assessment mechanisms. The incentives for the self-employed to underreport their income may even increase when the contribution rate rises gradually from 3 percent to 9 percent of earnings. Sharing information with the National Tax Service will be of some help, but the latter's income assessment tools are limited as well. In addition, the increase in irregular employment due to the enhanced flexibility of the labor market will also complicate the task.

Therefore, a structural reform with a long-term perspective is called for. Some people suggest that the self-employed be separated from the employees and that each pension fund be managed independently. But this cannot be a fundamental solution either. The problem lies in the regressive distribution between honest declarers and the dishonest ones, not between the employees and the self-employed.

Furthermore, many low-income, self-employed persons and temporary and daily workers are left out of the NPS. As seen in Table 10, 4,638 thousand persons, or 54 percent of the 8,624 thousand participants in urban areas, are currently exempt from compulsory contribution. Among these, 3,468,000 are too poor to pay the insurance premium. Many of them will remain excluded from the system or their benefit level will be considerably low due to their relatively short periods of contribution. If this issue is not properly dealt with in the near future, the social safety net under the NPS, excluding those with the greatest need for old-age income security, would be meaningless.

**Table 8. Current State of Participation in the NPS
(as of February 2000)**

(in thousand persons)

	Participants	Persons exempt from contribution	Not applicable ¹⁾	Unable to contribute ²⁾
Workplaces	5,308	-	-	-
Urban	8,624	4,638	1,170	3,468
Rural	2,081	682	171	511
Total	16,230	5,320	1,341	3,979

Note: 1) Those who are excluded from the scheme because they cannot pay the premium, including students and those who joined the military service.

2) Those who defer paying the premium for temporary reasons, including unemployment and business failures.

Source: Lee, S.S., 2000.

Inappropriate Levels of Contribution and Benefit

Despite the 1998 amendments, the income replacement rate remains at 60 percent for those with 40-year contributions.⁵ This level is substantially high in comparison with 41 percent in the US, 40 percent in the UK, 50 percent in France, and 40 percent in Canada. The severance payment, when added to the pension benefits, increases the total replacement rate up to 80 percent.⁶ On the other hand, the appropriate post-retirement income is estimated to be 55-70 percent of the pre-retirement income if the retiree is to maintain comparable living standards (Schmitt, 1985).

Reducing the severance payments and converting part of them into pension benefits would be a good way to lessen the duplication of two schemes and to lower the replacement rate to an adequate level. In fact, partial merging of two schemes was planned when the NPS was introduced in 1988, but the plan was discarded unilaterally by the government in the 1998 amendments without sufficient discussion. Merging the NPS with the severance payment system would also make it possible to restrain the growth in labor costs. The NPS contribution is regressive in nature because there are ceilings on the contribution base. It therefore has stronger effects on low-income workers' job opportunities. In many OECD members with relatively inflexible labor markets, the large social security costs are regarded as one of the major causes of the high unemployment rate, in particular amongst low-income, unskilled workers (OECD, 1997).

This non-wage labor cost issue also is emerging as a major point of contention in Korea, where various kinds of social insurance schemes have been recently introduced and

⁵ The ratio is even higher for low-income workers at over 90%.

⁶ If the mandated severance payments are converted into corporate pension schemes, the income replacement rate reaches around 20 percent for those who have continuously worked at least 30 years (Moon, 1999).

expanded. The total contribution rate is approximately 15 percent and the part paid by employers is over 7 percent, similar to the levels in other OECD members. When the cost of corporate severance payment schemes are taken into account (at around 8.3 percent of monthly wages), the employers' burden exceeds 15 percent. It will increase further due to the imminent rise in medical insurance premiums and the more than twofold growth of the NPS contribution rate that is expected over next 25 years. The increased labor cost is likely to serve as a disincentive for employers to hire workers, resulting in a higher unemployment rate.

2. Restructuring the National Pension Scheme

The financial vulnerability of the NPS, the administrative difficulties in assessing the incomes of the self-employed, and a large number of poor people left outside the system requires a more radical and structural – rather than parametric – reform of the NPS. To address the issue, the government established the National Pension Reform Board, consisting of more than thirty experts from both the public and private sectors, under the Social Security Council in June 1996. After quite a few rounds of debates, they proposed a comprehensive reform plan in June 1997.

According to the plan, the lump-sum part and the earnings-related part of the current scheme will be separated from each other and a two-layered system consisting of the basic pension (first layer) and the earnings-related pension (second layer) will be set up. Every Korean national over 18 years of age will be covered by the basic pension plan, leaving no one outside the National Pension Scheme. The amount of the basic pension benefit will be fixed across individuals regardless of one's earnings history and it will be just enough to cover the minimum cost of living. Part of, or the entire revenue for the basic pension, will come from general taxation, which will mitigate the problem of false income reports.

The earnings-related pension will be managed separately from the basic pension in a fully funded system. This characteristic will help secure the financial stability of the scheme and will reduce the intergenerational transfer from the young to the old. In addition, it will allow those who have corporate pension plans with comparable benefit levels to opt out from the earnings-related pension, thereby promoting the private pension market.

Moreover, when reunification finally arrives on the Korean peninsula, the basic pension plan may be quickly expanded to include North Koreans while the earnings-related part is expanded gradually.

Box . Structural Reform Proposals by the National Pension Reform Board (1997)

A. The Basic Structure of the New Scheme

The existing scheme should be changed into a two-layered system consisting of a Basic Pension and an Earnings-Related Pension.

- Basic Pension (BP): Every citizen aged between 18 and 60 should be covered by the BP and provided with a defined benefit covering the minimum cost of living. The amount of benefit may depend on the length of contribution. The participant unit may be either individuals or households.
- Earnings-Related Pension (ERP): Only the income-earners will be covered by the ERP. The ERP contributions and benefits will be kept actuarially balanced at all times.

B. Income Redistribution in the New Scheme

The Basic Pension as a definite benefit scheme will contribute to income redistribution. The degree of income redistribution in the current NPS is considered too high and should be reduced to an appropriate level in the new scheme.

C. Revenue Sources

- BP: Part of or the entire premium should be generated from general taxation to overcome the difficulties in income assessment. The current partial funding system should be maintained. The government may set aside a fixed portion of the national tax revenue for the Scheme, or raise the VAT rate and transfer the extra revenue to the Scheme.
- ERP: The current system of earnings-related proportional contribution should be maintained. ERP should be fully funded and actuarially balanced. The management of ERP Fund shall be based on the principle of profitability.

These recommendations by the National Pension Reform Board were not properly reflected in the amendment in 1998 due to the opposition by the Ministry of Health and Welfare. It is obvious, however, that the more pensioners there are, the greater will be the resistance from vested interests and the less likely will be the reform to succeed. Based on

the recommendations of the Board, a reform at a relatively early stage of the scheme is strongly called for.

IV. Future Tasks

1. Measures to Counter Aging Population

In Korea, the ratio of people over 65 years of age accounts for 7.9% of the whole population as of 2002, which means Korea has begun the inevitable trend in moving toward an “Aging Society.” In the year 2019, the ratio is forecasted to reach 14.4%. For an aging society (7%) to become an aged society (14%), for example, it took 115 years for France and 71 years for the United States., Japan, which recorded the fastest rate with 24 years has become second to Korea with the estimated record of 19 years. This remarkable rate is realized due to expanded life expectancy and rapid decrease in birth rate. Unlike the advanced countries that prepared for such phenomenon as the aging population over a long period of time, Korea is at the most urgent state to accommodate for her aging society.

The rapid aging society phenomenon warns Korea with prominent signs, which were never faced previously such as a demand for welfare expansion including medical care and income security for the elderly. In Korea, with such short amount of time to prepare for the Aged Society, expansion of welfare for the elderly is urgently needed as the society moves toward the Aged Population. In particular, a variety of advanced welfare services must be developed in line with the improvement of the national income level.

Since changes in the socioeconomic structure resulting from aging basically occur from the decrease in the working population, the most basic countermeasure is to induce as much labor power as possible to create a larger economically active population that will stay in employment on a longer term basis. In order to produce this effect, factors that hinder early retirement must be eliminated and reforms in the social security system must be steered toward this end. The retirement age must be raised and such measures that give greater pension for those who delay retirement must be enforced. Moreover, any incentives to encourage long-term employment should be sought such as no restriction on salary and

lighter tax on retirement pensions. When promoting these policies, employment opportunities for the aged should be also created in parallel. And other measures are as follows:

- Development of vocational training programs for the aged to improve their ability, and upward adjustment of retirement age
- Improvement of the employment promotion system for the aged so that they can be paid accordingly to their productivity
- Enhancement of job placement plans and administration functions through the establishment of a nationwide labor bank for the aged

As aging population grows, so do the medical treatment expenses for the aged. Thus, alleviating the burden of medical treatment expenses for the aged is an important issue. Because home treatment systems are not yet widely available, long-term treatment services in hospitals are the only available care for the elderly. However, these hospital services impose a heavy burden financially. Therefore, professional manpower capable of providing affordable home treatment services needs to be nurtured and efficiently utilized.

2. Enhancing the Efficiency of Social Safety Net

In order for an economy to maintain sustained growth, it not only requires the establishment of a productive social welfare system but also a system that is self-sufficient. Establishment of a system that is self-supporting and regenerating through education, employment, and health is a must. In addition, the system must also protect those marginalized groups whether regeneration is possible or not. Sustainable social welfare system is a prerequisite for continuous growth of the economy. Unless the operation cost of social welfare systems stays within the affordable limit of a society, sustainable social welfare systems will be threatened. Therefore, an appropriate balance between welfare benefits and welfare burdens is necessary for the sustainable social welfare system.

In preparation for the future in which welfare expenditure will rapidly increase, future welfare policies will need to focus on balanced development and quality improvement of each welfare system rather than on quantitative expansion of welfare expenditure. To do so, readjustment of excessive income level after retirement, enhancement of the system linking public assistance with labor, prevention of moral hazard in social insurance, and quality improvement efforts for increasing the productivity of various welfare systems are urgently needed.

First, the government should increase its efforts to construct effective monitoring systems including reliable and relevant data collection. Given the limited fiscal resources, particularly at the time of declining tax revenue and increasing need for government spending on economic restructuring and unemployment policy, targeting the real poor is the most cost-effective way to deal with social turbulence. Effective targeting requires an effective monitoring system in the implementation stage. Unfortunately, Korea experienced somewhat of a failure in implementing specific-group targeting strategies. For example, public work programs are targeted for the poor unemployed. But the lack of reliable data on individual income and poor monitoring of job search activities prevented the program from serving its purposes. Establishment of an efficient social delivery system and information system including the database of the unemployed and the poor are key pieces of infrastructure for providing various target-specific services.

Second, with the rapid expansion of social safety nets, it has become more important that the benefit programs be designed carefully so as not to discourage recipients from labor force participation. For instance, overly generous unemployment benefits and assistance that are not properly linked to work efforts can cause serious work disincentive by reducing the difference between net incomes of the employed and the unemployed. To prevent such problems, the unemployment insurance scheme needs to be designed in such a way that job seeking efforts made by the unemployed can be verified accurately when providing unemployment benefits, and the linkages between employment and vocational training should be strengthened in a bid to prevent them from losing their will to work and from abusing the system. As for livelihood protection programs, the government should evaluate carefully the self-support efforts of the recipients to remove their psychological

dependence on social protection.

Third, for more effective implementation, the government should try to provide more diversified training programs geared toward promising jobs and develop more efficient monitoring and incentive systems for the training institutions. Manpower training should be tailored to meet industrial needs. For example, support should be reinforced to stimulate customized training carried out by agreements between enterprises and training institutions. To improve the quality of service of training institutions, a performance-analysis system for vocational training should be established and competition between institutions should be strengthened so that only well-performing training institutions can thrive.

Lastly, with the enforcement of the MLSSA in October 2000, the new social assistance program is provided for those whose incomes are below the poverty line in a way that the government compensates for the difference between their actual incomes and the minimum cost of living. To implement this new minimum living standards security program, the government needs not only to conduct a means test (prior assessment of property and income) but also strengthen post-management by identifying any changes in the employment and income levels of the recipients. However, the means-testing process is very difficult and often requires more rigorous efforts than a tax audit, since a means-tested program is vulnerable to deception. That is, people may have incentive to understate their income level with the purpose of getting more assistance from the government. If this kind of manipulation is prevalent due to lack of ability to screen out over-claims from the government, public funds can be misallocated and people experiencing more difficulties may ultimately be excluded from benefits receipt. Therefore, it can be said that successful implementation of the new program depends on the accuracy of means-testing. An urgent task of the government is that the databases related to the poor and the unemployed are constructed and the profiling system be expanded to make the new program more effective.

3. Reforming the National Pension Scheme

The NPS is urgently in need of repair. Its financial stability is not yet guaranteed despite the amendment of the National Pension Act in 1998. Hence, more drastic measures are needed to reduce the benefit level. The National Pension Reform Board recommended that the government lower the replacement rate from 70 percent to 40 percent with a 40-year contribution and a fixed contribution rate of 12 percent. The recommendation, however, was not accepted by the government.

Experts in academia have often criticized the structural weakness and financial vulnerability of public pension schemes as well as the inefficient fund management. Nevertheless, necessary reform measures were not implemented because various parties with differing interests could not reach an agreement. If these problems remain unresolved, they will surely impose great economic and social burdens in the future

The current NPS has three basic problems: financial instability stemming from the imbalance between benefits and contributions; lack of coverage for the majority of poor people; and difficulty of assessing the incomes of the self-employed. To solve these problems, a radical restructuring is called for. The two-layered system proposed by the National Pension Reform Board in 1997, but not accepted by the authorities, must be given serious reconsideration. The tax-based basic pension, the first layer of the proposed scheme, would solve the second and third problems indicated above. Meanwhile, the fully funded earnings-related pension (the second layer) would improve the financial viability of the NPS and solve the first problem. In moving toward the new scheme, the combined income replacement rate of the NPS and the retirement allowance scheme should be adjusted downward as its current level is deemed too high.

References

(In Korean)

Bang, Ha-Nam, *Study of Korean Corporations' Retirement Allowance Schemes*, Korea Labor Institute, 1998.

Government Employees Pension Corporation, *Corporate Pension Schemes in Other Countries: Recent Trends and Development*, 1997.

Kim Hyun-Kook, *Current Status of the Private School Teachers Pension Scheme*, mimeo, 1999.

Kim, Ji-Hoon, "Financial Analysis of Government Employees' and Private School Teachers' Pension Schemes," *Social Security Studies*, Vol.15, No.2, 1999.

Kim, Jin-Soo, "Evaluation of the National Pension Coverage Expansion to the Urban Area," Paper presented at a Public Discussion Seminar organized by the Citizen's Coalition for Economic Justice, April 2000.

Kim, Yong-Ha, "Study on Public Pension Debts and Financial Stability," *Social Security Studies*, Vol.15, No.2, 1999.

_____, "Reform Proposals for Korea's Legal Retirement Allowance System," Subcommittee on Industrial Relations Discussion Paper, Tripartite Committee, January 2000.

Kong, Byoung-Ho and Oh-Seong Kwon, "Let's Privatize the National Pension Scheme!" Paper presented at the 5th Liberalism Workshop organized by the Center for Free Enterprise, 1998.

Korea Stock and Economic Research Institute, *Introduction and Management of the Corporate Pension System*, Working Paper 97-4, 1997.

Lee, Sang-Seok, "Evaluation of the National Pension Coverage Expansion to the Urban

Area and Future Directions,” Paper presented at a Public Discussion Seminar organized by the Citizen’s Coalition for Economic Justice, April 2000.

Moon, Hyung-Pyo, *Reform Proposals for Financial Stabilization of the National Pension Scheme*, Working Paper 95-07, Korea Development Institute, 1005.

_____, “Public Pension Reform for Income Security,” Paper presented at a Seminar organized by Minsan Political Research Institute, 1995.

_____, “The Current State and Future Development of the Korean Pension System,” Working Paper 99-21, Korea Development Institute, 1999.

_____, “Social Expenditures in Korea,” in 2000, *National Budget and Policy Issues*, KDI, 2001(in Korean)

Moon, Hyung-Pyo, Y. Kim, G. Yoo, and J. Bae, *Reform Proposals for the Government Employees’ Pension Scheme*, Korea Development Institute, 1999.

National Pension Reform Board, *National Pension Reform Providing for the Coverage Expansion to the Entire Population*, December 1997.

National Pension Research Center, *Overseas Pension Schemes Trends (V)*, Study Paper 2000-26, 1000.

Whang, S., and J. Lee, *The Problems of Income Distribution and Related Policy Issues in Korea*, KDI, 1997.

Yoon, Seok-Myung, “Problems and Reform Directions of Public Pension Schemes,” Paper presented at a Study Workshop organized by the Korean Society of Public Finance, April 2000.

Yoon, Seok-Myung, Won-Sik Kim, and Sang-Hyun Park, *Balanced Development of Public and Private Pension Schemes*, Korea Institute for Health and Social Affairs, 1999.

(In English)

Adelman, I., "Social Development in Korea," in D.Cha, K.Kim, and D.Perkins, eds.,
The Korean Economy 1945-95: Performance and Vision for the 21st Century,
KDI Press. 1997.

Auerbach, Alan and Lawrence Kotlikoff, *Dynamic Fiscal Policy*, New York: Cambridge
University Press, 1987.

The British Government, "State, Occupational and Personal Pension Arrangements."

Boskin, J.J., L.J. Kotlikoff, D.J. Puffert, and J.B. Shoven, "Social Security: A Financial
Appraisal Across and Within Generations," *National Tax Journal*, 40(1), 1987,
pp.10-34.

Choo, H., "Income Distribution and Distributive Equity in Korea," in L. Krause and F.
Park, eds., *Social Issues in Korea*, KDI, 1992.

Feldstein, M. and A. Samwick, "Social Security Rules and Marginal Tax Rates,"
National Tax Journal, 45, 1992, pp.1-22.

Gillion, Colin, "The Development and Reform of Social Security Pension: The
Approach of the International Labour Office," *International Social Security
Review*, Vol.53, Jan. 2000, pp.35-64.

Holzman, Robert, "The World Bank Approach to Pension Reform," *International Social
Security Review*, Vol.53, Jan. 2000, pp.11-34.

Mariger, Randall, "Social Security Privatization: What Are the Issues?" *National Tax
Journal*, Vol.LII, No.4, 1999.

McGillivray, Warren, "Pension Reform: Where are we now?" *International Social
Security Review*, Vol.53, Jan. 2000, pp.3-10.

Moon, H., "Growth with Equity: Experience of Korea," in *Growth with Equity: Policy Lessons from the Experiences of Selected Asian Countries*, United Nations ESCAP, 1999.

Moon, H., H. Lee, and G. Yoo, *Economic Crisis and Its Social Consequences*, Research Monograph, KDI, 1999.

Munnell, Alicia, "Reforming Social Security: The Case Against Individual Accounts," *National Tax Journal*, Vol. LII, No.4, 1999.

OECD, *Making Work Pay: Taxation, Benefits, Employment and Unemployment*, 1997.

Schmitt, D.G., "Today's Pension Plans: How Much Do They Pay?" *Monthly Labor Review*, 1985, pp.19-25.

World Bank, *Averting the Old Age Crisis*, Oxford University Press, 1994.

_____, "The Korean Pension System at the Crossroads," draft report, October 1999.