

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

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## 1 Introduction<sup>1</sup>

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.

## 2 Core Proposals in the 1994 World Bank Report

*Averting* 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. It envisages a replacement of on-going public earnings-related PAYG DB plans into a privatized FDC plan. *Averting* claims that a FDC plan is able to withstand population aging.

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<sup>1</sup> 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.

### 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).<sup>2</sup>

***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.

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<sup>2</sup> 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.

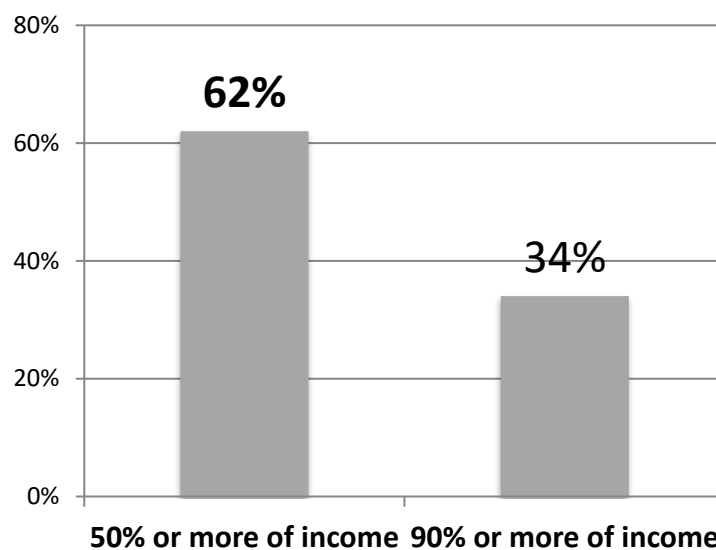
Note that no developed country has substituted her major PAYG public pensions entirely for funded ones by following the proposal of *Averting*.

**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.<sup>3</sup>

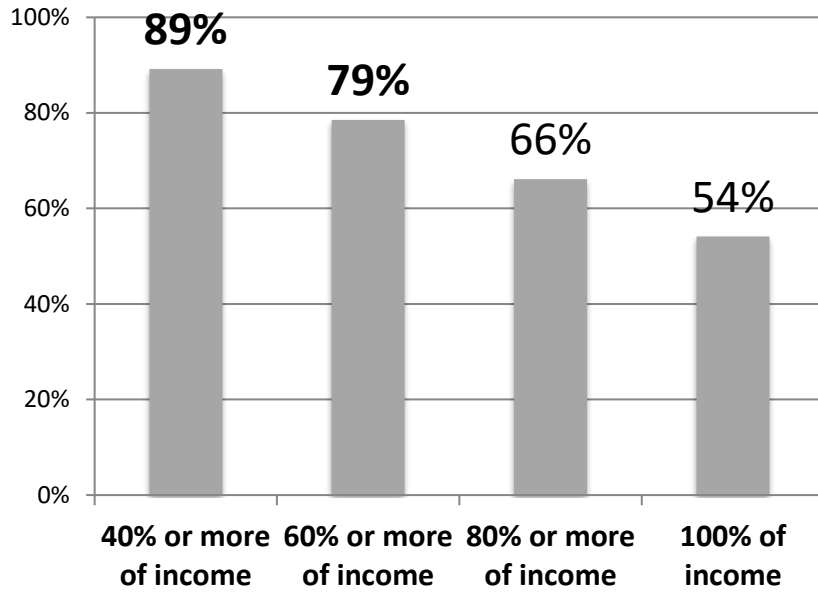
**Figure 1 Percent of Aged Receiving Social Security Benefits, by Importance Relative to Income in the US**



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

<sup>3</sup> 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**

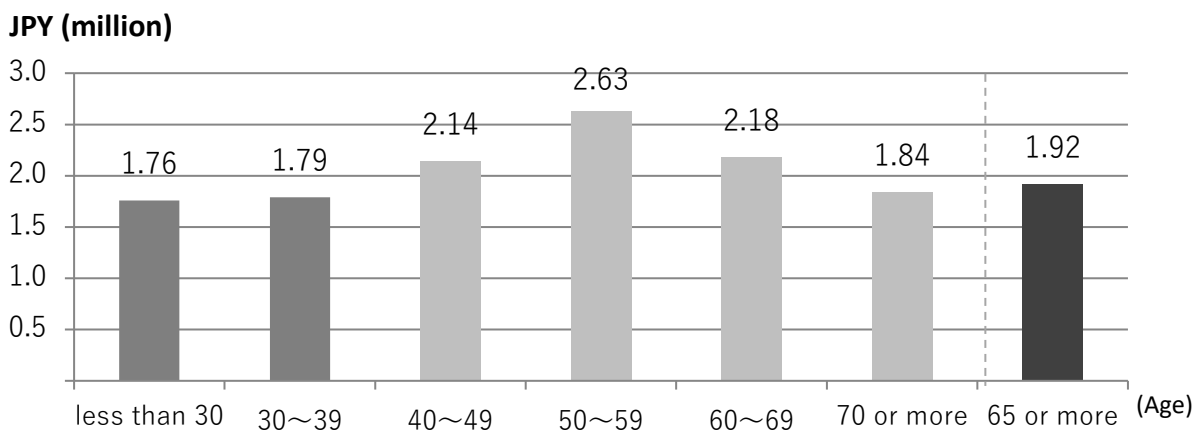


Note: The aged households are defined as those consisting of only aged person(s) of age 65 or over and unmarried children) less than age 18, if any.

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

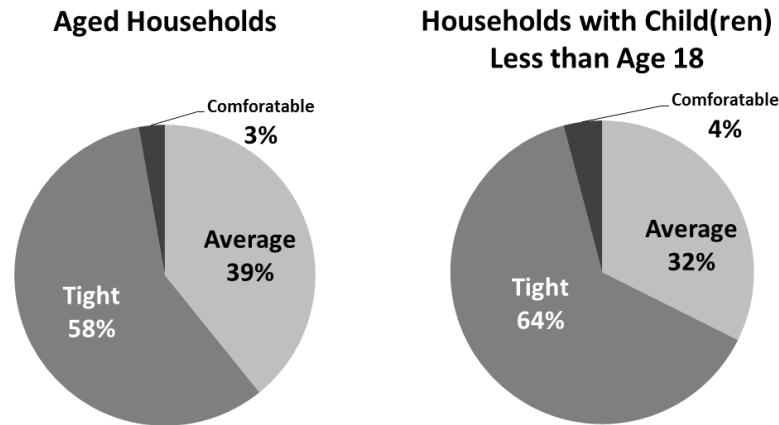
In reality elderly households are better off than young ones, and their self assessment of household financial conditions is better than that of young generations (see Figures 3 and 4).

**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?***

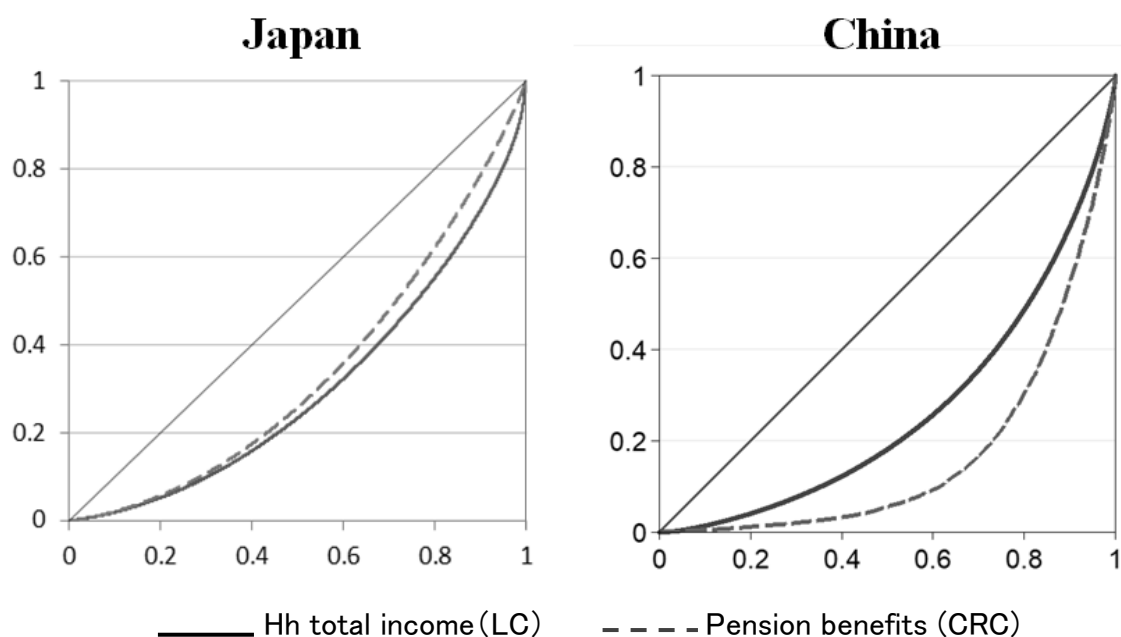
*Averting* claims that public pension systems redistribute income regressively among the aged households. But those countries which have a flat-rate basic benefit (or a benefit of similar substance, such as decreasing accrual rates with plural bend points in the US) as the 1st-tier component often work 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)<sup>4</sup>

### 【Acknowledgements】

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### References

N. Barr and P. Diamond (2010) *Pension Reform: A Short Guide*, Oxford: OUP (available in Chinese)

R. Beattie and W. McGillivray (1995) "A Risky Strategy" *International Social Security Review*, 48 (3/4)

R. Holzmann (2013) "Global Pension Systems and Their Reform" *International Social Security Review*, 66(2)

R. Holzmann, E. Palmer and D. Robalino, eds. (2013) *NDC Pension Schemes in a Changing Pension World*, Washington DC: WB and Swedish Social Insurance Agency

N. Ogawa and N. Takayama (2006) "Demography and Aging" in Clark-Munnell-Orszag eds. *The Oxford Handbook of Pensions and Retirement Income*, Oxford: OUP, available on the websites below:

[http://hermes-ir.lib.hit-u.ac.jp/rs/bitstream/10086/14252/1/pie\\_dp251.pdf](http://hermes-ir.lib.hit-u.ac.jp/rs/bitstream/10086/14252/1/pie_dp251.pdf)

N. Takayama (2002a) "Pension Reform of PRC: Incentives, Governance and Policy Options" available on website below:

(English) <http://hermes-ir.lib.hit-u.ac.jp/rs/bitstream/10086/20145/1/keizaikenkyu05604289.pdf>

(Chinese) [http://takayama-online.net/Japanese/pdf/thesis/thesis/chinese\\_ver1.pdf](http://takayama-online.net/Japanese/pdf/thesis/thesis/chinese_ver1.pdf) (中国的养老金改革：激励、監管及其政策選擇) included in 高山 (2012)、中文序、上海人民出版社)

N. Takayama (2002b) "Recent Pension Debates and World-wide Pension Trends" (in Japanese)

(Chinese) [http://takayama-online.net/Japanese/pdf/thesis/thesis/chinese\\_ver2.pdf](http://takayama-online.net/Japanese/pdf/thesis/thesis/chinese_ver2.pdf) (「全球性养老保障制度的最新争论与改革动向」中国社会科学院经济研究所『经济研究资料』2003年第4期、pp.10-21)

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<sup>4</sup> The present author is quite sure that decision-makers of China in charge of pensions are wise enough to distinguish these two things.



N. Takayama (2004) *Pension Reform with Trust and Sustainability*, Tokyo: The Oriental Economist (in Japanese); available in Chinese (高山憲之 (2012) 『信頼与安心的養老金改革』 上海人民出版社)

N. Takayama (2016) “The Funded Pensions: The Japanese Experience and Its Lessons” available both in English and in Chinese on the websites below:

(English) [http://takayama-online.net/English/pdf/Beijing\\_20160906.pdf](http://takayama-online.net/English/pdf/Beijing_20160906.pdf)

(Chinese) <http://takayama-online.net/Japanese/pdf/thesis/thesis/cinaciticpress2017.pdf>

World Bank (1994) *Adverting Old Age Crisis*, Oxford: OUP