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Pension system reform in China: Who gets what pensions?

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Abstract

This article is the first examination of pension reform in China and its effects on different social groups over the past three decades. China's pension system has undergone radical transition from the stateemployer model to a state-society one based on the combination of an underlying aim of supporting the economic reforms and learning from international experience. Although the pension system has expanded over the past three decades and the majority of people are now covered by social pensions, this remarkable policy change has created new inequalities. First, an important aspect of social stratification has been reshaped into five distinct pension scheme classes. Second, the new pension model has strengthened the link between benefits and contributions, which privileges the better off. In this newly stratified pension system, those with high human capital and family capital, and who are in the more developed regions are the clear winners. To tackle these inequalities, future pension reform in China should focus on promoting equalization and de-stratification.

KEYWORDS

China, inequality, pension system, reform, social stratification

1 | INTRODUCTION

While social and economic reform in China has been characterized by gradualism, the pension system has been radically reshaped over the past 30 years, from traditional state-employer security to state-society security and, remarkably, pensions have been extended to the majority of people. Pension system development has accompanied the domestic economic and enterprise reforms as well as being part of global social welfare developments. The resulting complex pension regime has significant effects on social stratification such as poverty elimination, income equality, and social integration. The main purpose of this article is to examine the distributional effects of China's new pension system on different population subgroups. In other words, who gets what pensions and why? First, we provide the

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background to pension reform in China. Second, we summarize relevant research on social stratification and social welfare and pensions. Third, we assess empirically the stratification effects of pensions by using the 2013 Chinese Health and Retirement Longitudinal Study (CHARLS) longitudinal data-set from the perspectives of the individual, family, and macro socioeconomic circumstances. The final part of the article considers the possible future direction of pension policy in China to promote greater equality and social integration.

2 | PENSION REFORM IN CHINA

China had established an employer-based Soviet style pension system as early as 1950. This was characterized by employer contributions, government management, pay-as-you-go (PAYG), a single tier and closed operation (Zheng, 2008). As the problems with this model became apparent, it was radically changed to state-social security in the context of economic reform and global pension system reform.

First, the economic system reform, from a planned economy to market-oriented one, centered on state-owned enterprises (SOEs) and eroded the foundations of the original pension system. One of the aims of SOE reform was to separate them from government, as independent business entities, like private enterprises, in order to improve economic efficiency and competiveness (Zhou, 1998). Reducing the size of workforces, especially workers aged 40 and over, was viewed as an important dimension of improving efficiency. A lifelong dependent relationship between workers and their enterprises was replaced by a contractual one, which meant the loss of all of the welfare programs provided by enterprises before the reform. SOE reform, in the name of efficiency, resulted in millions of workers being laid-off. For example, 32.39 million workers lost their jobs because of SOE reforms between 1997 and 1998 alone (Wang, 2007).

Second, inherent problems within the traditional pension system was another vital factor driving this paradigmatic change. For example, the state-employer model consisting of non-contributory pensions financed solely by enterprises was deemed unsustainable in an ageing society; and funds pooled at the enterprise level restricts labor mobility (Zheng, 2000). Those people who had retired before the reform had no pension to live on and many of their children were unable to support them because of unemployment. Meanwhile, those who remained economically active lost the expectation of socioeconomic security when they retired. Thus it was urgent to establish a new pension system independent from SOEs to support the retired.

Third, pension system reform in China followed economic reform and was part of the global trend of pension system reform (World Bank, 1994). The first wave of neoliberalism in the West, in the late 1970s and 1980s, advocated privatization, marketization, and free trade (Walker, 1990). Welfare state retrenchment followed, especially of state-run social insurance pension systems, on the pretext of a welfare state crisis (Walker, 1991; Walker & Deacon, 2003). The leading neoliberal economist, Milton Friedman visited China three times, in 1980, 1988, and 1993. Three other foreign experts from the United States, the International Labour Organization (ILO) and Singapore visited China in 1989 to recommend pension reform (Salditt, Whiteford, & Adema, 2008; Whiteford, 2003). At the same time, the now crisis-hit Chilean pension reform was proselytized by international governmental organizations (IGOs) and influenced many Latin America countries, and the World Bank purveyed a multi-pillar pension system (Holzmann, 2013). These international developments affected the path selection of pension reform in China at a time when a pension system was urgently needed to maintain economic growth, social stability, and political authority (Croll, 1999), but when domestic policymakers and experts had no idea about what was the best system for China to adopt.

A mixed pension system was designed for workers in urban areas and confirmed by regulations in 1995. The new pension system, Enterprise Employee Basic Pension (EEBP), was based on the "social pooling combined with individual account" model, which combined PAYG and fully-funded principles. According to the regulations issued in 2005, a retired worker would receive two distinct pensions. One was from the social pooling account, which was the accumulation of employer contributions, where the benefit levels depended on the average wage of workers, the worker's salary before retiring, and the number of contribution years. The second pension was from the individual account, which was accumulated from individual contributions before retirement. The new pension model was not simply "policy emulation", but "policy learning" (Hu, 2012). Its prototypes included the ILO social insurance model based

on the Bismarckian approach, the World Bank's neoliberal three-pillar system, the Singapore CPF, as well as the Chilean model (Hu, 2012). Moreover, the 1995 pension regulations proposed two implementation plans which also indicated deliberate comparison and selection, as well as confusion among policymakers. After the establishment of the new model, subsequent pension system reforms focused on extending its coverage and adapting it to China's particular socioeconomic and cultural environment. The pension system was extended to all types of enterprise employees in 1997 and further to all workers including the self-employed in urban areas in 2005, which was approximately 235.5 million people or 21.5% of the total population aged 16 and over in 2009. However, the majority of the population was excluded from this reform tide, and only some of them were covered by entirely different pension systems such as those for government and civil servants (gongwuyuan).

Those living in rural areas, in urban areas without jobs, housewives, overwhelmingly women, and rural migrant workers, were excluded from the social protection net until 2009, although the government had attempted to establish a pension system for rural residents in 1992, which ended in failure because of the lack of financial support (Ding, 2011). The structure of the Urban-Rural Resident Social Pension (URRSP) covering rural residents and urban residents excluded from other pension systems is similar to the EEBP with a basic account and an individual account. However, the basic account in the URRSP is not accumulated by employers' contributions, but financed by central and local governments. The benefit level is equal for all beneficiaries regardless of individual income or contributions, but there are huge discrepancies among regions as a result of wide variations in local economic development. Moreover, the individual account is composed of personal contributions and local government subsidy and therefore is also a source of inequality between regions. Up to the end of 2016, more than 510 million people were covered by the URRSP, and 150 million of these were aged 60 and over who were receiving pensions. For government and civil servants, a special pension system was established in 1950 which was non-contributory as well as providing relatively high benefit levels, and remained unchanged until 2015 (Zheng, Sun, & Qi, 2009). Under the huge societal pressure that mounted over the extreme inequality in pensions between different social groups, a regulation regarding government and institution pensions (GIP) was issued in 2015, the model for which is the same as for the EEBP Scheme. Although the characteristics of the GIP and the EEBP are similar, the two systems have not been merged. Thus there are three types of national state pensions in China: the GIP, the EEBP, and the URRSP.

In sum, from 1991 to 2015, China undertook a historic transition in its pension system from the state-employer model to a state-society one and gave everyone a chance to take part, even though full coverage was not achieved. However, there were many inevitable problems when completing this mammoth task in such a short time period. The pension system is a mixed product based on diverse models and, therefore, entails some of the disadvantages of each model, as well as attempting to combine different principles. For example, the World Bank stresses individual responsibility, economic efficiency, and growth, which is the same as Singapore's CPF, but those are very different from the ILO model, which emphasizes state responsibility, social equality, and political stability (Hu, 2012), as well as the preservation of traditional status differences in society (Scruggs & Allan, 2008). Today, the three parallel state pension systems cover different subgroups mainly separated according to type of employment. In addition, diversities among provinces, urban and rural areas, and socio-economic classes also contribute to pension inequality and wider social stratification.

3 | SOCIAL STRATIFICATION AND THE WELFARE STATE

Social stratification has long been one of the important themes of welfare state research. On the one hand, neo-Marxists regarded the social welfare provided by advanced welfare states as a tool for easing class contradictions and maintaining social stability (O'Connor, 1973; Offe, 1972; Piven, 1993); on the other hand, citizenship theorists (Marshall, 1992; Parkin, 1979) saw welfare reforms as a major contribution to the declining salience of class. Both schools agreed that social welfare policies contributed to equality, stability, and solidarity among classes regardless of the original aims of those policies (Weale, 1990). Some empirical research demonstrated a positive effect of

pensions on reducing income gaps (Caminada & Goudswaard, 2005; Kenworthy & Pontusson, 2005; Mahler & Jesuit, 2006). Wang & Caminada (2011) compared the impact of 36 Organisation for Economic Co-operation and Development countries' social transfers and taxes on inequality, and found that the former contributed the lion's share of 85% in total income inequality reduction, while the latter accounted for only 15%. Furthermore, in terms of social transfers, pensions accounted for 46% of total redistribution followed by disability benefits (9%) and social assistance (7%), while sickness benefits accounted for only 2%. On average, developed countries are less unequal than other regions of the world (Lustig, 2015). The Gini coefficient for the advanced economies was between 0.2 and 0.3 in 2014 with the exceptions of the United Kingdom and the United States, while the Gini coefficient in most less developed countries such as Chile, Turkey, and Mexico was over 0.4. Relatively low inequality is the result of fiscal redistribution on a large scale. For example, the Gini coefficient in Turkey was 0.495 in 2013 before social transfers and 0.421 when the social transfers were taken into account. The equivalent figures in Sweden were 0.534 and 0.249, respectively.

Although welfare reforms have routinely been launched in the name of equality, the core aim of all welfare states is social protection and income maintenance, not reshaping the class structure (Esping-Andersen, 2015). However, while the welfare state provides services and income security, it is also and always has been, a system of social stratification. Welfare states are key institutions in the structuring of the class and the social order (Crompton, 2008; Taylor-Gooby, 2016). The organizational features of the welfare state help to determine the articulation of social solidarity, divisions of class, and status differentiation (Esping-Andersen, 1990). In general, as noted above, developed countries have been more equal than less developed countries (Bratberg, Anti Nilsen, & Vaage, 2005; Holzer, 2007; Jæger & Holm, 2007) although there is huge variation among both groups of countries. The equalizing achievements of welfare states are, primarily the consequence of family policies aimed at evening out conditions for children during their formative years (Beller & Hout, 2006; Shaefer & Ybarra, 2012; Sørensen, 2006) as well as labor market policies promoting female emancipation (Esping-Andersen, 2015). In less developed countries, however, informal security regimes and insecurity regimes result in problematic inclusion or adverse incorporation, in which the government cannot play even vestigial governance and security enhancing roles, which means that people rely heavily on community and family (Wood & Gough, 2006).

The literature on the welfare state demonstrates that state institutions, structures, and policies are both the cause and consequence of social inequality. Welfare policies in conservative welfare regimes tend to have as a primary goal the preservation of traditional status differences in society and so are likely to reinforce the existing social order. Classical liberalism often manifested itself in programs that encouraged more extensive interaction with the market for the purposes of income maintenance and insurance against risks posed by illness and especially old age. Social democratic welfare regimes emphasized universalism in a broad sense—across class lines—linking state policies to social citizenship (Esping-Andersen, 1990; Scruggs & Allan, 2008). As well as political-ideological influences, the variation of redistribution effects across welfare states derived from the so-called "paradox of redistribution": the more that benefits are targeted at the poor only, as opposed to creating equality via equal public transfers to all, the less likely they are to reduce poverty and inequality (Korpi & Palme, 1998). The targeting model creates a zero-sum conflict of interest between the poor and the middle class, while the encompassing model includes all citizens in the same program, which benefits not only the manual workers and the better-off citizens, but the poor as well (Hirschman, 1970; Korpi & Palme, 1998). However, the outcomes of different welfare state systems have become blurred recently. Inequality has been increasing steadily in both encompassing and continental models (Alves, 2015).

As a cornerstone of the welfare state, pension systems undoubtedly deeply affect levels of poverty, inequality, and the nature of social stratification (Naegele & Walker, 2007). A well-designed national pension system should aim at mitigating the risk of poverty in old age, securing an adequate pension income, achieving inter-generational and intra-generational solidarity and equity through the redistribution of income, and achieving cost efficiency through the reduction of adverse labor market incentives (Brown, 2008; Stavrakis, 2012). In practice, inequality in pensions is prevalent in many countries, and pension system development is a stratified process (Walker & Foster, 2006). In most countries the better-off groups such as civil servants were covered first and by superior pensions. In the private sector formal pension entitlements tended to develop first in the largest and most bureaucratic firms. Even

though pension schemes were designed for broad populations, unequal access to resources in youth and middle age, which are institutionalized in labor market and employment status and the domestic division of labor, is reflected in relative disadvantage in retirement (Titmuss, 1955; Walker, 1980). Older people have become more of a distinct social category, defined by age, gender, class, and marital status in relation to the welfare system, as opposed to physical condition and capacity to contribute to economic and social change (Foster & Walker, 2006). Women who commonly have part-time jobs, low salaries, casual or temporary employment, and work in small organizations are at a disadvantage in pension systems due mainly to the prerequisite of continuous contributions (Foster, 2014; Ginn, Street, & Arber, 2001). Pension policies occupying a residual role in liberal welfare states, such as the United Kingdom, aim at preventing the poorest from poverty by providing low level benefits, which creates "two nations" in old age: those with decent jobs before retirement with supplementation by occupational pensions, and the majority of older people who are reliant on national insurance pensions (Titmuss, 1955; Walker, 1981) or between salaried and manual classes (Hannah, 1986).

4 | DATA AND METHODS

4.1 | Data sources

The data are from the 2013 wave of the CHARLS, which is conducted by the National School of Development, Peking University. The CHARLS began in 2011 and has subsequently re-interviewed every two years. The survey aims at collecting high quality micro-level individual information for research, and includes almost all aspects of individuals aged 45 and over and their families, such as health status, health care and insurance, work, retirement, pension, income assets, and housing. Compared with other relevant surveys, the CHARLS is the most appropriate data-set for our purposes. First of all, it is the most comprehensive data referring to the pension theme available in China. All of the interviewees must be asked about their pension scheme, benefit levels, contributions, when they started receiving a pension, reasons for being without pensions, jobs before retirement, and so on. Second, the CHARLS collects individual as well as family information, which enables an exploration of the effects of family status on pensions. Third, the CHARLS is a highly representative data-set, which covers 450 villages and communities out of 28 provinces and interviewed 23,000 people up to 2015. The 2013 second wave collected information on 18,378 people, including 15,637 interviewees who took part in 2011 and 2,741 new recruits.

4.2 | Measures

Compared with the first wave, data from the second wave, used in our analyses, specify the pension structure in detail. This can be divided into three parts: one is the so-called social pension organized by the government, another is the commercial pension provided by insurance companies, and the last is the occupational pension from employers. In stark contrast to most developed countries, the commercial and occupational pensions cover only a tiny minority, although central and local governments declare their desire to promote them. According to this survey, in 2013, only 36 interviewees had joined an occupational pension, accounting for less than 0.2% of the total sample, and 531 interviewees were in commercial pension schemes, consisting of 3% of the total sample.

Thus we put the main emphasis on the social pension, which is then further divided into at least eight types. In addition to arrangements for different subgroups, the differences between the social pension systems also derive from national policy experimentation. For example, the rural pension, also called the old rural pension, was established in 1992 and was replaced by the New Rural Social Pension (NRSP) in 2009, but some retired people also continued to receive the rural pension. Meanwhile, although the Urban Resident Social Pension (URSP) and the NRSP were merged at the policy level of central government in 2014, these two systems were still operating in parallel when the survey was conducted in 2013. Therefore, we merged the old rural pension, land-losing farmers' pension, the URSP, and the NRSP into the URRSP as a single item. There are two other pensions: the GIP and the EEBP. As a kind of non-

contributory pension, the Advanced Age Allowance (AAA) is confined to those aged 80 and over and was implemented mainly by municipal governments and covered only 18 provinces or 21 cites consisting of 1.56 million older people at the end of 2013 (Zhu, 2015). Considering its low coverage and benefit level, the AAA is excluded from the above social pension composite variable and analyzed separately. In all, out of 11,327 interviewees, 64% were in the URRSP; 1,996 interviewees, 11%, were in the EEBP; 5.6% of interviewees were members of the GIP, and almost 20% were excluded from any pension scheme.

Everybody is embedded within multiple socioeconomic circumstances, and therefore a particular person's pension is determined by many factors at both micro and macro levels. Of those, individual characteristics, family background, and macro socioeconomic circumstances and social policy are the key factors. First of all, individual characteristics are divided into demographic features and human capital. The former, including gender, age, and marital status are immune to social interventions. The latter involving education, residential (hukou) status, hukou mobility, and occupational mobility is easily affected by other factors. Second, we employed parental education and occupation to measure family background, while macro factors are gauged at the provincial level by the urban-rural income ratio, gross domestic product (GDP) per person, the urbanization rate, old age dependency ratio, the percentage receiving pensions at aged 60 and over, and the percentage of social security expenditure to total public expenditure. Table 1 shows the variables and sample distribution.

4.3 | Methods

We examine the stratification effects of pensions from the perspectives of individual, family and province. The individual and family are nested within a province and constitute a two-level structure. Thus the Hierarchical Linear Model (HLM) was the most suitable analytical method. Its main advantage is analyzing variance in the outcome variables when the predictor variables are at varying hierarchical levels (Heather, Andrea, Mackay, & Meredith, 2012). Compared with traditional ordinary least squares, HLM accounts for the shared variance in hierarchically structured data (Hofmann, 1997).

A two-level model consists of two submodels at level -1 and level -2. The variables in level -1 include demographic characteristics, human capital and family background, formulated as follows:

$$Y_{pension} = \beta_{0i} + \beta_{1i} X_{gender,ii} + \beta_{2i} X_{gge,ii} + \dots + \beta_{(g-1)i} X_{parental education,ii} + \beta_{gi} X_{parental occupation,ii} + Y_{ii}$$
(1)

Where β_{qj} are level-1 coefficients, and Y_{ij} is the level-1 random effect.

There are 6 variables at the provincial level including urban-rural income ratio, GDP per person, urbanization rate, old age dependency ratio and so on. Each of the level-1 coefficients, β_{ai} , becomes an outcome variable in level-2:

$$\beta_{aj} = Y_{q0} + Y_{q1} W_{urban-rural\ income\ ration,j} + \cdots + Y_{qs} W_{urbanization\ rate,j} + \mu_{aj}$$
 (2)

Where Y_{qs} are level-2 coefficients, and μ_{qj} is a level-2 random effect.

5 | RESULTS

5.1 | The stratified pension system

China's great era of pension policy reform since the 1980s has served economic goals rather than social ones such as equality and social integration. A highly stratified pension system was created by a combination of historical and contemporary policy factors. The 18th National Congress of the Communist Party of China (NCCPC) in 2012 said that the country should institute a complete, multi-tiered and sustainable system to provide basic security for both the urban and rural populations, with an emphasis on making the system more equitable and sustainable, and ensuring the smooth transfer of social security accounts between localities. Four key terms provide the guiding principles for

TABLE 1 Variables and sample distribution (n = 18,378)

Variables		Values	N	%
Individual characters	Gender Age	Male Female 59 and under	8,762 9,616 9,540	47.7 52.3 51.9
	Marital status	60-79 80+ Married	8,033 805 15.964	43.7 4.4 86.9
	Marital Status	Others	2,413	13.1
Human capital	Hukou status	Rural Urban	11,960 3,053	79.7 20.3
	Education	Elementary school Middle and high school Collage and upper	10,159 4,544 309	67.7 30.3 2.0
	Hukou mobility	Urban-rural No change	144 12,990	1.0 86.6
	First job type	Rural-urban Farmer Self-employer	1,864 13,404 674	12.4 77.0 3.9
		Enterprise employee Public worker Civil servant	2,023 915 397	11.6 5.3 2.3
	Occupational mobility ^a	Downward Non-mobility	1,153 11,487	8.0 79.5
	Indexed salary before retireme	Upward ent ^{b,c}	1,814	12.6 41.5
Family capital	Parental education	Elementary school Middle and high school Collage and upper	9,606 652 95	92.8 6.3 0.9
	Parental occupation	Famer, fisher, etc. Commercial worker Clerk Production worker	7,765 303 311 514	76.3 3.0 3.1 5.1
		Professional workers Governmental leader	480 803	4.7 7.9
Macro circumstances ^c (demographic, economic, social policy)	Urban-rural income ratio Ln (GDP per person) Urbanization rate Old age dependent ratio Percentage of beneficiaries Percentage of financial expen	diture		2.8 10.7 55.7 12.8 124.5 11.8

Notes.

^aOccupational mobility is equal to the last job type minus the first job type, the values of which range from -4 to 4. In order to express this simply, the values from -4 to -1 are classified downwards, and the values from 1 to 4 are classified upwards, the zero means non-mobility.

^bConsidering salary comparability for different years, we calculate the indexed salary by dividing the real salary by social average salary in the same year.

successive recent reforms: full coverage, basic security, multi-pillar, and sustainability, each of which contributes to the stratification effects of the new pension system.

First, the principle of full coverage aims at eliminating people's worries about the future and protecting them from poverty when they retire, which definitely should be major functions of a pension. According to the 2013 survey the coverage rate had almost doubled from 44.57%, compared to the same survey in 2011. This massive achievement is attributable to the operation of the URRSP, which provided an unconditional pension to those aged 60 and over when the policy was implemented, even if they had not contributed. Those aged between 46 and 59 were entitled to choose a single premium and receive pensions when reaching 60 years of age. For example, supposing that a person was aged 58 when the pension policy was implemented in 2010, he or she would be entitled to a pension two years

Those continuous variables such as indexed salary and macro circumstance are displayed with the mean values.

TABLE 2 Indicators of pension inequality (n = 6,991)

	Overall	GIP	EEBP	URRSP
Average (CNY per month)	708.4	2543.44	1813.84	127.47
SD	1045.05	1246.57	661.74	219.13
CV	1.48	0.49	0.36	1.72
Gini coefficient	0.6815	0.2708	0.1918	0.5033

Note. Deleting the extreme values by 0.5% of the maximum and minimum, respectively. The same below.

later with the precondition of contributing for only two years. Much research suggests that even a low level pension generates positive impacts on older people and their families. In addition to direct poverty reduction, a pension also helps older people to build social capital and strengthens their status in households and communities (Uprety, 2010). For example, older people use pensions to maintain connections and social networks within their communities by making contributions as socially required towards marriages and funerals (Suwanrada & Wesumperuma, 2012). Also, pensions play a key role in supporting human capital development, particularly for grandchildren, by contributing to their education (Duflo, 2003; Samson, 2007).

Second, the principles of basic security and sustainability reflect anxiety about the prospective national financial burden, which in turn results in inadequate pensions. Thus the remarkably fast expansion of coverage was at the expense of a decent pension level. Facing the dilemma between coverage and adequacy, the government chose the former. The replacement rate of the EEBP has fallen since 1995, especially over last decade, even though the government has compulsorily improved pension levels at the rate of 10% every year since 2005, 8% in 2016, and 5.5% in 2017. It dropped from over 80% at the beginning of the reform to 44% in 2011 and 42.3% in 2013 (Li & Wang, 2013). This was due to the new pension policy issued in 2005 strengthening the tie between benefits and contributions, rather than average salaries, which have increased dramatically since the end of 1990s (Li & Wang, 2013; Zhang, Yang, & Zhang, 2012). Those in the URRSP received only 55 CNY per month, which remained unchanged until 2015 when it increased to 70 CNY per month. According to the Ministry of Human Resources and Social Security, the average pension per month of the URRSP was 119 CNY, 5% of the EEBP, in 2015. Its symbolism is much more important than the actual amount provided.

Third, the multi-pillar principle further enlarges stratification. Multi-pillar, on the one hand, means different pensions co-existing between subgroups; and, on the other hand, it can also mean more than one pension per person. As demonstrated above, there are at least three essentially different social pension schemes, resulting in huge inequality among subgroups. As shown in Table 2, there are large gaps between benefit levels among these three schemes. The average pension for the total population is 708 CNY per month, or 16.5% of the average salary, and the Gini coefficient is 0.68 indicating extreme inequality. This inequality mainly results from the separated pension schemes. The ratio of benefit levels is 20:14:1. As shown in Table 3, further decomposition with a Theil index reveals that over 80% of the inequality is explained by the distinct pension schemes, while the rest is rooted within the schemes themselves. Although benefits within the URRSP are generally low, individual inequalities within it are more distinct than those in the other two schemes.

TABLE 3 Theil index of pensions (n = 6,991)

			Т	Contribution degree (%)
Pension type	Within groups	GIP	0.0465	5.20
		EEBP	0.0330	3.69
		URRSP	0.0878	9.82
	Between groups		0.7269	81.29

Note. Deleting the extreme values by 0.5% of the maximum and minimum, respectively.

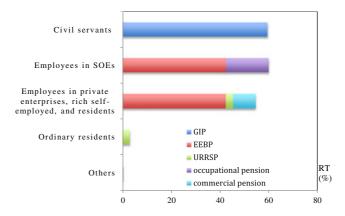


FIGURE 1 China's stratified pension system [Colour figure can be viewed at wileyonlinelibrary.com] *Note.* The horizontal axis represents the replacement rate of pensions, and the vertical axis represents subgroups.

In addition to those deriving from basic social pensions, inequalities worsen when taking social, occupational and commercial pensions into consideration. This shows that the adoption of a multi-pillar approach in China works against the goal of equality. Occupational pensions are not characterized by universality but are "work-select", which means that only those with relatively stable employment, mainly employees in state-owned or large-scale enterprises, and middle and high earners are entitled to them (Walker, 1981). For example, based on the data set, over 80% of interviewees reporting receiving occupational pensions were in the EEBP and the GIP. Of those, two-thirds previously worked in SOEs and one-third were civil servants. In contrast, commercial pensions reflect income rather than job type: 76% of interviewees receiving commercial pensions were farmers and the self-employed and 17% of them were enterprise employees. Because of extremely low pensions the better-off without an occupational pension regard a commercial pension as a vital additional income source.

Thus, as shown in Figure 1, which, in terms of benefit levels, take the shape of an inverted pyramid (or, in terms of population coverage, an upright pyramid). At the top are civil servants with the most superior social pensions, a total of 148 million people (5.6% of all pensioners), although most of them only have a single pension. In 2015 the tax-financed pension for civil servants was abolished and replaced by the model of social pooling combined with individual accounts, but an additional occupation pension was compulsorily established to compensate for the reduced level of benefits. Below them are employees in SOEs with mid-upper social pensions and considerable occupational pensions — 146 million pensioners (5.5%). In the middle of the pyramid are workers in private companies, the self-employed and some ordinary residents with relatively high incomes both in urban and rural areas. They use commercial pensions to supplement low social pensions—204 million pensioners (7.7%). The mid-lower class is the majority of urban and rural residents who are only covered by the URRSP and without a commercial pension—1,628 million pensioners (61.4%). The lowest class are those without any pensions—525 million people (19.8%).

5.2 | The winners in the stratified pension system

The strategy of pension reform called "full coverage, basic security, multi-pillars, and sustainability" has generated distinct and transformational stratification effects, which exist between as well as within schemes. Therefore, for a certain individual, how much is received not only depends on which type of pension scheme that person is a member of, but also on how many contributions the person has made. Those two influences are further determined by complex factors, such as individual characteristics, especially in terms of gender, family background, and macro socioeconomic circumstances. In Table 4 we analyze the factors driving pensions from the perspective of individual characteristics, human and family capital, and provincial socioeconomic circumstances, using HLM across four models.

TABLE 4 Factors determining the pension (n = 6.991)

Variables			Model 1	Model 2	Model 3	Model 4
One level	Individual character Family capital Human capital	Gender (male = 1) Age Marital status (married = 1) Parental education Parental occupation Education Hukou (rural) Hukou mobility First job type Occupational mobility Indexed salary before retirement	-263.4*** -6.5** -156.8***	-246.2*** 5.2* -178.5*** 133.3*** 136.9***	-107.4* 14.8*** -44.0 -9.6 -2.1 148.1*** 1016.3*** 43.4 291.3*** 141.2*** 0.5***	
Two levels	Gender (male = 1) Age Hukou (rural) Urbanization rate Education Ln (GDP per perso First job type Ln (GDP per perso Occupational mobility Indexed salary before Urban-rural incom Ln (GDP per perso Old age dependency Percentage of benefic Percentage of financi	n) / e retirement e ratio n) cy ratio ratio ciaries				-113.2*** 13.2*** 1058.2*** 10.5* 144.4*** 118.2*** 255.4*** 123.9** 122.5*** 0.9*** 2.1*** 1.3** -0.1* -80.2*** 11.4*** -62.8***

Notes. Values in brackets are reference groups.

Significant levels:

The results of Model 1 suggest that individual characteristics have a significant impact on benefit levels. In particular, compared with men, women are at a clear disadvantage. Their average pension is 263 CNY per month, or 30% lower than their male counterparts. This gendered outcome is mainly due to both the occupational disadvantages of women in the labor market at earlier states in their life course and the inadequate compensation made for the effects of motherhood and other caring activities (Foster & Walker, 2006). Also, the older people are, the lower the pensions they receive. The pensions of married couples are higher than those of others.

When family capital is added to create Model 2 there are two important outcomes. On the one hand, family capital has a significant impact on pension levels, which seems to imply that a person's pension is partly determined before he or she is born. Many studies demonstrate that the family plays a major role in determining the location of individuals within the social structure. Although family relationships do not in and of themselves create class relationships, they play a vital role in reproducing them, and the family is the major transmitter of social advantage and disadvantage (Crompton, 2006), which in turn affects their children's future pensions. On the other hand, the effect of age is inverted from negative to positive. It is common for people with similar family backgrounds to seek similar jobs, which results in them participating in the same pension scheme. This means that the pensions are regressive the later the retirement within the same pension scheme, which results from the reduction of the replacement rate. Thus, the negative effect of age in Model 1 is likely to result from institutional diversity.

The human capital index consisting of education, hukou, occupation, and so on, was pooled into Model 3. The most distinct change is the disappearance of the significance of the family capital variables, which indicates that the impact of family capital on pensions is indirect with the intervention of human capital. In addition to the effects

^{*}p < 0.05,

^{**}p < 0.01,

^{***}p < 0.001.

of family factors on children's occupation, parents with higher incomes and education are more able to invest in their children's education, which contributes to their human capital and subsequent pension entitlement. Meanwhile, the impact of gender on pension reduces, while for age it has the opposite effect. Regarding human capital, all variables are significant except for hukou mobility. In general, the higher the human capital, the higher the pension level.

Model 4 puts both micro and macro variables into the pool and deletes the non-significant variables in Model 3 (family capital, marital status, and hukou mobility). Table 4 shows that individual characteristics, including gender and age, are independent from other variables, and the coefficients are similar to those in Model 3. Regarding human capital, all variables are affected by macro circumstances except for occupational mobility. First of all, macro economic factors strengthen the effects of individual human capital on pensions. For example, the macro factor "urbanization rate" enlarges the pension gaps between rural and urban pensioners, which means that pension inequalities in the developed eastern provinces are greater than in the less developed middle and western provinces, and it also means that economic development strengthens the stratification effect of pensions within the current policy structure. Similarly, the variable "GDP per person" generates positive effects on education, first job type and salary before retirement. In contrast, the demographic factor, old age dependency ratio, has a negative effect on pensions. This is likely to be associated with economic development. Due to labor mobility from middle and western provinces to eastern ones, the left-behind older people result in an increase in the old age dependency ratio. In terms of social welfare policies, the percentage of beneficiaries has a positive impact on pensions, confirming that positive welfare policies contribute to decent benefits. Although the variable percentage of financial expenditure generates a significantly negative impact on pensions, it does not negate the previous conclusion, because the proportion is determined by both expenditure and GDP. Data indicate that the less developed provinces have higher percentages of financial expenditure than the more advanced ones, even though the absolute values are lower. In all, socioeconomic factors at the macro level generate significant impacts on inequalities and stratification. Economic factors favor the better off in developed regions compared to their counterparts in less developed ones, with human capital playing an intermediate role. Although the percentage of financial expenditure in developed provinces is lower than in less developed ones, the greater absolute expenditure and coverage increase the pension levels of the former.

5.3 Who benefits and who loses?

The strategy proposed by the 18th NCCPC aimed at establishing pensions for all in the form of basic security, which drove the extraordinary extension of pension coverage in China. This increased from 360 million people in 2010 to 858 million people in 2015, representing an average annual increase of 19%. The International Social Security Association gave the prestigious Award of Outstanding Achievement in Social Security to the Chinese Government for this unprecedented extension of pensions. The problem of pension stratification, however, remains unresolved. A key factor in this failure is that the primary purpose of China's pension reforms was not to promote wellbeing for retirees but, rather, to further its economic reforms. Due to the failure to observe the basic principles of pension systems, not only have many social problems not been resolved, in practice, but pension policy has created significant new ones, the most important one of which is a range of new inequalities.

In terms of *social* pensions, there are four main groups. At the top are those in the GIP, then follows those covered by the EEBP, the third group are those in the URRSP, and at the bottom are people without any pensions. The multipillar principle further reinforced pension stratification. Occupational pensions filled the gap in social pensions between SOE workers and civil servants. At the same time, commercial pensions compensated for the low social pension received by the better off under the URRSP, even though there remained a large gap between them and SOE workers and civil servants. When occupational and commercial pensions are taken into account pension system reform has reshaped this aspect of social stratification into five overall classes. In addition to the traditional division between workers and nonworkers, a new and crucial line of social division has appeared within what was once a single unified working class (Westergaard, 1995). Above the new line are "core employees" employed by central and local governments and SOEs; below the line are those in private companies or with part-time jobs. Again, women are the most disadvantaged. Also below the line are China's nearly 300 million migrant workers who remain classified as rural residents and are thus eligible for the URRSP.

There are three main causal factors underlying China's stratified pension system. First, the pension model of social pooling combined with individual accounts, initiated in the EEBP and subsequently in the URRSP and the GIP, created negative social stratification effects. The relationship between benefit and employment prior to retirement is now closer than before the reforms. Those with higher occupations and salaries in the reformed system receive higher pensions than their counterparts in the old one. Second, there are several pension systems for subgroups divided by job types before retirement. Those pension systems differ from each other in many respects, such as contributions, management, and benefit formulae, as a result of pension inequality. Although civil servants are under an obligation to contribute in order to qualify for pensions when they retire and the benefit formula of their social pensions is same as their counterparts in the EEBP, their privileged position was sustained by the compulsory introduction of a new occupational pension as compensation for the loss they incurred in accepting the new system. The contribution rates of these occupational pensions are 8% of salary for employers and 4% for employees. Third, the different adjustment mechanisms of benefit levels for each pension scheme also fuel inequality. As mentioned above, the benefit level of the EEBP has been increased since 2005 at the rate of 10%, 8% in 2016, and 5.5% in 2017 which resulted in a dramatic increase in EEBP pensions from 711 CNY per month in 2004 to 2,353 CNY per month in 2015. At the same time, the minimum level of the URRSP has remained unchanged for a long time, with the exception of an adjustment from 55 CNY per month to 70 CNY per month in 2015. Local government powers to supplement this national minimum, according to their financial capacity, result in wide discrepancies in social pension levels. For instance, the social pension was 510 CNY per month in 2017 in Beijing-more than seven times the national minimum-and in Qinghai Province 155 CNY per month. Due to the lack of any consistent national adjustment mechanism, pension inequality has widened among provinces as well as between pension types, despite the outstanding achievement of coverage extension.

Within this stratified pension system, who benefits the most? We have shown that both individual and macro circumstances influence pension levels. First of all, the pension system in China has a work-related, performance-related and earning-related structure. Those with high human capital such as high levels of education in stable jobs with high salaries, mainly men, receive a decent pension when they retire. In contrast, women, typically with lower human capital than men in the labor market, receive lower pensions. Although the coverage of social pensions is similar between men and women, the benefit levels are lower for women in each pension class. Furthermore, the advantageous position of the privileged is transferred between generations. Children from families with high parental human capital have more possibilities than others to attain high human capital themselves and, as shown, this leads to higher pensions. Poor performance in the labor market cannot be attributed solely to individuals. From a risk society perspective, in advanced modernity the social production of wealth is systematically accompanied by the social production of risks (Beck, 1992). It is the obligation of the state to provide protection against such risks, derived from the assertion that citizens possess social and economic rights that are legally defined in the Universal Declaration of Human Rights (UN, 1948) and the International Covenant on Economic, Social and Cultural Rights (UN, 1996). Inequalities within the labor market should not be passed on to later life nor to the next generation.

Second, macro economic circumstances and social security polices created new inequalities among geographical areas. People in advanced provinces received more and higher pensions than their counterparts in less developed areas. Due to the interaction between human capital and macro factors, those with high human capital living in the better-off (eastern) provinces are the biggest winners. This unequal outcome results directly from Deng's emphasis on local discretion in the reform process. Up to now, the pension system has been managed at the provincial level, even though many researchers have argued that China needs a national social pension to promote equality and risk management, which was proposed by the central government early in the 12th Five-Year Planning Outline of Social Security in 2012. The pension reforms in the middle and western provinces have lagged behind the eastern ones both in terms of coverage and benefit levels. In summary, those who benefit most from China's new stratified pension system are those from better-off families and with high human capital living in the most economically advanced areas. Women are at a distinct disadvantage as a result of the interaction between the labor market and the work-performance-earnings-related pension policy.

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6 | CONCLUSION

Based on this research we argue that equality and de-stratification should be the main goals of China's future pension reforms once full coverage has been achieved, and that inequality could be largely overcome by integration of the different pension systems. Reform of the GIP in 2015 for civil servants with the same model as the EEBP and the URRSP suggested a first step towards integration. Three further priorities need to be addressed.

First, it is urgent to merge all social pensions into one scheme, which would also promote labor force mobility and eliminate the impact of family capital on pension inequality. Due to the prospect of a decent pension despite a low salary, many people compete for jobs in public institutions every year.

Second, the management of pensions should shift from provincial to central government. In the context of regional inequality, the current management of fund pooling at provincial level blocks the redistributive function and generates new inequalities. It is important for central government to clear obstacles between provinces to provide security for older women, the disabled, and older people living in rural areas, the middle and western regions, and the "old revolutionary base areas" with more equal pensions. Then allowances for family/caring responsibilities and part-time work can be made to improve the pension status of women in the labor market.

Third, adjustments should be made to the pension model. The individual account is a fully income-related mechanism without any redistributive function. Thus part of social pooling should focus on redistribution, and aim to eliminate the salary- and work-related factors. Together, these reforms would represent a major step towards the elimination of pension inequality in China and, in turn, make a substantial contribution towards the creation of a more equal society.

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CONFLICT OF INTEREST

None declared.

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