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Evaluation Criteria for Pension System and Their Applications to Pension Reform in Japan

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Presented to the PBSS Program Part of the IACA, PBSS & IAAust Colloquium
31 October – 5 November 2004

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Abstract

This paper examines the criteria for evaluating social security pension systems, and applications whose criteria to the Japanese Pension Reform Bill 2004 are relevant. The evaluation criteria of pension reforms are indispensable tools to consider whether the pension reform proposed is desirable or not. However, there has been little discussion which criteria should be adopted to judge proper reform in Japan.

Points to consider;

1. To examine pension reform criteria respectively by historically changing factors or leaving unchanged.
2. To apply the criteria to the current system and the new system in terms of both ideas and quantity. Moreover to examine tentative application of the criteria to some developed countries.

This paper intends to show one possibility for evaluating pension reform, and this criteria might be applied to other developed countries.

1. Introduction

This paper examines criteria for evaluating a social security pension system, and applications to those criteria for the Japanese Pension Reform Bill 2004.

In the process of Pension Reform, especially before the Bill 2004 was submitted to the Diet on 10 February 2004, various opinions and the proposals on pension reform were made from government, political parties, the employer organizations, labor unions, and other groups. Generally speaking, whether proposed social system reform is considered desirable or not, depends on evaluation criteria/standards.^(Note 1) Therefore, the argument which clarified the criteria of evaluation is required for evaluating a social system. However, such criteria for an argument have little been discussed in Japan.^(Note 2)

In many developed countries, although pension reforms have been made or examined in accordance with demographic change and slowdown of economic growth at the end of the 20th century, the best choice for developed countries has not yet been found. Some people say whether the right and wrong of the pension system in each country depends on their historical background, present condition, etc., and cannot be discussed generally. However, examining criteria for pension systems to discuss more generally and applying those criteria to pension reform plans would be one of the methods of finding out a more desirable choice. And it also would make the discussion on pension reform clearer.

2. Preceding Researches

There are the following arguments on the criteria for pension system.

(1) United States: 1994-1996 Advisory Council on Social Security

President Clinton's social security advisory committee (1994-1996 Advisory Council on Social Security) adopted six criteria as follows in the United States.

- 1) Adequacy of retirement income, relative to poverty thresholds and household's pre-retirement income;
- 2) Insurance against unforeseen income fluctuations (such as those caused by disability, the death of an earner, unanticipated early retirement or unexpected longevity);
- 3) Avoidance of market inefficiencies;
- 4) Equity of lifetime Social Security taxes and benefits, both between and within generations;
- 5) Encouragement of private and aggregate national savings; and
- 6) Strengthening the financial integrity of the nation's retirement income systems.

Six criteria cover two sides, namely evaluation for pension system itself and influence on macro-and micro-economy.

Moreover, the Bush Administration dealt with the financial sustainability as one of the criteria in the report 'Strengthening Social Security and Creating Personal Wealth for All Americans' announced in December, 2001.

(2) Italy: Department of Finance (2000)

Italian Department of Finance suggested five criteria for public service pensions' framework.

- 1) Adequacy and comprehensiveness;

- 2) Viability;
- 3) Flexibility;
- 4) Fairness; and
- 5) Cost.

The criteria covers only evaluation of the pension system itself, and does not deal with the influence on the economy etc. Considering social influence is also required for criteria, the criteria may be indicated to incline toward pension system itself.

(3) United Kingdom: E Philip Davis (2003)

Professor Davis, Brunel University, mentioned four criteria for a sound pension system.

- 1) Retirement income security;
- 2) Financing issues - sustainability;
- 3) Effects on labour markets; and
- 4) Effects on capital markets.

Professor Davis's criteria deal with two sides, evaluation for pension system itself and influence on economy. Moreover, the criteria deal with "social adequacy" only, and do not treat "individual equity" which is another antithetical target of a social security pension system. UK Social Security system treats "social adequacy" - element to expand applicable people to the grant of a lower earner, such as 'Pension Credit'. On the other hand, UK private pension schemes pay the role of "individual equity" - element through 'Contract-Out system' or 'Stakeholder Pension system'. If we interpret UK systems above, we could understand why Professor Davis did not deal with "individual equity" in his criteria.

In Japan, there is little discussion that dealt with criteria for pension system directly. On the other hand, the purposes of a pension reform are shown in the Pension Reform Act 2004. Although the purposes are not necessarily criteria for a pension system, the purposes itself can be interpreted as criteria, in that, what purposes are attained leads to evaluation.

(4) Japan: Pension Reform Act 2004

The purposes of Pension Reform Act 2004 are as follows.

- 1) Establishment of a sustainable pension system which harmonizes with society and economy, and reliance to the pension system; and
- 2) Construction of the system corresponding to various lifestyle/work-style in order that individuals will be able to fully utilize their abilities.

Historically, the purposes of pension reform in Japan had been strongly focused for the system itself. For example, it was relief and prevention of the poor at a foundation term (till 1961), increasing pension benefit amounts at rapid economic growth term (from 1962 to 1986), and rationalization of benefit levels (decreasing benefit levels correspond to aging society) at low economic growth term (from 1975 to 1986). After 1986, it has focused on sustainability and liability for a social security pension system.

However, in this revision, influence on society (construction of the system corresponding to various lifestyle/work-style, women and pension, etc.) as well as pension system itself cover as purposes of reform. Since the targets of a social security system and how concern is paid differ in era, relief/prevention poor term and now the system covers the general public, purposes/criteria would also differ.

From above example of criteria for pension system, the first priority is adequacy of benefit and the second is sustainability for the system. Those two criteria seem to be indispensable for the criteria. Influence on economy and employment, though expression differs, is often dealt with. And adopted criteria are what we are conscious of as criteria now. If we consider the historical circumstances of the pension system in Japan, above mentioned, some criteria will come out newly in time (expressing “historically changing factors” hereafter). Some other criteria have existed since pension system was created, (expressing “historically unchanging factors” hereafter), but degree of consciousness may change with the times.

The next chapter examines evaluation criteria for pension system at the present time. This paper differs from preceding researches mentioned above in terms of the following.

- 1) To try to encompass the whole image of criteria for a pension system with contradictory ideas on pension policy, in order to grasp why criteria mentioned above may become criteria (see Figure 1: Structures of Social Security Pension’s Principles and its Criteria);
- 2) To consider “the sense of values which society aims at” as one of criteria at Section 3.2; and
- 3) To examine pension reform criteria respectively by historically changing factors and unchanging ones, and point out the direction of evaluation that would change from positions such as government, employers, employees, etc.

3. Evaluation Criteria for Pension System

In Chapter 3, in order to grasp why the criteria mentioned in Chapter 2 may turn into criteria; first, the whole image of criteria for a pension system is examined. Next, I try to show the criteria for a pension system from the viewpoint of historically changing factors and unchanging ones. Lastly, I examine indexes to measure some criteria quantitatively.

3.1 Structures of Social Security Pension’s Principles and its Criteria

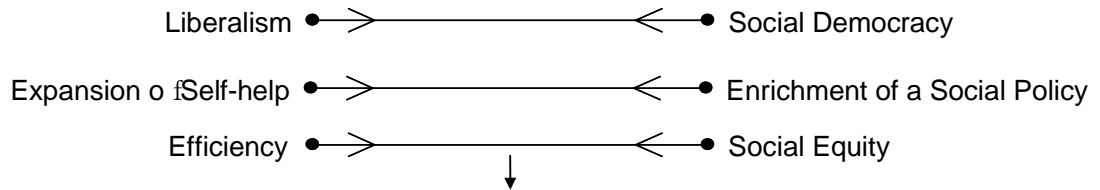
In order to understand that the criteria mentioned with Chapter 2 and Section 3.2 may become criteria, I examine the whole criteria image based on the views (ideas) about the role and necessity for a social security pension system.

Figure 1 illustrates structures of social security pension’s principles and whole image of criteria through arranging the antithetical targets. At ‘socio-economic policy’ and ‘contradictory ideas on social security’, abstract ideas are dealt with. On the other hand, at ‘contradictory ideas on social security’, concrete policies are listed.

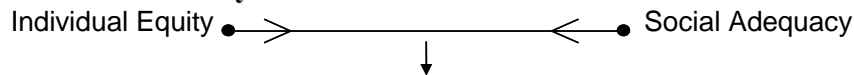
First, there are antithetical concepts of “liberalism” and “social democracy”, “expansion of self-help” and “enrichment of a social policy”, and “efficiency” and “social equity” as socio-economic policies. In modern society, only one of the antithetical concepts is not adopted as a policy target. The arrow drawn for “inner” from the antithetical both sides of a concept, means that both find out a compromise point, and both antithetical targets are simultaneously attained.

Figure1: Structures of Social Security Pension's Principles and its Criteria

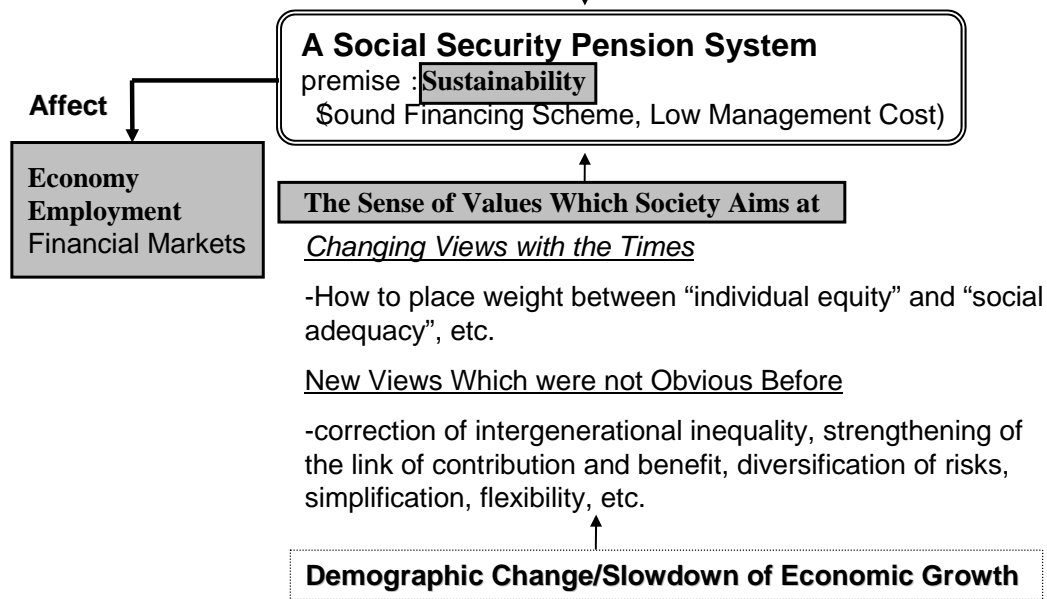
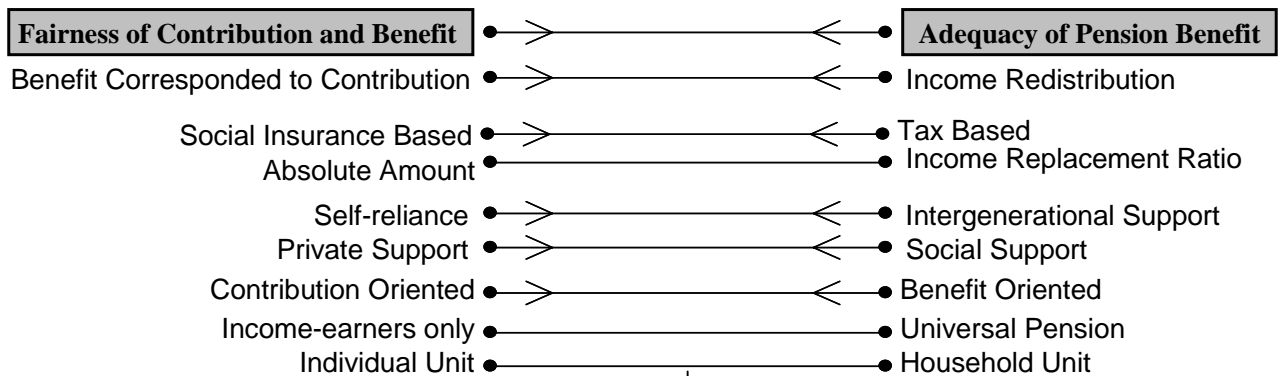
<Socio-Economic Policy (Targets)>



<Contradictory Ideas on Social Security>



<Contradictory Ideas on Pension Policy>



Note 1: [] shows criteria which will take up Section 3.2.

Note 2: • → ← • The antithetical targets are shown in both ends.

Note 3: • → ← • show that one of the antithetical views is not adopted but both elements are taken in, and find out the compromise point.

Next, there are two antithetical ideas on social security; “individual equity” and “social adequacy”. In order to attain two antithetical targets simultaneously, both have been compromised like the socio-economic policy. Similarly, both ideas of concrete pension policies are taken in, “social insurance based” and “tax based”, “self-reliance” and “intergenerational support”, “contribution oriented” and “benefit oriented”, etc. In regard to a “household unit” and an “individual unit” about the application scope of a social security pension system, “income replacement ratio” and “absolute amount” about benefit level, “an individual unit” and “a household unit” about design of a system, Japanese present system adopts the former by each (Figure 1 right-hand side).

In addition to the criteria currently dealt with the preceding researches of Chapter 2, I suggest “the sense of values which society aims at” should be set to one of the criteria. “The sense of values which society aims at” is changing with demographic change and slowdowns of economic growth. Change of the sense of values seems to reflect in the social security pension system reform at the end of the 20th century in developed countries. It would be classified into two parts; how to place weight between “individual equity” and “social adequacy”, etc., and new views which were not obvious before, such as diversification of risks, etc.

A social security pension system is made in response to these which I mention above, and it has sustainability (maintenance of a sound financing scheme and lowness of management cost) as the premise. Moreover, a social security pension system also affects by the economy, employment and financial markets.

What is illustrated above, a social security pension system in Figure 1, does not change historically (however, how to place a weight between two ideas changes historically). The sense of values which society aims at could be said to be historically changing factors.

3.2 Assumed Five Criteria

According to Figure 1, the criteria include not only the view of the pension system supporting a social security pension system but sustainability which is the premise of a social security pension system and influence on economy or employment. Moreover, the sense of values which society aims at would also be set to one of the criteria.

In this paper, the following five points are temporarily taken up as criteria of a pension system based on examination of Section 3.1, which cover whole contents of Figure 1. In this paper, I consider an old-age pension benefit mainly.

- 1) Adequacy of pension benefit;
- 2) Sustainability of pension system (maintenance of the soundness of a financing scheme, and lowness of management cost);
- 3) Adaptation to the sense of values which society aims at (correction of intergenerational inequality, strengthening of the link of contribution and benefit, diversification of risks, simplification, flexibility);
- 4) Fairness of lifetime contribution and benefit (guarantee of benefit corresponding to contribution would lead to increase of incentives to pay contribution. And increasing of elderly-people’s labor force is expected); and
- 5) Effectiveness of economic growth and employment expansion (the effect of employment expansion is related to No.4).

If those valuation bases are classified into historically changing factors and unchanging ones, it would become as Table 1.

Table1: The classification of criteria: historically changing factors and unchanging ones

	Historically changing factors		Historically unchanging factors
	How to place a weight change historically	Emerging new views which were not conventional	
1) Adequacy of pension benefit	X		
2) Sustainability of pension system			X
3) Adaptation to the sense of values which society aims at	X	X	
4) Fairness of lifetime contribution and benefit	X		
5) Effectiveness of economic growth and employment expansion			X

As above-mentioned, adequacy of pension benefit (listed No.1) is the antithetical ideas of fairness of lifetime contribution and benefit (listed No.4), and how to place a weight between two ideas could change historically. Sustainability of pension system (listed No.2) which is the premise of a social security system is classified into historically unchanging factors. Effectiveness of economic growth and employment expansion (listed No.5) is the target of a social security system itself in developing countries. On the other hand, since Japan and most developed countries focus on not as a target but as a result, it should be classified into historically unchanging factors.

I try to evaluate pension reform using the criteria examined in Section 3.2 and classify those criteria into two factors. But it needs to pay attention to the fact that the evaluation itself may change by positions (for example, government, employers (economic organizations), employees (labor unions)) even though using the same criteria. For example, “sustainability” and “low cost” are desirable for all positions. Other things may change by each position. Moreover, “correction of intergenerational inequality” etc. may change not only by the position but also by cohorts. It can be said that this is one of the causes that various reform proposals are submitted by various positions.

3.3 How to Measure Those Criteria Quantitatively?

In Section 3.2, I tried to arrange criteria in terms of ideas. It is also necessary to examine how to measure those criteria quantitatively. For example, the following indexes are considered to be useful to measure criteria quantitatively.

- 1) Income replacement ratio, individual saving ratio, poverty ratio and coverage situation to measure ‘adequacy of pension benefits’;
- 2) Income Redistribution to find the correct weight between “individual equity” and “social adequacy”. In this paper, degrees of income redistribution is indicated by the ratio (B/A), an average amount of flat-rate portion of old-age pension benefit (B) divided by an average amount of total social security old-age pension benefit (A). ;
- 3) Long-term financial balance and administrative costs to consider ‘sustainability of pension system’ directly;

- 4) The ratio that a contribution period divided by benefit period to consider ‘sustainability of pension system’ indirectly; and
- 5) Economic growth rate and labor force rate of old-age people to measure ‘effectiveness to economic growth and employment expansion’.

4. Application some criteria to Pension Reform

4.1 Japanese Pension Reform 2004

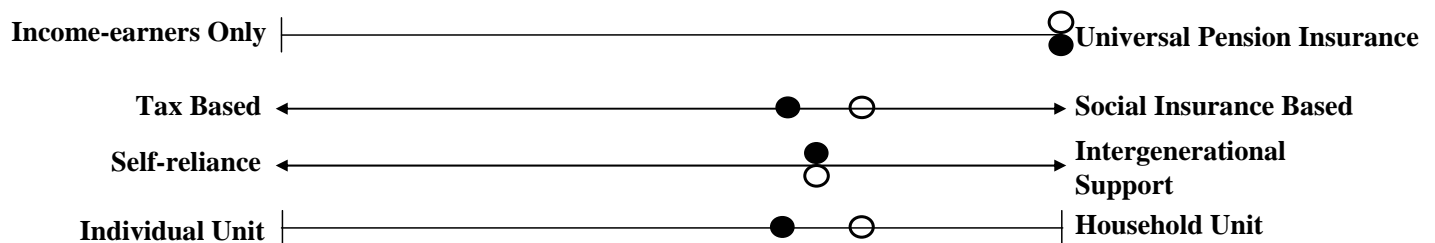
In Section 4.1, I examine the current pension system and the new system, as the example of application of evaluation. Table 2 shows the outline of the Government Bill submitted to Parliament on February 10, 2004. The Bill was passed June 5, 2004. Appendix 1 shows overview of Japanese social security system.

Table2: Outline of the Government Bill (The New System)

Purpose of reform	Establishment of a sustainable pension system which harmonizes with society and economy, and reliance to the pension system. Construction of the system corresponding to various lifestyle/work-style in order that individuals will be able to fully utilize their abilities.
Structures	To maintain the current structure (flat-rate + earnings-related)
Contribution and Benefits	Fixing the contribution program until FY2017. To introduce ‘Automatic Balancing Mechanism’ to adjust pension benefits. Minimum replacement ratio is set at 50%. Period of equilibrium is set 95 years. The rate of national subsidy to basic pension benefits is raised from 1/3 to 1/2.
Others	Treatment for the period of raising children is extended from one year to three years. Women and pension (introducing division of pension at divorce, etc.). Improvement of disability pension. Occupational pensions reform to fulfill ones. etc.

First, I arrange the position of the current pension system and the new system among the antithetical views in the pension system examined by Section 3.1, especially what may become very important for the future society in Japan. Four items were taken up in Figure 2.

Figure2: Examination Items Which May Become Important for the Future Society in Japan



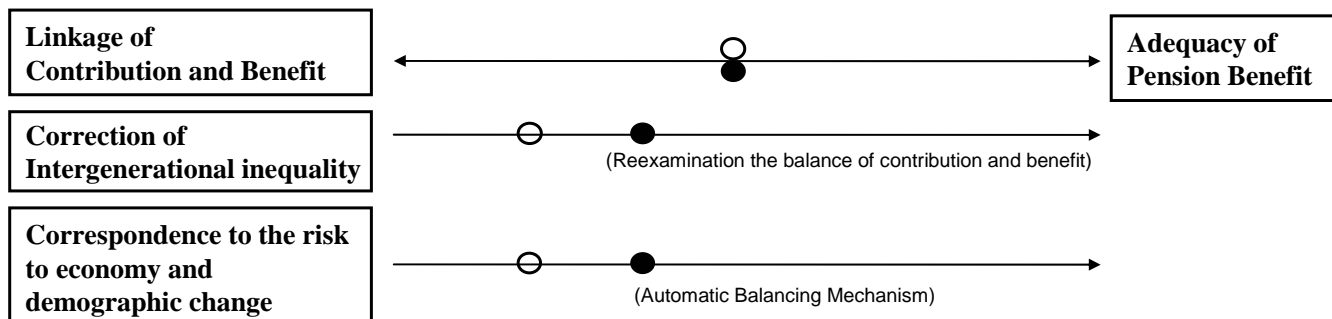
Note 1: ○ means the current system and ● means the new system.

Some items differ between the current system and the new system.

Japan needs to discuss the desirability from now on concerning the four items discussed here, especially how to place the weight between intergenerational support and self-reliance. Evaluation depends on this argument.

Figure 3 is evaluating the current system and the new system with some criteria taken up Section 3.2, in terms of ideas: adequacy of pension benefit, linkage of lifetime contribution and benefit, and some sense of values which society aims at.

Figure 3: Evaluation the Current System and the New System in Terms of Ideas



Note 1: ○ means the current system and ● means the new system.

Note 2: —————> means that ideas are so strong toward the peak of an arrow.

As shown in Figure 3, the differences between the current system and the new system are understandable. However, if it takes into consideration that evaluation can do only a part of criteria, the best answer may differ by which item is thought as important in criteria, and evaluation changes from positions etc., it is difficult to judge automatically which is more desirable. In order to make a more exact judgment, it has started deciding what view taken up in Figure 2 is chosen for the future in Japan.

Quantitative evaluation should be also necessary such as Section 3.3. Table 3 shows application criteria in terms of quantity.

Table3: Evaluation the Current System and the New System in Terms of Quantity

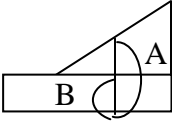

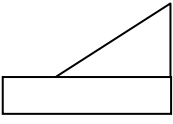
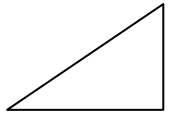
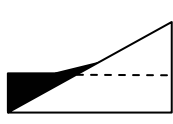
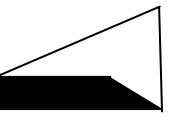
Criteria	Indexes	The Current System	The New System
Adequacy of pension benefit	Income replacement ratio	59%	50.2%
The place of weight between “individual equity” and “social adequacy”	Income redistribution (B/A) (The model case of standard one-income couple)	0.56	0.57
Sustainability of pension system	Long-term financial balance	Funding ratio: 5.2	Funding ratio: 1.0

4.2 International Comparison of Pension Systems

I also examine international comparison of social security pension systems with criteria, tentatively. Table 4 shows the ratio (B/A) which indicates degrees of income redistribution. If B/A is zero, the pension system is only composed of earnings-related pension. That is, the pension system pays a roll of “individual equity” only. The range of B/A is from zero to one. If B/A equals to one, a social security pension benefit pays a roll of “social adequacy” only. That is, the pension system is only composed of a flat-rate pension.

In this calculation, other social security benefits, such as public assistance, a means-tested benefit, etc., have not been included, to simplify calculations. I think that such assistances and benefits should be included to simulate in details.

Table 4: Measurement of Degree of Income Redistribution (B/A)

	Japan	U.S.	UK	Germany	Sweden	Australia
						
A	single: 171 thousand yen couple: 238 thousand yen	single: 874\$ couple: 1,320\$ (2001)	single: 412 £ couple: 852 £ (2002)	office-worker: 1,572DM (2001)	8,870SEK per person (2001)	Private mandate pension
B	single: 67 thousand yen couple: 134 thousand yen	single: 261\$ couple: 799\$ (2002)	single: 328 £ couple: 524 £ (2002)	0DM	2,780SEK per person (2001)	Means-tested benefit financed by tax
B/A	single: 0.39 couple: 0.56	single: 0.30 couple: 0.61	single: 0.80 couple: 0.62	0 per person	0.31 per person	-

Note 1: The amount of A and B are per month. A is an average amount of total social security old-age pension benefit. B is an average amount of flat-rate portion of old-age pension benefit.

Note 2: In the case of U.S., a minimum amount is interpreted as flat-rate portion (B).

Note 3: In the case of Sweden, the amounts correspond to old structure which is same as the present Japanese one.

Source: Ministry of Health, Labour and Wealth (Japan)

The German social security pension system does not have income redistribution function. In U.S. income redistribution function is stronger for couples, while in UK it is stronger for single persons.

Figure 4: Measurement of Degree of Income Redistribution (B/A): Case of Single

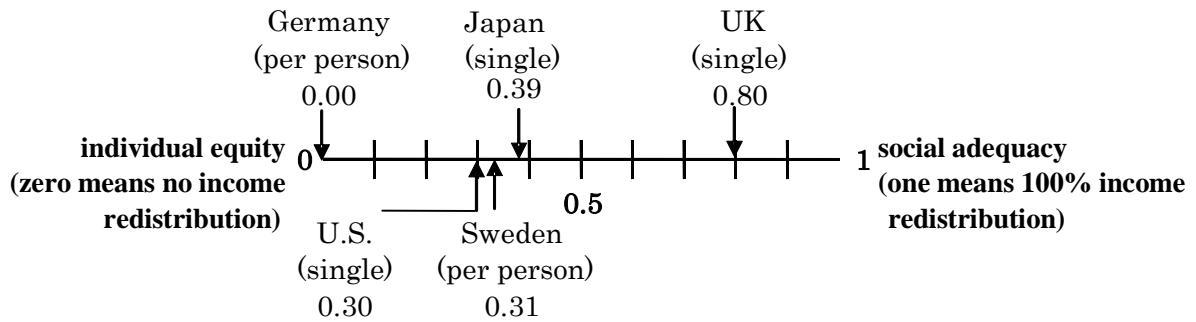
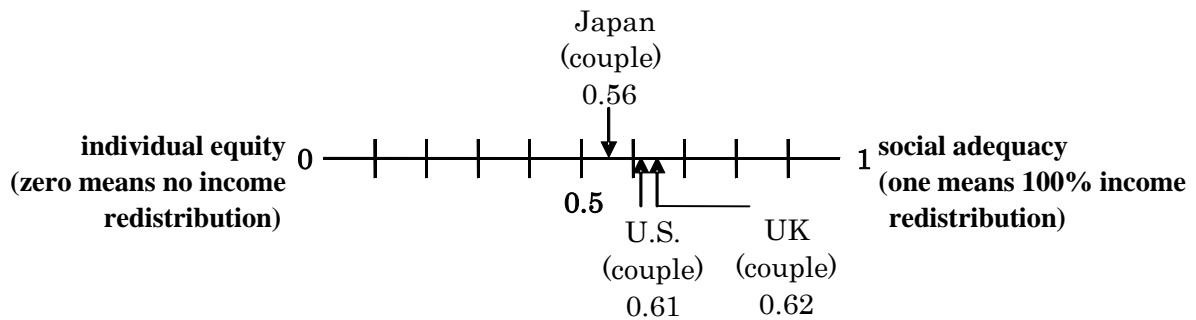


Figure 4: Measurement of Degree of Income Redistribution (B/A): Case of Couple



5. Concluding Remarks

In this paper, I examined criteria for pension system and tried to evaluate Japanese pension reform proposals with some criteria.

According to the understanding of the author, a social security pension system has ‘sustainability of pension system’ as a premise, and is designed reflecting the two antithetical ideas such as “individual equity” and “Social adequacy”, and ‘The senses of values which society aims at’. Moreover, the social security pension system also affects by the economy, employment, etc.

The criteria of a pension system has two sides; evaluation of the pension system itself (the premise of a social security pension system, the ideas of a pension system, sense of values that society aims at), and influence which a system has on society and economy.

The current system and the new system were taken up as an example of application of those criteria in terms of ideas and quantity. Before judging which is more desirable for the future society in Japan, it is required to decide the following things; whether universal pension or income-earners only, whether a social insurance based or a tax based, whether a household unit or an individual unit, and how to place the weight between intergenerational support and self-reliance. I also apply some criteria for some developed countries, tentatively.

Although the pension reform act 2004 passed in the Diet, some subjects are also left remaining, including whether Japanese structure of social security pension system should be changed. And it is also expected that the argument on a pension system will get into full stride from now on rather. Although various proposals have already been proposed by the government, the political parties, the employer organizations, labor unions, and other groups, full discussion has not taken place between each party and their opinions remain divided. More discussion is needed to create a desirable choice. When arguing about system reform, evaluating pension system plans with criteria is important and useful ways to compare the choices which can be assumed and examine a more desirable choice.

Notes

1. In this paper, I use “criteria” which mean measures of not only ideas but also its quantitative analyses. I think “standards” would be focused on the latter only.
2. In developing countries, a pension system is made for the purpose of achieving economic growth like ‘provident funds’ (mandate saving system of lump sum payment) which the World Bank promotes, and a pension system should play a roll how it contributes to economic growth. Since many developing countries do not have the problem of demographic change or the economic maturation which are faced in most developed countries, it is not necessarily appropriate to apply the developing countries’ discussion to developed countries. Another argument, what pension system is desirable in the phenomenon of change of population structure and slowdown of an economical change, is required for developed countries.

Appendix 1: Overview of Japanese Social Security Pension System

Japanese social security pension system is structured in 3 tiers;

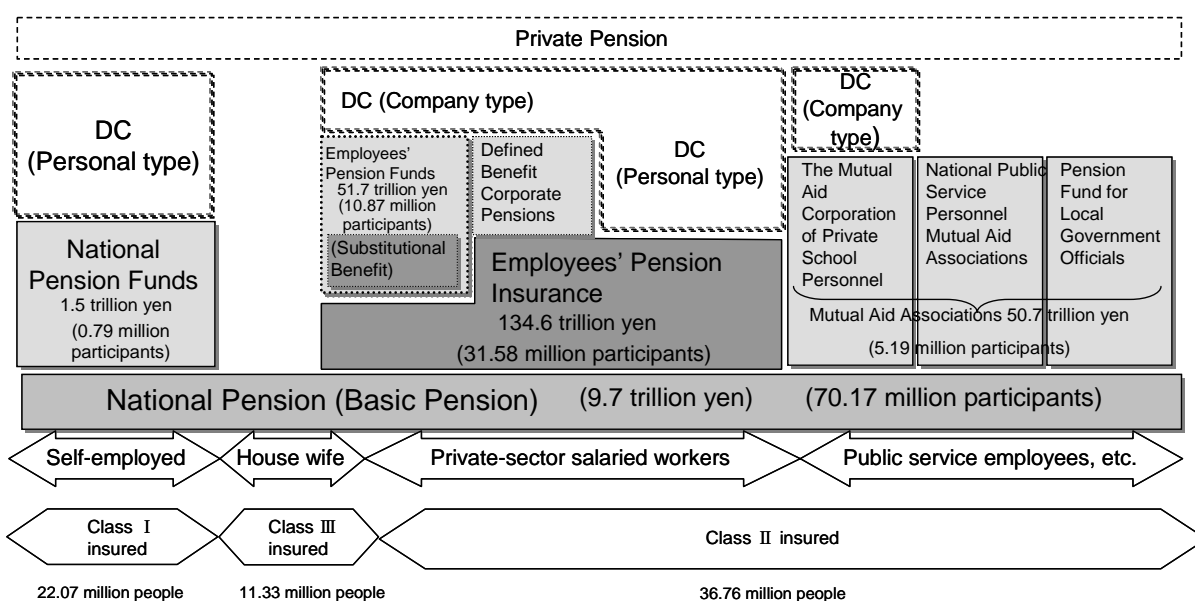
1st: Basic pension common to national people (universal pension).

2nd: Employee's pensions (Employee's Pension insurance or Mutual Aid Associations) which are earnings-related pensions as an addition to the basic pension.

3rd: Occupational pensions and individual annuities/savings (private pensions).

Among those, the public pension consists of a fixed amount portion of the first tier, and earnings-related component of the second tier.

Three characteristics of Japanese social security pension system could be pointed out. They are 'universal pension', 'social insurance based', and 'intergenerational support'.



Notes:

1. The number of participants and reserves are as of the end of March, 2002.
2. Public Pension Schemes in Japan are composed of two state pension schemes (National Pension and Employees' Pension Insurance) and three Mutual Aid Pension Plans.
3. DC: Defined Contribution. Defined-Benefit Corporate Pensions took effect on April 1, 2002. Tax-Qualifies Pension Plans (22.7 trillion yen, 9.17 million participants) will change over to New Company Pension Plans etc. within 10 years.

Source: Ministry of Health, Labour and Welfare. Drawn by Institute of Pension Research, Nikko Financial Intelligence, Inc.

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