

Intergenerational Equity and the Gender Gap in Pension Issues

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INTRODUCTION

This chapter focuses on two of the many pension-related challenges facing most countries around the world: increasing intergenerational equity and reducing the still-prevalent gender gap. An aging population and related slower economic growth are creating serious intergenerational equity concerns for pensions, while the growing participation of women in the labor market, along with their changing role with regard to family responsibilities, requires societies to revisit their pension provision for women.

The next two sections deal with, respectively, pension equity issues between generations and how to close the pension gap between men and women.

INTERGENERATIONAL EQUITY ISSUES

Although the issue of intergenerational equity of pensions has been discussed intensely, little common understanding of the relevant underlying concepts seems to have emerged (e.g., see Roemer and Suzumura, 2007). The discussion cannot be limited to the framework of social security pensions; issues that must also be considered include income transfers within families before pension systems were established and in their early stages, social infrastructure, subsidized child rearing (including education), and technological development.

Intergenerational pension equity might matter if younger generations were forced to bear excess burdens created by preceding generations. As long as each successive generation of workers enjoys a higher standard of living than preceding generations, securing equity might not become acute.¹ If living standards stagnate, then younger workers may wonder why they should support the older generations through a pension system. Intergenerational equity considerations vary between pension systems. These variations are discussed in the following subsections.

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¹An increased number of retired people can be supported if output grows. Economic output depends on the supply of workers, which means increasing the labor force participation of young adults.

Pay-as-You-Go Defined Benefit Plans

Many countries have established social security defined-benefit (DB) pension systems on a pay-as-you-go (PAYG) basis. These systems have generally succeeded in considerably reducing the number of elderly persons living in poverty because old-age pension benefits provide a basic floor of income after retirement.

The PAYG DB system has worked for many years as a tax-and-transfer system involving significant amounts of income redistribution between generations.²

The political difficulty is that seniors are strong voters, while younger people (and future generations) have little or no political power.³ Thus, it is tempting for politicians to ignore the interests of future generations. Indeed, politicians are likely to make many promises to retirees, as long as the pension system is operating with a surplus, rather than introduce unpopular or painful measures—such as increasing the contribution or tax rate, raising the eligibility age, or reducing the income replacement rate of pensions—even when these measures are needed to maintain a pension system's financial sustainability. Politicians typically operate according to two time lags: (1) the lag until a majority of them realize that circumstances have changed unfavorably and (2) the lag until they adopt painful policy measures.

Continued economic growth mitigates the potential difficulties of maintaining healthy PAYG pension financing. But if the economy fails to expand at the same time the share of senior citizens in the population increases, younger workers will see a decline in their real after-tax income in the absence of benefit cuts or increases in the statutory retirement age. They will not be able to achieve a higher standard of living than their parents, and the existing level of intergenerational transfers from workers to the retired will become difficult—or impossible—to maintain. The United States and Sweden publish the balance sheets of their social security pensions annually.^{4,5} This yearly information keeps the public aware of the need to change the long-term financial conditions of the systems as circumstances change. Other countries should publish their balances annually. Appendix 5A discusses how Japan has adapted its pension system to changing circumstances.

²A PAYG system is sustainable only if participation is compulsory. If people can opt out, transfers between generations cannot be maintained. Moreover, in many low-income countries, PAYG DB plans are restricted to military and civil servants. If a disproportionate share of government revenue is appropriated for pension benefits for these two groups, less is available to meet other needs (e.g., education, health, and infrastructure investment), inducing more inequitable income transfers between generations (Takayama, 2011).

³There are several proposals for revising voting systems. Demeny (1986) proposed a system that takes the number of non-adult children into account. Another proposal is to assign voting rights to adults in proportion to life expectancy (Oguro and Ishida, 2012). Others refer to the Iroquois law of seven generations in political decisions (e.g., see Frischmann, 2005).

⁴Specifically, the United States reports the value of unfunded obligations of social security.

⁵Several case studies on using the balance sheet approach to reform pensions are included in the Project on Intergenerational Equity (2005, 2006), Takayama (2005), and Holzmann and Jousten (2013). The studies include Canada, China, Germany, Italy, Japan, Sweden, and the United States.

Automatic adjustment

In a PAYG system, pension benefits are financed primarily by the contributions of those of working age. It may be perceived as a socialized system of intergenerational transfers between parents and children. Without a socialized system, ordinary parents and their children would have responded flexibly to changing circumstances. The retired parents expect to live a decent life, and working children should be adequately rewarded for their labor. A PAYG DB social security pension plan and the family-based income transfers between aging parents and their children should follow similar designs. The PAYG DB system should prescribe the rules for satisfying the needs of both groups: contributors and beneficiaries.

The benefits and contributions in a PAYG DB plan should be changed in a timely and proper way to respond to changing circumstances. Because of the uncertainty of possible outcomes in the future, reforms must be ongoing to keep the system viable.

The most serious issue in a PAYG pension system is how to reduce political risk. Automatic adjustments are one good way of doing so (Whitehouse and others, 2009). Unless automatic adjustments are implemented, pension reforms are likely to be delayed in the political process, and people will be forced to accept sudden changes in a time of crisis, as was the case in Greece. Box 5.1 provides more information.

BOX 5.1

Automatic Adjustments

Sweden devised an automatic balance mechanism to ensure the long-term viability of its social security pension system. If excess liabilities on the balance sheet are verified, the notional rate of return is automatically adjusted downward. Germany, which uses a points-based system,¹ and Japan have introduced indexation formulas to adjust pension benefit levels based on demographic changes.

In 2006, Denmark introduced automatic indexation of the normal pensionable age to longevity. This approach avoids political risks while ensuring equity between generations because the average period for which individuals will receive old-age pension benefits will be the same for all generations. Denmark's Ministry of Social Welfare anticipates that the normal pensionable age will reach 70 years by 2040 (Ministry of Social Welfare and Ministry of Health and Prevention, Denmark, 2008).

In 2011, stakeholders in the Netherlands (labor unions, businesses, and the government) agreed to adopt Denmark's indexation to longevity. Later in the same year, Italy also decided to introduce indexation to longevity beginning in 2018, when the normal pensionable age will reach 67 years (Mazzaferro, 2012).

¹A point system measures relative contribution performance: for instance, a person contributing at the average will earn one point in a period, while someone contributing twice as much will earn two points. The monetary value of a point (and, by extension, the total entitlement represented by the point balance at retirement) is determined by government at or close to retirement, depending

Notional Defined-Contribution Plans

In the 1990s, Sweden introduced a notional defined-contribution (NDC) plan to replace its PAYG DB plan. Italy, Poland, and Latvia followed suit.

In an NDC plan, pension benefits are directly linked to individual contributions. On an aggregate basis, however, some adjustment to benefit levels is required to maintain long-term financial sustainability (thereby enhancing equity between generations), because NDC plans are financed on a PAYG basis.

Funded Defined-Benefit Occupational Plans

At first glance, funded DB occupational plans seem to be free of intergenerational equity issues. It is assumed that any risks involved in these plans are allocated only within each generation. However, these plans face different risks, such as investment risk and the risk of sponsor company bankruptcy.⁶ The rate of return on investments is intrinsically volatile. Poor investment performance can create unfunded pension liabilities, for which the sponsor companies must assume responsibility.

Sponsors experiencing financial difficulties or facing bankruptcy have to cut wages, let some of their employees go, and limit new hiring. Through these measures, benefit entitlements for current pensioners are often protected at the expense of younger workers. Thus, occupational DB plans are subject to intergenerational equity issues whether they are PAYG or funded.

Changes often occur in the income transfers between generations in funded DB occupational plans because all businesses experience ups and downs. Companies such as General Motors Corporation, Japan Airlines, and Tokyo Electric Power Company have not been immune to changing conditions. The employer-sponsored plans in these companies were forced to reduce pension benefits for current and future pensioners. Such reductions are a compromise between generations that enable the sponsoring companies to survive.⁷

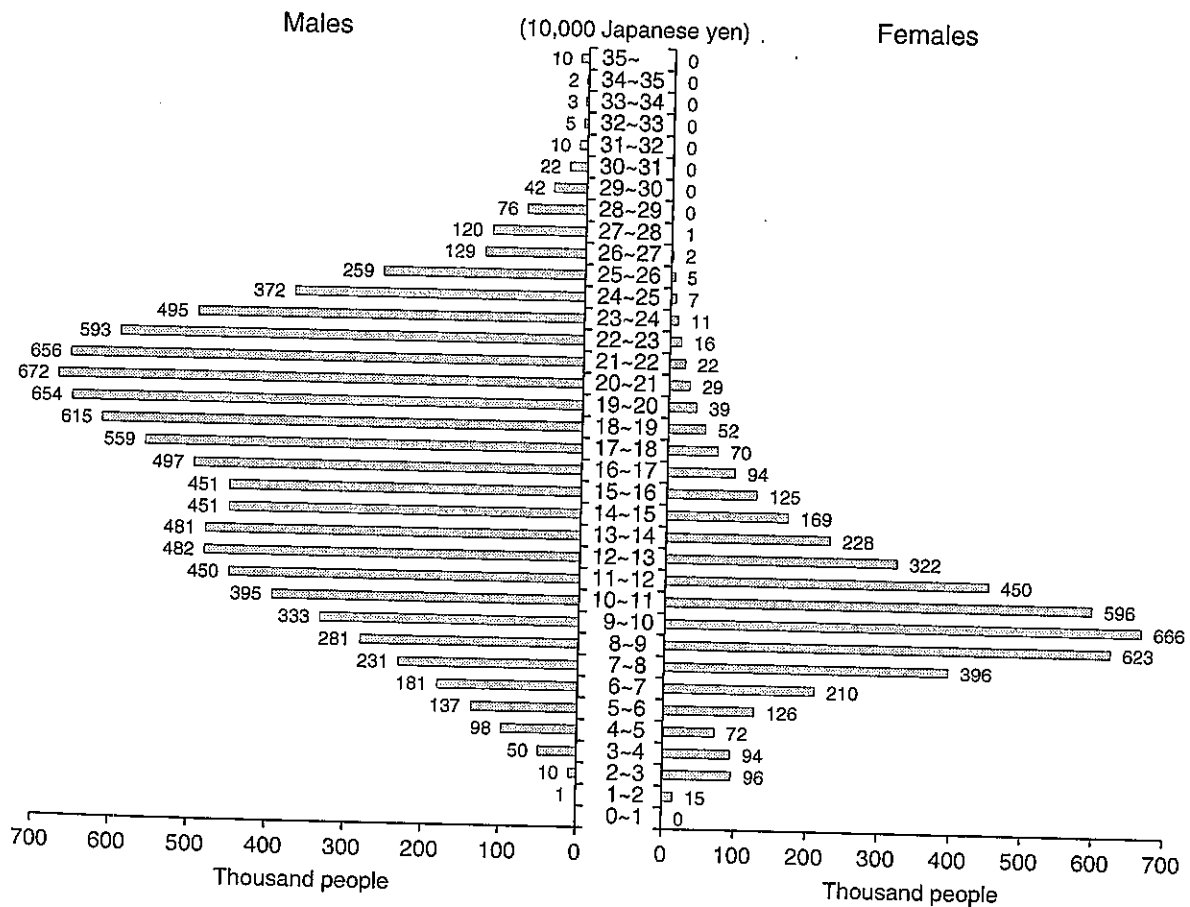
Funded Defined-Contribution Plans

An individual counting on a funded DC plan faces investment risk (i.e., a volatile rate of return), the risk of future earnings trajectory, inflation risk, and the risk of living longer than expected. Very few generations escape all of these risks in their lifetimes, and instruments to minimize the risks are generally absent. Because it is the individual who bears these risks under such arrangements, pension benefits in old age might end up below individual expectations. By definition, the contribution rate (financial or notional) in DC plans is fixed, and any adjustments are made on the benefit side.⁸ Recipients of pensions have less time to adjust to

⁶Unexpected longer life expectancy is another major cause of increased unfunded liabilities in occupational plans.

⁷Occupational DB plans have been terminated in many countries, such as Australia, the United Kingdom, and the United States, because businesses are no longer prepared to shoulder this risk.

Figure 5.1 Japan: Distribution of Monthly Amounts of Old-Age Benefits of the Major Social Security Plan



Source: Ministry of Health, Labor, and Welfare, Japan (2012).

unexpected events and fewer options for doing so. Risks cannot be completely eliminated, but at a minimum, attempts can be made to control them.⁹

GENDER GAP

Women are likely to receive a lower amount of pension benefits from social security than men. For example, in 2010 in Japan, the average monthly old-age benefit for women from the major pension program (Kosei Nenkin Hoken, or KNH [Employees Pension Insurance]) was ¥104,000 (US\$1,175), about 60 percent of the amount for men (see Figure 5.1).¹⁰ Several reasons underlie the difference in the level of pension benefits between men and women. Women's average wage rates are lower than those of men, and they are likely to work fewer hours per week and to work as nonregular employees. They also tend to work fewer years because they spend time caring for their children and for frail elderly dependents. In addition, women often work in the informal sector, which offers no entitlement to pension benefits. Moreover, divorced women

⁹Instruments include indexed bonds and annuities.

¹⁰However, the replacement rate for women tends to be higher than for men if minimum pension

are often discriminated against when it comes to pension benefit entitlements. Finally, women are likely to live longer than men and are typically younger than their husbands, so an overwhelming majority of recipients of survivors pensions are women, and the level of survivor benefits is usually not adequate to ensure decent standards of living. Thus, women usually face a greater risk of poverty in old age because the principal income source for a majority of elderly women is a pension benefit from social security.

The following subsections discuss these issues, as well as the potential for more equitable treatment in the pension system and implications of the incentive structure. Pension policies do not always take priority over other public policies. To achieve greater gender neutrality in pensions, measures to remove persistent gender differences in labor market participation and to change the unequal division of caring roles are critically important.¹¹

OLD-AGE BENEFITS

Pensions for Lower Wage Earners

In many countries, women are disadvantaged in the wages and salaries they earn in comparison with men. Their access to higher education, good jobs, and on-the-job training often remains limited, mainly by social pressures and constraints. The most effective policy option for women's stronger labor market attachment is to remove these pressures and constraints.

Meanwhile, pensions can partly remedy the wage gap observed during beneficiaries' active years, which would benefit women who earn lower incomes. The contribution rate can be set at a lower level for low-wage earners, which might encourage employers to increase their demand for these workers. The funds required to compensate for the lower contribution rates of these workers can be financed by a higher contribution rate for middle and high wage earners (i.e., a cross-subsidy) or by a transfer from general revenue.

If a country implements a two-tier benefit system that includes a flat-rate basic benefit (as in the United Kingdom and Japan) or a progressive benefit formula of the type in the United States, the gap in pension benefits will be smaller than the gap in wages. Alternatively, a Swedish-type residence-based minimum pension can compensate for the wage gap.

Pensions for Nonregular Employees

In the past, entitlements to pensions related to social security earnings were often limited to regular employees working full time. A growing number of countries have expanded their coverage of earnings-related pensions to part-time and other nonregular employees. However, this expansion has encouraged employers to offer a lower wage rate to atypical employees working less than full time. It has also encouraged

them to switch to contract-based work with self-employed persons, increasing the number of pseudo-self-employed workers. Additionally, if system implementation is weak, the expansion of coverage to nonregular employees tends to increase the number of people working in the informal sector. Another method used by employers to avoid paying the necessary social security contributions is to move production lines to other countries with lower wages and less well developed social security systems.

Pension Credits for Child Rearing and Caring for the Elderly

Benefits for those on maternity or parental leave are usually smaller than the wages or salaries they were earning. If these benefits are included in the basis for these workers' pension benefit calculations, most mothers will ultimately receive a lower old-age pension.

To solve this problem, a growing number of countries are providing special pension credits in this situation. A typical method is to exempt the parents on leave from making social security contributions and for the government to make their contributions for them according to their previous salary, using money from general revenues or contributions made by other insured persons. With these credits, pensions can be neutral with regard to childbearing and the care of infants.

Longer career interruptions for child rearing can cause labor market reentry difficulties, leading to lower salaries. Some countries offer special advantages to women who work as nonregular employees (for example, as part-time workers) while engaging in child rearing. Germany treats them as if they were earning 1.5 times their actual wages (up to a limit) until their children are 10 years old. These advantages, however, will reduce a mother's incentive to remain, or resume being, a full-time regular employee. Canada and the United Kingdom calculate career average earnings by dropping the years spent in child rearing. This calculation may be more advantageous to higher-earning women.

Other countries promise an additional old-age pension benefit to those who raise children.¹² The purpose of this benefit is to maintain a higher fertility rate. However, few countries have a lower contribution rate for those involved in child rearing, although several countries have explored this possibility.¹³

Pension credits for those who care for the frail elderly are rare, but a growing number of countries have set up social insurance systems for long-term care. Without such a system, many women are likely to accumulate fewer years of paid work because they care for aging parents or in-laws. Consequently, their old-age pension benefits will be lower.

¹²For example, France provides a 10 percent increase in the final pension amount to both parents who raise three or more children.

¹³In Poland, caring credits are financed by a transfer from general revenue and are paid on the basis of the minimum wage. Workers with earnings higher than the minimum wage are thus penalized for

Pensions for Full-Time Spouses

Pension arrangements for dependent full-time spouses vary from country to country and by stage of economic development. Pension systems can be designed based on the individual or based on a household unit. A purely individualistic system does not make allowances for full-time spouses and does not provide survivor pensions. Under such a system, lower wage earners will receive lower pensions.

However, many countries (including Japan, the United Kingdom, and the United States) have household-based social security pensions. If a husband earns a salary and makes contributions to social security, his dependent wife is also entitled to an old-age pension benefit. Typically, the pension for a dependent wife is about half the benefit her husband receives. Another option is to split the husband's earnings equally when determining entitlement to pension benefits; however, this approach may reduce men's incentives to marry (see, e.g., Burkhauser and Holder, 1982). Financing these pensions can be a contentious issue (Box 5.2).

Pensions for Divorced Wives

Divorce after many years of marriage used to mean a very low pension benefit for an ex-wife with a short earnings history. Several countries, such as Canada, Germany, and Japan, have implemented a provision that provides pension benefits to a divorced wife by equally splitting the combined earnings of the spouses during their marriage. This provision has increased the incentive for women to legally divorce.

Normal Pensionable Age

Many countries used to have lower statutory pensionable ages for women than for men. This provision favored women and encouraged them to retire earlier than men. Labor force participation rates for women in their sixties are usually lower than those for men in their sixties, as shown in Table 5.1. A lower retirement age for women usually means fewer years of social security pension contributions, resulting in lower pension benefits.

Women live longer than men on average. Under unisex mortality tables, women's social security pension wealth is likely to have a higher current discounted value.

As a result of calls for gender equity, among other reasons, a growing number of countries are adopting the same normal pensionable age for men and women.¹⁴

Survivor Benefits

The overwhelming majority of recipients of survivor benefits are women, and they have a higher level of poverty. Some countries still have compelling needs to increase the level of survivor pensions; others, such as Japan, have already done so.

¹⁴A shift from a DB plan to a DC plan typically disadvantages women. This kind of shift results from

BOX 5.2**Financing Pensions for Full-Time Housewives in Japan**

In Japan, full-time housewives married to regular employees are automatically entitled to the flat-rate basic benefit without being required to make any direct individual payment to the social insurance pension system. The money to pay these benefits comes from contributions made by singles and from general revenue. However, this entitlement raises contentious issues. The number of dual-income couples and single women has been steadily increasing, to the extent that full-time housewives no longer constitute a majority of working-age women. Single women and dual-income couples believe that providing pensions for full-time housewives is unfair. The issue lies in ideologically fraught ground (Takayama, 2009).

In Japan, a female survivor can enjoy full flat-rate benefits plus three-quarters of the earnings-related old-age benefits of her deceased spouse.

In a traditional DB pension system, survivor benefits are financed by the overall income of the system. If survivor benefits are increased, contribution rates will have to be increased as well, or old-age pensions will have to be reduced. Alternatively, stricter qualifications for disability pensions could help fund a higher level of survivor benefits. Survivor pensions benefit couples, while single persons have no access to them; thus, any change to the system will have winners and losers.

TABLE 5.1**Labor Force Participation Rates of the Elderly in Japan (Percent)**

1. Males			
Year	Age		
	60-64	65-69	70+
1975	79.4	63.9	31.6
1980	77.8	60.1	28.4
1985	72.5	55.6	26.8
1990	72.9	54.1	26.3
1995	74.9	54.2	26.1
2000	72.6	51.1	24.3
2005	70.3	46.7	21.1
2010	76.0	48.9	19.6
2. Females			
Year	Age		
	60-64	65-69	70+
1975	38.0	27.7	9.3
1980	38.8	25.8	9.6
1985	38.5	26.8	10.0
1990	39.5	27.6	10.4
1995	39.7	27.2	10.3
2000	39.5	25.4	9.8

In a DC pension system, a joint-life annuity option may be a solution for providing surviving spouses with an adequate benefit.

CONCLUSION

Little common understanding exists regarding intergenerational equity of pensions, and as long as the standard of living for younger workers is generally higher than that of retired workers, the issue will probably not be considered critical. Intergenerational equity considerations vary among the different pension schemes according to their risk structures.

Continued economic growth mitigates difficulties in maintaining a financially healthy PAYG pension system. However, if the economy does not expand but the share of senior citizens in the population increases, the real after-tax pay of current workers will decline. Younger people will not be able to achieve a higher standard of living than their parents, and the existing level of intergenerational transfers from workers to the retired will be hard to maintain.

The long-term financial sustainability of a PAYG pension system is better reflected in changes over time in excess liabilities accrued from contributions made in the past (i.e., accrued-to-date net liabilities) than in annual changes in the account balance. Holding excess pension liabilities below a certain percentage of GDP is important for avoiding the incentive compatibility problem.

The system of contributions and benefits in a PAYG pension plan should be adjusted according to changing circumstances. Automatic adjustments of pension benefit levels and indexation to longevity are two ways to reduce the political risk inherent in making changes to the system.

In employer-sponsored DB plans, entitlements to pension benefits for current pensioners are often protected at the expense of younger workers. DB plans create equity issues between generations regardless of whether they are PAYG or funded.

A funded DC plan might face investment risk (i.e., a volatile rate of return), the risk of future earnings trajectories, inflation risk, and the risk of living longer than expected. Very few generations avoid all of these risks in their lifetimes, but instruments to minimize them are generally not in use.

With regard to the gender gap, women's responsibilities at home and their employment conditions have been changing for many years. The same pension system can have different effects on the gender gap among different cohorts of working-age women.

Gender issues for pensions are very complicated, and solutions require trade-offs between equity and incentives to work. Certain options benefit some women at the expense of others. Singles and couples have different preferences, and the interests of single-earner couples often conflict with those of dual-earner couples.

Social values vary from person to person, and it is not easy for societies to reach a compromise regarding gender issues on pensions. Rigorous empirical studies using panel data are needed to give some insight into the impact of alternative pen-

APPENDIX 5A. REFORMING THE JAPANESE PENSION SYSTEM

Today's Japan might be an extreme case of an aging society, with the level and dynamics of its aging as well as the fiscal consequences of the aging process. Owing to the long-lasting economic slump, the expected lifetime income for current younger generations could be about 30 percent lower in real terms than that of current older generations (Figure 5A.1). During the past 20 years, the wage and salary profile for younger generations has been flattened (Figure 5A.2). A majority of younger workers in Japan believe that they will not be better off than their parents' generation.

To make matters worse, the fertility rate in Japan remains very low, about 1.3 to 1.4 children per woman. Kaneko (2008) estimates that if this rate remains unchanged, nearly 40 percent of women born in 1990 would have no children and about 50 percent would have no grandchildren (Figure 5A.3). The Japanese family structure would change drastically, which could intensify tensions between generations and weaken the public sense of intergenerational solidarity.

Excess Pension Liabilities as a Percentage of GDP

The long-term financial sustainability of the PAYG pension system is better reflected in changes over time in excess liabilities accrued from contributions made in the past (i.e., accrued-to-date net liabilities) than in annual changes in the account balance (Holzmann and Jousten, 2013). Figure 5A.4 shows social security pension liabilities as a percentage of GDP in the European Union. Political will is required to reduce these hidden and implicit liabilities.

Tables 5A.1 and 5A.2 show the balance sheet of Japan's major social security pension system for private sector employees (Kosei Nenkin Hoken, or KNH) before and after the 2004 reform. Part 1 of Table 5A.1 shows assets and liabilities accrued from past contributions, and part 2 shows those that will accrue from

Figure 5A.1 Reduction in Lifetime Wages (*Million Japanese yen*)

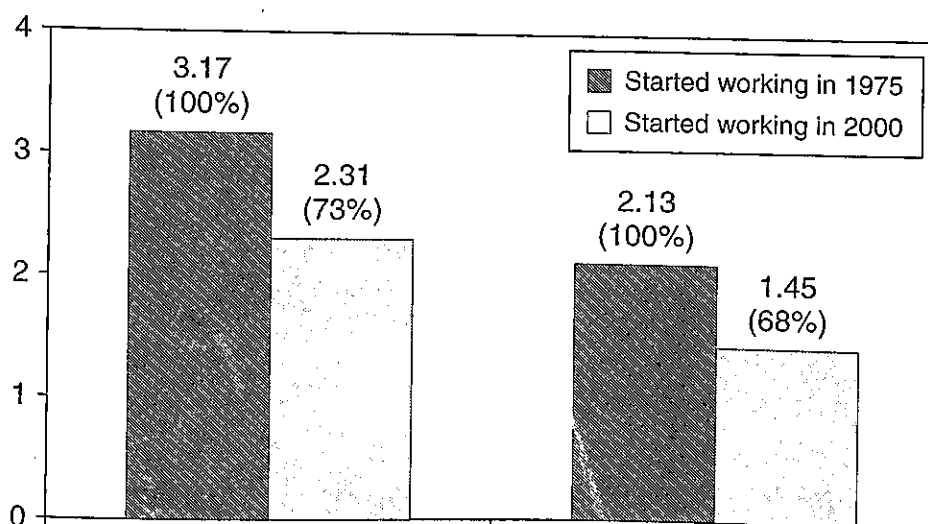
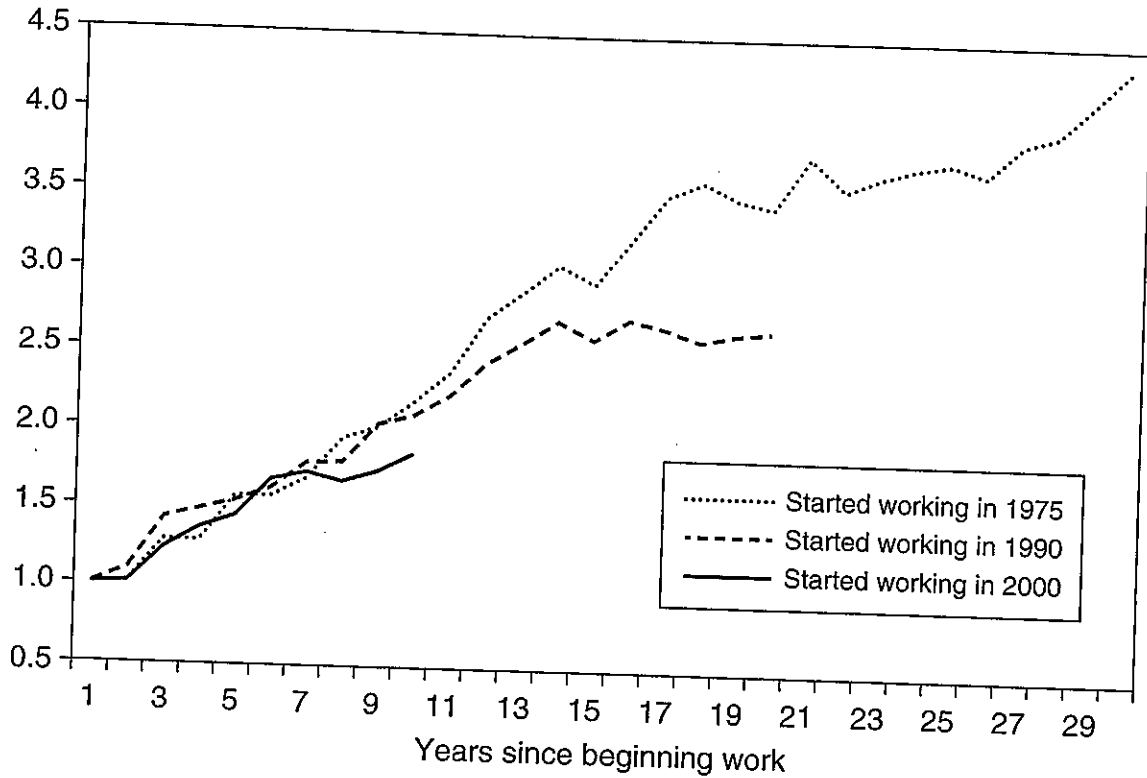


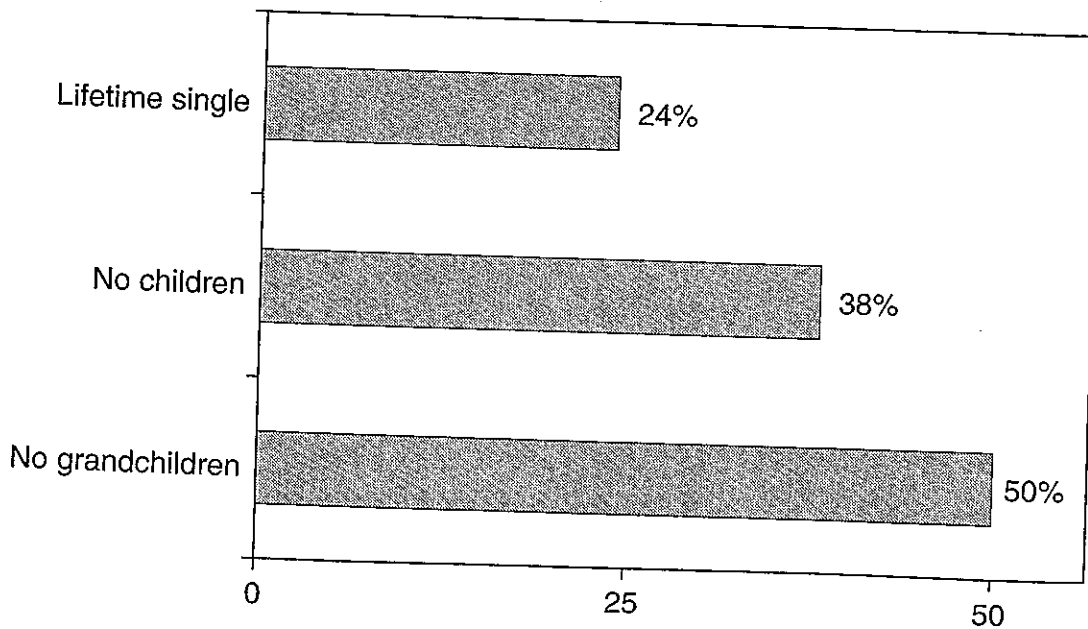
Figure 5A.2 Lifetime Wage Profiles for Workers in Manufacturing Industry (Years since beginning work)



Source: Hori and Iwamoto (2012).

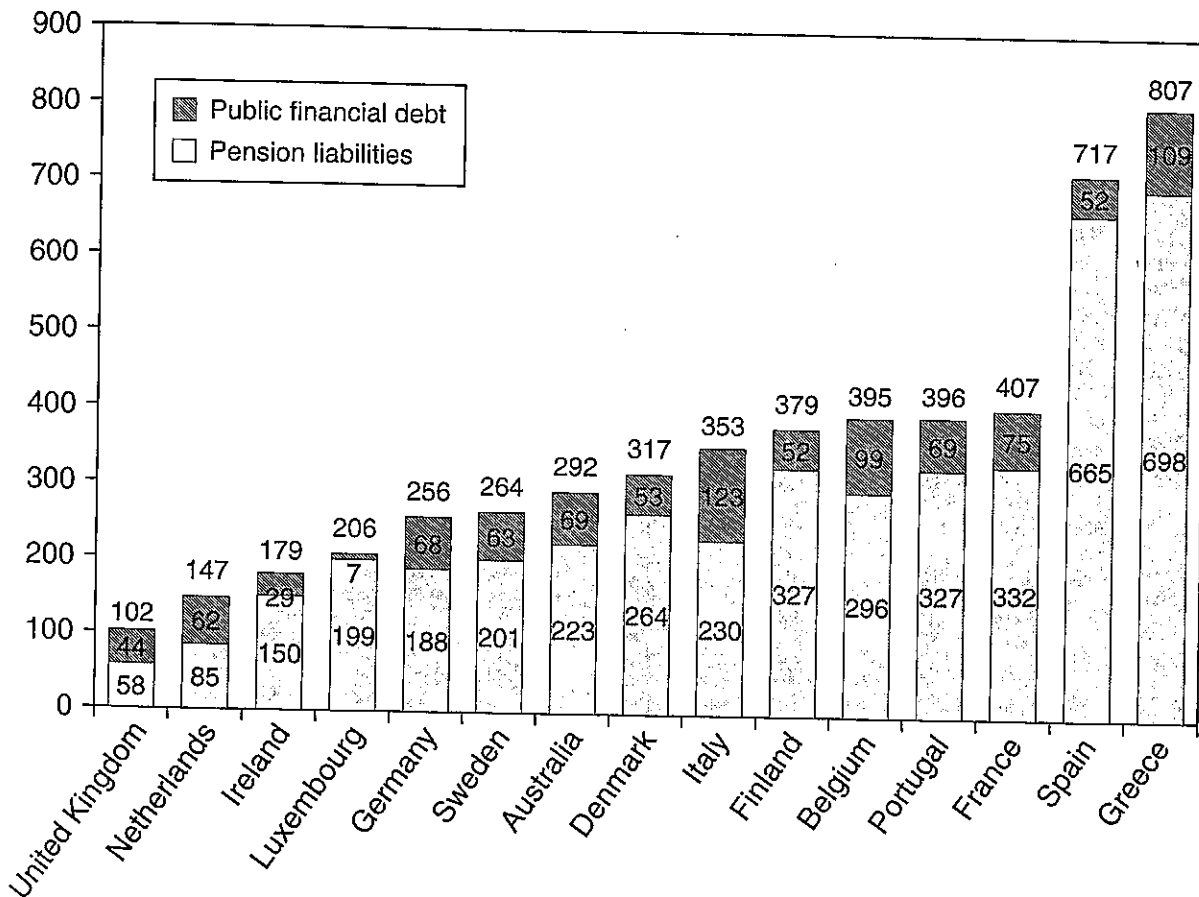
Note: Large manufacturing firms; college-educated, white-collar workers. Wages at start are normalized at 1.0.

Figure 5A.3 Probabilities of No Children and No Grandchildren for Women Born in 1990 (Percent)



Source: Kaneko (2008).

future contributions. Table 5A.1 indicates that the pension fund:

Figure 5A.4 Public Debt and State Pension Liabilities (Percent of GDP)

Sources: De Vlieghe and Vreyman (2006) based on ABN AMRO (2003); and Hedbavny, Schneider, and Zapal (2004).

Table 5A.1 part 1 shows a different picture though: pension liabilities were estimated to be ¥800 trillion, while pension assets were only ¥300 trillion. In other words, the accrued-to-date net liabilities (i.e., the legacy cost) were about ¥500 trillion, which was more than 60 percent of part 1 liabilities, equivalent to about 100 percent of Japan's 2004 GDP. Thus, the true crisis in the Japanese social security system at that time was how to handle the ¥500 trillion of excess liabilities from contributions made in the past.

In 2004, a pension reform bill was passed that had the following main points:

- The KNH contribution rate would be increased by 0.354 percentage point every year beginning in October 2004, and is to reach 18.30 percent by 2017. After 2017, it will be kept at 18.30 percent.
- Social security pension benefits will be further reduced by 0.9 percent in real terms every year for 20 years. Consequently, the replacement rate for the "model" male retiree and his dependent wife will gradually decrease from 60 percent to 50 percent by 2023. This reduction introduces a demographic factor that takes into account the decreasing number of actively working people and longer life expectancy.
- Transfers from general revenue were increased from one-third to one-half of the total pension cost.

TABLE 5A.1**Balance Sheet of the KNH before the 2004 Reform (¥ trillion, as of March 31, 2005)**

1. Part One	
Assets	
Financial reserves	170
Transfers from general revenue	130
Liabilities	
Pensions due to past contributions	800
Excess liabilities	500
2. Part Two	
Assets	
Contributions	920
Transfers from general revenue	130
Liabilities	
Pensions due to future contributions	1,100
Excess liabilities	50

Source: Ministry of Health, Labor, and Welfare, Japan (2004).

TABLE 5A.2**Balance Sheet of the KNH after the 2004 Reform (¥ trillion, as of March 31, 2005)**

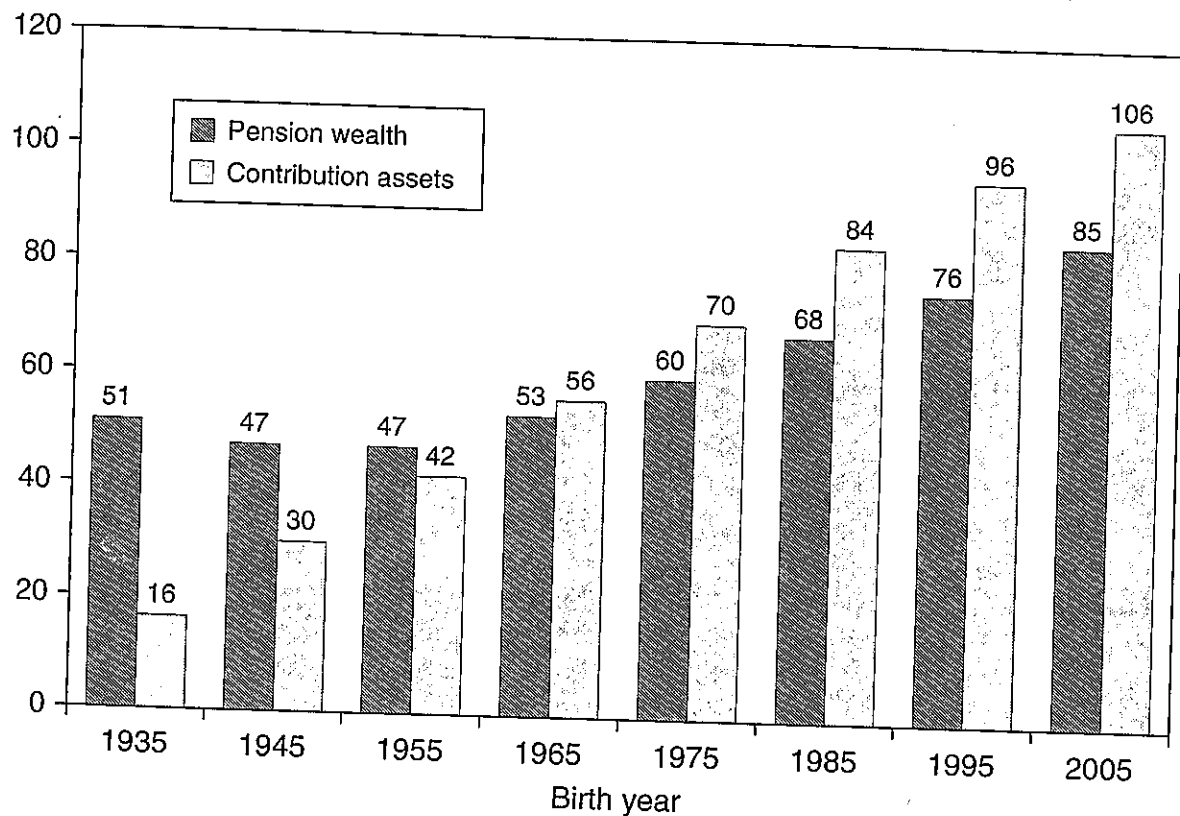
1. Part One	
Assets	
Financial reserves	170
Transfers from general revenue	150
Liabilities	
Pensions due to past contributions	740
Excess liabilities	420
2. Part Two	
Assets	
Contributions	1,200
Transfers from general revenue	190
Liabilities	
Pensions due to future contributions	970
Excess assets	420

Source: Ministry of Health, Labor, and Welfare, Japan (2004).

The policy measures adopted in the 2004 pension reform would reduce the legacy liabilities by ¥80 trillion (16 percent) to ¥420 trillion. The reform would induce excess assets of ¥420 trillion in the part 2 balance sheet, offsetting excess liabilities of the same amount in the part 1 balance sheet, as shown in Table 5A.2. The huge excess assets shown in the part 2 balance sheet indicate that future generations might be forced to contribute more than the benefits they would receive in the future.

Figure 5A.5 presents KNH pension wealth and its contribution

Figure 5A.5 Ratio of KNH Pension Wealth to Contribution Assets (Million Japanese yen)



Source: Author's calculations based on Ministry of Health, Labor, and Welfare, Japan (2004).
 Note: Assets and wealth shown at 2005 prices.

born after 1985 will be about 80 percent of their contributions. This could create an incentive compatibility problem or a dropout problem for future generations. A pension system is a zero-sum game—it has winners and losers. Ensuring that excess pension liabilities as a percentage of GDP do not increase over time is important to avoid the incentive compatibility problem.

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