

Several Questions on Basic Ideas of the 1994 World Bank Report *Averting the Old Age Crisis*

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ABSTRACT: It is 20 years after China made a drastic pension reform based on the 1994 World Bank (WB) report. China has been facing the problems similar to many other countries which have introduced the similar model and reversed. This paper reflects on the core proposals of the 1994 WB report in perspective of both economic theory and experiences all over the world for the past 20 years. The review may help China restructure her pension scheme to ensure more adequate and sustainable benefits. The paper discussed: the roles of funded pensions in withstanding population aging and promoting output growth, intergenerational equity, income share of public pension benefits and their progressivity, and the match between policy instrument and its objective. The analysis concluded that the 1994 WB report was not based on robust scientific evidences. Therefore, no developed country has followed the 1994 WB report to reform their pensions. Instead, they adopted automatic balance mechanism to get the financial problem settled down. This paper suggested China to introduce the notional defined contribution model.

Key words: public pensions, pay-as-you-go, mandatory funded pensions, automatic balance mechanism

1 Introduction¹

It is 20 years after China made a drastic pension reform. It is said that the main reference to this reform is the 1994 World Bank (WB) report *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth*. (hereafter, *Averting*)

It is now a good time to review this report, taking into account both economic theory and experiences all over the world for the past 20 years. The review may help China restructure her pension scheme to ensure more adequate and sustainable benefits.

The lead author of *Averting* is Professor Estelle James. Note that Prof. Dr. Robert Holzmann had nothing to do with this report writing.

Needless to say, Robert Holzmann is a giant; a Pope in charge of pension issues among international organizations, who has acquired a well-balanced knowledge by visiting more than 80 countries and by his lengthy career in academia and international policy

¹ This is a slightly revised version of the report presented at the IPLE-CASS conference on Worldwide and China's Pension Reform, Guobin Hotel, Beijing, 15 October 2017.

institutions.

He was the director of the WB social protection section for more than 20 years from 1997. He is one of the strongest defenders for a NDC plan and an automatic indexation to longevity. He has been devoting best efforts to expand the pension coverage all over the world, with recommending social pensions and matching contributions.

2 Core Proposals in the 1994 World Bank Report

Adverting demonstrates that existing public pension (PAYG DB) systems often encourage early retirement, pay more generous benefits to the rich than to the poor, and frequently redefine their benefits downwards. It also presents that the existing systems are not financially sustainable under population aging.

To advert the old age crisis, the report strongly recommends a mandatory FDC as a significant portion, along with proposing multi-tier pension schemes.² It envisages a replacement of on-going public earnings-related PAYG DB plans into a privatized FDC plan. *Adverting* claims that a FDC plan is able to withstand population aging.

² The appendix of this paper takes up some aspects of the multi-tier pension schemes for further discussions.

3 Several Questions

Q1: Is a Mandatory FDC able to Withstand Population Aging?

Under a PAYG plan, pension benefits are directly transferred through taxes and/or contributions paid by active workers. Under a funded plan, pensioners liquidate accumulated assets by selling to active workers. In both cases, workers' disposable income is reduced by the amount of resources transferred to the retired in a macroeconomic sense.

Thus, the choice between PAYG and funded plans under demographic changes can be relevant only if funded plans induce higher output growth.

But this is not often the case. Take an economy with excess saving, for example. A forced saving through a mandatory FDC will be offset by personal saving elsewhere (or increase government borrowing), thereby may not increase aggregate national saving, and accordingly national output, either (→ the fallacy of composition).

An economy with a shortage of saving is necessary for funded plans to produce increased output. Isn't China an economy with excess saving, today?

If output does not grow enough, the rate of return on the FDC accumulated pension assets will decline, or there will be a decline in the FDC asset values, as a result of population aging (Barr-Diamond 2010). The outcome will be not so different between PAYG and funded plans. If a PAYG plan is not able to withstand population aging, then a funded plan cannot do it either. (→ Output growth matters.)

Holzmann (2013) wrote that "the call for funding was at times motivated by *incorrect* arguments that funding by itself would be able to address population aging and the *incorrect* assumption that the then high funded rate of return would continue in the future." This is a very important message. The present author entirely agrees with his statement.

Q2: What Policy Instrument Does Best Fit to Promote Output Growth?

Averting tries to achieve too many targets through a virtually single policy instrument of pensions. The standard theory of policy assignment suggests that each objective can be best attained only if it is matched with each different policy instrument of comparative advantage.

The major objective of the pension system is old-age income security, and not promoting economic growth. Pensions have a comparative advantage, therefore, when they are assigned to attain old-age income security.

It is true that more saving through a mandatory FDC plan might induce higher economic growth in a limited case, but what economic theory tells us is that working longer with higher productivity is the most decisive solution to promoting growth under population aging (Ogawa-Takayama 2005).

At the same time, smoother international movements of capital, goods and services, and labor, can moderate any adverse economic effects of population aging.

Q3: Is a Mandatory FDC Intergenerationally Equitable?

Economic growth enables workers in future generations to be much better off than workers today. Imposing extra contributions on today's relatively poor workers through a mandatory FDC may induce income redistribution to relatively rich workers in the future with paying higher pension benefits. Is this redistribution equitable?

Rather, dividend from economic growth has to be redistributed to today's relatively poor generations by paying adequate pension benefits and/or imposing lower contributions on them through mandatory pension schemes.

Q4: Isn't there Any Alternative Other than a Mandatory FDC Plan as the 2nd-tier Earnings-related Component?

Adverting makes no mentions on it. But, in Sweden, a path-breaking NDC plan was under discussion from the early 1990s. It was in 1994 that the major political parties there jointly agreed to introduce a NDC plan.

A NDC plan can rectify design deficiencies and inequities in existing PAYG DB plans. It introduces incentive-compatible pensions without any considerable transition costs. Moreover, it is transparent. It can give much greater incentives to program participation, if the notional rate of return is set to equal the growth rate of the economy (Takayama 2002a; Holzmann-Palmer-Robalino 2013).³

Q5: Isn't a PAYG Pension Plan able to Withstand Population Aging?

In the past (before 2000), financial sustainability of mandatory PAYG DB plans was the major concern in almost all developed countries (except the UK) under population aging.

Its difficulty came mainly from a political risk. There were two time lags; a recognition lag and a decision-making lag. These lags were likely to bring a "too-late, too-little" problem.

Today, however, pension experts have already invented a wise method for avoiding the political risk above mentioned; an "automatic" balance mechanism and/or an "automatic" indexation of the normal pensionable age to longevity. With this instrument, any mandatory PAYG plans are able to withstand population aging.

For those countries which have already implemented this policy device in their social security provisions, long-term financial sustainability becomes a problem of secondary concern.

³ 15 years ago in 2002, the present author made an intensive study on Chinese pensions and wrote one paper. Takayama (2002a) pointed out that China can escape from the transition problem or the "empty box" problem, if China adopts an NDC plan, instead of the FDC plan. It also pointed out that China can give much greater incentives to program participation, if the notional rate of return is set to equal the growth rate of the Chinese economy. It was only 5 years after the drastic pension reform in China that Takayama (2002a) pointed out these two things, when the empty box problem became quite serious. Takayama (2002a) would be the first that suggested a NDC plan as a promising alternative option for China.

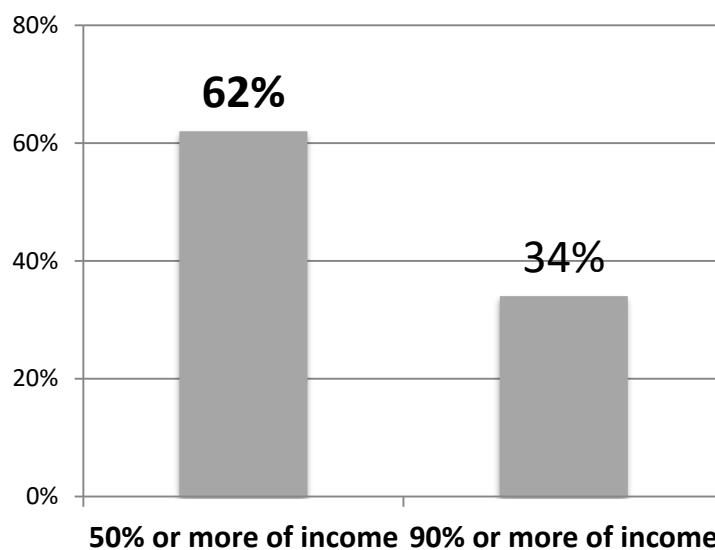
Note that no developed country has substituted her major PAYG public pensions entirely for funded ones by following the proposal of *Averting*.

Q6: Which is More Important, Public or Private Pensions?

Averting conveys the policy message that public (social security) pension systems should be restricted to the 1st-tier modest flat-rate benefits with a means-test or an income-test, and that the bulk of the 2nd-tier earnings-related portion be provided through privatized mandatory FDC plans.

Let's look at current situations in the US and Japan. Regarding the share of public pension benefits over household total income, it was a little over 60% in the US, and around 80% in Japan (see Figures 1, 2). For the elderly in the US and Japan, PAYG DB public pension benefits are the major income source after retirement, especially for low- and middle-income groups. Situations are more or less similar for almost all developed countries. Exceptions might be Chile, Singapore, and Australia.⁴

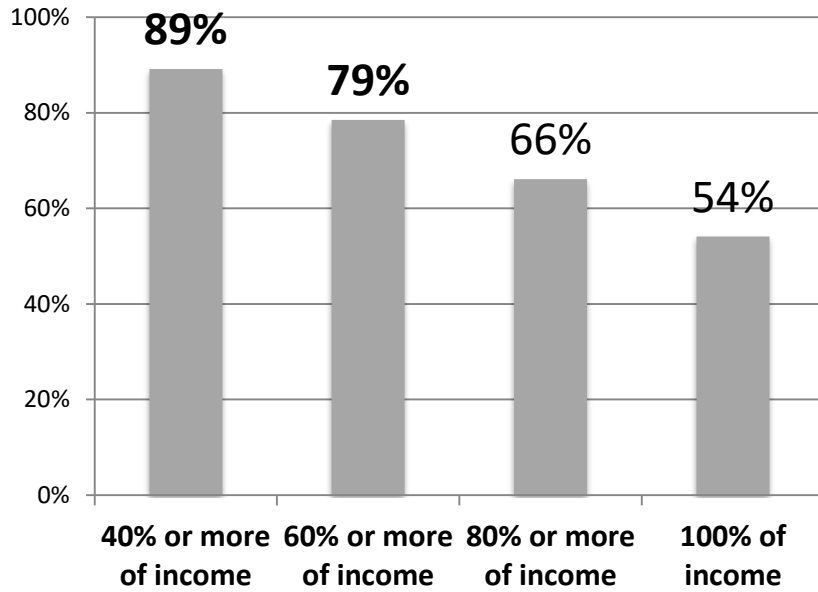
Figure 1 Percent of Aged Receiving Social Security Benefits, by Importance Relative to Income in the US



Source: U.S. Social Security Administration, *Fast Facts and Figures about Social Security*, 2017

⁴ According to Jing Xu calculations from the 2013 weighted CHIPs, for 47% of the Chinese elderly, public pension benefits accounted for 10% or more of their household total income. To put it the other way around, for a majority of the elderly in China, public pension benefits consist of less than 10% of their household total income. Incidentally, around 70% of the Chinese elderly received monthly benefits of no more than USD 10 equivalent from public pensions. USD 10 is fairly lower than USD 38 (the international extreme poverty line).

Figure 2 Percent of Aged Receiving Social Security Benefits, by Importance Relative to Income in Japan

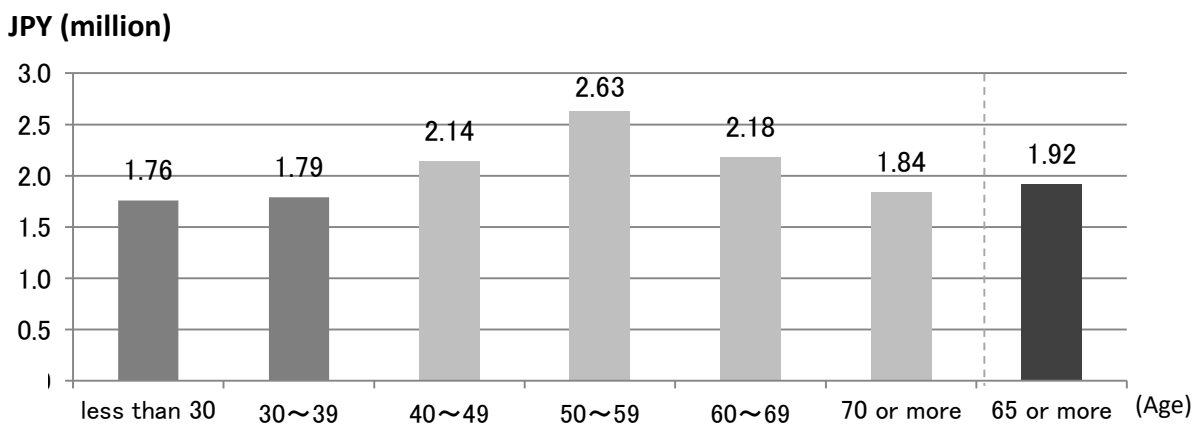


Note: The aged households are defined as those consisting of only aged person(s) of age 65 or over and unmarried children) less than age 18, if any.

Source: The Ministry of Health, Labour and Welfare, Japan, *The 2016 Comprehensive Survey of Living Conditions*.

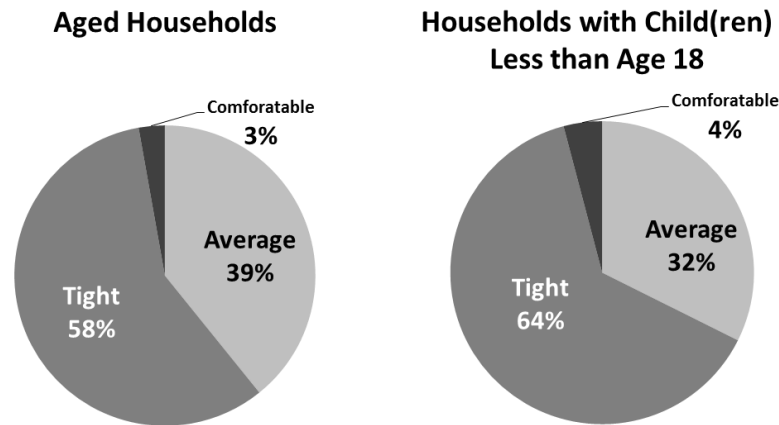
In reality elderly households are better off than young ones, and their self assessment of household financial conditions is better than that of young generations (see Figures 3 and 4).

Figure 3 Average Household Annual Income per Capita by Age in Japan



Source: The Ministry of Health, Labour and Welfare, Japan, *The 2015 Comprehensive Survey of Living Conditions*.

Figure 4 Average Household Annual Income per Capita by Age in Japan



Source: The Ministry of Health, Labour and Welfare, Japan, *The 2015 Comprehensive Survey of Living Conditions*.

Moreover, the PAYG DB public pensions in Japan have been actually withstanding economic crises (the Lehman shock, etc.), devastating Tsunamis, and repeated huge earthquakes. Can the FDC pension plans withstand these crises and disasters?

Q7: Is Income Transfer by Public Pension Benefits Regressive among the Elderly?

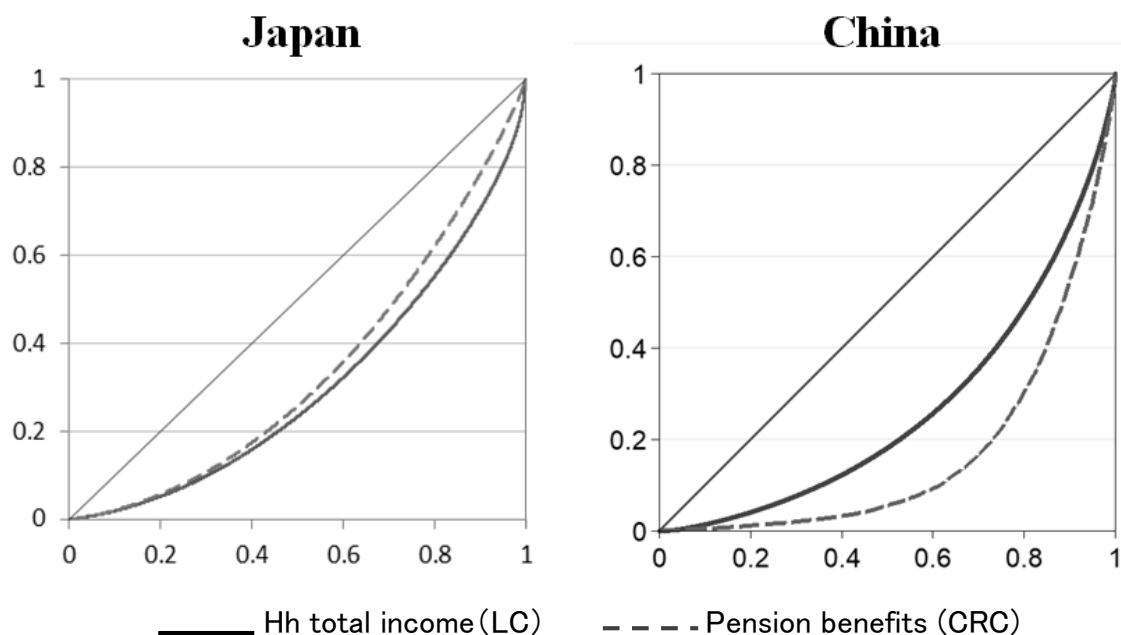
Averting claims that public pension systems redistribute income regressively among the aged households. But those countries which have a flat-rate basic benefit (or a benefit of similar substance, such as decreasing accrual rates with plural bend points in the US) as the 1st-tier component often work out progressive transfers through public pensions in practice. This is shown by Gini coefficient and Lorenz curve in Table 1 and Figure 5 (see the case in Japan).

Table 1 Gini Coefficient

Country	Pension Benefits	Hh Total Income
China	0.8198	0.4707
Japan	0.3339	0.3978

Source: Jing Xu calculations from the 2013 weighted CHIPs and the Ministry of Health, Labour and Welfare, Japan, *The 2007 Comprehensive Survey of Living Conditions*.

Figure 5 Lorenz Curve (LC) & Concentration Rate Curve (CRC)



The current situation in China makes a sharp contrast with that in Japan; namely the share of public pension benefits over total income is much smaller for the elderly with lower income, and thus public pension benefits are distributed much less equally than total income among the elderly households.

4 Concluding Remarks

There remain many other questions on a FDC plan such as investment risk (unstable financial markets), expensive handling costs, tremendous costs for transition, inflation risk, perverse income distribution within each generation, institutional capacity constraint, and so on (Barr-Diamond 2010; Beattie-McGillibray 1995; Takayama 2002b, 2004, 2016).

Here the present author would like to skip these questions, and go straight to conclude this paper. *Averting* entirely ignored the experiences of many developed countries where thoughtful and never-ending efforts have been done in search of better pension design and implementation. Provisions in PAYG DB plans need to flexibly adapt to a changing and unpredictable world.

In the end, the 1994 World Bank proposals are quite doubtful if they will bring adequate and acceptable pension benefits in developing countries where low quality of governance and embryonic financial markets are persistent.

Indeed, those countries which followed the 1994 World Bank approach (with its technical and financial assistance) to reforming pensions often faced a serious mess. Many of them were forced to partly or wholly give up their FDC plans and to return to a PAYG plan.

Averting was not based on robust scientific evidences. It turned out rather to be a dogmatic manifesto from a market-fundamentalist point of view.

Missing is a far greater commitment to empirical research based on scientific evidences.

Following are the final words:

Don't entrench yourself in actual battles, carrying only a toy gun with you. (Joseph A. Schumpeter)

God, grant me the serenity of mind to accept the things which cannot be changed, the courage to change the things that should be changed, and the wisdom to distinguish the one from the other. (Reinhold Niebuhr)⁵

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⁵ The present author is quite sure that decision-makers of China in charge of pensions are wise enough to distinguish these two things.

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Appendix: On Multi-tier Pensions

1 Introduction

Multi-tier pension systems⁶ sound good for any country to control risks at a minimum level for ensuring socially-adequate and financially-sustainable benefits. But, there are many points to be cleared. This Appendix takes up some of them with reference to experiences in developed countries.

2 Income after Retirement

The adequate level of income after retirement (replacement rate) will be 70%~75% of income just before retirement.

There are several sources of income after retirement; social security (public) pension benefits, voluntary occupational/individual pension benefits, wages and salaries, income from assets, remittances, disposal of assets, and so on.

For middle and low income groups, the major source of income after retirement has to be public pension benefits. Its percentage over their total income is 50%~60% for the middle income group, and 80%~90% for the low income group in almost all developed countries (see Figures 1 and 2 in the body text).

Different percentages of public pension benefits over household total income in old age come from differences in potentials of economic growth, the balance between solidarity and self-reliance, perceptions about income disparity after retirement, understanding of intergenerational equity, credibility of the government commitment, regulatory competence against investment risk, and development of the capital market.

3 Structure of Public Pensions

In many cases, public pension systems have a two-tier structure. The 1st-tier is the social pension (or basic pension) and the 2nd-tier is an earnings-related portion. Both pensions are mandatory.

The 1st-tier pension is a flat-rate benefit. It is indispensable for partly ensuring an adequate level of benefits. It has a progressive effect on income distribution among pensioners. Its typical replacement rate is 20%~35% for middle income earners. It is usually a DB plan, financed on a PAYG basis by transfers from general revenue (partly or wholly). A contribution-based system for the social pension can be said to be exceptional (the UK, Japan, China, etc.). Furthermore, China has a FDC social pension plan for persons other than regular employees. It is quite unique.

⁶ This Appendix assumes traditional and standard 3-tier pension systems, and not 5-pillar ones.

The 2nd-tier pension is an earnings-related benefit. Its main objective is consumption-smoothing. Its replacement rate is 30%~50%. Almost all developed countries adopt a PAYG DB (or NDC) plan as the main scheme. Australia is an exception, implementing a FDC plan.⁷ Usually there is no subsidy from general revenue. In this point, China is an exception.

4 The 3rd-tier Pension

The 3rd-tier occupational/individual pensions are voluntary. They are mainly for regular middle- and high-wage earners to add up their pension benefits, with tax privileges. They are DB plans and/or DC ones, financed on a funded basis.

5 The Building Order

Earnings-related PAYG DB pensions for military and civil servants came first. Then, voluntary employer-based occupational pensions in the private sector took place, and they were spreading step by step. Sooner or later, almost all countries (except New Zealand) have mandated an earnings-related pension for regular private-sector employees.

Some countries which are blessed with a strong perception toward income equality in older age, have introduced a flat-rate basic pension as the 1st-tier portion, while others have not yet. Typically, it is a renewal of public assistance for the elderly only. The timing of its set-up was before or after establishing a mandatory earnings-related pension, depending on different circumstances of respective countries.

A 3rd-tier voluntary pension with stronger tax incentives came last to compensate for a diminishing role of social security pensions under the population aging.

⁷ Australia introduced a FDC (Superannuation) as the mandatory 2nd-tier in 1992. Its performance seems pretty good, so far. There are several reasons for this success. Among others, Australia has been enjoying her economic growth for more than 25 years. Even under the 2008 economic shock, it recorded the positive rate of economic growth. If Australia had adopted a compulsory NDC plan instead, as the 2nd-tier pension, the performance would be not much different, owing to her continued economic growth. The crucial point is not whether FDC or NDC, but the sustained economic growth. There first came the 1st-tier flat-rate pension in Australia. Its benefit level is relatively generous. The Super-annuation came later, with 9% contribution rate. Its rate is much lower than 20% in China.