RURAL PENSION REFORM: THE CASE OF CHINA

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Rural Pension Reform: The Case of China

ABSTRACT

This article provides a critical review of the Chinese New Rural Pension System (NRPS), which combines a voluntary funded defined contribution (FDC) pillar with contingent social pensions (SP). NRPS successfully expanded rural coverage and thus emerged as a potential model for other developing countries. However, NRPS is also facing challenges with respect to future incentives for participation among younger workers, benefit adequacy, and financial sustainability. We discuss the strengths, weaknesses, and feasibility of expanding the number of participants and generosity of the SP pillar, switching to a matching defined contribution scheme, and exploring a novel notional matching defined contribution scheme.

Keywords: rural, pension policy, social security, developing countries, China, Latin America
Rural Pension Reform: The Case of China

In 2009, the Chinese government began introducing the New (aka National) Rural Pension System (NRPS). The goal has been to rapidly extend pension coverage to rural areas. During the past five years, NRPS coverage has been extended to all rural counties. The number of rural residents covered reached 71 million by the end of 2009 and increased to 477 million by the end of 2014 (National Development and Reform Commission, 2015), achieving coverage for about 77 per cent of the rural population including almost all rural residents over age 60 (Ministry of Human Resource and Social Security [MHRSS], 2015).

Today China’s NRPS covers a larger number of rural residents and is providing pensions to more people 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.

NRPS is based on two very modest components: a contingent noncontributory social pension (SP) pillar and a voluntary funded defined contribution (FDC) pillar. Retirement age rural residents become eligible for an SP if their adult children “voluntarily” enroll in and contribute to the FDC component of NRPS. Working age rural residents become eligible for a SP benefit after they have contributed to the FDC pillar for at least 15 years and have reached retirement age (currently 60 for both genders). At that point they become eligible for a pension benefit based in part on the assets (or credit) in the FDC pillar and in part on the noncontributory SP financed by a combination of local and central government sources.

In this article we aim to provide a critical review of what has been achieved by NRPS in China, current challenges facing NRPS, and potential reform options that could be considered in the near future. This review considers relevant pension experience in several other countries, particularly in Latin America, a region that has been a hothouse for the implementation of ideas about multi-pillar schemes that include FDC pillars. Despite the
numerous differences, China shares a number of similarities with Latin America, such as having comparable old-age dependency ratios and life expectancy, middle-income transforming economies with dualistic rural-urban economic structures, many rural migrants, large informal sectors in labor markets, and particularly the challenging task finding ways to alleviate rural poverty. Regarding rural pension systems, China and numerous Latin American countries have recently introduced pension reforms that combine SP and FDC pillars (Calvo, Bertranou, and Bertranou, 2010).

The focus of this critical review is on three dimensions of NRPS: coverage, benefit adequacy, and financial sustainability (other dimensions are discussed in Liu, Han, Xiao, Li, and Feldman, 2015; Wu, 2013). The NRPS currently provides a strong incentive for participation, particularly for working age adults with retirement-age parents. The major incentive is a very innovative “family-binding” policy making a SP benefit available immediately to rural residents over age 60, but only if their adult children enroll in and contribute to the NRPS (MHRSS, 2015). Many developing countries have introduced FDC schemes (e.g., Chile) and a few (e.g., Brazil) have introduced SPs for their rural populations (Rofman, Apella, and Vezza, 2015), but China’s innovative model has been particularly successful in attracting participation in its “voluntary” FDC pillar.

However, in the decades ahead most retirees will have a pension and new incentives may be needed to assure that young adults choose to participate in this voluntary program. The impending problem is reflected in the strong preference among many working age enrolled residents to select the lowest allowable voluntary contribution level. This choice assures that their retirement age parents are eligible for a SP, but it will also lead to very low pensions when they themselves retire (Lei, Zhang, and Zhao, 2013). The primary goal for many working age adults seems to make their parents eligible for a social pension now, not to maximize their own future pensions. While NRPS seems to be working well relative to
schemes typically found in rural areas of most other developing countries, given its current structure, there are reasons to believe that issues of adequacy and sustainability are likely to become increasingly problematic in the decades ahead.

Our critical review makes at least three contributions. First, we address a gap in previous literature, which is largely focused on urban pension systems. Although some researchers have compared the largely urban pension systems in Latin America with urban pension policy in China (Calvo and Williamson, 2008; Shen and Williamson, 2010; Titelman, Vera, and Pérez Calderón, 2009), few have compared pension policy for their respective rural populations. Second, because NRPS benefits more people than any other pension scheme in the world, a successful pension program in China is a successful pension program for a substantial share of the world’s elder population. Third, our analysis has clear policy implications both for China and other developing countries. The rapid expansion in NRPS coverage is a major success in China that deserves particular attention given that a substantial fraction of rural populations remain unprotected in most developing countries. However, in order to achieve its long-term goals, those in charge of NRPS policy adjustments need to more adequately address the issues of benefit adequacy and sustainability.

Due to space limitations we will not be discussing other components of the Chinese pension system, such as the Urban Enterprise Pension System, the Urban Resident Pension Scheme, the military pension system, or the pension systems for government workers and civil servants. Our focus will be on the primary pension system for China’s rural population that made up 45 per cent of the Chinese population at the end of 2014 (National Bureau of Statistics [NBS], 2015). Other sources are available that provide descriptions of recent developments and critical assessments of Chinese pension schemes for the urban population, and other groups such as civil servants and government workers (Chen and Turner, 2015; Liu and Sun, 2016; Williamson and Béland, 2016). Of particular note are how fragmented the
Chinese pension system is and the lack of integration between the urban and rural schemes (Chen and Turner, 2015; Shi, 2012).

**Past Achievements and Current Challenges in China’s NRPS**

NRPS is based on a noncontributory SP and a voluntary FDC component, which can be received simultaneously. The SP currently of ¥70 (US$11) per month is available to those who are already of retirement age, but is contingent on their adult children “voluntarily” enrolling in and contributing to the FDC component of NRPS. This SP is entirely financed by the central government in the less affluent central and western provinces. In the more affluent eastern provinces the SP is financed half by the central government and half by local government (Chen and Turner, 2015).

The FDC personal account component is funded by contributions from enrolled workers who select one of twelve annual contribution levels ranging from ¥100 to 2000 (US$16 to US$324) (MHRSS, 2014). Local governments are required to match a portion of workers’ contributions to these FDC accounts and in more affluent areas the matching contributions are substantially above the required minimum of ¥30 (US$5) per year.

**Coverage**

The current incentives of getting an SP for 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 and Béland, 2016). As a result, we have seen a rapid increase in coverage over the past five years. Figure 1 shows that by the end of 2014 approximately 477 million (77 per cent) of rural residents were covered. Among covered residents, in 2014 133 million of those over age 60 were covered as beneficiaries, meaning that almost all rural elders are currently benefitting from this system (MHRSS, 2015; United Nations 2015).

[FIGURE 1 ABOUT HERE]
After several years of ambitious expansion, NRPS coverage seems to be reaching an upper limit, but the “full coverage” goal 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 access to system. It does not mean all rural residents are enrolled in NRPS as either contributors or pension recipients. The family-binding policy limits pension eligibility for some rural elders, particularly the poorest, whose children are often very poor themselves and unable or unwilling to make even the small annual contribution to NRPS required to make their retirement-age parents eligible for a SP without having contributed to the system.

While poor coverage in rural areas is not currently a major issue, this could change in the years ahead if an increasing number of younger adult rural residents elect not to participate because their parents are already SP eligible based on their own work histories. Some analysts have shown that the attractiveness of the NRPS comes mainly from the SP for elder parents financed by the government. Rural residents, especially young adults without retirement age parents, generally have very little incentive to participate (Lei et al., 2013; Zhang, 2010). In short, the influence of the family-binding incentive will gradually decline in the decades ahead and it may be necessary to replace this incentive with others, if current high coverage rates are to be maintained.

A major reason for this incentive problem is the design of the FDC component. Currently some or all of the assets are notional. That is, the contributions from rural workers are often diverted by the government to finance pensions due to residents who are already retired. Personal pension accounts are established to keep a record of these contributions which hold notional (unfunded) credit, but often no actual cash is placed in these accounts. The promise is that the government will take into consideration any contributions that have
been diverted when the person reaches retirement age, but many rural residents are understandably skeptical as to how adequate the eventual compensation will be. In those cases where contributions are not diverted there is another problem. The contributions must be deposited in government owned banks paying interest rates set by the government with yields that are typically far below market rates and generally provide negative real rates of return. This adverse incentive problem gets worse for those electing to contribute at more than the minimal level allowed for those who enroll. In sum, notional accounts combined with low return rates may adversely impact coverage as the family-binding incentive weakens in the decades ahead. Benefit adequacy and financial sustainability will also be affected if workers make the lowest allowable contribution, accrue little on interests, and increasingly depend on the government to finance the schemes cumulative deficits.

_Adequacy_

The current SP benefit of ¥70 used in many areas is very low, making voluntary participation in the NRPS unattractive to many middle- and most high-income rural residents. This benefit is about 36.5 per cent of the official poverty line in rural areas, 8.5 per cent of the average income in rural areas, and 3.5 per cent of the average pension benefit of urban retirees in 2014 (National Bureau of Statistics, 2015). Although the average monthly (total) pension benefit increased by ¥21 (US$3) between 2010 and 2013, from Figure 2 one can see that benefit adequacy in China remains very far behind levels found in most Latin American countries. On average, SP pension benefits in Latin America are about US$188, adjusted for Purchasing Power Parity (PPP). Sixteen of these countries provide noncontributory benefits that are more than US$100 (PPP) per month. Benefits in the other 11 mostly range from US$60 to US$94, which is still substantially more generous than China’s NRPS benefit. Perhaps a better measure of pension adequacy is benefits as a percentage of GDP per capita, which ranges from 1 per cent to 33 per cent and has an average of 15 per cent.
Benefit adequacy in the FDC pillar is also a challenging issue. Given that the majority of participants select the minimum allowable annual contribution level, ¥100 (US$16), 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 clear mechanism in place that indexes NRPS (SP) benefits to inflation or income growth, leaving the rural elderly at substantial risk of pension devaluation over the years. Clearly, the resulting pension does not 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 of a problem in the decades ahead as price and wage levels increase.

Sustainability

The current cost of the Chinese SP remains at .11 per cent of GDP, far below the .42 per cent average for Latin American countries (see Figure 3). However, some 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 a minimum ¥30 per year for each covered worker) to the personal FDC accounts of enrolled workers (Cai, Giles, O’Keefe, and Wang; Shen and Williamson, 2010). This financial sustainability issue is aggravated by the increasing burden of rural population aging linked to the migration of young adults from rural to urban areas in such of better jobs.

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 implications for the sustainability of NRPS in the decades ahead.
Future Reform Options for China’s NRPS

In this section we critically review future reform options to address NRPS challenges with respect to coverage, adequacy, and sustainability. We focus on four potential reforms that appear feasible to be implemented: (1) combining FDC and SP components in new ways, (2) expanding the SP component, (3) shifting to a Matching Defined Contribution (MDC) scheme, and (4) shifting to a Notional Matching Defined Contribution (NMDC) scheme.

In this analysis, we consider pension experience in several other countries, particularly those in Latin America. In recent years many of the Latin American FDC schemes initiated during the 1980s and 1990s have experienced poor coverage, low benefits for low-income workers—including informal workers in urban areas and most residents in rural areas—, and higher fiscal pressures than anticipated. In several of these countries such as Chile, Mexico, and Bolivia, there has been a recent wave of pension reforms often focused on noncontributory SP schemes (Calvo et al., 2010). This paradigm shift in several Latin American countries reflects efforts to make these schemes more inclusive and the benefits more adequate, particularly for the rural poor, but also for urban residents working in the informal sector. The reforms have often involved expanding noncontributory programs or making the requirements for the contributory schemes more flexible (Rofman et al., 2015).

Combining FDC and SP Components in New Ways

In China, the family-binding policy that links the workers’ FDCs to their older parents SPs has created a strong incentive to participate in NRPS. This incentive is likely to change for future younger workers as their currently enrolled parents begin to retire.

Models that include SP and FDC components are of particular relevance to the debate in China about how to reform NRPS. Evidence from Latin America suggests that it makes more sense to combine FDC and SP in one pension scheme as a way to increase rural pension coverage rather than having only a mandatory FDC pillar and no SP. Noncontributory
pensions make a substantial contribution to coverage in several Latin American countries. In Ecuador, Costa Rica, Chile, and Bolivia, those who receive only noncontributory benefits represent a substantial fraction of the elderly (Rofman and Oliveri, 2012). In Brazil, there is a large noncontributory quasi SP system that covers most rural workers. Other countries, like Mexico, have some local subnational level noncontributory SP schemes (e.g., Mexico City).

The promise made by numerous early advocates of privatization was that the introduction of FDC schemes would provide an economic incentive to increased participation and coverage (Mesa-Lago, 2005). However, coverage rates presented in Table 1 suggest that the Latin American countries that have introduced FDC schemes still have a substantial fraction of their population without coverage, particularly in rural areas, where labor markets are less organized and government agencies have less enforcement power. Until quite recently this pattern was mirrored in China as well, and without the recent introduction of the NRPS, it is likely that the pattern in China would still parallel that in Latin America.

China has not tried the typical Latin American mandatory FDC model in rural regions. Instead, China has tried a voluntary FDC model combined with a SP. This model has been very successful in helping to increase rural coverage during the past years and we argue it should be continued in the foreseeable future. However, it is possible that Chinese policy makers may eventually make the currently voluntary FDC pillars mandatory in an effort to stop the slide in rural enrollment, should such a trend emerge. But given the problems (most of the “funded” accounts have ended up being partially or entirely unfunded with the workers’ contributions being diverted to finance the pensions of those already retired), China has recently run into in connection with the use of a mandatory FDC pillar for the urban pension system, it is less likely that this will happen any time soon. However, Chinese policymakers may benefit from considering a number of other reform options, such as
substantially increasing SP benefit levels, shifting to an MDC scheme, or exploring (piloting) schemes that include an NMDC component.

**Expanding SPs**

With the enactment of NRPS numerous rural residents began receiving SPs. Unfortunately, SP benefits are quite modest. Expanding the number and generosity of SPs could help address adequacy concerns as well as to improve coverage. Noncontributory SP schemes, sometimes called tax-financed pensions, have become an important option in Latin America not only for extending coverage, but also for reducing poverty (Organization for Economic Co-operation and Development [OECD], 2014; Rofman et al., 2015).

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

[TABLE 2 ABOUT HERE]

Major changes have been made to strengthen noncontributory pensions in the region. Chile 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 per cent of the income distribution who have not made “mandatory” contributions (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 old-age, disability, and survivor pensions was 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, and Barreto de Oliveira, 2004). Due to the high level of pension spending in rural Brazil and the high coverage rate for the contributory pensions, elderly households are about half as likely to be found at the bottom two quintiles than is the case for households with no elderly members (Bosch, Melguizo, and Pagés, 2013; OECD, 2014).

Bolivia has a universal noncontributory SP scheme, which has gained considerable attention across Latin America. In 1996 Bolivia launched a pension reform which 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 1 per cent 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 had a very positive impact on households by reducing poverty rates and improving their living conditions (HelpAge, 2015).

There is every reason to believe that similar schemes of larger and noncontingent SP benefits could be used to greatly reduce poverty rates and limited coverage in rural China (Cai, et al., 2012). In the “13th Five-Year Plan” published in 2015, the Chinese central government announced a plan to eradicate poverty in rural areas during the next 5 years (China Daily, 2015). SPs as one of fundamental social assistance programs in rural China could greatly reduce rural old age poverty.

Looking to the future there is reason to believe, based on the evidence from Latin
America, that a country as economically developed as China should be able to finance a substantially more generous rural social pension scheme. In 2013, the total social security expenditure in China was about 6.7 per cent of GDP which is far less than those in developed countries and many developing economies as well (NBS, 2015). In the 13th Five-Year Plan, China’s economy is predicted on an annual growth rate of at least with a 6 per cent, which will undoubtedly generate fiscal space for increasing social spending (NBS, 2015). The Latin American evidence demonstrates that even very poor countries can find a way to finance SP benefits that are substantially more generous than those currently in place in China (see Figure 3). While there is no agreement at this point as to how much the SP should be increased, based on the evidence from various Latin American countries a substantial increase should be possible, given China’s current low social expenditure level and fiscal capacity. For example, assuming an average benefit level of ¥100 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 per cent of GDP in 2014 (MOHRSS, 2014). SPs have often been financed at a cost of less than 1 per cent of GDP in several Latin American 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 of the central government.

_Shifting to an MDC Scheme_

Given that most rural Chinese workers are making the lowest allowable contribution, in the decades ahead benefit adequacy will likely become a major problem for the FDC pillar as is the case today with SPs. Shifting to an MDC scheme could help deal with adequacy issue. The MDC model is similar to the FDC model, but it differs in one major way, it calls for a “matching” contribution from the government (Cai, 2012). Currently China does this on
a very small scale because local governments are required to contribute at least ¥30 per year (US$4.70) to the FDC pillar of NRPS. So technically China already has an MDC scheme in place for its rural population, but much more than this very meager US$4.70 per year contribution is what advocates of the MDC model have in mind.

It is clear that SPs play an important role in coverage extension in both regions, but this pillar focuses primarily on income redistribution and reduction of extreme poverty. The Latin American evidence suggests that an effective way to provide adequate retirement income while at the same time extending coverage is to find incentives that increase participation and foster saving for old-age during the period of active employment. Since China has a traditional culture of saving preference which is much stronger than that in Latin America (Calvo and Williamson, 2008), if market rates of return were provided for the current voluntary FDC component of the NRPS, it is entirely possible that coverage levels in China would increase rather than decrease in the decades ahead. At the same time it would promote higher levels of benefit adequacy and system sustainability. However, if financial markets crash or the current extremely low rates of return were to prevail for a lengthy period of time, the FDC based models may prove to be very problematic.

One of the most promising alternatives for reforming the FDC pillar would be to transform it into an MDC scheme. This idea is being promoted by both Chinese (Zheng, 2012) and World Bank (Dorfman, 2013) economists. If the contributions were placed in a government MDC fund paying something approaching a market rate of return, such a 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 model might help increase participation rates among working-age adults with retirement age parents who will increasingly be eligible for SPs based on their own contribution histories. 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.

Another advantage of the MDC alternative is that its added incentive feature could increase (or at least help maintain) NRPS participation rates among the growing proportion of young adults legally designated as rural residents who spend a few years as migrant workers in urban areas. It is currently common for such workers to skip making NRPS contributions while working in urban areas. The MDC incentive might also reduce contribution gaps for those who are ill or out of the labor force due to caregiving obligations.

If the NRPS is to reach its long-term goals, the pension benefits must become more generous than they are today. The increase could, as with the MDC model, come in part from matching contributions financed by government (central, provincial, local). Most OECD countries with MDC schemes provide incentives of at least 10 per cent of contributions—the average is around 20 per cent—although this provision is typically financed through tax deductions for employers who provide these subsidies (Holzmann, Robalino, and Takayama, 2009). Examples of MDCs in developing countries include the schemes for informal sector workers in Rajasthan and Madhya Pradesh, India. In some Latin American countries including Chile, Columbia, and Peru, MDC mechanisms also have been implemented in coordination with the FDC pension reforms (Hinz, Holzmann, Tuesta, and Takayam, 2012).

*Exploring (Piloting) an NMDC Scheme*

Fiscal pressures for the local government create more concern, especially once locally financed matching contributions are factored in. However, there are reasons to believe that these pressures can be reduced through a stronger role of the central government and higher contributions from insured individuals. As noted earlier, China already has a variant of the MDC model in place in that local government is required to partially match the FDC contributions at a very low level (currently ¥30 per year). Affluent and fiscally sound local governments are urged to (and often do) provide much more matching funds. Since the
matching benefit is generally very small, this policy, as currently implemented, does not do much to help increase the voluntary amount workers contribute. But over time, as rural China becomes more affluent and as evidence accumulates that larger contributions do lead to substantially higher retirement pensions, it is reasonable to expect that contribution levels will gradually increase. At the outset the incentive for contributing more than the required minimum to the voluntary MDC component would be modest, but if the matching contributions from central government sources were to steadily increase and the rate of return on contributions were to increase substantially, it is likely that the long-run returns on contributions to the MDC pillar would eventually become a powerful incentive to contribute, as seems to be the case in some high income countries including U.K., New Zealand, and Japan (Hinz et al., 2012).

In China the proposed individual account MDC pillar of the NRPS would be voluntary. This pillar could be prefunded, but when fiscal pressures arise, it could be financed on a PAYG basis with “notional credit” reflecting the worker’s contributions made over the years and with annual credit added to the account based on trends in wage levels. Given the volatility of China’s financial markets, the relatively poor track record to date for the current FDC pillar associated with its pension scheme for urban workers, and the rapid income growth of rural workers in recent years and near future, it would make sense to give serious consideration to the Notional (unfunded aka non-financial) Defined Contribution (NDC) alternative for this pillar (Holzmann and Palmer, 2006; Williamson, Price, and Shen, 2012). It could be structured along the lines of the NDC pillars currently in use in several countries with NDC pillars and possibly modified to include the addition of credit by the government making it what we refer to as a Notional Matching Defined Contribution (NMDC) pillar. Others refer it to as an MDC scheme financed in part or full on a pay-as-you-go notional basis (Hinz, Holzmann, Tuseta, and Takayama, 2012).
With NMDC schemes rural residents could contribute a flat amount, as opposed to a percentage of earnings, and it could be designed to allow flexible contribution schedules. To create incentives to enroll, the government could match contributions (with additional notional credit) up to a specified maximum level selected. This could be done in such a way as to focus the subsidy on the lower end of the income distribution, an alternative that may make sense during the early years when funding may be more of an issue. Since there is a strong saving and thrift culture in rural China, may be even stronger than urban areas (Calvo and Williamson, 2008), a good NMDC design could work particularly well in rural areas. While very few Chinese analysts are currently calling for the introduction of NMDC based schemes in China, it is an idea worth exploring, possibly starting with pilot program in one province. Until the Chinese financial markets become less volatile than they have been in recent years, the NMDC model would have advantages relative to its MDC cousin.

Conclusion

In this article we have critically reviewed coverage, adequacy, and sustainability issues as well as past, current, and potential future developments of NRPS. Coverage increased rapidly and numerous rural residents began receiving benefits that required limited effort from the central government. However, incentive problems, modest benefits, and fiscal pressures for local governments are important challenges that NRPS needs to address in order to achieve its full potential. Continuing the current mix between a voluntary FDC and contingent SP has some advantages, but further reform options may be needed, such as increasing the generosity of SPs and eventually switching to an MDC scheme or possibly an NMDC scheme.

These reforms could be part of a long-term strategy to avoid a reduction in coverage and, hopefully, to further increase coverage, with the additional goal of substantially reducing old-age poverty in rural China, while maintaining financial sustainability. If policies along
the lines of those outlined in this article were implemented, poverty reduction over the short run would probably depend primarily on the introduction of a generous SP pillar. Looking further into the future, increased income replacement might well depend largely on the shift from a FDC to a generous (near market rate) MDC or NMDC pillar. Since China is currently experiencing rapid urbanization and trying to find ways to integrate the rural pension system with the urban pension system, there will soon be a whole new set of issues related to this system integration effort to explore. It is likely that looking forward, future reforms of the NRPS will be taken with this eventual goal of integration in mind. Many of the same issues will come up as future efforts are made to reform other public pension systems including urban workers pension as well as pension plan for civil service and public institutions.

Pension experience from other countries, particularly in Latin America, suggests that some of the reforms that we have discussed may be feasible in China. However, taking lessons from one country to another is necessarily a highly tentative effort given the many obvious differences between countries and regions of the world. China and Latin American countries share a number of characteristics, but differ particularly with respect to size, pension policy legacy, and government administrative structure. What is working well in one or more of the Latin American countries, may not work well in China and vice versa for a variety of reasons; but evidence as to what is working well or not in Latin America is evidence that Chinese policymakers may want to consider when reforming and refining Chinese pension policy in the decades ahead.

Those seeking to extend the analysis presented in this article could explore the long-term performance of NRPS, put the requirements of various reforms into fiscal equations in order to further explore feasibility, and include other dimensions beyond coverage, adequacy, and sustainability, such as gender equality or the integration between the urban and rural systems. This article, with its focus on the rural population of China, seeks to contribute to a
prior and much more extensive literature that has focused on pension systems for urban workers in developing countries. Given the pervasive rural to urban migration taking place in China, a case can be made for future research that seeks to deal with the problems linked to efforts to provide pension coverage for those who are moving from rural to urban areas. There are a similar set of issues to explore in the context of the problems associated with migration from one city to another, particularly when that migration involves migration from one province to another.

The evidence from the NRPS to date can be viewed as a lesson for other developing countries suggesting that when participation in an FDC pillar is linked to a SP benefit for retirement age parents, it is possible to get high participation rates even in rural areas. However, NRPS policy makers need to give more attention to the challenges of incentives, benefit levels, and sustainability. Because NRPS covers a larger number of rural residents than any other pension system worldwide, the policy implications of future reforms to NRPS will be enormous.

One of the major limitations of this study is that it is not based on “original” data. This is more of a problem with our data on China than for our data on Latin America. We have had to depend largely on data that the Chinese government makes available for public consumption and on published articles that are dependent in large measure on such data. These sources often do not include a full accounting of the problems programs, including the NRPS, are facing. It tends to be much easier to find information concerning aspects of programs such as the NRPS that are working well than information about the problems. In short, there may be problems that those responsible for the NRPS are currently dealing with that are not as yet being made public.
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<th>Contributors/Employed Population</th>
<th>Beneficiaries/Population Age 65+</th>
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<td>Argentina (2010)</td>
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<td>67.20</td>
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<td>11.63</td>
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<td>63.34</td>
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</tr>
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<td>23.45</td>
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<td>30.44</td>
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<td>12.27</td>
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<td>26.67</td>
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<td>27.01</td>
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<td>66.83</td>
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<tr>
<td>Venezuela (2006)</td>
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<td>35.30</td>
<td>NA</td>
</tr>
<tr>
<td>Average</td>
<td>23.67</td>
<td>41.63</td>
<td>36.01</td>
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</table>

Notes: Adapted from Rofman and Oliveri (2012). NA = not available. Countries marked with a star have FDC schemes.
Table 2. Characteristics of Social Pensions (SPs) in Latin American Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Year of enactment</th>
<th>Age of retirement</th>
<th>Universal coverage</th>
<th>Coverage (pop. 60+)</th>
</tr>
</thead>
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<tr>
<td>Antigua and Barbuda</td>
<td>1993</td>
<td>77</td>
<td>No</td>
<td>NA</td>
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<td>1994</td>
<td>70</td>
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<td>NA</td>
<td>65</td>
<td>No</td>
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</tr>
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<td>1937</td>
<td>65.5</td>
<td>No</td>
<td>22%</td>
</tr>
<tr>
<td>Belize</td>
<td>2003</td>
<td>65-67</td>
<td>No</td>
<td>21%</td>
</tr>
<tr>
<td>Bermuda</td>
<td>NA</td>
<td>65</td>
<td>No</td>
<td>NA</td>
</tr>
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<td>Yes</td>
<td>103%</td>
</tr>
<tr>
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<td>Yes</td>
<td>28%</td>
</tr>
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<td>65</td>
<td>No</td>
<td>8%</td>
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<td>65</td>
<td>No</td>
<td>39%</td>
</tr>
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<td>2003</td>
<td>54-59</td>
<td>No</td>
<td>26%</td>
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<tr>
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<td>No</td>
<td>20%</td>
</tr>
<tr>
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<td>No</td>
<td>42%</td>
</tr>
<tr>
<td>El Salvador</td>
<td>2009</td>
<td>70</td>
<td>No</td>
<td>5%</td>
</tr>
<tr>
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<td>2005</td>
<td>65</td>
<td>No</td>
<td>11%</td>
</tr>
<tr>
<td>Guyana</td>
<td>1944</td>
<td>65</td>
<td>Yes</td>
<td>96%</td>
</tr>
<tr>
<td>Jamaica</td>
<td>2001</td>
<td>60</td>
<td>No</td>
<td>18%</td>
</tr>
<tr>
<td>Mexico</td>
<td>2001</td>
<td>65</td>
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<td>42%</td>
</tr>
<tr>
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<td>2001</td>
<td>64-70</td>
<td>No</td>
<td>9%</td>
</tr>
<tr>
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<td>No</td>
<td>23%</td>
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<td>17%</td>
</tr>
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<td>Peru</td>
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<td>11%</td>
</tr>
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<td>Saint Vincent and Grenadines</td>
<td>2009</td>
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<td>No</td>
<td>53%</td>
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<td>Suriname</td>
<td>1973</td>
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<td>Yes</td>
<td>106%</td>
</tr>
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<td>Trinidad and Tobago</td>
<td>1939</td>
<td>65</td>
<td>No</td>
<td>45%</td>
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<tr>
<td>Uruguay</td>
<td>1919</td>
<td>70</td>
<td>No</td>
<td>5%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>2011</td>
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<tr>
<td>Average</td>
<td>1987</td>
<td>66</td>
<td>No</td>
<td>31%</td>
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Notes: Adapted from HelpAge (2015). NA = not available. Both Brazil and Mexico have two social pensions.
Figure 1. Trends in Rural Population and Coverage of NRPS

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.
Figure 2. Social Pensions (SPs) Benefit Adequacy in China and Latin America

Notes: Adapted from HelpAge (2015) and MHRSS (2014).
Figure 3. Cost of Social Pensions (SPs) in China and Latin America

Notes: Adapted from HelpAge (2015).