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**OLD-AGE PENSION REFORM AND MODERNIZATION PATHWAYS:
LESSONS FOR CHINA FROM LATIN AMERICA**

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Abstract

While numerous Western countries first experienced cultural rationalization, next economic modernization, and then faced the challenges of population aging and pension policy reform, both Latin America and China, in contrast, are dealing with these challenges in the context of much less developed economies and stronger traditional cultures. In this article we analyze old-age pension reform efforts in eight Latin American countries that have introduced funded defined contribution schemes with individual accounts. We are searching for insights about the potential success of similar reforms being implemented in China. All of these societies are organized primarily around the principles of family, reciprocity, loyalty and poverty. Our analysis suggests that these distinctive characteristics have important implications for the likely success of the reforms currently being implemented in China, particularly in four interrelated areas: coverage, compliance, transparency, and fiscal stability.

Keywords: Pension reform, China, Latin America, Social Security

1. Introduction

Latin America is a pioneer with respect to the shift from old-age pension schemes based on pay-as-you-go (PAYG) defined benefit models to schemes based all or in part on funded individual accounts. In 1981 Chile became the first nation to make the shift with the introduction of mandatory fully-funded privately managed individual retirement accounts (IRAs). Today there are 12 Latin American countries that have shifted to or are in the process of shifting to schemes influenced by the Chilean model albeit with some variations (Gill et al. 2005; Kritzer 2005).

On the opposite side of the earth, China is following a similar path, though the Chinese IRAs are currently publicly managed and remain largely unfunded (Jackson and Howe 2004). Since 1995 China has introduced a number of reforms, the most important of which were promulgated in 1997 and 2000. In many respects these reforms have not been working out as had been intended. The major problems include low coverage and compliance rates, poor transparency, and serious fiscal difficulties.

China is facing the challenge of rapid population aging and the strain this places on the former PAYG defined benefit pension scheme and the traditional family based old-age support system more generally (World Bank 1997). By 2025, one quarter of the world's population aged 60 and over will be living in China. The number of Chinese elderly will be larger than that for all of the European countries combined. It will be about equal to the combined elderly population of North America, Latin America and the Caribbean, Africa, and Oceania (UN 2004). For this reason the success or failure of the reform of China's old-age pension system will affect a major proportion of the world's elderly population (Williamson and Shen 2004).

Our analysis is based in large part on evidence with respect to pension reform in eight Latin American countries—Argentina, Bolivia, Chile, Colombia, El Salvador, Mexico, Peru and Uruguay—that introduced some form of funded IRAs (partial privatization) between 1981 and 1998. Four other countries—Costa Rica, the Dominican Republic, Ecuador, and Nicaragua—are not included because their reforms are so new, because they are not yet fully implemented, or due to the lack of information. One goal of this analysis is explore the ways in which historical and cultural factors can shape the acceptance and effectiveness of newly introduced pension

reforms in Latin America and China. Another goal is to obtain insights about the potential consequences of reforms currently being introduced in China based on evidence from Latin America. From this point forward when we refer to Latin America, it is primarily a reference to the eight Latin American countries selected for this study.

2. Modernization pathways

Population aging and with it the associated problems of reforming the old-age pension systems are taking place around the world including China, Europe, and Latin America. In this section we will consider two modernization pathways preceding the growth of the old-age population, one that fits a number of Western European nations and a second which better fits China and Latin America. The pathways to be presented consist of broad historical transformations of the culture and the economy that are common to a number of countries. They can be viewed as Weberian ideal types (Weber 1949; 1958). They are not meant to correspond to all of the characteristics of any particular country, but rather to highlight common elements and thus facilitate comparisons.

2.1 The Western Pathway

The Western Pathway is that of Western European countries. Southern European countries (e.g. Spain, Portugal and Italy) are more culturally similar to Latin America and for this reason were excluded from the pathway described here.

The genesis of the Western Pathway can be traced back to the sixteenth century, when the Protestant Reformation and related religious controversies split the traditional Catholic cultural unity of the region. We will use the term “differentiated culture” to refer to a society in which people are confronted with conflicting cultural world views (e.g., Protestant vs. Catholic) and contrast it with a traditional society in which everyone shares basically the same cultural world views and assumptions. A differentiated culture does not provide an adequate level of social integration and requires the creation of rational arrangements to assure social order (Cousiño and Valenzuela 1994).

The cultural differentiation led to a profound rationalization process among the Western countries. According to Max Weber (1968), the process of rationalization tends

to foster and to be associated with secularization and the view that everything is explainable by reason, at least in principle (Giddens 1971; Kalberg 1994; Lash and Whimster 1987). In behavioral terms, rationality involves a second meaning: greater reliance on means-ends calculations designed to organize activity so as to more efficiently reach a particular goal.

Max Weber posed the question: Why did the modern West develop the way it did, and why did China not develop at the same time and in the same way as the West? He focused on a number of factors that distinguish the European modernization from that of China arguing, for example, that Western European countries were characterized by the separation of the productive enterprise from the household, while China was organized on the basis of extended kinship clans (Weber 1961). But the most important difference Weber (1951; 1963; 2002) highlights is that between European Protestantism and Chinese Confucianism. Protestantism is based on an ethic that prompts an active attitude to change the world and places an emphasis on the individual. Confucianism is an ethic of adjustment to the world; it accepts things as they are and promotes a contemplative, mystical and passive attitude that tends to prolong ancient traditions. In this sense, Confucianism lacks the active tension that exists between Protestant religion and the world. That is, it lacked a “mentality” or “moral energy” suited for the early emergence of modern capitalism and a rationalized social order. Note that this is an historical argument. Hence, Weber is not arguing that China can not develop (or will not at some point in the future) modern capitalism or a rationalized culture; rather, he is arguing that it did not do so before and in the same way as the West.

In the Western Pathway the rationalization process is followed by a prosperous capitalist economic development. Figure 1 illustrates the recent trends in Gross Domestic Product (GDP) of the Western Pathway in comparison to the pathway followed by China and Latin America. While this data covers a very recent time period, it is consistent with and lends support to a Weberian conception of what we refer to as the Western Pathway. Only after becoming rational and affluent societies do the Western countries start facing the challenge of a rapidly aging population and the associated need for pension system reform. Clearly this is not the case of Latin America

and China, which have much stronger traditional cultures and have not yet reached the Western European level of economic development.

[Figure 1]

2.2 *The Pathway of Latin America and China*

The Western Pathway represents the historical outcome in Western Europe and a few Western countries outside of Western Europe. This pathway is limited primarily to those countries that share this similar religious and cultural background. It does not describe a universal process of social evolution. More specifically, the pathway for Latin America and for China has been quite different.

Between the 1960s and 1980s, Latin America and China were actively trying to rationalize their cultures. However, this rationalization was driven by the desire to emulate the Western countries and not the same differentiated culture that drove the rationalization process in Western Europe. In Latin American and China this effort took place in the context of a less differentiated culture and as a result the rationalization process has been less pervasive in these regions than in West. For example, during the Cultural Revolution (1966-1976) the traditional culture was harshly attacked in China: temples were destroyed and Confucianism was declared an outdated ideology and popular religion mere superstition. However, starting with the 1980s there is widespread evidence of a strong revival of traditional religious practices and beliefs (Adler 2002; Lagerwey 2004; Overmeyer 2003). Temples are being re-built and devotion to local deities continues to thrive. Festivals, rituals, dances, processions, communication with supernatural beings, *fengshui*, and popular medicine are now part ordinary life for many Chinese people. Altars for ancestors and patron deities are found in many households. Confucianism remains at the core of the cultural unity of China, albeit today more as an ethical philosophy or system of thought than as a formal religion.

Similarly, Latin America has not experienced the level of cultural differentiation found in Western Europe. Some Sociologists argue that Latin American culture remains integrated by the values and norms underlying “Marianism” — the Catholic adoration of the Virgin Mary (Cousiño 1990; Cousiño and Valenzuela 1994; Morandé 1984). Similarly to Weber’s comparison of Confucianism to Protestantism, these Sociologists

contrasted Marianism with Protestantism. The “ethic” of Marianism is that of grace and mercy rather than individual merit and responsibility. Mary is viewed as a mother-like figure with compassionate attitude towards offenders and willingness to grant favors. She recompenses devotion with clemency and unmerited divine concessions. Accordingly, Marianism — as is the case with Confucianism — lacks the “moral energy” that would bring about a profound rationalization process.

Numerous factors other than religion may have influenced the modernization pathways. However, describing these factors goes beyond the scope of this article. The point that we want to stress here is the disparity between the strong traditional culture of China and Latin America and the rationalized culture of Western Europe.

One indicator of the level of rationalization in a society is a strong and uncorrupt formal legal system which fosters a social order based in large measure on laws, not just traditional cultural practices. Figure 2 shows that corruption levels are lower in Western European countries than in China and in most Latin American countries. Although a traditional culture may have a formal legal system, the social order may be less based on these laws than in Western countries. In China, for example, if there is a dispute between two families, rather than engage lawyers and courts, people may turn to spirit-mediums, respected in the community, familiarized with the parties involved and local history, and thus qualified to suggest solutions that are acceptable to both sides (Adler 2002). Such evidence suggests that China and Latin America have not undergone as profound a rationalization process as have the Western European nations.

[Figure 2]

In contrast to Western countries, Latin America and China are also facing the challenge of rapid population aging before reaching high levels of national income. Despite rapid economic growth since the early 1980s, China is still a poor country. In 2001, more than 16 percent of the Chinese population was living on less than one dollar per day (World Bank 2003). In Latin America, one-fifth of the total population lives in extreme poverty and almost half in poverty (ECLAC 2004).

To summarize, for the countries under consideration there is a difference in the *type* of cultural and economic transformations that have preceded the challenge of rapid population aging and the associated need for pension reform. There has also been a

difference in the *timing* of these processes. While numerous Western countries first experienced cultural rationalization, next economic modernization, and then faced the challenges of population aging and pension policy reform, both Latin America and China are dealing with these challenges in the context of much less developed economies and stronger traditional cultures (Figure 3).

[Figure 3]

3. Pension reform in low-income traditional societies

The need to reform old-age pension systems is a challenge that both Latin America and China share. Latin America and China both have traditional cultures and low-income economies. As defined here, a “traditional culture” is organized around three principles: family, reciprocity, and loyalty. In comparison, a “rationalized culture” is organized around institutions, planning, and legality. In this case the traditional cultures are also low-income economies characterized by poverty while the rationalized cultures are developed economies characterized by wealth. Table 1 summarizes these constructs in a way that is easy to connect to the pension reform. Note that the separation of traditional and rational does not imply that traditional cultures are irrational. Conflicting principles can coexist in the same culture, but typically one has preeminence over other.

[Table 1]

Drawing evidence from Latin America, in this section we argue that the modernization pathway preceding the aging challenge in China will shape the challenge to the old-age pension system reform in four interrelated areas: coverage, compliance, transparency, and fiscal stability (Table 1).

3.1 Coverage: Old-Age Pension Institutions and Family

About two-thirds of Chinese workers live in rural areas and in those areas only about 11 percent of these workers are covered by a formal-institutional pension system. Coverage goes up to 55 percent of the workforce in urban areas, although even this level of coverage is insufficient by Western standards (Jackson and Howe 2004). Overall, three out of four Chinese workers have no pension coverage at all (Figure 4).

[Figure 4]

It is generally agreed by most Chinese policymakers that it is not feasible at this point in time to extend coverage by the formal-institutional old-age pension institutions to the vast Chinese rural population, despite the high level of rural old-age poverty (Williamson and Shen 2004). Based on the analogous pension reform efforts in a number of Latin American countries, it does not seem likely that current reform efforts in China are going to substantially increase coverage any time soon (Arenas de Mesa 2000; ECLAC 2006; Gill et al. 2005; Jiménez and Cuadros 2003; Mesa-Lago 2004; Packard 2002). Table 2 compares coverage rates before and after the reform. It also presents data for several different measures of coverage in Latin America. Regardless of the indicator used, for most of these countries a substantial fraction of the population is left without coverage. For a good discussion of the reason for the discrepancies between these various indicators see Rofman (2005).

[Table 2]

Today most Chinese rely heavily on family networks for support. According to the 2000 census data, about two-thirds of those age 65 and over live with their children (Table 3). This tendency is particularly strong for elderly women living in rural areas. Family networks are the primary source of support available in rural areas, where there is virtually no pension coverage. The lack of formal-institutional pension coverage for most elderly Chinese and the evidence from Latin America suggesting that coverage may not substantially increase any time soon, leads us to the conclusion that in China family support is likely to remain the primary source of old-age security during the foreseeable future.

[Table 3]

In 1970, the Chinese elderly were outnumbered by children six to one, but by 2040 there will be two elderly people for every child (UN 2003). This projected demographic change gives us reason to question the efficacy of the traditional family support system for meeting the economic needs of tomorrow's Chinese elderly (Gubhaju and Moriki-Durand 2003; Zeng and Wang 2003). It is also a reason to believe that the need for old-age pensions is going to be increasing.

It is clear that the Chinese elderly will not be able to rely solely on family arrangements (World Bank 1997; Friedman et al. 1996). Nonetheless, it is also true that family support networks will continue to play a very important role for many of the elderly. Examination of recent pension reform efforts in Latin America suggest that the family performs a crucial function as a source of support and protection for the elderly, given the limited coverage of the pension system in the region (ECLAC 2004) and the centrality of the family in the Latin American culture. There is no reason to expect a different outcome in China. The Confucian ethic of filial piety (*xiao*) involves respect, obedience, gratitude and the obligation to reciprocate for parents having given us life and, in comparison to the Western countries, this ethic remains very strong in China (Gu and Liang 2000; Sung 2000). It has been motivating children to take care of their elderly parents for centuries and will probably continue to play a role for care for the elderly long into the future (Zeng and Wang 2003), though increasingly in combination with formal old-age pension institutions.

The assumption made by some analysts that the family support system is going to break down places the Chinese case into a conceptual framework better suited to the Western Pathway. That framework overlooks the fact that China continues to be a traditional culture and limits policymakers to seek out individualized ways to support retirees, relegating the family network of support to a secondary role in the policy debate about the reform.

3.2 Compliance: Individual financial planning and reciprocity

Closely related to the coverage problem are low compliance rates and low contribution densities. One goal of the pension reform in Latin America has been to improve incentives for workers to participate in the system and to increase personal contributions to their funded accounts. A strengthened “equivalence principle” (a linkage between contributions and pension benefits) was expected to get workers to view their contributions as investments or savings rather than as a tax. This in turn was expected to increase the incentive for participating and contributing to the system (World Bank 1994). However, the evidence from Latin American does not point to any such trend (Gill et al 2005; Jiménez and Cuadros 2003; Mesa-Lago 2004; Packard

2002; Rofman 2005). Evidence presented in Table 4 shows that compliance rates have actually decreased in Latin America suggesting that IRAs are not having the expected impact on the incentive to contribute.

[Table 4]

It is generally agreed both in Latin America and in China that some segments of the population are particularly reluctant to contribute. For example, workers in rural areas, workers in the informal sector of the economy, and low-wage workers choose savings options other than IRAs, such as housing and the education of their children (ECLAC 2006; Gill et al. 2005; Kritzer 2000; Mesa-Lago 2004; Packard 2001; Rofman 2005).

Why might these groups avoid contributions to a reformed old-age pension system if it is clearly strengthened with respect to the “equivalence principle”? We will focus on explanations connected to the modernization pathway preceding the reform. One potential explanation is that individuals are “irrational”; not contributing to the IRA reveals a myopic behavior or short planning horizon (Valdés-Prieto 2002). An alternative explanation is that preference for the education of one’s children and housing over IRAs is a “rational” behavior for an individual in a traditional culture and in a low-income economy, where the family is a strong social unit and affected by poverty. Numerous studies in Latin America conclude that contributing to the IRAs is too costly, particularly for low-income workers who struggle to meet immediate basic needs for survival and face the pressing consumption needs of their families (Barr and Packard 2000; Gill et al. 2005; Jiménez and Cuadros 2003; Kritzer 2000; Mesa-Lago 2004; Packard 2002). In Figure 5 we present aggregate data that points to a similar trend. We see that compliance rates tend to increase as GDP per capita increases, despite evidence of some variation between nations in similar GDP per capita ranges (e.g. Mexico versus Uruguay). At the cultural level, contributing to an IRA could disrupt the cycle of reciprocity inside a family. By investing in housing and childhood education, wealth is shared and transferred among generations in a permanent cycle of giving, receiving, and returning (Bataille 1988; Mauss 1967), a dynamic that assures family support at older ages. Summing up, in a low-income economy and a culture where reciprocity has primacy over individual financial planning, a strengthened

equivalence principle is likely to have little impact on a worker's propensity to contribute to the system.

[Figure 5]

As with Latin-Americans, the Chinese are severely affected by poverty and tend to show a lack of enthusiasm for IRAs (Zhao and Xu 2002), but support for the principle of reciprocity inside the family (Gu and Liang 2000; Sung 2000; Bengston and Putney 2000). Therefore, it is reasonable to hypothesize that a stronger equivalence principle is an insufficient incentive for Chinese workers to contribute. However, two caveats should be mentioned. First, while the value placed on reciprocity is associated with an "ethic of family savings" in China, in Latin American it occurs within an "ethic of ritual spending of wealth."

In Latin America, reciprocity is extended beyond the family to God and nature (Cousiño 1990; Cousiño and Valenzuela 1994; Morandé 1984). For example, a profuse harvest is comprehended as a gift of nature or a favor from God. The spontaneous reaction of people is to greet the benefactor with sacrifices or to spend part of the wealth received in a celebration. The popular belief is that human efforts cannot succeed without luck or divine support. This belief is confirmed in Latin American semantics, where the concepts "earning" and "winning" are indistinct: you *win* a wage as you win a lottery. This example illustrates Latin Americans' predisposition to spend and share wealth as if it were a prize. Individual financial planning is not based on this type of reasoning where wealth is often attributed to God or the earth. Such behavior is more typical in cultures that attribute the origin of wealth to human work. In Chinese culture this link seems to be stronger, perhaps because land is more highly regulated and is perceived as a particularly scarce resource. The Chinese more readily save wealth than Latin-Americans, though savings may be for children's prosperity and perpetuating the principle of reciprocity. Even Chinese individuals living in foreign countries, where changes in the family support patterns are more prevalent, tend to sacrifice part of their personal gain for the well-being of their family (Lan 2002; Wong et al. 2006).

The fact that the equivalence principle could be strengthened a lot more in China constitutes a second caveat when assessing ways to increase compliance rates (Dorn 2004; Zhao and Xu 2002). China has formally based its old-age pension system reform,

at least in part, on funded IRAs; but in actual practice these IRAs are often closer to the NDC (notional [or unfunded] defined contribution) model than to the funded defined contribution model (Williamson and Deitelbaum 2004). For an extended discussion of the NDC model see Williamson (2004). IRAs have been set up and a record is being kept of what has been contributed, but the government routinely diverts money from IRAs to pay pensions to the currently retired. The discrepancy between pension policy as described in government documents and what happens in actual practice, has the unintended effect of contributing to distrust and discouraging both participation and compliance. Figure 6 suggests that transparency and credibility (high CPI scores) are associated with higher compliance rates. Corruption levels in China are similar to those of Argentina and Peru, and most likely have a negative effect on compliance rates.

[Figure 6]

3.3 Transparency: Legality and loyalty

The privatization reforms in Latin America were designed to provide pension systems with a high degree of resistance to political manipulation (World Bank 1994). However, the economic crisis in Argentina that started in the late 1990s has been attributed in part to the deficit created by the old-age pension reform and poor management of the funds (Bertranou et al. 2003; Matijascic and Kay 2006; Mesa-Lago 2004). Argentina deferred its debt by selling bonds to the fund management companies. This risky behavior illustrates that the new funded systems are not immune to political manipulation and that it is important to invest in asset classes other than just government bonds. The case of Bolivia is another good example. Loose regulations led to fraudulent interpretations of the rules for the transition, contributing to higher than expected costs (Escobar 2003; Gill et al. 2005; Dowers et al. 2001). On the other hand, Chile's better coverage can be attributed, at least in part, to its lower level of corruption. Figure 2 shows the disparity in levels of corruption between Chile and other Latin American countries. Chile has a CPI score closer to Belgium and France, while Argentina and Bolivia have the lowest scores. China also has low CPI scores; this may foreshadow problems with corruption in the funded component of the Chinese pension system.

As discussed earlier, a strong and clean legal system is an indicator of rationalization. A rationalized set of laws is needed where traditional behaviors are unable to provide sufficient social order. In traditional cultures, “loyalty” upholds order to a greater extent than “legality” and leads people to provide favors and preferential treatment to friends or relatives. When a morality based on personal relationships and favors is extended to public institutions, such as the pension system, corruption is a high risk. Accordingly, in a traditional culture, the shift from family support to the support of a formal-institutional pension system — either with or without IRAs — is prone to corruption.

China is particularly vulnerable to corruption for several reasons. First, loyalty (*zhong*) is a longstanding Confucian virtue that permeates all social relationships (Adler 2002). Second, mechanisms that facilitate regulation and supervision of the pension system have been slow to emerge (Holzmann and Hinz 2005). Third, funds are typically invested with low public transparency in a context where there is too much money for too few opportunities (Holzmann and Hinz 2005; Williamson and Shen 2004). Fourth, the money is collected, administered, and owned by the government (Dorn 2004; Jackson and Howe 2004; Holzmann and Hinz 2005). Consequently, separating these roles, diversifying the investment opportunities, carefully establishing and legitimating the regulatory system, creating technical organizations of supervision, and enabling greater public access to information about fund management are all much needed steps in Chinese pension reform.

3.4 Fiscal stability: Economic growth and poverty reduction

One of the major political selling points for the partial privatization of pension schemes has been governments’ difficulty with financing the increasing pension burden associated with prior PAYG defined benefit schemes. Therefore, the fiscal stability of the new systems is fundamental to the credibility of the new reforms (Dowers et al. 2001; Gill et al. 2005).

In Latin America the fiscal burden has remained substantial, though it may have been even higher, particularly in future decades, without recent reforms. The shift to partial privatization typically calls for some form of “double payments”: payments

associated to the new system, but also payments recognizing benefits and contributions for those participating in the old system (Jiménez and Cuadros 2003; Mesa-Lago 2000). The transition costs associated with these reforms have typically turned out to be much larger and are currently projected to last much longer than had originally been expected. Permanent costs may also increase: low rates of compliance could force the government to aid more people than initially anticipated through the minimum pension guarantee and social assistance pensions. For the region as a whole the cost of social security and social assistance taken together increased from 5.2 percent of the GDP in 1990-1991 to 7.1 percent in 2002-2003 (ECLAC 2005).

These costs are likely to be high in China as well. Fiscal difficulties have been a problem affecting the Chinese old-age pension system since the 1980s (Bottelier 2002; Jackson and Howe 2004; Whiteford 2003; Williamson and Deitelbaum 2005).

Previously, State-Owned-Enterprises (SOEs) were responsible for providing pensions to their retired employees. In the 1980s the finances of the SOEs became deeply strained by the transition to a market economy and the governments decision to stop subsidizing them. Without government support and with a declining number of workers, SOEs faced serious difficulties in providing pensions for their former workers. In response to this problem, the Chinese government has called for municipal pooling of pension obligations and contributions. This reform largely shifted the financial crisis from SOEs to the municipalities. With the 1997 reforms, the pension burden, previously shifted from the SOEs to the municipalities, was in part returned to the central government.

China's long history of fiscal problems its pension system and the evidence of pervasive fiscal problems associated with the new privatization related reforms in Latin America suggest that the pension related fiscal burden will continue to be a major challenge for pension reformers in China. China's weak fiscal situation in the years preceding recent reforms raises concerns about how the nation will deal with the impending cost of the transition. Figure 7 illustrates the fiscal situation of Chile, Argentina, and China in the years preceding the privatization related reforms. Argentina dramatically underestimated the cost of the transition, and during its recent economic crisis paid a heavy price for this mistake. In Chile the transition cost was also very high (about 5.7 percent of annual GDP during the 1980s and 1990s), but the general fiscal

surplus was very helpful in dealing with this burden (Acuña e Iglesias 2001; Betranou 2003; Gill et al. 2005; Mesa-Lago 2000). Figure 7 shows that China is in a comparatively feeble position to handle the fiscal pressures of the reform.

[Figure 7]

Finding a way to finance the pension system is a problem for most countries around the world, but this problem become particularly acute for low-income countries, such as China and those in Latin America. However, there is an important difference between China and Latin America. The Chinese government has called for a new pension system that is based in part on funded IRAs, but due to lack of alternative ways to raise the money needed to pay promised pensions to those who are currently retired, these “funded” accounts are today for the most part unfunded. The money has been used, typically by the local government to pay pensions to those who are already retired, leaving little more than electronic records in the accounts of individual workers specifying that they have made specific “contributions” to their account and the level of the unfunded balances in those accounts. In practice, China is using a variant of “notional accounts” as a financing strategy for the pension system (Williamson 2004; Williamson and Shen 2004; Williamson and Zheng 2003). The discrepancy between the formal structure of the program and what is actually going on must be contributing to mistrust of the government and to a lack of confidence in the pension system. It must also be reducing the incentive to contribute and increasing the incentive to evade paying into the scheme. However, there are advantages to the NDC model when properly designed as the model does help to spread the transition costs over more age cohorts and it does tend to reduce administrative costs.

Low-income countries face difficulties as they try to balance the aims of fostering economic growth and poverty reduction as they reform their pension schemes. It is generally assumed that the main objective for an old-age pension system is to provide at least some financial security for the elderly. In those countries with many elderly in or at risk of poverty, the need for income redistribution becomes particularly salient. Minimum and non-contributive pensions can be used to help with redistribution and poverty reduction, but they do not maximize the equivalence principle and do increase the cost of the system (Gill et al. 2005; Holzmann and Hinz 2005; Johnson and

Williamson 2006; Jiménez and Cuadros 2003; Matijascic and Kay 2006; Mesa-Lago 2004a).

4. Conclusion

While numerous Western countries first experienced cultural rationalization, then economic modernization, and after that faced the challenges of population aging, both Latin America and China are dealing with pension system reforms in the context of much stronger traditional cultures and less developed economies (Figure 3). The analysis presented in this article suggests that these distinctive characteristics have shaped the consequences of the reforms in Latin America and will likely do so in China.

Specific challenges arise in the context of a traditional culture and a low-income economy where society is organized around the principles of family, reciprocity, loyalty, and poverty (Table 1). One of the most predictable challenges will be the coverage problem. Most Chinese elderly are not covered by formal old-age pension institutions and currently rely only on traditional family support. There is no evidence from the Latin American countries that have introduced pension reforms calling for partial privatization suggesting that coverage for the Chinese system is likely to approach universality in the foreseeable future. Therefore, the family unit, the traditional source of well-being at older ages, seems likely to continue being the major pillar of the old-age security, particularly in rural areas. However, in the decades ahead the Chinese elderly will with increasing frequency find that their families are not in a position to provide the needed support. The need for formal-institutional pension coverage will be increasing rapidly in the years ahead. A key question will be whether the recent reforms calling for partial privatization will in the end undermine or strengthen traditional family networks of support and filial piety.

Low compliance rates are another major challenge for China. Although incentives to contribute have improved, the current low compliance rates point to a preference for old-age security based on reciprocity (e.g. investments on children's education) rather than individual financial planning. Strengthening the "equivalence principle" that links contributions and benefits could stimulate compliance for some. Nevertheless, those used to living in poverty, particularly in rural areas, may resist

efforts to encourage individual financial planning and may prefer to sacrifice part of their modest wealth for the family. It would make sense for policy makers to adjust incentives in such a way as to take into consideration historical, cultural, and contextual factors.

Corruption and lack of transparency aggravate the coverage and compliance problems and constitute yet another challenge for the Chinese reforms. Where loyalty has primacy over legality, corruption and lack of transparency are likely outcomes. Favors are expected in a traditional culture, but such favors are considered corruption in a modern institutional context. Carefully designing, fully legitimating, and cautiously implementing the regulatory system and supervisory institutions are important steps to improve transparency and credibility.

Another foreseeable challenge for the Chinese reform is the fiscal burden. How to finance the reform and to balance the objectives of economic growth and poverty reduction are major questions almost everywhere, but low-income countries such as China face additional difficulties. The empty IRAs, which were supposed to accumulate funds, are likely to increase distrust of government and of government sponsored old-age security schemes. It might make sense for Chinese policy makers to introduce a system based on unfunded defined contribution accounts at least until it is clear that national financial markets and administrative structures are ready for the demands of a partially privatized social security system.

The nations in Latin America under consideration here have not succeeded with respect to coverage and compliance. In addition, transparency and fiscal stability are far from certain. This evidence suggests that without some major changes in the current policy direction, China may be headed for potentially serious pension policy problems in these four areas. The modernization pathway preceding old-age pension reform in China will likely shape the process and outcomes in these four areas. Chinese policymakers might well benefit from a close analysis of the flaws that are starting to become clear in connection with the new partially funded pension schemes that have been introduced in Latin America in recent years.

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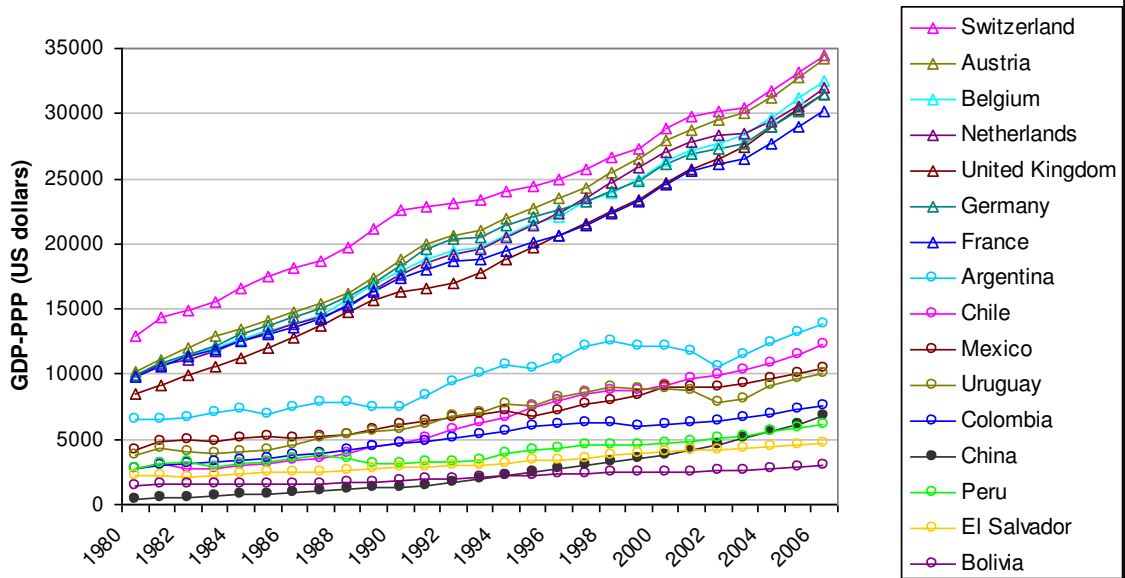
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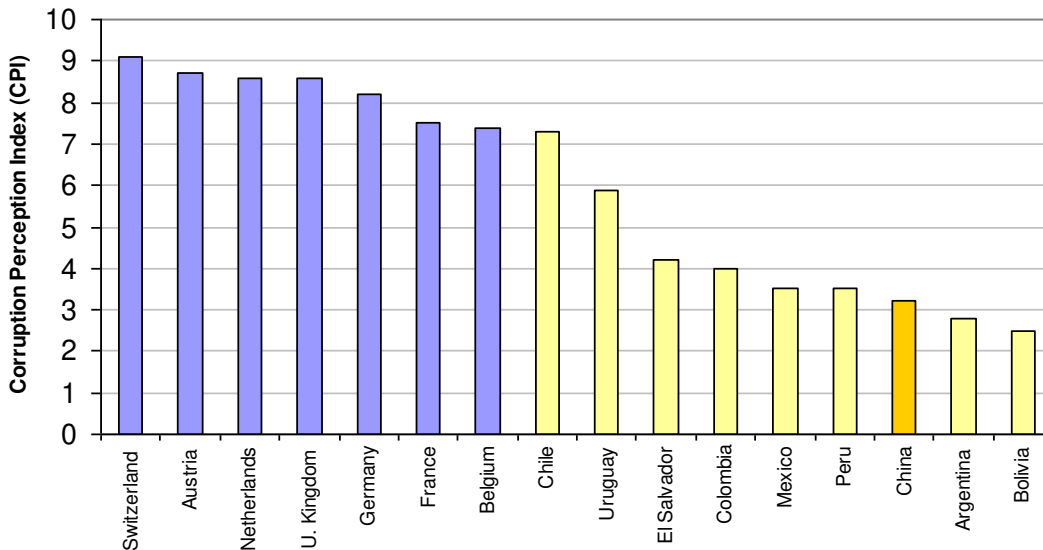
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Figure 1. The western pathway is characterized by wealth.



Note: China excluding Taiw an Province and Hong-Kong SAR.
 Source: International Monetary Fund, World Economic Outlook Database, September 2005.

Figure 2. Western countries are perceived as less corrupt than China and Latin America.



Note: CPI Score ranks countries according to experts' perception of corruption, and ranges between 0 (highly corrupt) and 10 (highly clean). China excluding Hong-Kong SAR.
 Source: Transparency International 2005.

Figure 3. The aging challenge for the pension system has come through dissimilar modernization pathways.

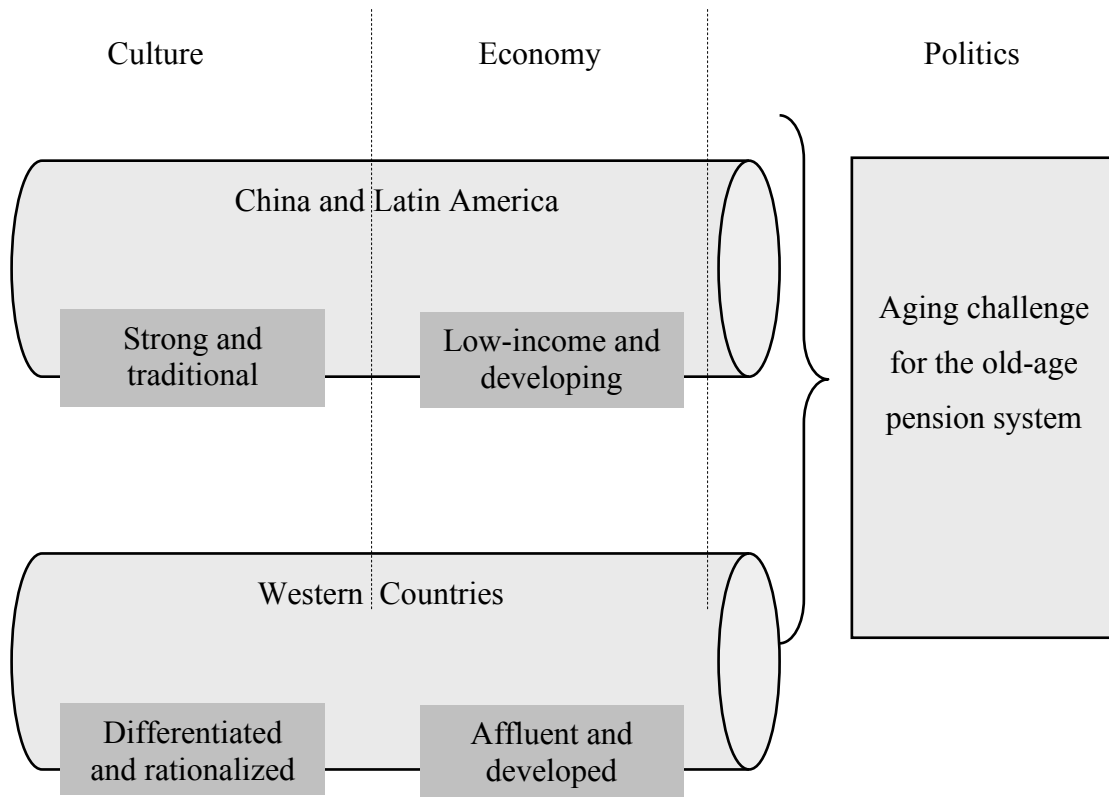
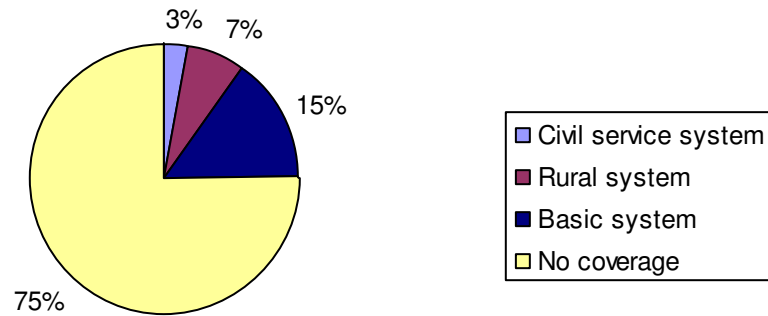


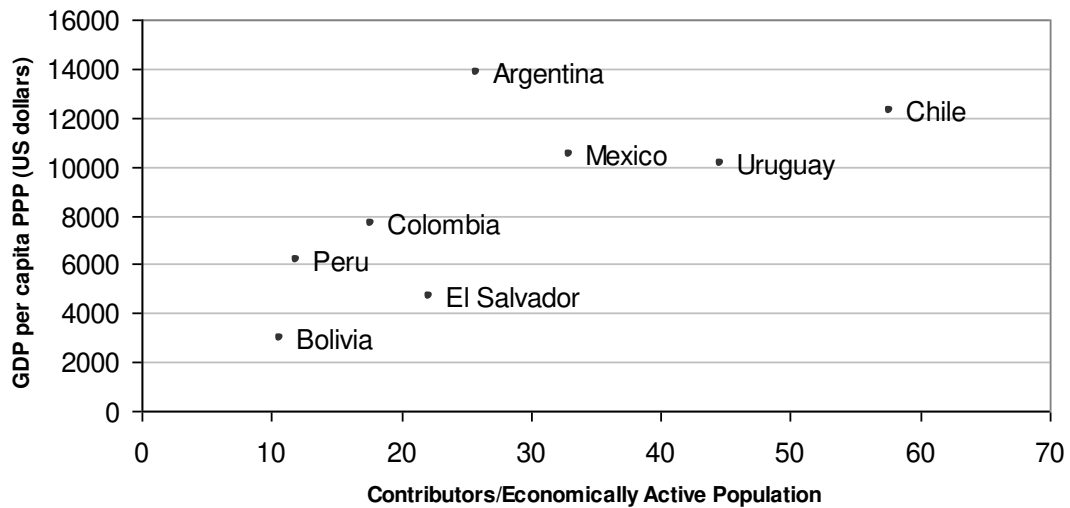
Figure 4. Three-quarters of the Chinese workforce has no pension provision.



Note: Percent of total Chinese workforce covered by pension systems in 2002.

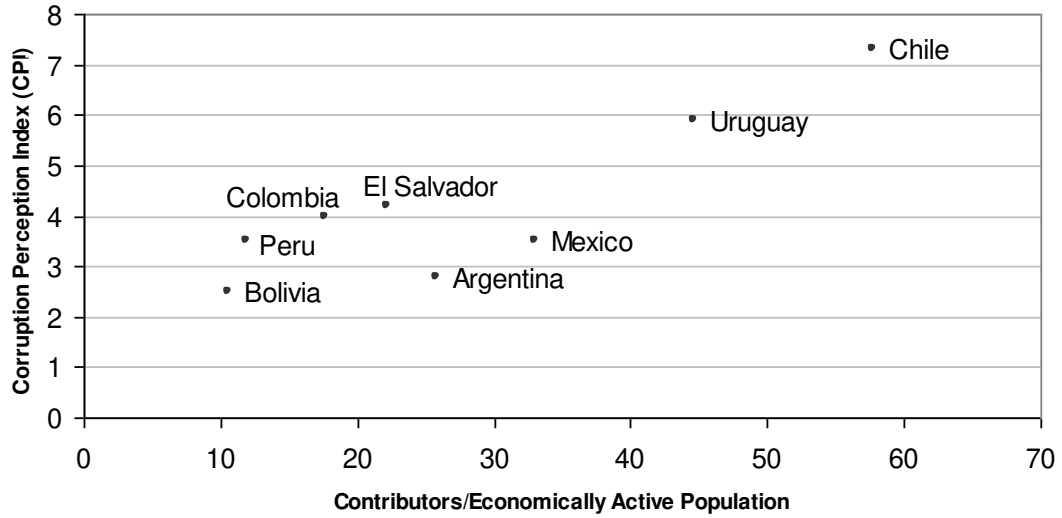
Source: Jakson and How e 2004.

Figure 5. Coverage is larger in wealthier countries.



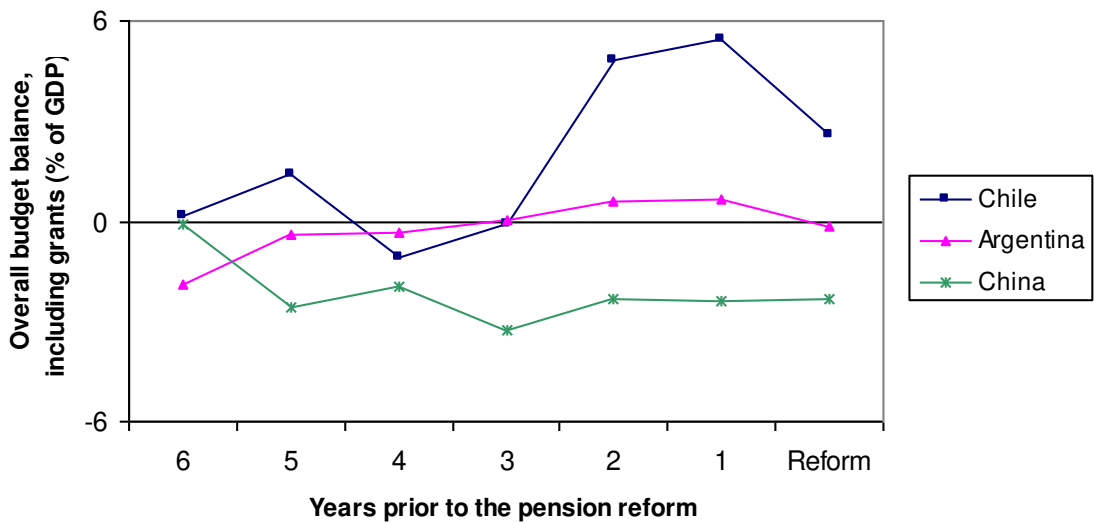
Source: Author's calculations based on AIOS 2005; IMF 2005; Mesa-Lago 2005, Rofman 2005, and Transparency International 2005.

Figure 6. Coverage is larger in countries with better CPI score (less corrupt).



Source: Author's calculations based on AIOS 2005; IMF 2005; Mesa-Lago 2005, Rofman 2005, and Transparency International 2005.

Figure 7. The fiscal strength prior to the reform is key to overstep its costs.



Source: Author's calculations using WDI (WB 2003), based on Gill et al 2005.

Table 1. Challenging areas of the old-age pension system reform and modernization pathways.

Old-Age Pension Reform	China and Latin America ¹	Western Countries
Coverage	Family (<i>xiao</i>)	Institutions
Compliance	Reciprocity (<i>chung</i>)	Individual Planning
Transparency	Loyalty (<i>zhong</i>)	Legality
Fiscal stability	Poverty	Wealth

¹ The *pinyin* system of Romanization has been used for Chinese terms for Confucian virtues.

Table 2. In Latin America the pension system reform had little if any effect on coverage. ¹

Country	Coverage before the reform	Coverage after the reform	Other indicators of coverage after the reform		
	Contributors/ Economically Active Population (year)	Contributors/ Economically Active Population ² (2002)	Contributors/ Employed Persons ² (2000-2003)	Contributors/ Wage-Earners ² (2000-2003)	Beneficiaries/ Population Age 65+ ³ (2000-2003)
Chile	64 (1980)	58	63	77	64
Argentina	50 (1994)	26	40 ⁴	55 ⁴	68 ⁴
Mexico	37 (1997)	33	39	62	19
Uruguay	32 (1997)	45	65 ⁴	79 ⁴	87 ⁴
Colombia	32 (1993)	18	-	-	19
Peru	31 (1993)	12	14	31	24
El Salvador	26 (1996)	22	32	53	15
Bolivia	12 (1996)	11	11	29	15

¹ Adapted from AIOS 2005; Mesa-Lago 2005; and Rofman 2005.

² These measurements could overestimate coverage for workers doing sporadic contributions, or underestimate coverage for workers not doing contributions but covered by non-contributory pensions.

³ This measurement could underestimate coverage for spouses of beneficiaries, for individuals who continue working and delayed the benefits, and individuals receiving non-contributive benefits.

⁴ Information for urban areas.

Table 3. The majority of Chinese elders live with their children.¹

	Rural	Urban	Rural-urban combined
<i>Males</i>			
Living alone	8.7	7.7	8.4
With spouse only	26.3	33.7	28.8
With spouse & other, not with children	0.7	0.8	0.7
With spouse and children	36.5	39.0	37.4
With children, not with spouse	25.6	16.8	22.6
With others, not with spouse and children	1.9	1.3	1.7
Institution	0.3	0.7	0.4
Grand total	100.0	100.0	100.0
Subtotal of living with spouse	63.5	73.5	66.9
Subtotal of living with children	62.1	55.8	59.9
<i>Females</i>			
Living alone	9.8	12.4	10.7
With spouse only	17.9	21.3	19.1
With spouse & other, not with children	0.3	0.6	0.4
With spouse and children	22.8	21.7	22.4
With children, not with spouse	48.1	42.6	46.2
With others, not with spouse and children	0.9	1.0	0.9
Institution	0.2	0.4	0.3
Grand total	100.0	100.0	100.0
Subtotal of living with spouse	41.0	43.6	41.9
Subtotal of living with children	70.9	64.4	68.7

¹ Living arrangements for Chinese population aged 65 and over, rural urban comparison, year 2000. Adapted from Zeng and Wang 2003.

Table 4. Compliance rates have declined in Latin America.¹

Country	1998	1999	2000	2001	2002	2003	2004	2005
Argentina	48.9	44.3	39.1	29.0	33.2	35.2	35.4	40.3
Bolivia	-	-	-	47.0	46.9	39.0	44.9	47.5
Chile	52.8	53.4	50.9	53.7	51.0	51.9	50.4	51.2
Colombia ²	-	51.6	48.5	48.7	47.6	48.7	49.5	50.6
El Salvador	67.2	63.8	53.5	53.2	47.6	46.3	41.9	39.5
Mexico ³	63.4	60.2	57.9	44.7	41.7	39.3	38.8	37.6
Peru	45.6	45.7	41.7	41.2	39.4	41.9	39.9	36.2
Uruguay	67.4	58.7	53.9	53.2	45.1	52.7	52.5	55.7

¹ Percentage of affiliates who contributed in the past month to IRAs, December 1998-2005. Source: Mesa-Lago 2005 and AIOS 2005.

² In 1993-2003 contributor was an affiliate who had at least one contribution in the last six months.

³ In 1999-2003 contributor was an affiliate who had at least one contribution in the past two months.