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Implications of Recent Income Distribution Trends on National Pension Reform Discussions

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Implications of Recent Income Distribution Trends on National Pension Reform Discussions

Heesuk Yun, Professor at KDI School

“The maturing of the National Pension scheme has helped improve income distribution recently, but its effect has been limited due to a large coverage gap in the system. Against this backdrop, the focus in pension reform discussions needs to be reset toward enhancing enrollment instead of heightening the replacement ratio.”

Income distribution in Korea has exhibited signs of improvement in recent years. A deterioration in distribution since the early 1990s seemingly lessened after the late 2000s. Still, experts deferred any judgment, not saying whether the trend was temporary or sustainable. Now that the latter has been observed for a considerable period, it is time to find the source of the trend and identify the policy implications.

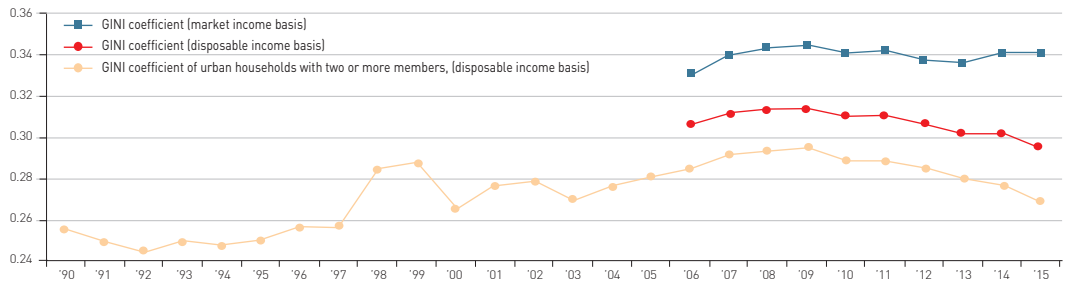
This paper used income data collected on all households, including single-person households, since 2006, when it first became available. Analysis focused on the trajectory of income composition. It found that the National Pension (NP) scheme is much more important than any other income source or government support. It also found that a smaller pension coverage gap and a longer entitlement period are more essential than enhancing the income replacement ratio of pension recipients. More fundamentally, instead of solely focusing on income guarantee from the NP, the government needs to

[Figure 1] Changes in the Poverty Rate



Source: KOSIS (last accessed: Jul. 4, 2016).

[Figure 2] Changes in the GINI Coefficient



Source: KOSIS (last accessed: Jul. 4, 2016).

raise its capacity to offer individuals more choices and guarantees to ensure programs that take into account the labor income of the elderly and private pensions function properly. Thus, a new focus is needed, diverging from previous studies that regard the income replacement ratio of the NP as an essential means to ensure old-age income security and reduce senior poverty.

I. Income Distribution Trend and Contributors to Poverty Reduction

The post-1960s were studied with large-scale economic development projects. The era can be divided into two periods: one with growth and distribution in harmony and the other with distribution worsening. Income distribution was sustained favorably in the high-speed growth period,¹⁾ but turned negative after the early 1990s, influenced by a changing business environment—fast-paced globalization and expanding low-productive services industry (Yun, 2012).

[Figure 1] and [Figure 2] suggest a new era is around the corner. The GINI coefficient and poverty rate, representative indicators of income distribution, have exhibited unequivocal

1) Distribution worsened in the late 1970s. There are opposing viewpoints regarding distribution during the boom that Korea enjoyed, thanks to its “three-low” benefits in the 1980s. Nevertheless, there was overall distribution improvement from the 1960s, when economic development provided more jobs, to the early 1990s (Yun, 2016).

① Growth and distribution in a virtuous cycle after economic development in the 1960s; ② deteriorating distribution after the early 1990s; and ③ signs of improvement in distribution thanks to redistribution in recent years.

<Table 1> Income of Market Income-based Poor Households in Terms of Disposable Income (2015)

(Unit: %)

Age of householder	Market/disposable income-based poverty		Proportion of households	Proportion of households with the following income source					
				Earned income	Market income excl. earned income	Public pension income	Basic pension income	Other social benefits	
Total	Market income-based	Total	26.1	67.0	57.2	38.8	56.4	28.8	
		Disposable income-based	Not in poverty	6.1	75.3	59.4	74.3	45.9	31.7
			In poverty	20.0	64.5	56.5	28.1	59.6	27.9
Aged 65 and over	Market income-based	Total	73.0	60.5	62.0	47.8	79.4	27.8	
		Disposable income-based	Not in poverty	18.3	70.1	62.8	80.6	54.5	28.2
			In poverty	54.7	57.3	61.7	36.8	87.7	27.6

Note: 1) 'Poverty' is defined as households with income below the median (50%) after adjustment for equalization and individualization.

2) Figures under 'Poverty of households with the following income source' were calculated with households in each poverty category on a scale of 100.

Source: 2015 Household Income and Expenditure Survey (Statistics Korea, MDIS, last accessed: Aug. 2, 2016).

<Table 2> Poverty Rate Changes Depending on the Age of Householder (2006-2015)

(Unit: %p, %)

Household type	Proportion of population (%)		Poverty rate (%)		Changes in poverty rate (%p, 2015-2006)	
	2006	2015	2006	2015		
Total	100	100	13.8	13.1	-0.7	
Age of householder	Senior	90.8	84.9	10.0	7.4	-2.6
	Non-senior	9.2	15.1	51.3	45.3	-6.0

Source: 2006 Household Income and Expenditure Survey (Statistics Korea, MDSS), 2015 Household Income and Expenditure Survey (Statistics Korea, MDIS, last accessed: Aug. 2, 2016).

improvement only recently after prolonged sluggishness.

In recent years, the gap has widened between the distribution index based on disposable income (final income after market income plus tax and transfer) and that based on market income. Meanwhile, the disposable income-based poverty rate and GINI coefficient have been declining. Market income distribution has deteriorated less than before, and the final poverty rate and GINI coefficient in post-redistribution have continued to fall.

This paper intends to identify a channel in which redistribution reduces the poverty rate.²⁾ To see which redistribution tool significantly curtails the poverty rate, this paper examined the composition of transfer incomes of households that fall within the poverty threshold in terms of market income but not in terms of disposable income.³⁾

The largest difference in income composition between the two types of impoverished households—one in poverty on a market income basis but not on a disposable income basis and the other in poverty on both—is the presence of public pension income. Of the former—who can escape poverty through redistribution, 74.3% are public pensioners,

Overall, the poverty rate of respective population groups is declining, and the increase in the senior population is largely to blame for the heightening poverty rate.

2) Acknowledging claims that national statistics on the upper income class are problematic (Kim and Kim, 2013), Statistics Korea launched a review to decide whether to revise the Household Income and Expenditure Survey. However, a revision is expected to mainly affect only the GINI coefficient. Since the poverty rate is not significantly affected by statistics on the upper-income class, it is highly unlikely that any revision of statistical methods would influence the trend substantially.

3) Poverty reduction is comprised largely of curtailing the poverty rate—by lowering the proportion of the poor population—and narrowing the poverty gap between the household income and the poverty threshold by reducing the degree of poverty with support to the severely poor. Both are key goals of the anti-poverty policy. This paper focuses on the former. Public assistance such as the basic pension is deemed more effective to resolve severe poverty.

<Table 3> Income Source of Households Escaping Poverty via Redistribution (2006, 2015)

(Unit: 1,000 won, %)

Items of non-market income of households in market income poverty and not in disposable income-based poverty	Changes in household income			
	2006		2015	
	Amount	%	Amount	%
Changes in household income(=disposable income-market income + private transfer)	971	100	1,247	100
Private transfer income	204	21	178	14
Public transfer income	797	82	1,145	92
Public pension	583	60	848	68
Basic old-age pension	0	0	99	8
Social benefits	211	22	198	16
Refund from year-end tax settlement	3	0	0	0
Tax and social insurance premium	-30	-3	-76	-6

Note: Poverty in this table is a relative concept, referring to the income below the median (50%).

Source: 2006 and 2015 Household Income and Expenditure Survey (Statistics Korea, MDIS, last accessed: Aug. 2-24, 2016).

whereas of the latter—who remain in poverty, 28.1% are public pensioners. Among households aged 65 and over, each recorded 80.6% and 36.8%.

What lies beneath the difference is a rapidly rising proportion of elderly households in the poor class. Changes in the total poverty rate can be categorized as inter-group and intra-group proportion changes. In this sense, the large proportion of elderly households in the poor class is the consequence of the rising proportion of elderly households amid the falling poverty rate in respective groups <Table 2>. In other words, the poverty rate of both elderly and non-elderly households declined in 2006-2015, but the reduction was offset by the increased proportion of elderly households whose poverty rate is high. Thus, the total poverty rate exhibited a slight drop.⁴⁾

Combining this with <Table 1> explains the growing importance of public pension entitlement in poverty and income distribution. To identify the contributing role of public pension to poverty reduction, <Table 3> decomposed income changes in households who escaped poverty through redistribution. Public pensions, including the NP, contributed 68% in 2015, up by 8%p from 60% in 2006. When added with the Basic Old-Age Pension and Basic Pension (BP) adopted in 2008, the contribution rose to 16%p from 60% in 2006 to 76% in 2015.

II . Implications of Recent Poverty Rate Changes on the Redistribution Policy

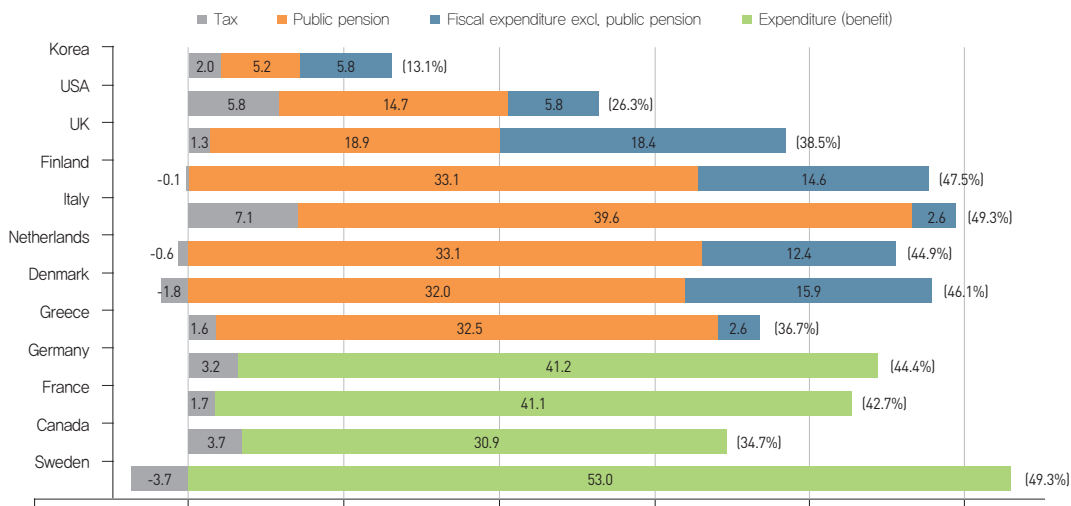
International comparison is a useful tool to gauge whether this trend will persist or how much it will prevail. [Figure 3] displays the decomposition of the function of respective

4) According to the decomposition analysis of contributions of inter- and intra-group proportion to poverty rate changes, with the change in the total poverty rate (-0.7%p) set at 100, the change in the proportion of senior heads of households caused a 432 rise in the total poverty rate while that in the poverty rate of senior heads of households caused a 78 decrease.

The recent reduction in poverty is owing to the maturing of the National Pension.

Public pension benefits 76% of the poverty-escaping households in the redistribution process.

[Figure 3] Income Redistribution Effect of Taxes and Fiscal Expenditure (GINI coefficient basis)



Note: All figures, excluding Korea's, are based on the latest available data. GINI coefficients were calculated in the sequential order of market income, market income-tax, market income-tax + public pension and disposable income. Income redistribution effects were calculated for respective stages. As for countries whose fiscal spending could not be divided into public pension and other categories, calculations were first made in market income, then market income-tax and finally disposable income.

Source: Luxembourg Income Study (LISS, last accessed: Aug. 18-24, 2016); Household Income and Expenditure Survey (MDIS, last accessed: Aug. 2, 2016).

redistribution policy methods that countries have used to reduce market income inequality. In countries with respective data on tax revenue and expenditure and public pension as a component of expenditure, the impact of a public pension to redistribution is overwhelming;⁵⁾ 73.7% (= 33.1/44.9) in the Netherlands and 80.3% (=39.6/49.3) in Italy. The fact that public pensions account for an outsized proportion of redistribution in countries with mature public pensions means the trend would be universal.

However, public pension may be a double-edged sword; the more robust a public pension system is, the less likely people will be enthusiastic about working. Consequently, the inequality in market income is exacerbated. <Table 4> shows the proportion of households with zero earned income. Compared to Korea, other countries exhibit a strikingly high proportion of such households. Among OECD countries, the estimation of the relationship between the income replacement ratio of public pensions and the proportion of households with zero earned income is positive [Figure 4]. Although the proportion or scatter plot of households with zero labor income may provide only limited information, they are useful enough to presume the relationship between the inclusion of Korea's public pension and the proportion of senior heads of households with labor income.

In short, Korea might seem to have a weak redistribution mechanism because its

The main channel for redistribution through tax expenditures is through public pension payments.

5) International comparison of contributions made by each country's redistribution methods has the following implications: ① Tax expenditures contribute far more than tax pension. Thus, discussions of value-added or corporate income taxes should avoid excessive emphasis on redistribution than on securing tax revenue; and ② public pension is an essential means of tax expenditures. The fact that institutionalized redistribution through pensions is larger than discretionary redistribution through general accounts means that much more redistribution has come automatically from a maturing pension system than by government efforts in each period.

<Table 4> Proportion of Households with No Earned Income

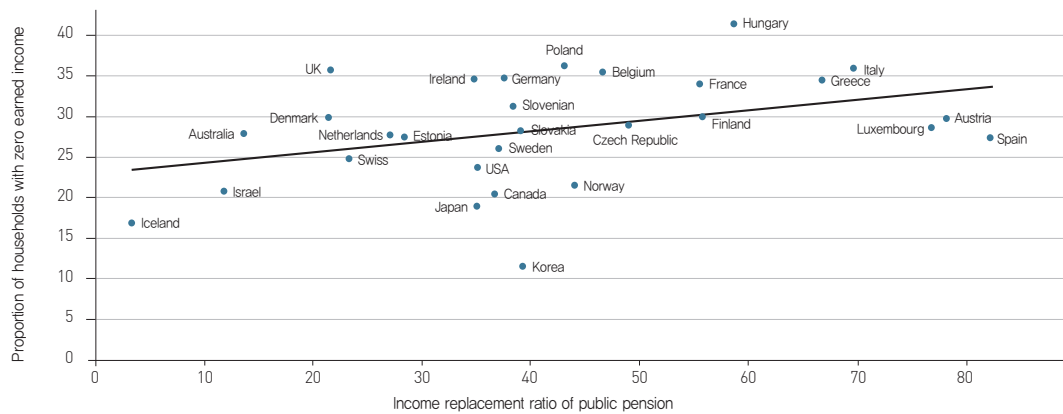
Age of householder	Korea ('15)	UK ('13)	US ('13)	France ('10)	Germany ('10)	Italy ('10)	Netherlands ('10)	Sweden ('05)
Total	11.5	35.6	23.7	33.9	34.7	35.9	27.6	26.0
65 yrs and over	36.3	83.9	65.0	89.3	82.9	82.2	81.9	75.7

(Unit: %)

Note: Residential rental income is categorized as business income in Korea's data (Household Income and Expenditure Survey), and as capital income in the LIS data. Hence, it is excluded from this comparison.

Source: Luxembourg Income Study (LISSY, last accessed: Aug. 23-24, 2016); Household Income and Expenditure Survey (MDIS, last accessed: Aug. 2, 2016).

[Figure 4] Income Replacement Ratio of Public Pensions and Proportion of Households with Zero Earned Income



Note: All figures, excluding Korea's, are based on the latest available data. GINI coefficients were calculated in the sequential order of market income, market income-tax, market income-tax + public pension and disposable income. Income redistribution effects were calculated for respective stages. As for countries whose fiscal spending could not be divided into public pension and other categories, calculations were first made in market income, then market income-tax and finally disposable income.

Source: Luxembourg Income Study (LISSY, last accessed: Aug. 18-24, 2016); Household Income and Expenditure Survey (MDIS, last accessed: Aug. 2, 2016).

contribution to income inequality reduction is low, but its income inequality overall ranks in the middle of OECD countries,⁶⁾ suggesting market income inequality was not high in the first place in Korea. And, this can be confirmed by the fact that the proportion of households with no earned income is low. What these imply is that public pension's function for stronger income security could depress the labor force participation rate and therefore deepen market income inequality. As a result, the role of redistribution may look exaggerated to some extent.

The higher public pension's income replacement ratio rise, the more households with no earned income appear. As a result, market income inequality would worsen and redistribution will seemingly function strongly.

Moreover, the dependence on pension alone is not a desired phenomenon, considering there are more and more healthy seniors with high work ability amid the aging population. This is particularly so, given the fact that each country is experiencing a mounting burden arising from pension payments and advanced countries in the West initiated works to overhaul pension programs in a way that would not undermine the employment possibilities of senior workers.

Korea's public pension has not matured yet, and thus a large proportion of seniors

6) The OECD (2016) places Korea's GINI coefficient (0.302) on a disposable income basis at 18th among 35 member countries, and ranks Korea at the bottom with 0.341 on a market income basis (OECD Income Distribution Database (IDD), last accessed: Aug. 31, 2016).

must continue working. Some are healthy and committed enough to work. Others are not healthy and lack ability but need to stay in the labor market to make a living.⁷⁾ Thus, it would be desirable that the public pension could help able-bodied senior workers supplement their income with their own labor, while also strengthening the system.

III . Implications of Recent Poverty Rate Changes on National Pension Reform

Previous discussions about the income of the elderly have revolved around the income replacement ratio of the NP. When the Government Employees Pension (GEP) scheme underwent revision to avoid criticism caused by the much higher payment than the NP, a plan for a NP hike was announced and then revoked at the last minute. Fixation to the income replacement ratio seems to stem from three myths about the NP. First, its income replacement ratio was established at a low level. Second, increasing the ratio is the best way to reduce elderly poverty. Third, heightening the ratio will not cause any significant side effects to the national economy.

These myths, however, do not stand up to close scrutiny. First, the income replacement ratio of Korea's pension system is not low; the total standard ratio of the BP and NP is approximately 50%, noticeably higher than the average ratio of 41.3% in other OECD countries' public pension (OECD, 2015).

Second, the nominal ratio cannot be linked to the real ratio that shows actual pension payment, unlike in advanced countries. As of December 2014, the real replacement ratio of the standard recipient—who receive benefits from both the NP and BP—is about 25.6%, much lower than 48%, the average of 27 EU countries as of 2010 (Lee et al., 2015).

The gap is due to the fact that the actual enrollment period of the NP is 16 years on average in Korea, much shorter than 36 years in its counterparts in the EU (Lee et al., 2015). A shorter pension enrollment period despite long working years in the labor market probably means long-time employment at a workplace that is outside the NP plan: a large coverage gap in the pension system is what limits the real income replacement ratio.⁸⁾

In other words, increasing the nominal ratio probably would not help achieve Korea's desire for a stronger public pension. What matters more today are the efforts to reduce the pension coverage gap so that the current not-so-low nominal ratio can be linked to the real one.

Besides, among the market income-based poor households in <Table 1>, those who

Fixation to income replacement ratio in pension reform discussions originated from certain myths: ① Korea's income replacement ratio is low, and ② that is mainly responsible for the old-age poverty.

7) According to the data from the 10th Korea Welfare Panel Study (2014), of the population aged 65 and over who said they are able to work, only 44% are engaged in economic activities.

8) As of the end-2014, the NP has 21,130,000 recipients (including 370,000 voluntarily and voluntarily & continuously insured persons). More than 90% of the working-age population (22,878,000) aged 18-60 are under the NP. However, about 27% (5,700,000) of total are excluded from premium payment because they have failed to report their earnings or are long-term delinquents who have reported their earnings but defaulted on premium payments more than a year. This adds up to a large hole in pension plan coverage (Lee et al., 2015).

Households with public pension are 44.6% likely to escape poverty through redistribution, but those without show only a 9.8% likelihood.

receive public pension payments are 44.6% likely to escape the poverty in terms of disposable income, while those without payments are only 9.8% likely. This implies that like other countries, the redistribution in Korea has been strengthened as pension system matures, but its scope has been limited by the large pension coverage gap.

Third, heightening the ratio would not always bring positive effects. If a heightened ratio is not followed by a sufficient increase in the insurance premium, it would dent the financial soundness of the pension. Sustainability of a pension is not an issue that affects its system alone. Instead, against the backdrop of global economic trends, it causes a huge impact on the government's fiscal prudence, capital market, labor market and long-term economic growth.

Since the 1980s, countries around the world have reformed their pensions in various ways: stronger linkage between contribution and payment; more inherent incentives to continue economic activities; more pension reserves; structural reform to weaken the defined benefit so the pension fund will be less affected by changing demographics; and a wider role given to private pensions to reset the boundary between private and public pensions. In short, they have acted to minimize negative ripple effects from their public pension onto their economy.

The government's ultimate role in securing the old-age income is to strengthen the old-age income security system while maintaining the sustainability of the public pension fund. In order to strike a balance between these two seemingly conflicting goals, what comes first is not to increase the nominal income replacement ratio, but to resolve the real bottleneck of the old-age income security issue.

To that end, this paper recommends the provision of pension premium support to the vulnerable group, tighter monitoring and penalty on those who avoid participating in the NP, elimination of labor market discrimination that could discourage work continuation of healthy seniors, more active inclusion of seniors in employment support services, more choices on when to start receiving pension payments and by how much, fewer early cancellation and promotion of annuities and advanced management.

The presence of a coverage gap in its pension system is the main reason of Korea having difficulty in reinforcing a redistribution function.

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[Box] Pension Reform: International Trend and Korea

Advanced countries in the West have strengthened their pension system since the end of World War II. What is most challenging is not the coverage gap in the pension system, but deteriorating fiscal soundness of pensions resulting from population aging. They have counteracted in various ways. They include reducing pension payments by lowering the payment level or delaying the age to begin receiving pension payment, increasing the pension premium, improving the return on investment for their pension fund and structural reform to reduce sources of fiscal deterioration by using all the aforementioned options.

These are common actions taken by countries and in doing so they seem to have used integrated measures while remaining sensitive to the cost of implementation. The basic direction of reform is, of course, intended to resolve the causes of financial erosion of their pension fund in relation to an aging population: ① defined benefit; ② pay-as-you-go system, which makes the current working population support the elderly, instead of using the reserve; and ③ an early age to begin receiving a pension payment, which may undermine the motivation to work.

What has been particularly noticed in advanced countries is that they have tried to develop a solution that suits their own situation, taking into account implementation costs such as resistance from pensioners, instead of initiating a structural transition into a defined contribution or supplied funding in a single stroke.⁹⁾ In other words, their basic tool consists of increasing the premium, cutting the payment, extending the working period and setting up an automatic balance mechanism.

- Sweden, during the 1980s, transitioned into a nominal defined contribution, which combines the existing defined benefit with a defined contribution. The aim of the pension reform was to better absorb any shocks to the financial condition of its pension fund by adjusting the amount of pension payment to the life expectancy of a pensioner.¹⁰⁾

- Canada, Germany and Japan adopted an automatic stabilization mechanism. It adjusts pension payments based on correction coefficients that reflect changes in their demographic structure and labor market. This intends to absorb macro

9) Early adopters of public pension started a funded pension system in the beginning. Then they inevitably shifted into a pay-as-you-go system because the real value of fund reserves depreciated and pension payments increased after two world wars. This pay-as-you-go system seemed to work properly while they enjoyed high economic growth and their large working population supplemented pension payments to the senior population. However, their ballooning aging population caused a rapid rise in pension payments and aggravated intergenerational equity problems, consequently heightening the necessity for a funded pension system.

10) Contributions are saved in individual's virtual account which would have a virtual interest rate determined by the government taking into account the annual economic growth rate. Pension payments for individuals are the total savings divided by the life expectancy at the time of retirement. Even after the first payment is delivered, the pension system is constructed to move in sync with economic growth rate and inflation, meaning that when the real growth rate is lower than its potential, pension payment will not rise to the inflation level, resulting in a decrease in real value.

[Box] Pension Reform: International Trend and Korea

risks while bypassing political friction in reform process. Finland and Norway linked pension payments to life expectancy (Kim, 2015).

- Denmark, Portugal and the UK raised the eligibility age for first pension payment. This option has been increasingly popular as a significant alternative that could impede a rise in fiscal costs resulting from rising life expectancy. Thus, the average age of first pension repayment is on the rise in OECD countries (Kim, 2015).

- Korea's NP is constructed with unstable partial funding system, which could be overseen in a stable manner only in its early years. The structure, consisting of low contributions and high payment, will be soon come under severe fiscal pressure once pension payments reach full scale. In addition, its defined benefit method will most likely produce a huge burden as population aging proceeds. Nevertheless, Korea lacks proper instruments that could ease the burden.