中国社科院社会保障实验室

工作论文

SSL Working Paper Series

WP No. 037-20170512 中国社科院世界社保研究中心 主办



# Rural Pension Reform in China: Progress and Suggestions *

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## Abstract

This article provides a critical assessment of the Chinese New Rural Pension System, a scheme that combines a voluntary funded defined contribution pillar with contingent

* 本文即将发表于《Journal of Aging Studies》*41 (2017)*，正式出版内容以刊物为准。

social pension. China has rapidly and dramatically increased rural coverage and has emerged as a model that will potentially influence rural pension policy development in many other developing countries in the years ahead. However, the new scheme is also facing challenges, including the need to maintain its currently high coverage level by finding some new incentives for participation to replace the innovative family-binding incentive that is likely to be less effective in the decades ahead than it is today. Other challenges include the need to substantially increase benefit adequacy while maintaining financial sustainability. Our research is largely based on Chinese government documents, World Bank reports and similar documents from other international organizations such as OECD, United Nations, and HelpAge International.

***Keywords*:** rural, pension policy, social security, developing countries, China, Latin America

## 1. Introduction

In rural China, as in rural regions of many other developing countries, prior to the mid-20$^{th}$ century old-age provision had been the responsibility of the family. In China this was true in both rural and urban areas. In 1951, shortly after the founding of the People's Republic of China, the first public old-age pension provision scheme was introduced. It was designed to cover workers in urban areas, primarily those working in the state owned enterprises (SOEs) that were generally located in urban areas. It was financed by employers with no contributions required from employees. For rural residents provision for old-age continued to be largely the responsibility of the family. However, there was also some additional support from the rural communes (collective farms). Rural residents who were childless were guaranteed a very modest level of support in the form of the "Five Guarantees," a social assistance program that was covered by the collective that assured at least minimal coverage with respect to food, clothing, housing, medical care, and burial expenses (Wang, Williamson, & Cansoy, 2016). But during the 1980s and the gradual shift from a

command to a market economy, the rural communes generally devolved into individual family plots. This resulted in old-age provision becoming again almost entirely the responsibility of the family. During the 1980s and 1990s several other voluntary small scale old-age pension schemes were piloted in some regions of rural China. But the rural population remained largely ignored by government sponsored pension schemes.

In 2008 approximately 10% of the rural population in China was covered by one of several small-scale voluntary schemes (Fang, Giles O'Keefe, & Wang, 2012). Our focus in this article is on some very innovative recent developments in pension policy in rural China, particularly developments between 2009 and 2014. By the end of 2014 a new program called the New Rural Pension Scheme (NRPS) had been introduced and was available throughout rural China. By then almost the entire rural population that was age-eligible (over age 60) was receiving old-age pensions. Today China's NRPS (which has recently been merged with a similar scheme covering some urban residents which we will return to discuss later) is providing pensions to more rural residents than any other pension program in the world. This rapid expansion in coverage represents a major step forward for China's rural population and a potential model for rural populations in other developing countries around the world.

The main goals of our analysis are: (1) to describe the innovative structure of the NRPS, (2) to provide an assessment of what has already been achieved by this scheme, (3) to review the current challenges facing the NRPS with an emphasis on issues related to coverage, adequacy, and sustainability, (4) to discuss the three separate pension schemes that have evolved in urban areas and the recent integration of them, a similarly structured urban pension scheme with the NRPS, and (5) to review several potential reform options that some Chinese pension policy analysts are currently looking into that may play a role in future rural pension policy developments in China.

## 2. Recent achievements and current challenges

NRPS is a two pillar scheme: (1) a noncontributory social pension component

(SP) and (2) a "voluntary" funded defined contribution (FDC) component. Retirement age rural residents who meet certain conditions become eligible for a pension that combines the benefits due from both of these pillars.

The SP is currently ¥70 (US$10) per month and is available to rural residents who are already of retirement age (currently age 60) even if they have never contributed to the scheme, but this benefit is contingent on their adult children "voluntarily" enrolling in and contributing to the FDC component of NRPS. This "family-binding" policy is to our knowledge a policy innovation that is unique to China and not currently found in any other country. Given its success in China we believe that it has the potential to influence rural pension policy in many other countries around the world. This SP for those who have never contributed is entirely financed by the central government in the less affluent central and western provinces. In the more affluent eastern provinces the SP is typically financed half by the central government and half by local government (Chen & Turner, 2015).

Working age rural residents eventually become eligible for a SP benefit after they have contributed to the FDC pillar for at least 15 years and have reached retirement age. At that point they become eligible for a pension benefit based in part on the contributions they have made to the voluntary FDC pillar (and interest credited to these personal accounts) and in part on the noncontributory SP pillar. Working age rural adults have two voluntary decisions to make. One is whether or not to enroll and make (annual) contributions to the FDC pillar of the scheme and the other is how much to contribute. If they decide to enroll, there are a number of alternative contribution levels available that range from ¥100 to ¥2000 (US$15 to US$290) per year (Ministry of Human Resource and Social Security, 2014). Those who voluntarily elect to contribute more each year can expect a larger pension when they reach age 60. Local (county) government shares the burden of financing SP benefits with the provincial government. In addition the local government is required to contribute between ¥30 (US$4) and ¥60 (US$8) per year (depending on how much the resident elects to contribute within this range) to the enrolled participant's FDC account, but local governments in more affluent regions are urged to match a substantially larger

share of the participants' contributions and many such of the local governments do contribute more.

We now turn to a discussion of three major issues that we consider particularly important in connection with an assessment of the NRPS: coverage, adequacy, and sustainability. For a discussion of other related issues that we will not be discussing see (Liu et al., 2015; Liu & Sun, 2016).

*2.1 Coverage*

The current incentives of getting a SP for one's parents and a government partial match of FDC contributions are proving to be very effective in getting rural residents to enroll despite the voluntary nature of the program (Williamson & Bland, 2016). As a result, there was a rapid increase in coverage over the past five years between 2009 and 2014. Figure 1 shows that by the end of 2014 approximately 477 million (77 percent) of rural residents were covered. This figure includes 133 million recipients over age 60, almost the entire rural retirement-age population (MHRSS, 2015; United Nations 2015).

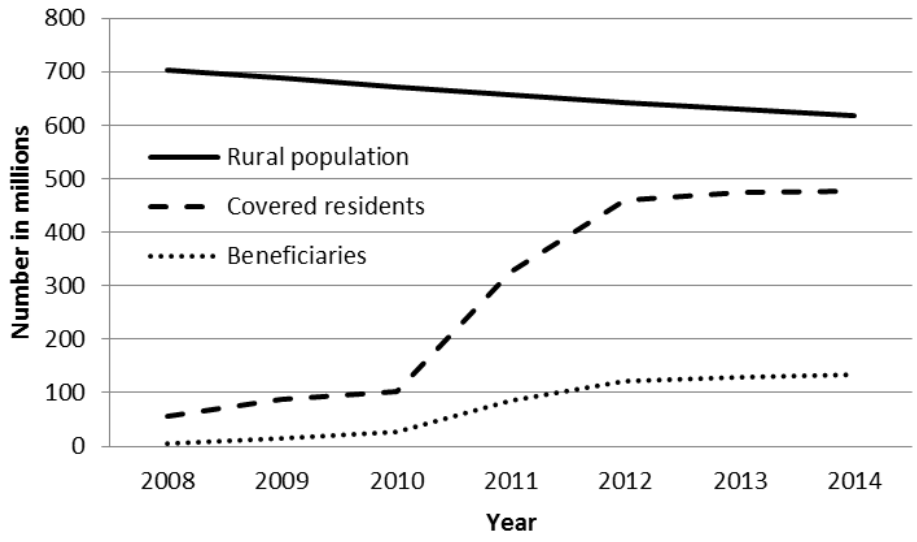



**Figure 1. Trends in Rural Population and Coverage of NRPS in China**

*Notes*: Adapted from MHRSS (2015). The number of beneficiaries for 2012 and 2014 were estimated by the authors. Our data for "covered residents" includes both participants that are not currently receiving benefits and beneficiaries. A few small scale pension programs were available in some provinces during the years prior to the introduction of the NRPS that began in 2009.

After several years of ambitious expansion, NRPS coverage seems to be reaching an upper limit, but the "full coverage" goal still has not been fully realized, particularly for young adults. The term "full coverage" is sometimes used by the Chinese government to mean that this program has been implemented in all rural counties and every rural resident is being given the opportunity to participate in the new system. But it does not mean all rural residents are enrolled in NRPS as either contributors or pension recipients. Some younger residents elect not to participate, particularly when they are poor and more than 15 years from the pension eligibility age.

While poor coverage in rural areas is not currently a major issue, this could change in the years ahead if an increasing proportion of younger adult rural residents elect not to participate, for example, when they are more than 15 years below the pension eligibility age. Many analysts argue that the attractiveness of the NRPS currently comes mainly from the SP for elder parents financed by the government without any prior contribution to the NRPS. In contrast, rural residents, especially young adults without retirement age parents, generally have much less incentive to participate (Lei et al., 2013; Zhang, 2010). Because the influence of the family-binding incentive is likely to gradually decline in the decades ahead, it may be necessary to replace this incentive with others, if current high coverage rates are to be maintained.

Other aspects in the design of the FDC component contribute to this incentive problem. Many rural residents are very poor and face considerable pressure to spend what limited funds they have on a host of pressing short-term needs such as medical emergencies. Personal pension accounts are established to keep a record of these contributions, but they do not get access to these funds until they reach retirement age. Rural residents are understandably skeptical as to how adequate the eventual compensation will be. The contributions must be deposited in government owned banks paying interest rates set by the government with yields that in some years provide a negative real rate of return and are consistently far below the rate of increase in rural incomes (People's Bank of China, 2017). This adverse incentive problem gets worse, because the modest fixed government match translates into a

lower rate of match for those electing to contribute at more than the minimal level allowed for those who enroll. In sum, in the years ahead low rates of return for the FDC pillar may adversely impact coverage rates as the family-binding incentive weakens.

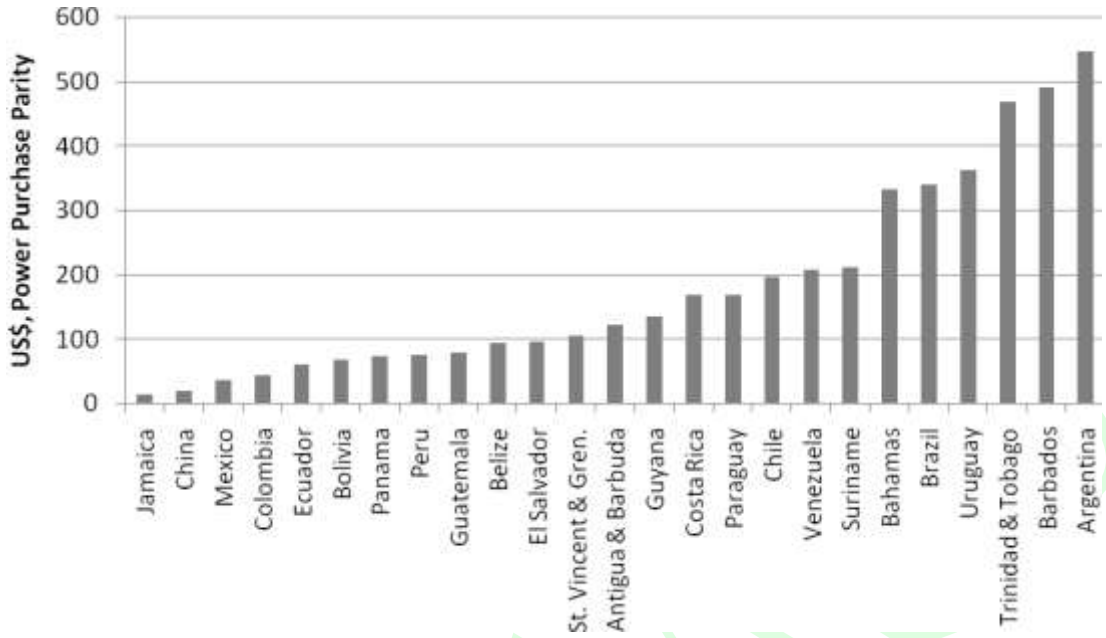
*2.2 Adequacy*

Benefit adequacy will be adversely affected if workers continue to opt for making the lowest allowable annual contribution levels to the FDC pillar ¥100 (US$15) for 15 years, the resulting supplement to the pension benefit based on the SP pillar will at best be very modest. Even if the interest earned on contributions to the FDC pillar were to keep up with or slightly exceed the rate of inflation, which is quite possible, the supplement to the SP benefit would still be modest, particularly for the many rural residents who are electing to contribute at the lowest allowable levels.

The current monthly SP benefit of ¥70 (US$10) used in many areas is clearly very low, making voluntary participation in the NRPS of little interest to affluent rural residents. In 2014, the benefit was about 36.5 percent of the official poverty line in rural areas, 8.5 percent of the average income in rural areas, and 3.5 percent of the average pension benefit of urban retirees (National Bureau of Statistics, 2015). The bottom line is that the NRPS as currently structured may provide a good starting point, but it is not a model likely to continue to attract attention from around the world unless progress is made with respect to the adequacy of these pensions.

Is there reason to believe that it should be possible for China to fund these rural pensions at a level that will yield pension benefits viewed as attractive when comparisions are made with the pensions available to the rural population in other developing countries? Based on strong evidence from Latin America and the Caribbean countries that we will be presenting, we believe this is possible. As the pension benefits in China associated with the NRPS are currently highly dependent on the level of the SP pillar, a particulary appropriate comparision is with the SP schemes currently available in many Latin American and Caribbean countries. Latin America has been a region of the world with many countries that have introduced multi-pillar pension schemes that include SP and DC pillars (Calvo, Bertranou, & Bertranou,

2010). It is also a region that includes some countries at China's level of economic




development as well as others that are less developed than China. From the data presented in Figure 2 it is clear that the Chinese SPs are much less generous than those found in most Latin American and Caribbean countries with SPs, including many that are much poorer (as measured by GDP/capita) than China. Jamaica is only country in Figure 2 that provides SP benefit levels that are lower than those found in China; all of the other countries provide SP benefits that are more generous than those in China. An alternative way to compare spending on SPs in these countries is the % of GDP spent on SPs. In Figure 3 note that China spends less (as measured by GDP/capita) on SPs than do 16 of the other countries, seven of which are substantially below China with respect to GDP/capita (Guatemala, Colombia, Belize, Ecuador, Paraguay, Guyana, and Bolivia). It would be difficult to say exactly how much more China should be able to spend on the SPs, but clearly there is a great deal of room for improvement in the decades ahead, should this goal become a priority for the Chinese government. Peru (US$11,100/cap) and Columbia (US$11,100/cap) have values of GDP/capita that are quite similar to China (US$9,800/cap) and they spend about the same fraction of the GDP as does China on SPs, but other countries such as Bolivia (US$5,500/cap) and Paraguay (US$6,800/cap) are substantially poorer, but spend

substantial more on SPs than does China.

**Figure 2. Social Pension (SP) Benefit Adequacy in China and Latin/Caribbean America**

*Notes*: Adapted from HelpAge (2015) and MHRSS (2015).

Benefit adequacy is also an issue in connection with the DC pillar of the NRPS. Given that the majority of participants select the minimum allowable annual contribution level, ¥100 (US$15), pension credits generated in these FDC accounts will remain very small even after contributing for the required minimum of 15 years. In addition, there is no automatic mechanism in place that indexes the FDC benefits to inflation or income growth either before or after pension payments begin. This leaves the rural elderly at risk of pension devaluation during the retirement years due to the lack of automatic indexing for either of the two pillars of the NRPS scheme. Clearly, the resulting NRPS pension does not fully meet the pension adequacy needs of the rural population today and unless some major changes are made, the issue of adequacy will become even more problematic in the decades ahead as price and wage levels increase.

*2.3 Sustainability*

Currently China is spending about .11 percent of its GDP on its SPs, far below the .42 percent average for Latin American and Caribbean countries. However, some Chinese analysts have serious concerns about the fiscal ability of local governments in poor areas to fund their share of SP benefits and provide matching funds currently between ¥30 and ¥60 (US$4 to US$8) per year for each covered worker, depending on how much workers contribute to their personal DC accounts (Cai, et al., 2012; National Bureau of Statistics, 2015; Shen & Williamson, 2010). Financial sustainability in rural areas may be aggravated by continued mass migration of young adults from rural to urban areas in search of better jobs. It is possible that this migration will provide funds for elder parents who remain in rural areas that will help them finance that portion of pension benefits that local rural residents must help subsidize, but it is also possible that this outmigration will diminish the tax base needed to make good on pension benefits that have been promised to those who

continue to reside in rural areas during their retirement.

As shown in Figure 1, China's rural population has declined substantially in recent years and this trend will continue given the rapid pace of urbanization. Also of note is the aging of the rural population due largely to the decrease in rural family size linked to the migration of many young adults from the countryside to cities. Both of these trends have potential implications for the sustainability of NRPS in the decades ahead.

## 3. Recent History of the Pension System for Urban Workers and Residents

We now turn to a discussion of the much more complex pension alternatives for urban residents and workers. China's hukou system is a system of household registration as either urban or rural resident, a distinction that has profound implications for eligibility with respect to a number of social services including pension scheme eligibility, with more generous benefits for those with an urban household registration. Based on this registration system, Chinese citizens are classified as either rural residents or urban residents and that distinction is typically used when estimating the number of urban vs. rural residents in China. However, there are also a number of rural residents who migrate from rural to urban areas for a number of years or for shorter periods of time in search of jobs that pay more than they can earn in their rural area of origin. These migrants typically retain their rural hukou status for pensions and other social services.

For those with an urban hukou status there are three major pension alternatives for different categories of workers and residents. By far the largest of the pension schemes for China's urban population is the Urban Enterprise Pension System (UEPS). During the 1990s China began to explore multi-pillar pension schemes that combined a pay-as-you-go pillar (financed by the employer) with a FDC pillar (funded by mandatory contributions by employees). Starting in about 2000 this pension scheme was financed in part by a 20% payroll tax on employers and in part by an 8% tax on individual earnings for those employed by the various State Owned

Enterprises (SOEs) and joint owned enterprises, that is, enterprises jointly owned by China and various foreign corporations. Within a few years it became evident that the 20% payroll tax on employer was not going to be adequate to finance the pensions for current and projected future retirees. The response in many provinces was to divert funds that were by statute supposed to be deposited into the workers' FDC individual accounts to help finance the pension payments due current retirees. A record is kept of all such contributions and a promise has been made that at retirement workers will be compensated for any personal contributions that had been diverted (Williamson, Shen, & Yang, 2009). This diversion of funds is still going on in some areas, but it has been much less prevalent than it was during the early 2000s. Currently about 322 million urban residents are covered by this scheme (Ministry of Human Resources and Social Security, 2014).

The second major pension scheme in urban China is for civil servants and government workers. Until recently this scheme was entirely funded by the government with no contributions from workers. This scheme was much more generous than the prior schemes, but it is currently in the process of being merged with the UPES scheme and has become a very contributory scheme. Approximately 40 million urban residents in China are covered by this scheme (Williamson & Bđand, 2016).

Besides the above two schemes for urban workers, there was a need for a third pension scheme for urban residents. In urban areas, there were some with urban resident "hukou" status who did not have a job, or were self-employed, and had not participated in the mandatory pension system for urban workers. In 2011, the central government launched a new program called the Urban Resident Pension Scheme (URPS) to include this relatively small segment of urban residents. Since the design of the URPS is very similar to that for NRPS, starting in 2014 the NRPS and URPS were merged into one system with the new name of Urban and Rural Resident Pension Scheme (URRPS), a scheme that in 2015 included a huge number of rural residents (481 million) and a relatively small number of urban residents (23 million) (Ministry of Human Resource and Social Security, 2015; National Development and

Reform Commission, 2015). Since about 95% of those covered by the new scheme are rural residents, including some who are temporary migrants into urban areas, this new scheme if viewed by many, particularly by those living in rural areas, as essentially a pension program for rural residents.

## 4. Future Reform Options for China's URRPS

In this section we look to the future with a brief discussion of possible reform options that we believe may help to address challenges that China's pension policy makers will be facing with respect to coverage, adequacy, and sustainability of pension coverage, particularly for the rural population.

Who makes the decisions such as the decision to introduce the NRPS, the decisions to merge programs to create a new joint program such as the URRPS, or decisions to introduce more modest structural changes in public pension programs? We do not have a well documented answer to that question. The internal process is largely opaque from outside MNRSS, the ministry responsible for the nation's public pension schemes and other social security programs. The details of the decision making seems to be opaque even to scholars at major academic Chinese pension organizations that do a great deal of pension related research, such as the Chinese Academy of Social Science. What we do know is that the major policies and policy changes are made by committees at MHRSS (Ministry of Human Resources and Social Security) that, no doubt, need to get approval from various actors outside of MHRSS including those at the very highest level of the government when major changes are under consideration.

It is common for MHRSS to sponsor visits to countries with schemes in place that are viewed as potentially useful models for China. Experts at the World Bank and other such major international financial institutions are often consulted. In the United States in past years organizations such as the Cato Institution have sent delegations to meet with Chinese officials and policy makers, when decisions were being made about the introduction of an FDC pillar (partial privatization) as part of the pension scheme for urban SOE workers (those covered by UEPS). It is also a common pattern

for Chinese policy makers to try out new pension policy ideas in a few carefully selected regions of the country before implementing a program for the country as a whole.

Chinese academics are quite free to discuss a variety of policy alternatives and very likely at least indirectly end up having an impact on the final policy alternatives selected. It is in that spirit that we now turn to a discussion of four reform options as examples of various ways in which the current pension scheme could potentially be changed and hopefully improved in the years ahead: (1) make the currently voluntary FDC pillar into a mandatory pillar; (2) increase the generosity of the SP pillar; (3) transform the current FDC pillar into a matching funded defined contribution pillar (MFDC), and (4) transform the current FDC pillar into a matching notional defined contribution pillar (MNDC). We acknowledge that to fully explicate each of these reforms and to present supporting evidence would take us beyond the scope of this article.

*4.1 Gradually shift from a voluntary FDC pillar to a mandatory FDC pillar*

China has tried a "voluntary" FDC pillar combined with a SP. This model has been very successful in helping to increase rural coverage during the past few years and we agree that it should be continued more or less in its current form unless at some future point evidence emerges that voluntary participation in rural areas starts to decline sharply. As mentioned earlier, there is reason to believe that such a trend may emerge in 10 to 15 years when most new retirement age rural residents will be become eligible for what has become the URRPS pension benefits based on their own as opposed to their children's work histories. Were such a slide in enrollments to emerge, it might make sense to gradually phase in a variant of the current voluntary FDC pillar that could start by requiring a very modest mandatory level of contribution with the option of voluntarily contributing more for those seeking a larger pension when they reach pension age. If such a change were phased in gradually, it might be accepted by the rural population, particularly if this change were to be introduced after much of the rural population has gained confidence in the government's track record of making good on promised pension benefits in connection with the existing

scheme. This reform may help retain the already high coverage among the rural population or at least help reduce the rate of decline in rural coverage in the years ahead.

However, given the government's relatively poor track record in connection with the FDC pillar associated with nation's Urban Enterprise Pension System (by far the largest scheme for the urban population), confidence in government promises with respect to future pension benefits associated with a mandatory FDC pillar may be relatively weak for at least a few years. When it becomes clear that the government really is making good on its promise to adequately compensate employees for the funds that were diverted from personal "funded" accounts and used to pay others their pension benefits, it may help build support for a reform for rural workers calling for at least a portion of the FDC pillar becoming mandatory. The original pension statutes for urban enterprise employees (mostly those working for State Owned Enterprises) specified that the contributions made by workers were to be placed in personal FDC accounts in government banks where they would earn an interest rate specified by the government. However, in many parts of China some or all of these contributions were diverted to pay pensions to urban workers in the local area who were already pensioners. The government has kept track of the workers' diverted contributions and has promised that the eventual pension will be calculated in basically the same way as it would have been had these contributions been physically placed in interest bearing funded individual bank accounts over the years. The primary reason for the proposed reform would be to help maintain pension coverage in rural areas, but it would also at the same time help deal with the issue of sustainability of the URRPS pension scheme. However, if not well managed, the introduction of this proposed reform could not only fail to stop the fall in coverage rates, it could even accelerate the rate of the decline. This might be the outcome if the shift is made too rapidly before rural workers have confidence that they will be adequately compensated for the mandatory contributions associated with this proposed reform.

*4.2 Increase the generosity of the social pension pillar*

With the introduction of NRPS most rural residents over age 60 immediately

began receiving SPs. However, while the current level of coverage is outstanding, SP benefits continue to be very low. Increasing the generosity of the SP would help address concerns about the adequacy of the program (Dorfman et al., 2013; Fang, 2014) Noncontributory SP schemes have become important in a number of countries around the world, including Namibia, South Africa, and Nepal, but particularly among Latin American and Caribbean countries. Noncontributory SPs have been useful for increasing coverage, but they have also helped with the issue of adequacy by reducing the extent of extreme poverty (Organization for Economic Co-operation and Development [OECD], 2014; Rofman et al., 2015).

Table 1 presents an overview of SPs in Latin American and Caribbean countries in 2013. Most of these SPs were introduced during the past two decades and target individuals in their 60s or 70s and do not provide universal benefits. On average, these SPs cover 31 percent of the population age 60 plus, with only Bolivia, Guyana, and Suriname approaching the current coverage levels in rural China. However, it is of note that benefits for those receiving SPs in Latin America and the Caribbean are much more generous (see Figure 2).

**Table 1. Characteristics of Social Pensions (SPs) in Latin/Caribbean American Countries**

| Country | Year of enactment | Age of retirement | Universal coverage | Coverage (pop. 60+) |
|---|---|---|---|---|
| Antigua and Barbuda | 1993 | 77 | No | NA |
| Argentina | 1994 | 70 | No | 1% |
| Bahamas | NA | 65 | No | 6% |
| Barbados | 1937 | 65.5 | No | 22% |
| Belize | 2003 | 65-67 | No | 21% |
| Bermuda | NA | 65 | No | NA |
| Bolivia | 1997 | 60 | Yes | 103% |
| Brazil | 1963 | 55-60 | Yes | 28% |
| Chile | 1974 | 65 | No | 39% |
| Colombia | 2003 | 54-59 | No | 26% |
| Costa Rica | 1974 | 65 | No | 20% |
| Ecuador | 2003 | 65 | No | 42% |
| El Salvador | 2009 | 70 | No | 5% |
| Guatemala | 2005 | 65 | No | 11% |
| Guyana | 1944 | 65 | Yes | 96% |

| | | | | |
|---|---|---|---|---|
| Jamaica | 2001 | 60 | No | 18% |
| Mexico | 2001 | 65 | No | 42% |
| Panama | 2009 | 70 | No | 23% |
| Paraguay | 2009 | 65 | No | 17% |
| Peru | 2011 | 65 | No | 11% |
| Saint Vincent and Grenadines | 2009 | 67 | No | 53% |
| Suriname | 1973 | 60 | Yes | 106% |
| Trinidad and Tobago | 1939 | 65 | No | 45% |
| Uruguay | 1919 | 70 | No | 5% |
| Venezuela | 2011 | 55-60 | No | 19% |
| Average | 1987 | 66 | No | 31% |

*Notes*: Adapted from HelpAge (2015). NA = not available. Excluding Beneficio de Prestacao Continuada in Brazil and regional schemes in Mexico. The impossible values for Surinam, Bolivia, and the unlikely value for Guyana are due to the crude estimating procedure used. Population data from the UN Population Division, alongside recipient numbers, is used to calculate the percentage of the population aged 60 and over covered. Coverage rates very near or above 100 per cent are either the result of inaccuracies in population data or reflect pensions being received by those aged under 60.

Major changes have been made to strengthen noncontributory pensions in the region. Chile, for example, has increased coverage particularly in rural areas with improvements in its so-called "solidarity pillar," which now finances SPs for those in the bottom 60 percent of the income distribution including many who have not made "mandatory" contributions to the pension system (International Social Security Association, 2014). It has also increased pension benefits for those who have participated in the formal labor market, but only intermittently and those with low wages (Berstein, 2010).

Brazil provides a particularly useful case for highlighting the viability of SP schemes in rural areas. In Brazil the rural population has almost universal access to pension benefits at both the family and individual level. The limited provision of noncontributory SPs for workers in the rural sector can be traced back to 1963, but the entitlements were until recently restricted to the very old. In 1991 entitlement to pensions were extended to workers in subsistence activities in agriculture, fishing and mining, and to those engaged in informal employment. Whereas prior to 1991 only heads of household were entitled to a pension, the 1991 reforms extended entitlement to all qualifying workers, thus expanding coverage to female rural workers who were

not heads of household (Beltrao, Pinheiro, & Barreto de Oliveira, 2004). Due to the high level of pension spending in rural Brazil and the high coverage rate for these non-contributory pensions, elderly households are about half as likely to be found at the bottom two-income quintiles as households with no elderly members (Bosch, Melguizo, & Pagés, 2013; OECD, 2014). Bolivia has a universal noncontributory SP scheme that has also gained considerable attention across Latin America. In 1996 Bolivia launched a pension reform that included a universal SP scheme called Bonosol in response to low coverage rates for the existing FDC pension system. In 2008, Bonosol was replaced by Renta Dignidad. By 2013, Renta Dignidad covered all elders with a monthly payment of 250 Bolivianos (US$36), at a cost of around one percent of GDP (HelpAge, 2015). Studies show levels of per capita income and consumption were significantly increased in households receiving the Renta Dignidad, and this system has had a very positive impact on households by reducing poverty rates and improving their living conditions (HelpAge, 2015).

Looking to the future, there is reason to believe, particularly based on the evidence from Latin America and the Caribbean (see Figure 3), that a country as economically developed as China should be able to finance a substantially more generous rural SP scheme. In 2013, the total social security expenditure in China was about 6.7 percent of GDP; this is far less than levels found in developed countries and substantially less than levels found in many developing economies as well, particularly those in Latin America and the Caribbean (NBS, 2015). In the 13th Five-Year Plan, China's economy is expected, based on a projected annual growth rate of at least 6 percent, to significantly increase its fiscal capacity for increased social spending (NBS, 2015). The Latin American evidence demonstrates that many countries with GDP per capital levels far below that of China are finding ways to finance SP benefits that are more generous than those currently in place in China (see Figure 3). For example, assuming an average benefit level of ¥100 (US$15) per month in 2014 for all rural residents aged 60 and above in rural areas indexed to GDP per capita thereafter, the overall SP expenditure would have been approximately 0.3 percent of GDP in 2014 (MHRSS, 2014). SPs have often been financed at a cost of

less than 1 percent of GDP in several Latin American and Caribbean countries, including Brazil, Chile and Costa Rica, even including some that are substantially less affluent than China (see Figure 3). Were such a change made, the SP would do a better job with respect to poverty reduction without seriously affecting sustainability. However, it is of note that there are pension experts who would question the sustainability of the SPs linked to China's rural pensions, to say nothing of our proposal to make China's URRPS substantially more generous in the decades ahead (Wang & Bland, 2014).

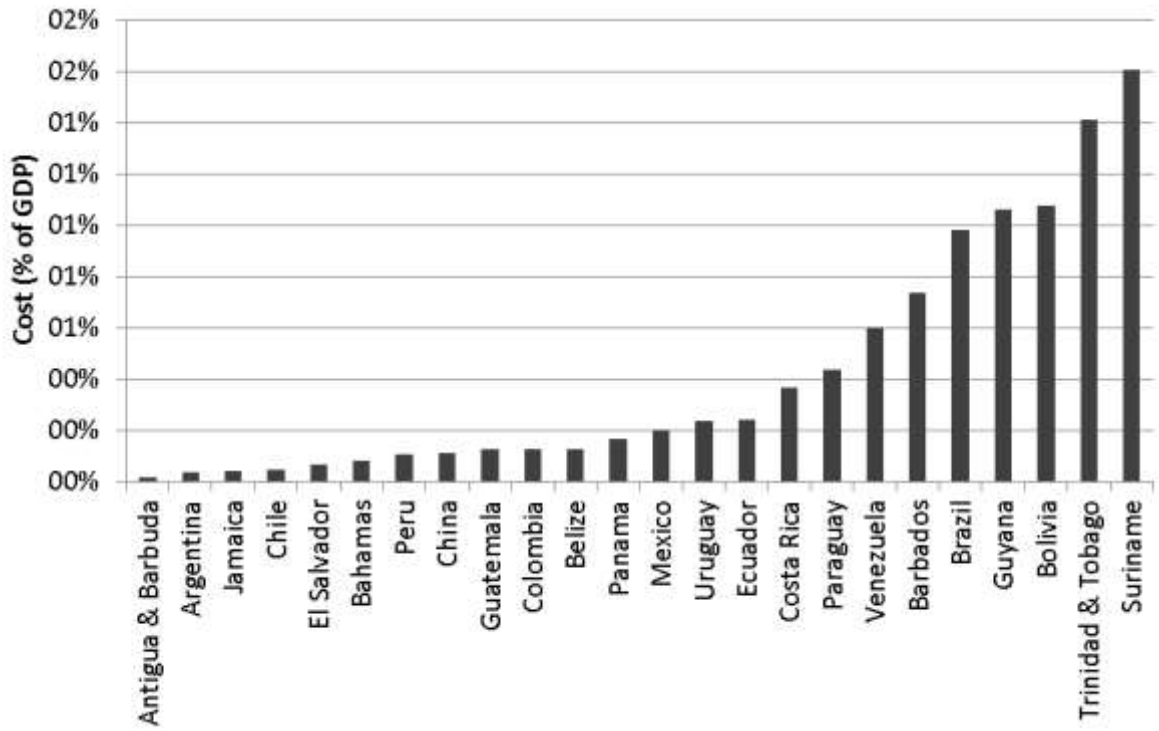



**Figure 3. Cost of Social Pensions (SPs) in China and Latin/Caribbean America**

*Notes*: Adapted from HelpAge (2015) and MHRSS (2015).

*4.3 Shift to a matching funded defined contribution (MFDC) scheme*

Given that rural residents in China are most commonly selecting the lowest allowable voluntary contribution level, ¥100 (US$15) per year, when they reach retirement age most will find that the component of their pension benefit derived this the FDC pillar will add very little to their total pension income. Benefit adequacy is a major problem for the FDC pillar, as it is for the SP pillar. Shifting to a matching FDC (aka MFDC) pillar could be done in such a way as to help deal with the adequacy

issue. The MFDC model is similar to the FDC model, but it differs in one major respect, it calls for a partial "matching" contribution from the government (Cai et al., 2012). Currently China does this on a very small scale as local governments are required to contribute at least ¥30 per year (US$4) to the FDC pillar of NRPS. So technically China already does have an MFDC scheme in place for its rural population, but much more than this very meager US$4 per year contribution is what advocates of the MFDC model have in mind. In some Latin American and Caribbean countries including Chile, Columbia, and Peru, MFDC mechanisms have been implemented with some success (Hinz, Holzmann, Tuesta, & Takayam, 2012).

If the Chinese pension scheme that covers most rural residents (and now some urban residents) is to reach its long-term goals, the pension benefits must become substantially more generous than they are today. The increase could come in part from matching some of the defined contribution contributions financed by government, possibly from a combination of central, provincial, and local government. Most OECD countries with MDC schemes provide incentives of at least 10 percent of contributions—the average is around 20 percent—although this provision is typically financed through tax deductions for employers who provide these subsidies. Examples of MDCs in developing countries include the state schemes for informal sector workers in Rajasthan and Madhya Pradesh, India. In some Latin American and Caribbean countries including Chile, Columbia, and Peru, MDC mechanisms also have been implemented (Hinz, Holzmann, & Takayam, 2012).

Since China has a traditional culture of saving preference which is much stronger than that in Latin America and Caribbean (Calvo & Williamson, 2008), if government (central, provincial, and or local) sources were used to match a substantially larger portion of the voluntary contributions made by rural residents the FDC pillar, making it a much more robust Matching Funded Defined Contribution (MFDC) pillar, it is likely that the rural population would look very favorably on such a scheme and many might shift to higher voluntary contribution levels. In response the current very high coverage levels in rural China might be maintained in the decades ahead. Were this to happen it would also be reasonable to expect substantially

higher pension benefit levels during the retirement years. This would be particularly so if the assets in such accounts were to get a rate of return that consistently keeps up with the rate of inflation. However, if the current extremely low rates of return on contributions in banks were to prevail for a lengthy period of time and the matching component of the MFDC were to remain even close to the current levels, any benefit derived from this reform would be quite limited.

*4.4 Shift to a matching notional defined contribution (MNDC) scheme*

Another reform option under current consideration by some Chinese pension policy experts is a matching "notional" defined contribution (MNDC) scheme. These accounts would be MDC accounts as described in section 4.3 above, that is, accounts based on defined contributions made by covered residents that are partially matched by government contributions. But they would be notional in the sense that they would be promised benefits based on the amount credited (by their own contribution and by partially matching government contributions) to their accounts over the years, even though there would be no money held in those personal accounts backing up such promises. It would become a variant of the defined benefit model that is much more closely linked to contributions made than is typically the case with defined benefit schemes in most countries. The NDC component of this alternative has received support from both Chinese (Zheng, 2012; 2014) and World Bank (Dorfman et al., 2013; Holzmann & Palmer, 2006) economists. It is a variant of the proposal discussed in section 4.3 above. It differs in two fundamental respects. First, the contributions made by residents and the government would be carefully recorded, but instead of being deposited into individual bank accounts, the funds would be made available to the government to help finance pensions for current pensioners as is currently the case in Sweden and several other countries with NDC schemes in place.

The notional credit in these individual accounts would be incremented on at least an annual basis in one of several ways such as being adjusted for inflation or preferably and more generously, credited by building in at least a partial adjustment for increases in wage levels as well. In China wage levels are increasing much more rapidly than inflation, suggesting that over the long-run adjusting for price inflation

alone will not be enough. A well designed MNDC pillar could go a long way toward dealing with benefit adequacy, income replacement, and poverty reduction (Dorfman, et al., 2013). The incentive associated with such a scheme should help maintain participation rates among working-age adults with retirement age parents who will increasingly be eligible for SPs based on their own contribution histories and for that reason their pension eligibility will typically not be dependent on the participation of their adult children. That is, it would at least partially replace some of the reduction in the incentive to contribute that can be anticipated as the current family-binding incentive gradually weakens in the decades ahead.

But will the residents of rural China accept the idea of notional (unfunded) accounts as an alternative to accounts that involve real assets in bank personal accounts, albeit funds that they cannot access until they reach retirement age? Traditionally rural residents in China have not had a lot of trust that money sent to a government agency with the promise of a pension that fairly reflect that amount actually contributed during their working lives. It may be that this distrust may make this model unacceptable to most rural residents at this point in time. But the model may become acceptable in the years ahead depending on the level of trust that is built up in connection with the FDC pillar of the existing scheme. As they hear about others who are getting pensions that are viewed as fair given the contributions they have made over the years, they may come to trust the government more in connection with such pension programs.

Acceptance of the NDC model may be even more dependent on what happens to the many urban workers who are currently covered by the Urban Enterprise Pension System (UEPS), the main pension scheme for urban workers. In many areas these pillars have been de facto NDC pillars as the contribution to the workers' individual accounts have been diverted to pay the pensions due current retirees in the area leaving only electronic credits for contributions made. The promise is that when these workers become pensioners, they will get just as much pension credit as they would have received, if the contributions had been placed in their personal bank accounts. If this actually happens, it is quite possible that both urban and rural

workers will become more accepting of not only FDC accounts, but similar NDC (and MNDC) accounts.

## 5.0 Summary and conclusion

We have described China's New Rural Pension Scheme and why we believe that several of its clever innovations will be of great interest to pension policy analysts in other countries, particularly developing countries with large rural populations. We give particular attention to the important issues of: coverage, adequacy, and sustainability and the rapidity with which China was able to extend coverage to a very high proportion of its rural population. Currently nearly all rural residents in china are eligible for social pensions in connection with this new scheme

While this scheme includes some creative new pension policy ideas, there are some aspects of this new program that are in much need of further refinement. In an effort to foster such efforts we have also included a discussion of several alternatives for policy reforms that illustrate some possible reforms that would to help deal with some of the current limitations of the Chinese pension system including as well as some that we anticipate will be emerging over the next few years.

At the core of the new pension system for rural residents is a social pension pillar that currently provides an old age pension to almost every rural resident who is over age 60, even if that person has never contributed to this new voluntary contributory pension scheme. The family-binding policy used to bring in the adult children of age-eligible pensioners has proven to be a very effective strategy for getting almost the entire rural population covered very quickly. This is a structural innovation found in no other nation that we fully expect many other developing nations to pick-up on in the years ahead.

While the near universal social pension component is a great idea, it does not begin to provide an adequate pension by to live on. It is a popular supplement to other sources of support in old age, but it does not keep recipients out of even extreme poverty. In addition, when comparisons are made with other developing countries with social pensions, such as those in Latin America and Caribbean, the evidence

suggests to us that China should currently be able to afford a substantially more generous social pension scheme. Given China's current rate of economic growth this should be even more true in the relatively near future.

The new pension system for rural residents also includes a "voluntary" defined contribution component. We put the word "voluntary" in quotes because adult children must enroll in and contribute to the new pension scheme if they want to assure that their age-eligible parents will be immediately eligible for a social pension without having themselves made any contributions had to the new scheme. This was a great idea and it certainly has worked. Before this model was introduced in China, many pension experts in major international financial institutions believed that it is all but impossible to successfully extend near universal coverage to the rural population in a developing country using a voluntary contributory pension scheme. China has proven this is not the case.

## References

Beltrao, K., Pinheiro, S., & Barreto de Oliveira, F.E. (2004). Rural population and social security in Brazil: An analysis with emphasis on constitutional changes. *International Social Security Review*, 57(4):19-49. doi:10.1111/j.1468-246X.2004.00201.x

Berstein, S. (Ed.). (2010). *El sistema chileno de pensiones*. Santiago, Chile: Superintendencia de Pensiones. Retrieved from: https://www.previsionsocial.gob.cl/

Bosch, M., Melguizo, Á., & Pagés, C. (2013). *Mejores pensiones, mejores trabajos. Hacia la cobertura universal en América Latina y el Caribe*. Washington, DC: Inter-American Development Bank. doi:10.1017/s1474747215000190

Cai, F., Giles, J., O'Keefe, P., & Wang, D. (2012). *The elderly and old age support in rural China: Challenges and prospects*. Washington, DC: World Bank. doi:10.1017/s1474747214000080

Calvo, E., Bertranou, F., & Bertranou, E. (2010). Are old-age pension system reforms

moving away from individual retirement accounts in Latin America? *Journal of Social Policy*, 39(2):223-34. doi:10.1017/S0047279409990663

Calvo, E., & Williamson, J.B. (2008). Old-age pension reform and modernization pathways: Lessons for China from Latin America. *Journal of Aging Studies*, 22(1):74-87. doi:10.1016/j.jaging.2007.02.004

Chen, T., & Turner, J.A. (2015). Fragmentation in social security old-age benefit provision in China. *Journal of Aging & Social Policy*, 27(2):107-22. doi:10.1080/08959420.2014.977647

China Daily. (2015). *Series of measures announced to lift 70m out of rural poverty*. Retrieved from http://www.chinadaily.com.cn/

Dorfman, M.C., Holzmann, R., O'Keefe, P., Wang, D., Sin, Y., & Hinz, R. (2013). *China's pension system: A vision*. Washington, DC: World Bank. doi:10.1177/0920203x13485669h

Fang, C., Giles, J., O'Keefe, P., & Wang, D. (2012). *The elderly and old age support in rural China: Challenges and prospects*. Washington, DC: The World Bank.

Fang, L. (2014). Towards universal coverage: A macro analysis of China's public pension reform. In K Hujo (Ed.), *Reforming Pensions in Developing and Transition Countries.* London: Palgrave.

HelpAge International. (2015). *Pension watch database* [Data file and codebook]. Retrieved March 19, 2017 from http://www.pension-watch.net/

Hinz, R., Holzmann, R., Tuesta, D., & Takayama, N. (2012). *Matching contributions for pensions: A review of international experience*. Washington, DC: World Bank. doi:10.1596/978-0-8213-9492-2

Holzmann, R., & Palmer, E. (Eds.). (2006). *Pension reform: Issues and prospects for non-financial defined contribution (NDC) schemes*. Washington, DC: World Bank. doi:10.1596 / 978-0-8213-6038-5

International Social Security Association. (2014). *Social security programs throughout the world: The Americas*. Washington, D.C: U.S. Social Security Administration.

Lei, X., Zhang, C., & Zhao, Y. (2013). Incentive problems in China's New Rural

Pension Program. In C. Giulietti, K. Tatsiramos, & K.F. Zimmermann (Eds.), *Labor market issues in China* (pp. 181-201). Bingley, UK: Emerald Group Publishing Limited. doi:10.1108/s0147-9121(2013)0000037010

Liu, H., Han, X., Xiao, Q., Li, S., & Feldman, M.W. (2015). Family structure and quality of life of elders in rural China: The role of the New Rural Social Pension. *Journal of Aging & Social Policy, 27*(2):123-38. doi:10.1080/08959420.2014.977662

Liu, T., & Sun, L. (2016). Pension reform in China. *Journal of Aging & Social Policy, 28*(1):15-28. doi:http://dx.doi.org/10.1080/08959420.2016.1111725

Ministry of Human Resource and Social Security. (2014). *Statistical communiqu é of human resource and social security.* Retrieved from http://www.stats.gov.cn/

Ministry of Human Resource and Social Security. (2015). *China Human Resource and Social Security Development Bulletin 2012-2015*. Retrieved from http://www.mohrss.gov.cn/

National Bureau of Statistics. (2015). *National statistical data* [data file]. Retrieved from http://www.stats.gov.cn/

National Development and Reform Commission. (2015). *Report on the implementation of the 2012-2015 plan for national economic and social development and on the 2013-2016 draft plan for national economic and social development 2015 draft plan for national economic and social development.* Retrieved from http://www.npc.gov.cn/

Organization for Economic Co-operation and Development. (2014). *Pensions at a glance: Latin America and the Caribbean*. Paris, France: OECD Publishing. doi:10.1787/9789264224964-1-en

People's Bank of China. (2017). Retrieved from http:/wwwstats.gov.cn/

Rofman, R., Apella, I., & Vezza, E. (2015). *Beyond contributory pensions: Fourteen experiences in Latin America*. Washington, DC: World Bank. doi:10.1596/978-1-4648-0390-1

Rofman, R., & Oliveri, M.L. (2012). *Pension coverage in Latin America: Trends and determinants*. Washington, DC: World Bank.

Shen, C., & Williamson, J.B. (2010). China's new rural pension scheme: Can it be improved? *International Journal of Sociology and Social Policy*, 30(5-6):239-50. doi:10.1108/01443331011054217

Shi, S.J. (2012). Towards inclusive social citizenship? Rethinking China's social security in the trend towards urban-rural harmonisation. *Journal of Social Policy*, 41(4):789-810. doi:10.1017/S004727941200051

Social Security Administration (2016). *Social Security Programs Throughout the World*. Retrieved from: https://www.ssa.gov/policy/docs/progdesc/ssptw/

Titelman, D., Vera, C., & Pérez Caldentey, E. (2009). *Pension system reform in Latin America and potential implications for the Chinese case* (The IDEAs Working Paper No. 06/2009). Santiago, Chile: Economic Commission for Latin America and the Caribbean.

United Nations (2015). *UNdata*. Retrieved from http://data.un.org/

Wang, L., & Bådand, D. (2014). Assessing the financial sustainability of China's rural pension system. *Sustainability*, 6:3271-390. doi:10.3390/su6063271

Wang, X., Williamson J.B., & Cansoy, M. (2016). Developing countries and systemic pension reforms: Reflections on some emerging problems. *International Social Security Review*, 69(2):85-106.

Williamson, J.B., & Bådand, D. (2016). The future of retirement security in comparative perspective. In L.K. George & K.F. Ferraro (Eds.). *Handbook of Aging and the Social Sciences* (8th ed., pp. 461-81). San Diego, CA: Academic Press. doi:10.1016/b978-0-12-417235-7.00022-6

Williamson, J.B., Price, M., & Shen, C. (2012). Pension policy in China, Singapore, and South Korea: An assessment of the potential value of the notional defined contribution model. *Journal of Aging Studies*, 26(1):79-89. doi:10.1016/j.chieco.2014.05.014

Wu, L. (2013). Inequality of pension arrangements among different segments of the labor force in China. *Journal of Aging and Social Policy*, 25(2):181-96. doi:10.1080/08959420.2012.735159

Zhang, C. (2010). Intention of the peasants on participating in New Rural Pension

Program and its influencing factors. *Journal of Agrotechnical Economics*, 6:4-10.

Zheng, B. (2012). China: An innovative hybrid pension design proposal. In R. Holzmann, E. Palmer, & D. Robalino (Eds.), *Nonfinancial Defined Contribution Pension Schemes in a Changing Pension World* (pp.189-212). Washington, DC: World Bank. doi:10.1596/9780821388488_CH06

Zheng, B. (Ed.) (2014). *China Pension Report 2014*. Beijing, China: Economy & Management Publishing House.

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