Which pension model holds the most promise for China: a funded defined contribution scheme, a notional defined contribution scheme or a universal social pension?

John B. Williamson, Ce Shen and Yinan Yang

Faced with concerns about how to finance pensions for present and particularly future retirees, Chinese policy makers concluded that their traditional defined benefit pension scheme was not going to be sustainable. They, like pension policy makers around the world, have been looking for alternatives and have tentatively decided to go with a multi-pillar scheme that includes a major funded defined contribution pillar. We question the wisdom of that choice and explore two alternatives, one for urban workers based on the notional defined contribution (NDC) model and one for rural workers based on the universal social pension model.

Introduction

China has one of the most rapidly increasing rates of old-age dependency in the world. This trend poses a major problem for pension policy experts in China. But China is not just another rapidly aging country, in 2007 some 21% of the world’s population aged 60 and over was living in China and in the years ahead China’s share will be increasing (Kinsella and Velkoff, 2001; UN, 2007). This is one reason that pension policy developments in China are so important. Another is that China is not only a large country, it currently has the world’s fourth largest economy (US Census Bureau, 2009). Due to its size, the rate of growth of its economy and its status as a developing nation, it is quite possible that other developing nations will be looking to China for ideas about how best to deal with increasing old-age dependency.

During the decades after the end of the Second World War, the pay-as-you-go defined benefit (PAYG DB)public pension model spread from the industrial nations of the world to other nations around the world including many developing nations (Dixon, 1999; US Social Security Administration, 1999). Since the early 1980s several new approaches to providing old-age security in developing nations have emerged and are currently being tried out in various nations around the world. We will be considering three of these models: (1) the funded defined contribution (FDC) model; (2) the notional (unfunded) defined contribution (NDC) model; and (3) the universal non-contributory (social pension) model. The question we will be addressing is which of these three models holds the most promise for China?
Current policy

The People’s Republic of China was established in late 1949 and by 1951 an old-age pension scheme had been set up, but the scheme was largely limited to certain categories of urban workers, those working in state-owned enterprises (SOEs) and employees of large urban collectives. The old-age security system in China is continually undergoing change, but the broad outline of the current scheme for urban workers is described in State Council Decrees 26 (in 1997), 42 (in 2000) and 38 (in 2005) (Williamson and Deitelbaum, 2004; Zhu and Liu, 2008). The current scheme is described by the government as having three pillars. The first is made up of two mandatory components. The second and third pillars are both voluntary and target primarily more affluent workers. Tax incentives are given for participation in the second pillar which is fully funded by contributions from workers and employers. The third pillar is basically a private savings scheme and is usually managed by private sector insurance companies with very little government involvement. Because very few workers participate in either of these pillars, we will not focus on them in the discussion that follows. However, it is of note that both of these pillars are fully funded with assets managed by private sector money managers (Zhu and Liu, 2008). There are separate pension schemes for the military and government workers.

The first component (Pillar Ia) is a PAYG DB pension financed by the employers contributing an amount that varies from city to city, but averages about 20% of the payroll. Employees become eligible for this benefit at age 60/55 (men/women) after 15 or more years of covered employment. The second component (Pillar Ib), which most analysts would call a separate pillar, is a mandatory FDC scheme. This component is financed by an 8% payroll tax on employees. At retirement part of the worker’s pension income is based on the contributions made to this scheme. It is not a strict annuity, but it takes into consideration many of the same factors. The payroll contributions are managed by provincial social security bureaus and are supposed to be deposited into a special account in the worker’s name in a state (government) bank that in turn is supposed to invest the funds in government bonds. However, what is actually going on in many provinces is quite different than what the central government’s State Council decrees call for. In about 75% of China’s 31 provinces local governments are finding it necessary to use the contributions designated for the FDC individual accounts to pay pension benefits due to current retirees. A record is being kept of the contributions that would have gone into these funded accounts, and the plan is that the workers will eventually be compensated for these contributions; but the reality is that in many of these accounts no deposits have been made and in others only a fraction of the workers’ payroll contributions have been deposited (for more details see James, 2002; Zhao and Xu, 2002; Williamson and Shen, 2004; Zhu and Liu, 2008).

In rural China coverage is sparse. Somewhere between 5% and 10% of the rural population is covered, primarily by one or the other of two very small-scale programmes. The higher estimate is calculated using data taken from official government sources (China Civil Affairs Bulletin, 2007; China Social Security Bulletin,
2007; China Statistical Yearbook, 2007). The lower estimate is based on interviews with our Chinese pension experts who view the official coverage statistics as inflated (Wang, 2006). The most well known of the two programmes is called Rural Five Guarantees; it is a non-contributory social assistance programme that aims to help poor older people who are unable to work and have no children to provide for them. The other is a funded old-age insurance plan based on voluntary contributions.

**Three innovative pension models for China**

In this section we briefly outline three new pension models that have been proposed by those seeking alternatives to traditional PAYG DB pension schemes. One approach is to shift to a multi-pillar scheme that includes a substantial FDC pillar. A second is to include an NDC pillar. A third approach is to include a universal social pension.

**The funded defined contribution (FDC) model**

In 1981, Chile, like many other Latin American nations at the time, had a relatively mature PAYG DB scheme in place and was facing a situation in which the payroll tax revenues being collected were not adequate to pay the benefits to current pensioners and demographic projections made it clear that the problem was destined to become a lot worse in the decades ahead. The government decided to respond by shifting to an innovative new model, the funded defined contribution (FDC) model. For many years Chile’s new pension scheme became the model for this new approach. Today there are 12 Latin American schemes and over 30 worldwide that include at least an FDC pillar (James, 2005; Calvo and Williamson, 2008). By the early 1990s this model was being strongly promoted by the World Bank (1994) for countries around the world facing financing problems with their PAYG DB pension schemes. There are still those who remain strong supporters of the Chilean model (James, 2005; Zhu and Liu, 2008); however, in recent years opinions about the success of this model have become more mixed (Williamson, 2005; Casey and Dostal, 2008; Kritzer, 2008).

**The notional defined contribution (NDC) model**

The NDC model is a second alternative that has emerged in response to the difficulties many countries were having funding their maturing PAYG DB schemes. It typically calls for a PAYG defined contribution individual account as one pillar in a multi-pillar scheme. These accounts are notional (unfunded) as the contributions are not deposited; instead, they are used to pay pensions to current retirees (Williamson and Zheng, 2003; Williamson, 2004; Holzmann and Palmer, 2006). One goal is to tie pension benefits more closely to individual contributions than is typically the case with traditional PAYG DB schemes. The NDC pillar of a pension scheme is not redistributive. However, a separate redistributive pillar is typically included as part of the pension system in most countries with an NDC pillar (but not in
Mongolia), often taking the form of a guaranteed minimum pension for those who have contributed for a specified number of years.

Another goal of the NDC model is to provide mechanisms for sharing the burden between contributing workers and retirees when the pool of revenues being collected via payroll contributions declines. This sharing of the burden is done in different ways, but one of the most common is to base the annual adjustment of the balance in the worker’s notional account (this is the analogue to interest in a savings account) on changes in the size of what is called the ‘wage sum’ (think of it as the sum of the contributions made by all workers combined). The wage sum can move up or down and it can go down even when average wage levels move up. When the average wage level increases, the size of the annual increment to these individual accounts tends to increase; but if the number of workers contributing declines, due to higher unemployment rates or demographic changes, the size of the adjustment tends to decline. With NDC schemes there are typically similar burden sharing provisions associated with the level of annual adjustments of benefit paid to pensioners. The size of the annual pension adjustment can fall if the economy does not perform well. NDC schemes currently can be found in seven countries including Sweden, Latvia, Poland, Mongolia and Russia.

The universal social pension model

The term ‘social pension’ is sometimes used to refer to a means-tested non-contributory pension available for citizens above a specified age (for example, 60, 70 or 90); but we will focus on the universal (non means-tested) variant of the social pension. In Vietnam at age 60 a citizen becomes eligible for a means-tested variant of the social pension and then at age 90 becomes eligible for the universal variant (HelpAge International, 2007). Schemes based on the social pension model are being introduced in some urban areas, such as Mexico City (Scott, 2005), but are primarily viewed as a way to reach poor older citizens living in rural areas. Traditionally, in low-income nations, most residents of rural areas have had to rely entirely on their families for economic support in old age. Many pension experts have argued that it is not feasible to attempt to provide a government supported pension for anything approaching a large segment of the older population in the rural areas of these nations (Jutting, 2000; James, 2002; Overbye, 2005). However, some recent research suggests that social pension coverage is possible for much of the rural population, in many developing countries, if the political will exists (HelpAge International, 2007; Willmore, 2007).

A number of countries have introduced means-tested non-contributory schemes for the poor in rural areas, among them are Bangladesh, India, Brazil, Costa Rica and South Africa. Others have introduced universal non-contributory social pension schemes, among them are Bolivia, Botswana, Namibia and Nepal (Johnson and Williamson, 2006). This model is also under serious consideration in yet more countries including Sri Lanka (HelpAge International, 2008). How can such poor countries pay for such schemes? The short answer seems to be a combination of
keeping the pension benefit low and often keeping the age of eligibility initially high. For example, Nepal started its universal social pension programme in 1995 with an age eligibility of 75 and a benefit level of 10% of GDP per capita. The total cost came to 0.1% of the country's GDP. Namibia finances its scheme at a cost of 0.9% of the nation's GDP. Similarly, the cost is 0.5% of GDP in Botswana and 1.2% in Bolivia (Willmore, 2007).

**Which of these models best fits the needs of China today?**

For China, as for many other developing nations, there is a huge gap in levels of social and economic development between urban and rural areas (Shen and Williamson, 2006). Until this gap is greatly reduced, it is not going to be feasible to set up a single old-age security scheme that will work well everywhere. Urban workers employed by state-owned enterprises (SOEs) are the easiest group to deal with, but even for this group it is not currently possible to put in place a scheme that is administered in the same way throughout China. The central government can issue State Council decrees, but when it comes to implementation, there is substantial variation from province to province and even from city to city. One reason is that in many areas the local authorities cannot pay the benefits due current pensioners if a substantial fraction of the payroll tax contribution is diverted into funded individual accounts (World Bank, 1997).

A second major reason that these FDC accounts do not currently make sense is that even in the areas where the State Council decrees are fiscally possible to implement, there is the potential of significant pension security risk to contributing workers. Currently funds are deposited in government banks and invested in government bonds (China State Council Decree 42, 2000). This makes these accounts into a variant of the provident fund model found in many former British colonies, a model that has generally not worked out well because it is so easy and so common for governments to pay below market interest rates that fail to keep up with inflation (World Bank, 1994, p 127). In addition, the eventual goal is to permit these funds to be invested in private sector banks that will allow a portion the portfolio to be invested in equities (Xinhua Net, 2007). During good times this would potentially boost the rate of return on these accounts, but during periods of financial upheaval there could be very adverse consequences for Chinese workers close to retirement age. A sudden shock to financial markets, such as that experienced around the world during 2008 and 2009, could within a matter of months sharply lower the level of assets in their FDC retirement accounts. This would be particularly problematic for less affluent workers who were depending on those accounts to keep them out of poverty during their retirement years.

A third reason for concern about the FDC model for China at this point in time is the lack of adequate institutionalisation of property rights. In China State Council Decree 42 (2000) the government ruled that those managing the urban pension scheme could not divert funds from the defined contribution accounts to the defined benefit component, but despite this ruling such 'borrowing' continues to
be very common. Workers experiencing this diversion of funds from their accounts cannot expect legal redress by hiring a lawyer and asserting their rights to those funds. Another reflection of the current level of regard for individual property rights are the frequent cases in which the government forces rural residents to sell their property to developers with plans to build large housing or industrial projects that will not benefit those generally poor landowners. These rural residents are not in a position to resist such appropriations despite the modest compensation they are forced to accept. Further evidence of what by Western standards represents a low level of property rights institutionalisation is lack of respect for and enforcement of international copyright rules, particularly with respect to music, movies, books and software (New York Times, 2009). The institutionalisation of something closer to Western conceptions of property rights is increasing in China, but it has a long way to go before workers will feel confident that contributions to their FDC accounts will be safe from diversion or appropriation.

For urban workers in the SOEs, the substitution of NDC accounts for the FDC accounts would make sense. The major difference is that no pretense would be made that payroll tax contributions were being deposited into individual accounts. The policy of using contributions from current workers to finance pensions for current retirees would continue, but it would be formalised into a much more transparent and elaborated NDC scheme. The scheme would include provisions specifying how the benefits of future wage growth (as well as the burdens during periods of economic contraction) would be shared in proportion to the payroll contributions the worker had paid in over the years.  

Were China to shift from the FDC model to an NDC alternative for the wage-related component of the pension for urban SOE workers, the resulting scheme would still also include a separate defined benefit first pillar that would provide a basic pension for all workers who had been contributing for 15 or more years that would replace about 20% of the worker’s final wage (China State Council Decree 42, 2000). While this model would work well for many urban workers, eventually something also needs to be done for the urban workers not covered by the current scheme (Wang, 2006). Of the 58 million older retired people living in urban China about 51 million, or 88%, receive some sort of government pension. The other 12% is subdivided into a number of distinct groups, some of which are going to be hard to research. Among them are: (1) legal urban residents with marginal employment records linked to disabilities; (2) illegal urban residents living alone who have never been covered by the pension system; (3) illegal urban residents who are living with their adult children (who may or may not be legal urban residents themselves); and (4) legal urban residents who have spent very little time working in jobs covered by the pension system. Good figures about the relative size of these groups are not currently available. The proportion that are not covered has been declining in recent years and in comparison to many other developing nations the size of this group is now relatively small. For some of these people it can be assumed that their economic needs are being met, at least in part, by their adult children.
For most of the rural population there is currently no formal pension coverage for older workers (Guo, 2007). Our analysis suggests that the FDC model is currently problematic for urban workers, and we see this model as even more problematic for the 55% of the Chinese population living in rural areas (China Statistical Yearbook, 2007). As noted earlier, there are a few very small FDC schemes currently in place in some rural areas, but they have not been flourishing (China Social Security Bulletin, 2007). Corruption and lack of skills in managing pension funds have been problems (Jutting, 2000). Often the funds in these accounts are invested in ways that produce poor returns. There are also reports of instances of money being stolen by those local officials in charge of managing these funds. In short, transparency is often a problem (Zhou, 2008).

While the NDC model seems to offer a viable alternative that would represent a step in the right direction for urban workers currently covered by the public scheme, this alternative is not well suited for meeting the needs of rural older people in China. Among the reasons are the lack of bureaucrats well trained in pension issues, and the lack of reliable long-term record-keeping (Jutting, 2000).

Many rural workers currently depend on support from relatives, particularly their children, for economic security in old age (World Bank, 1996, p 4). Is this going to be enough in the years ahead? The recent worldwide economic crisis, which is having a major impact on the demand for Chinese exports and driving up unemployment rates in many Chinese cities, raises questions about the wisdom of relying almost exclusively on such informal arrangements to provide old-age security coverage in rural areas.

There are many who argue that the Chinese government does not currently have the economic resources needed to take on any major increase in spending on old-age security pensions for rural residents. Furthermore, this was a commonly held view even before the Chinese government was confronted with the added fiscal pressures associated with the recent downturn in world markets for Chinese goods. It is quite likely that it will be a few years before Chinese policy makers will give serious consideration to proposals calling for the expansion of government-financed old-age security spending to rural areas. We would argue that at that point in time, hopefully in the not too distant future, attention will turn to this issue as it would make sense to introduce a universal social pension for older people living in rural areas.

One option would be to start with a relatively low cost programme calling for a gradual reduction in the age of eligibility and increase in the generosity of pensions, possibly over a period of decades as the economy expands (Shen and Williamson, 2006). For example, Nepal has recently announced (September 2008) that it will soon be reducing the age of eligibility from 75 to 70 years – and to 60 years in one area of the country. At the same time it will be increasing the size of the benefit from 10% to 25% of GDP per capita. The new pension scheme will also be paid to all widows over the age of 60 (HelpAge International, 2008).
Conclusion

We ask which of three alternative new pension models makes the most sense for China in the years ahead. Until quite recently the Chinese public pension system was a PAYG defined benefit scheme covering primarily urban workers. By the early 1980s it had become obvious to Chinese pension policy experts that major pension policy changes were needed. The plan that eventually emerged called for the introduction of a multi-pillar scheme that included both a mandatory funded defined contribution pillar and a scaled-back variant of a traditional defined contribution scheme. We agree that an overhaul of the pension system was called for, but question the wisdom of the new scheme that emerged and is currently in the process of being implemented. One reason for this conclusion is that the new scheme includes a major funded defined contribution pillar, and the other reason is that it does not make an adequate effort to meet the pension needs of the rural population.

After discussing some of the problems with the new pension scheme, particularly those linked to its FDC pillar, we explored the relative merits of two alternative models that have been receiving increasing attention in recent years, primarily outside of China. One is the notional defined contribution (NDC) model and the other is the universal social pension model. We conclude that given the huge disparities in the level of social and economic development between the rural and urban areas, currently it does not make sense to structure the old-age security system in the same way for these two very important segments of the Chinese population. Eventually, it should be possible to introduce one model for both the rural and urban population, but this may not be the optimal policy option for the next few decades.

For the rural population, we call for the gradual introduction of a scheme based on the universal social pension model. In the urban areas we support the idea of introducing a multi-pillar scheme that includes a defined contribution pillar, but our scheme would differ from the current scheme in that it calls for a shift from a funded defined contribution (FDC) pillar to a notional defined contribution (NDC) pillar. This shift would likely do a better job of providing economic security in old age. Those near retirement would be better protected from the sometimes major fluctuations in financial markets associated with FDC pillars. They would also be better protected from the temptation of the government to provide a rate of return on prior contributions that falls below the rate of inflation, as has so often been the case in other low-income nations with funded government-managed provident fund schemes. An NDC pillar would better assure that pensioners share in the benefits of any increases in wage rates during their pre-retirement years as well as those taking place during their retirement. In addition, it would provide greater intergenerational equity because it would also assure that retirees share with those still in the labour force any reduction in income and standard of living linked to periods of economic contraction.
Notes
1 A defined benefit (DB) pension is typically based on the number of years the worker contributed and the wage level during the (last few or total) years of covered employment. Such pensions (whether public or private) are not influenced by trends in financial markets. Typically it is financed in part by contributions from the employer and in part from contributions from the employee. If it is a government scheme, during retirement it is often adjusted for inflation.

2 A funded defined contribution (FDC) pension scheme is based on the amount that has been contributed by the worker and or the employer to the scheme over the years. These schemes are funded in the sense that the money contributed is retained in the worker’s personal account and typically increases over the years due to the appreciation of the assets which in turn is greatly influenced by trends in financial markets.

3 While the Chinese economy has been growing rapidly for many years, the central government finds it very difficult to extract tax revenues. There continues to be a great deal of tax evasion. Many Western corporations and joint ventures have extracted agreements with the government that they and their workers would not be required to participate in the urban public pension scheme. This has put some pressure on the public pension scheme, but in recent years the government has been able to bring an increasing number of these workers into the urban public pension scheme. Currently, pension-related tax concessions to private corporations and joint ventures do not seem to be a major factor limiting the government’s ability to fund a more generous pension system. The problem is primarily tax evasion and the huge number of older workers who have little by way of savings and who are unable to work or to find work.

References


John B. Williamson, Department of Sociology, Boston College, USA, jbw@bc.edu

Ce Shen, Graduate School of Social Work, Boston College, USA, shenc@bc.edu

Yinan Yang, School of Public Administration, Renmin University of China, allenyny@yahoo.cn