Journal of Infrastructure, Policy and Development (2023) Volume 7 Issue 2.
DOI: 10.24294/jipd.v7i2.1991

ORIGINAL ARTICLE

Political doctrine, economic growth, and the development of urban social security: Lessons from post-reform China

***Guan Huang*[1,2], *Jinfeng Zhang*[3,*]**

[1] *Quqiubai School of Government, Changzhou University, Changzhou City 213159, Jiangsu Province, China*

[2] *City University of Macau, Macau, China*

[3] *School of Humanities and Laws, Hebei University of Technology, Tianjin City 300401, China*

ABSTRACT

This study provides an empirical examination of the design and modification of China's urban social security programme. In doing so, this study complements the popular assumption regarding the correlation between economic growth and social security development. Focusing on the economic and political motivations behind the ruling party's decision to implement social security, this study first discusses the modification of urban social security and welfare in China. It then empirically demonstrates the mechanisms behind the system's operation. This study proposes the following hypothesis: in a country like China, a change in the doctrine of the ruling party will affect government alliances, negating the positive impact of economic growth on the development of social security. In demonstrating this hypothesis, this study identifies a political precondition impacting the explanatory power of popular conceptions of social security development.

KEYWORDS

Chinese urban social security; unequal distribution; governance orientation; economic development; economic reform; CCP

ARTICLE INFO
Received: 14 March 2023
Accepted: 9 June 2023
Available online: 1 August 2023

*CORRESPONDING AUTHOR
Jinfeng Zhang, School of Humanities and Laws, Hebei University of Technology, Tianjin City 300401, China;
ico2018619@163.com

CITATION
Huang G, Zhang J (2023). Political doctrine, economic growth, and the development of urban social security: Lessons from post-reform China. *Journal of Infrastructure, Policy and Development* 7(2): 1991. doi: 10.24294/jipd.v7i2.1991

1. Introduction

Comprising both social security and welfare, China's social security programme has been criticised as overly fragmented and unequally distributed. Certainly, it is well-established that those considered important to the Chinese Communist Party (CCP)—particularly in the implementation of party doctrine—receive more benefits. This study addresses both of these issues. Meanwhile, prolonged natural emergencies like COVID-19 have had a severe impact on the operation of China's urban social security, resulting in the country's social security system receiving greater scholarly attention. This study identifies and demonstrates the decisive impacts of changes in Chinese politics on urban social security development. That said, natural emergencies like the COVID-19 pandemic have not led to fundamental changes in the Chinese political regime. Accordingly, this study does not discuss the impact of COVID-19 on the operation of China's urban social security system;

rather, it focuses on the period prior to, and free of, such long-lasting natural emergencies.[1]

In China, social security coverage and benefit distribution are shaped by two factors: area type (urban/rural) and employment status (public/private). First, the system can be broadly divided according to area type, namely, urban and rural areas (Chang, 2003; D. Liu, 2020). Indeed, institutional social security was only introduced in China's rural areas in 2009. Even today, the structures, benefits, and coverage of rural social security differ from that provided in urban areas. As this study focuses on urban social security development, the rural system is excluded from analysis. In this respect, social security provision also differs according to an area's degree of development: while social security structures are generally similar in different towns, the amount of support decreases as one moves from the advanced east to the less-developed west. Second, China's social security system can be further divided based on who receives benefits, with CCP cadres and governmental officials—that is, public employees—enjoying more comprehensive coverage and benefits than private employees (G. Huang, 2022).

China's urban social security system comprises five mandatory insurance programs—namely, pension, health, unemployment, work-related injuries, and maternity—and a housing fund. CCP cadres and government employees also have access to smaller, but frequently replenished, welfare programs (Du and Zhang, 2008, pp. 1–22; Qin, 2015). Using a model (G. Huang and Pang, 2022; L. Tang, 2012), this study is premised on the notion that the fundamental reason for the adoption of this social security programme was to implement CCP doctrine and that the system's design and operation was based on and shaped by the CCP's doctrine of economic development. Indeed, although social security was on the margin of the CCP's governing system, it was designed as a means through which the CCP could implement its doctrine. Certainly, the CCP has increased the collection of resources via this system (X. Huang, 2013) and continues to play a central role in the deployment of social security (Mok and Wen, 2022; Pan, 2007, pp. 58–67).

Most existing studies on Chinese social security focus on individual programs—such as pensions, health, and unemployment—and use empirical and comparative methods to evaluate the system's development or test previous research observations (Feldstein, 1999; G. Huang and Cai, 2021). General studies primarily comprise reviews of development records and policies (G. Huang, 2013), although empirical studies on individual programs are becoming more common (A. Chen, 2004; A.J. He et al., 2022). While the bulk of extant research is written in Chinese, Dixon's *The Chinese Welfare System 1949–1979* (1981) remains the authoritative study on Chinese social security development. As such, international scholars have tended to base their studies on secondary data (G. Huang and Cai, 2021, pp. 7–11; White, 1998), undermining the reliability of their conclusions. Few studies have attempted to explain the impact of Chinese politics on the development of its social security programs in an empirical and testable way. As a typical transition country, the CCP regime shift from totalitarianism to authoritarianism resulted in the introduction of significant reforms across China (Yu and Cai, 2015). Scholars have designed some quantitative measures to observe the impacts of the regime transition on China's urban social security development; for instance, scholars have examined the impact of the transition by adopting dummy variables (totalitarianism set as 1, and authoritarianism as 0) (G. Huang et al., 2016). However, there is still no efficient

[1] The CCP government has referred to the "Three Year Famine" as the "Three Year Natural Disaster", despite it being a disaster caused by politics. In view of the fact that it was a man-made disaster, the development of China's urban social security is included in this study's research period.

way to calculate the transition strictly, weakening the accuracy of existing observations from the perspective of regime transition.

Classifying the Chinese social security system as quintessentially "Confucian", "American-Pacific" or "East-Asian" (Peng and Wong, 2010), some scholars have highlighted the fusion of the private and public sectors in the provision of social security. Defining China as a "developmental state", others have argued that social security provided a means of stabilising society and promoting economic growth (J. Liu, 2009). Others, including Dixon (1981), have used the CCP's focus on "productivity" to explain the government support of these programmes. Scholars like A. Chen (2004), Lai and Fujinami (2021) have emphasised the lessons learned from the Japanese experience. Meanwhile, other scholars have sought to identify the "Chinese characteristics" that explain the differences between China's social security programme and those of other countries (Chow, 2000; Lu, 2021).

In contrast, economic studies usually identify a correlation between the economy and social security by testing for mutual effects, preferring quantitative methods and statistical data. Classic economic theories have been highly influential, including the idea that economic development has a positive impact on social security expenditure (C. Wang et al., 2014). Many scholars use theories developed in western countries to explain the development of China's social security programs. For example, Wilensky and Lebeaux (1958) and Kasza (2006) theorised that an increase in a country's per capita GDP will have a positive impact on social security expenditure. While this popular and widely accepted "Industrialisation" theory has been directly applied to China, its applicability to the Chinese case has not been verified (Hong and Ngok, 2022; Ke, 2009). To addressing this concern, this study tests the viability of such an application.

Many Chinese economic studies have focused on social security provision after China's economic reform and opening up, typically using economic development and globalisation to explain the system's development. These scholars assume that Chinese economic reform ushered in globalisation and that China adopted a western-style social security system in order to facilitate trade (Qi, 2013). They also assume that China needs to sustain social security equivalent to that provided in western countries in order to remain attractive to international investors and increase exports (Qi, 2013). Although this theory is useful for illustrating the establishment of current Chinese urban social security, it has yet to explain why the CCP government sought to reform the system in the first place (Luo et al., 2018; Zheng, 2009). Significantly, the conclusions of these studies have never been properly tested. This approach also overlooks the impact of politics. By regarding economic reform as a precondition for the development of a social security system, economists do not feel the need to examine the impact of politics on the economy. However, political factors have and continue to play a decisive role in the development of Chinese urban social security (L. Yang and Hu, 2010). These limitations notwithstanding, economists have provided instructive quantitative measures with which to test qualitative hypotheses on Chinese social security development. In this respect, this study uses the proportion of the aged population to evaluate social structure changes, GDP per capita to evaluate personal economic conditions, and Gini-coefficients and comparative structure methods to express the results of redistribution implemented by social security (Luo et al., 2018).

In light of the foregoing, this study proposes the following hypothesis: given the authoritarian regime of the CCP, any modifications to CCP doctrine will affect the party's governance orientation,

the resulting change in governance measures and interests negating the positive impact of economic growth on the development of social security. In other words, the co-varied institutional design and governance style resulting from changes to CCP doctrine will decisively change the popular assumption regarding the correlation between socio-economic improvement and social security development.

This study comprises three sections. Using archival data, the first section provides an overview of China's mandatory social security system in urban areas. This section identifies the CCP's orientation, while exposing institutional inequality in terms of coverage and benefits as well as emergent financial issues.

Based on data from the Chinese National Bureau of Statistics, the second section provides a statistical analysis of the system—from the collection of funds to expenditure. In doing so, this section reveals how CCP doctrine is manifested in the economic operations of urban social security. This section also conducts two comparative analyses. First, as China is the second-biggest economy in the world, many scholars use the OECD as a reference in evaluating the development of China's urban social security system (Xu and Qiu, 2014). These studies assume that a country's GDP expenditure on social security is positively correlated to the amount of GDP per capita. This study thus compares Chinese expenditure on social support systems with that of OECD members. Second, this study designs another metric to compare China to other countries based on industrialisation theory's argument that a country's social support expenditure is positively related to both the size of its elderly population and per capita GDP (Hong and Ngok, 2022; Kasza, 2006; Wilensky and Lebeaux, 1958). In doing so, this study provides a more comprehensive evaluation of the current Chinese urban social security than any previous study.

The third section discusses the mechanisms behind the design and operation of China's urban social security system. In order to demonstrate its hypothesis, this study tests the applicability of Chinese data to popular thinking regarding the correlation between the economy and social security (Hong and Ngok, 2022). As the development of the Chinese economy fundamentally changed in 1978, the data are divided into two periods: before and after economic reform. Although the transition is a good independent variable to illustrate changes in modern China, too many factors fall under the regime change from totalitarian to authoritarian rule. Scholars thus have a duty to find the key factors impacting social security development in a transitional country. Beyond the change in political leadership and the design and operation of political institutions, the most fundamental change in a transitional country is that to its political doctrine (G. Huang and Pang, 2022). This study uses the change in CCP doctrine to explain the difference in the relationship between the economy and social security development. Although the changes in CCP doctrine are difficult to calculate, no social organisations existed before the regime transition due to the CCP's strict control over the establishment of such organisations, providing a useful indicator to quantitatively express the changes in CCP doctrine. This impact of the change in CCP doctrine is calculated using the number of social organisations,[2] and based on the premise that only social groups important for CCP endeavours were allowed to establish social organisations (J. Hu, 2011). While socio-economic organisations were forbidden before China's reform and opening up (S. Wang et al., 2014), almost

[2] In China, a social organisation is semi-governmental; its authority comes from the support of the CCP government (S. Wang and Song, 2013). No social organisation could be established legally without CCP permission; no such permission was issued throughout the totalitarian period.

all organisations in contemporary China are related to the economy in some way (W. Hu, 2012).

2. An overview of China's urban social security system

Prior to the introduction of major economic reforms in 1978, the CCP implemented a comprehensive but unequally distributed social security system that corresponded with its notion of class-based revolution (Huang and Pang, 2022). The socialist market economy developed quickly, even as the previous social security system faced bankruptcy (Dixon, 1981; G. Huang, 2022, pp. 334–335). Consequently, a number of reforms were introduced to avoid the recurrence of such financial problems (Y. Wang and Long, 2011).

The CCP played a crucial role in modifying China's urban social security system (see the Appendix, Table A1). Rather than laws, this system is constituted through policies[3] drawn up by the central government. Since 1978, five insurance programmes have formed the basis of China's urban social security system: pension, health, unemployment, work-related injuries, and maternity. Prior to reform, workers were not required to pay premiums and employers paid an amount equivalent to 3% of human resources costs. In contrast, the premiums for these post-reform programmes are compulsory and collected from both employers and employees (Yu and Cai, 2015). By charging workers 11% of their salaries and employers an amount equal to 36%–42% of the human resource cost, the CCP has freed itself from the burden of financing urban social security (Zheng and Scholz, 2019).

Issued in 2016, a recent decrease in employers' share of premiums has exposed the CCP's attempts to facilitate economic development. Pointing to the downturn of the Chinese economy, the CCP claimed that a decrease in employers' contributions would aid in reducing the financial burden (State Council, 2016). However, this study argues that, having freed itself from the costs involved in providing social security, the CCP had to ensure the implementation of its doctrine (Shi and Chen, 2009). As a result, employees' premiums increased despite being subject to the same economic conditions (State Council, 2016). This supports the argument that the CCP wants to facilitate economy development, as well as amplify its control of capital, by implementing social security programmes.

An examination of urban social security reforms reveals that the CCP has prioritised programs like pensions, health, and unemployment—all of which are necessary for assisting economic growth. The government invested considerable time in these programs by experimenting with different options and designs. The remaining programmes—maternity and work-related injuries—are not prioritised in the social security system (Yang and Zhou, 2001).

The reform of China's urban social security system has a clear progression (Pan, 2007). First, the CCP government maintained and gradually adjusted pre-existing programmes to satisfy their vested interests. Second, they used experimental programmes to provide insurance to groups of fixed-term workers in public enterprises, who were not covered by labour insurance before reform. Third, the CCP government selected the most acceptable of the experimental programmes and extended them to include urban workers in private businesses across China, thereby reducing the financial strain

[3] In China, a law must be ratified by the People's Congress, but a policy can be decided by the CCP government alone—even if it conflicts with an established law.

social security placed on public budget. Fourth, the scope of these new programs was gradually expanded to cover indefinite-term workers in public companies. However, state officials still enjoy the most generous and comprehensive social security, financed by the treasury.

Insurance premiums are deducted from workers whose incomes range between 60% and 300% of the minimum wage (Wang and Long, 2011). This means that workers earning more than 300% of the minimum wage are excluded from paying larger premiums. In other words, those who can afford high premiums pay a relatively small part of their income, while workers with lower disposable incomes have to spend a relatively large portion of their income on social security (L. He and Sato, 2008). This has exacerbated social inequality in China. Moreover, the main body of Chinese urban social security only covers the employed, while the only support system for unemployed people is a minimum living allowance. As such, the design of the urban support system favours those who are employed, whereas the vulnerable groups that would benefit the most from such support are excluded from the majority of programmes. Therefore, the system is actually strengthening pre-existing socio-economic stratification.

Prior to the social security reform, workers' social security was financed by a "pay-as-you-go" (PAYG) system (Zheng, 2009). Although the system has been fundamentally reformed, the CCP government still uses these "former measures" to cover "former workers", with "new measures" reserved for "new workers".[4] Consequently, the so-called "empty account" problem[5] emerged, posing a serious threat to the operation of the entire social security system (Y. Wang, 2015). The "empty account" problem refers to the fact that although the social security system of former workers has changed and has theoretically been financed by the new social pool[6] and personal account[7] co-ordinated money accumulation system (SPPA), in reality, they have no personal accounts or social pool (L. He, 2008). The CCP government has thus been using the funds accumulated by "new workers" to finance the social security of 'former workers', emptying both the personal accounts and the social pool (Ren, 2006). This means the amount of money indicated by the balance for social security is nominal, as the financing system is still shifting from the PAYG to SPPA system.

This section can be summarised as follows. First, citizens important for the implementation of CCP doctrine receive more benefits. Second, the CCP is serious about reforming the social security system. Third, the design of Chinese urban social security has strengthened pre-existing social stratification, particularly insofar as it favours employed citizens over the most vulnerable groups. Fourth, although the current system theoretically adopts a money accumulation financing system, it actually continues to run as a PAYG system. This incomplete shift has resulted in the "empty account" problem, severely impacting the sustainability and stability of the entire system.

[4] The CCP government categorises employees who were employed prior to the social security reform as "former workers", and those employed after the reform as "new workers".

[5] In the social security financing system, the accumulated money in an individual's account is nominal. There is no actual money in the account, since the money has been embezzled by the administration to provide social security to "former workers", who were not required to pay premiums before reform and thus had no accumulated funds.

[6] The employers' premium accumulates in an administrator-controlled social security account. An employee has a nominal social pool account until their employer paid the total premium, which can take 15 years or more.

[7] The employees' premium accumulates in their own personal social security accounts.

3. Social security since 1990

The CCP's focus on implementing its doctrine when designing the country's urban social security system is evident in the historical development described above. It is also evidenced in the operation of the current system. This section documents China's social security system in terms of fund collection and expenditure, areas in which data are the most frequently and reliably recorded.

China's expenditure on social security programs has grown over time (see Figures A1–A20), but was markedly uneven. **Figure 1** shows the uneven expenditure on different departments, especially after 1989. Expenditure on pensions and health increased the fastest. On the other hand, unemployment insurance has decreased since 2003, although its expenditure levels are still higher than that for work-related injuries and maternity. Considering China's dramatic economic development and increasing GDP, this decrease in expenditure on unemployment insurance is to be expected.

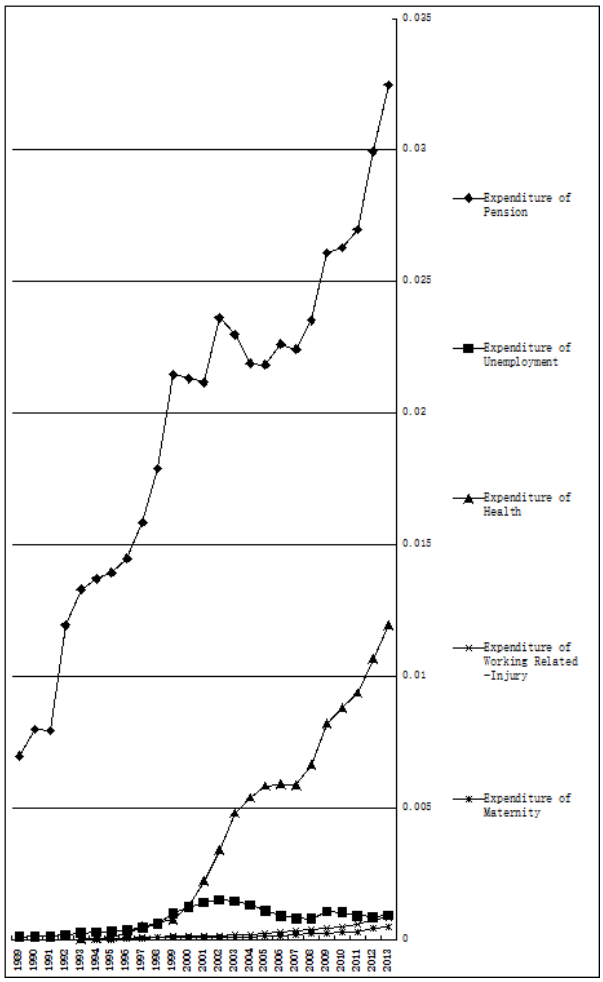

Figure 1. The record of expenditure of insurances of social support 1989–2013.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

The collection of funds illustrates the economic aspect of the CCP's focus on economic development. Current capital input is primarily derived from premiums levied on employers and employees (as described in the previous section), the treasury, and the welfare lottery (Du and

Zhang, 2008). However, according to a 2013 report from the National Audit Bureau, only 3.2% of the welfare lottery's income was spent on social security. Work units[8] have shouldered the biggest percentage of social security funding (see Figure A23). Indeed, even individuals contribute a larger share than the treasury. According to the 2014 public finance report, while the Chinese government's income was 22.07% of the total GDP, they spent only 2.5% of the GDP—or 10.5% of the government's total income—on social security. As such, the CCP shares the larger financial burden with society.

Arguably, the Chinese government has run its social security system in order to collect capital more than soothe income stratification (see Figure A25, 1–2). Observing the accumulation of capital across all departments, it is evident that the increases in accumulated funds and total annual income are much higher than any of the expenditure. The rapid increase in accumulated funds compared with China's ever increasing social security deficit presents a significant paradox and indicates an inefficient use of capital (S. Yang and Gao, 2012). The Chinese government seems more interested in collecting and controlling funds derived from the operation of social security programmes than financing it.

The distribution of social security resources is also extremely uneven (Y. Wang and Long, 2011). In this regard, future research needs to examine the national and provincial data for China's social security needs. Provincial governments pay out a much greater sum than the proportion of income they control; in contrast, the central government only provides 4.3% of the total expenditure, although it controls more than 45.94% of revenue. This indicates that national redistribution is very weak, and people living in different regions receive varying levels of social security (also see Figure A24, 1–2).

This uneven distribution is realised in two ways (see Figure A24, 1–2). First, the larger the administrative region, the more financial resources it controls. Second, the more developed eastern regions control more resources than the rest of the country. The uneven distribution of resources has much to do with the uneven distribution of benefits (Ke, 2009). Detailed analysis of the provincial data reveals that the income, expenditure, and balances of the five insurance programmes (pension, health, unemployment, working-related injuries, and maternity) increased rapidly and consistently, although income always increases more quickly than expenditure. After 2008, the programme balances began increasing faster than both income and expenditure. The development of urban social security followed the same trend in different provinces, although the variations between provinces ought to be identified, particularly in view of the importance of understanding China's urban social security development.

As there is no generally accepted standard with which to evaluate the development of a country's social security, cross-state comparison is commonly used to identify relative development levels. In order to evaluate the development of Chinese social security as reliably as possible, this study designed a comparison that includes key factors—such as expenditure and coverage of social security, personal economic conditions, and population configuration—selected based on the work of industrialisation theorists (Hong and Ngok, 2022; Kasza, 2006; Wilensky and Lebeaux, 1958), who advanced the assumed correlation between the economy and social security development. This comparison involves a two-step method: first, evaluate the social security expenditure and rate of

[8] A Chinese phrase denoting an employing organisation, private or public. It represents both institutions and companies.

increase among countries with the relatively highest GDPs in the world; second, compare the cost of social security among countries with similar individual economic conditions. This two-step method reveals a general picture of the development of Chinese social security.

In the first step, following current research trends (Y. Tang, 2008), this study used the OECD to evaluate the development of Chinese social security. **Figure 2** demonstrates that, compared to OECD members, Chinese social security is often less substantial in terms of amount and rate of increase—even Japan, which is below the OECD average, is more advanced than China. The increase in Chinese expenditure on social security has been slower than of countries with similarly sized economies.

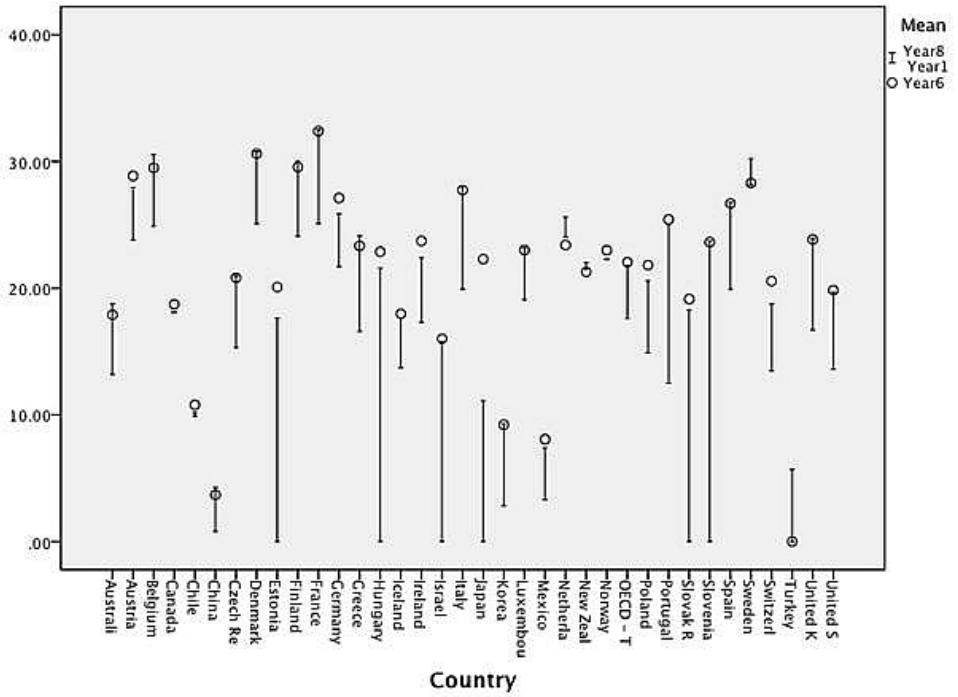

Figure 2. The record of expenditure of social support of OECD and China 1990–2013.
Source: The Chinese Statistic Bureau, www.stats.gov.cn. and OECD SOCX database.
Some states' data only last to 2009, but that do no harm on our argument.
The left axis calculates the percentage of GDP that has been spend on social support. In this figure, the 1990 is the beginning year, the 2013 is the ending year, and the circle represents the data of 2012. In this way, we show the increase range and the recent increase rate of expenditure on social support in each state.

In the second step, as the GDP per capita in most OECD countries is much higher than that of China, this study used countries whose GDP per capita is around USD 10,000–15,000. **Figure 3** shows the social security expenditure for these countries in terms of money and the percentage of GDP, as well as their population configurations. China falls in the middle in terms of both the amount of money and the percentage of GDP spent on social security. China is similar to other developing countries in Europe and Central Asia and spent more money than the average country, including those of East Asia and the Pacific (at all income levels), in 2014.

When the population configuration is taken into consideration, it becomes apparent that countries with a smaller elderly population spend more on social security—both in absolute terms and as a percentage of their GDP. **Figure 4** presents a comparison of the coverage of social security systems.

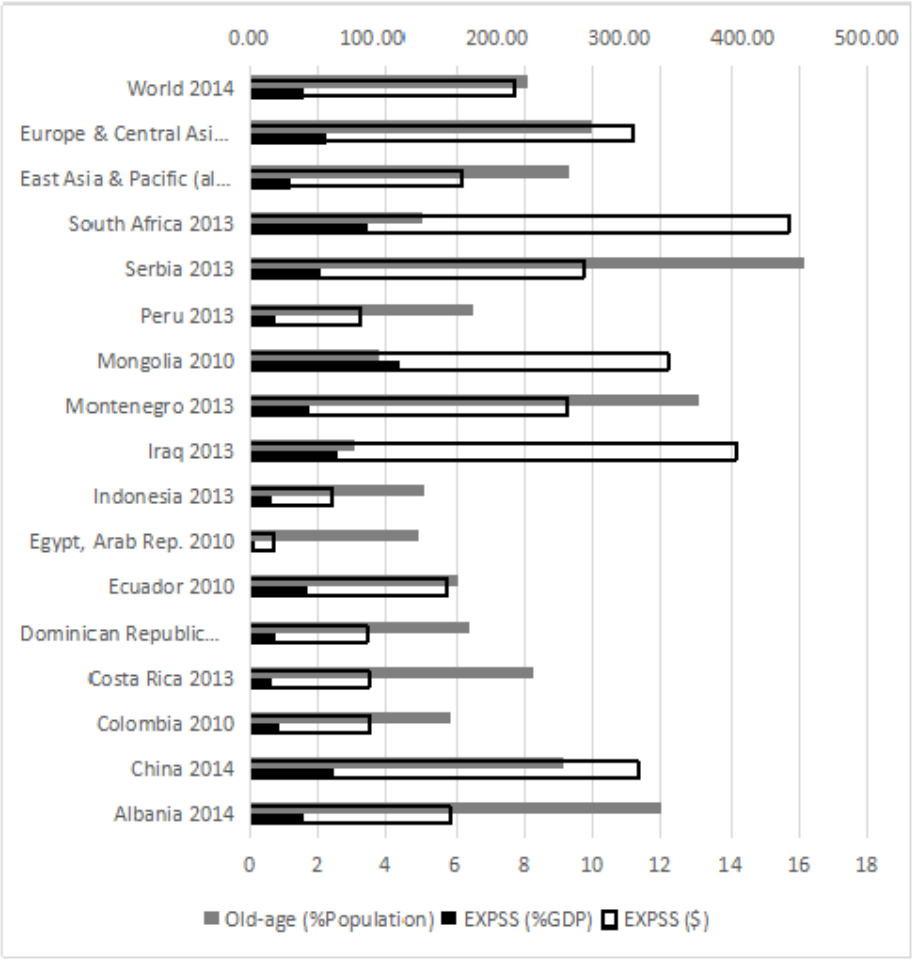

Figure 3. The proportion of old-age and the expenditure on social support.

Source: The Chinese Statistic Bureau, www.stats.gov.cn. and World Bank database.

Old-age: the person older than 65 (include 65), EXPSS: expenditure on social security. The EXPSS has been calculated in two ways: percent of GDP, and amount of dollars (2011) on personal. The upper coordinates show the amount of dollars (2011) has been spent on an individual when those countries are in a nearly similar economy situation. The down coordinates value the percent of GDP that has been spent on social support and population of old people composed.

China's social security coverage is the smallest among these countries. It can thus be argued that, compared to countries with relatively similar GDP per capita (USD 10,000–15,000), China provides a medium level of support to a relatively small proportion of its population.

To summarise, the Chinese social security system displays four characteristics. First, the funding is primarily derived from premiums. The treasury and its controlled welfare lottery do not constitute a substantial financial contribution. Second, the provincial distribution of social security services—in terms of both resources and benefits—is very uneven. Third, the Chinese government runs its social security system to collect capital more than reduce economic stratification. Finally, a comparison between China and comparable countries reveals that Chinese social security services are lagging behind. Compared with the country's level of economic development, the Chinese social security system has not been fully developed and has settled at a relatively mediocre level. In comparison to countries with a similar per capita GDP, China's social security remains unadvanced and provides coverage to the smallest amount of people. Like pre-reform Chinese

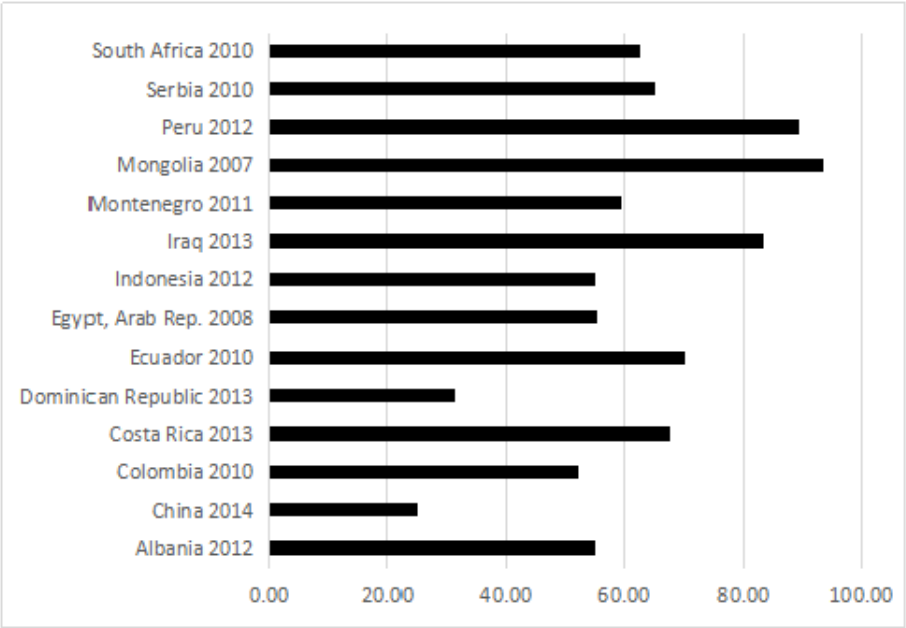

Figure 4. The coverage of social support (% of population).
Source: The Chinese Statistic Bureau, www.stats.gov.cn. and World Bank database.

social security systems, the current system continues to focus on the implementation of CCP doctrine. Consequently, the government carries the smallest share of the financial burden, with primary financial responsibility falling to non-governmental employers and employees. Indeed, Chinese governmental social security has been used as a political tool to carry out the CCP's notion of reform through economic development.

4. The operational mechanisms of China's social security system

According to Kasza (2006), social security expenditure is positively related to (1) GDP per capita, (2) the maturity of social security programmes, and (3) the proportion of the non-productive population. The study of Wilensky and Lebeaux (1958) also supports the positive relationship between social security expenditure and GDP per capita. This study tested the correlations between GDP per capita and social security, including the five departments and their branches. As shown in **Table 1**, tests revealed that GDP per capita has a high impact on social security programs. As such, the proposal that expenditure on social security is positively related to the GDP per capita passes the correlation test.

However, the correlations between GDP per capita, and unemployment insurance expenditure is not as significant as in other data. This is consistent with a phenomenon observed earlier: the development of social security in China is strictly related to employment—social security systems favour employees and work units, and work units shoulder the main burden of financing social security. **Table 1** also shows that a rise in urban employment has a positive effect on expenditure, but a rise in rural employment has a negative impact. These correlations also exist when measuring the social security system's income and balance (see Table A2).

Up until this point, this study's results are mostly consistent with the widely accepted assertions

Table 1. The bivariate analysis between the important economic factors and the expenditure of social support 1989–2013.

Correlations							
		ExSS	**ExPI**	**ExUI**	**ExHI**	**ExWRI**	**ExMI**
Year	Pearson correlation	0.987**	0.961**	0.718**	0.947**	0.924**	0.919**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000
	Sum of squares and cross-products	166.335	100.960	5.410	55.135	3.265	1.705
	Covariance	7.232	4.390	0.235	2.397	0.142	0.074
	N	24	24	24	24	24	24
GDPPC	Pearson correlation	0.906**	0.841**	0.458*	0.960**	0.979**	.963**
	Sig. (2-tailed)	0.000	0.000	0.024	0.000	0.000	00.000
	Sum of squares and cross-products	235,392.121	136,147.871	5318.075	86,208.450	5335.719	2758.010
	Covariance	10,234.440	5919.473	231.221	3748.193	231.988	119.913
	N	24	24	24	24	24	24
EmpU	Pearson correlation	0.973**	0.928**	0.639**	0.975**	0.954**	0.942**
	Sig. (2-tailed)	0.000	0.000	0.001	0.000	0.000	0.000
	Sum of squares and cross-products	154,716.382	91,927.911	4542.177	53,571.641	3181.416	1650.637
	Covariance	6726.799	3996.866	197.486	2329.202	138.322	71.767
	N	24	24	24	24	24	24
EmpR	Pearson correlation	−0.590**	−0.467*	−0.128	−0.784**	−0.775**	−0.742**
	Sig. (2-tailed)	0.002	0.022	0.553	0.000	0.000	0.000
	Sum of squares and cross-products	−44,775.420	−22,060.740	−432.430	−20,533.110	−1232.770	−619.690
	Covariance	−1946.757	−959.163	−18.801	−892.744	−53.599	−26.943
	N	24	24	24	24	24	24

*** Correlation is significant at the 0.01 level (2-tailed).*

** Correlation is significant at the 0.05 level (2-tailed).*

Source: The Chinese Statistic Bureau, www.stats.gov.cn.

GDPPC = GDP Per Capita; EmpT = Total Employment; EmpU = Urban Employment; EmpR = Rural Employment; ExSS = Expenditure of Social Support; ExPI = Expenditure of Pension Insurance; ExUI = Expenditure of Unemployment Insurance; ExHI = Expenditure of Health Insurance; ExWRI = Expenditure of Work-Related Insurance; ExMI = Expenditure of Maternity Insurance.

of Kasza (2006) and Wilensky and Lebeaux (1958). However, further scrutiny of these results challenges their findings. **Table 1** shows that per capita GDP and urban employment levels have a significant impact on the three branches (income, expenditure, and balance) of Chinese urban social security (also see Table A2). In contrast, **Table 2** illustrates that before the 1978 economic reforms, Chinese economic development actually negatively impacted social security at the 0.95 significance level. Moreover, during this time period, the significance of the correlation between social security and GDP is higher than that between social security and GDP per capita, although the impact is less. Therefore, while the popular theory of social security development can be used to explain the

Table 2. The bivariate analysis between the important economic factors and the expenditure of social support 1952–1978.

Correlations		
		ExSS
Year	Pearson correlation	−0.461*
	Sig. (2-tailed)	0.015
	Sum of squares and cross-products	−3.856
	Covariance	−.148
	N	27
GDP	Pearson correlation	−0.485*
	Sig. (2-tailed)	0.010
	Sum of squares and cross-products	−42,457.848
	Covariance	−1632.994
	N	27
GDPPC	Pearson correlation	−0.452*
	Sig. (2-tailed)	0.018
	Sum of squares and cross-products	−33.310
	Covariance	−1.281
	N	27

*** Correlation is significant at the 0.01 level (2-tailed).*
** Correlation is significant at the 0.05 level (2-tailed).*
Source: The Documents of Chinese Labour Statistic 1949–1985.

operation of Chinese urban social security after economic reform, it cannot be applied to the period before economic reform.

While the results presented in **Table 2** do not align with popular theory, those of **Table 3** cast serious doubt. With the reform of the Chinese economy, social security services have maintained a positive correlation with the economy, especially over the long-term. However, this relationship was negative prior to reform, particularly between 1961 and 1970 when the implement of the class-struggle centered CCP doctrine got furiously.

In challenging the popular understanding of social security development, the Chinese case supports a new hypothesis: given the authoritarian nature of the CCP regime, a change in CCP doctrine results in a shift in governance orientation, impacting government interests and alliances. The resultant co-varied institutional design and governance style thus undermines the popular assumption regarding the correlation between socio-economic improvement and social security development.

More specifically, while a country's social security system is closely related to its economy, it is also subject to political influence. Therefore, a broad outline of Chinese politics is necessary to illuminate the mechanisms driving Chinese social security policy. In China, the CCP controls political power, provides important economic resources, and retains sole control over the military (Tang, 2012). Capitalists and economic elites control the other economic resources, while the working class and farmers make up the main body of society—that is, China's human resources

Table 3. The bivariate analysis between the important economic factors and the expenditure of social support 1961–1970.

Correlations		
		ExSS
Year	Pearson correlation	−0.887**
	Sig. (2-tailed)	0.001
	Sum of squares and cross-products	−0.960
	Covariance	−0.107
	N	10
GDP	Pearson correlation	−0.942**
	Sig. (2-tailed)	0.000
	Sum of squares and cross-products	−12,190.177
	Covariance	−1354.464
	N	10
GDPPC	Pearson correlation	−0.956**
	Sig. (2-tailed)	0.000
	Sum of squares and cross-products	−11.759
	Covariance	−1.307
	N	10

*** Correlation is significant at the 0.01 level (2-tailed).*
Source: The Documents of Chinese Labour Statistic 1949–1985.

(Tang, 2012). Additionally, the capitalist class has disappeared since the "cultural revolution", with many of the economic resources controlled by bureaucrats in charge of economic departments and enterprises. Before economic reform, China was a typical communist regime and CCP doctrine centred on the notion of class-based revolution (Zhao, 2005). As the CCP intended to rebuild China in order to realise class revolution, the proletariat was privileged in the design of social security (Pye, 1992). As **Table 3** shows, there was a negative correlation between social security expenditure and the economy during this period. However, with the introduction of economic reform, CCP doctrine shifted to focus on reform through economic development (Shi and Chen, 2009). At this time, the correlation between social security and the economy became positive and more significant. This indicates that Chinese politics has a decisive impact on the development of social security.

In order for the CCP to implement its doctrine, it adopts corresponding governance orientations and institutional designs. As noted, the focus on revolution resulted in the CCP privileging the proletariat in pre-reform social security design, while the focus on economic reform has seen the CCP align itself with the social classes or groups that control the economic resources it needs. As such, the change in the amount of economic associations is a good indicator of the shift in CCP doctrine after 1978.

Although there are many official CCP- and government-issued documents regarding the revaluation of economic elites while building socialism (S. Chen and Zhong, 2012), this study requires a different kind of evidence in order to test its hypothesis quantitatively. Prior to the introduction of economic reform, the CCP forbid the establishment of any kind of association. In contrast, some 499,268 social associations have legal standing in China today. As any associations

must obtain permission from the CCP in order to be legally registered, this increase demonstrates the CCP's intent to ally itself with capitalists and economic elites in order to facilitate economy development (S. Wang and Song, 2013). **Table 4** presents the correlation between the increase in the number of social associations and the development of social security. As illustrated in **Table 4**, after CCP doctrine shifted to focus on reform through economic development, it integrated all those related to economic development into its institutional design and operation; accordingly, the CCP adopted a social security system with the same correlation to the economy as that found in western capitalist cases.

Table 4. The regression analysis of the public expenditure on social support 1990–2013.

Model summary[b]				
Model	**R**	**R square**	**Adjusted R square**	**Std. error of the estimate**
1	0.989a	0.581	0.553	0.001008969023

Coefficients[a]						
Model		**Unstandardized coefficients**		**Standardized coefficients**	***t***	**Sig.**
		B	**Std. error**	**Beta**		
1	(Constant)	0.292	0.055		5.341	0.000
	lnGDPPC	0.010	0.002	1.148	4.629	0.000
	NONPROPOP	−0.064	0.128	−0.330	−5.093	0.000
	SO	0.041	0.000	0.415	2.435	0.026
	YEARS	−0.029	0.000	−0.297	−3.507	0.003

a: Dependent variable: EXPSS
SO = Social Organization.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

Table 4 also shows that while the impact of the economy on social security is always positive, the performance of this relationship is overshadowed by the negative impact of the non-productive population and the maturity of the social security system. This supports the following arguments. First, China's urban social security system has been designed to privilege those who are employed. Second, although the economy always has a positive impact on social security development, the size of the non-productive population and the maturity of the system can be modified by the system design. Third, the increase in social associations reflects the CCP's focus on reform through economic development, which has had a positive impact on the development of urban social security in China. Significantly, this study's main hypothesis has passed the empirical test.

5. Conclusion

CCP doctrine continues to focus on reform through economic development. As demonstrated in this study, the ruling party's doctrine has determined the governance orientation and design of the Chinese urban social security system. While centred on the collection of capital, post-reform social security is fragmented and unevenly developed. There are three reasons for this. First, the CCP continues to use social security as a means through which to implement its doctrine. Second, the social security programmes are oriented towards capital manipulation in order to facilitate economic

development. Third, the uneven distribution of resources has strengthened social stratification, making the reward system more significant. Consequently, unless CCP doctrine changes to focus on social equality, the Chinese social security system will never be a comprehensively developed system with fairly distributed benefits.

In addition to examining the Chinese case and proposing a new means of evaluating social security development, this study demonstrates that a country's political system plays a major role in determining how the economy impacts the development of social security. Significantly, CCP doctrine shapes the features of the social security system and which social classes the party favours. These findings strongly support the argument that changes in a ruling party's doctrine decide the development of a country's social security system. Nonetheless, the proposed relationship between politics and social security needs to be tested with data from another country that has undergone a similar political process to that of China. This would indicate whether the decisive impact of politics on the development of social security is unique to China or applicable to comparable situations. Furthermore, although this study illustrates the decisive impacts of politics on social security development, comparing the temporary impacts of natural emergencies, like the COVID-19 pandemic, on social security may benefit our understanding of the mechanism of temporary political changes on social security development. In this respect, a study specifically examining the impact of COVID-19 on China's urban social security is currently in process.

Author Contributions

Conceptualization, GH and JZ; methodology, GH; Software, GH; validation, GH and JZ; formal analysis, GH; investigation, GH; resources, GH and JZ; data curation, GH and JZ; writing—original draft preparation, GH; writing—review & editing, ZJ; visualization, GH; supervision, GH; project administration, GH; funding acquisition, JZ. All authors have read and agreed to the published version of the manuscript.

Funding

This research has been financed by the National Social Science Fund Project of China (19BSH182).

Conflict of interest

The authors declare no conflict of interest.

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Appendix

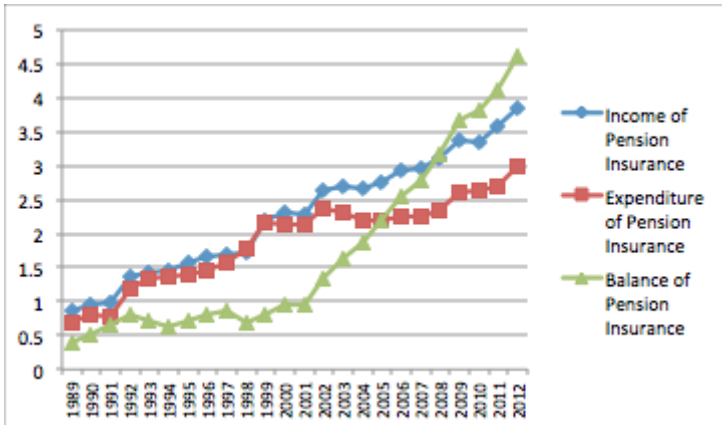


Figure A1. The record of basic pension fund 1989–2012 (% GDP).
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

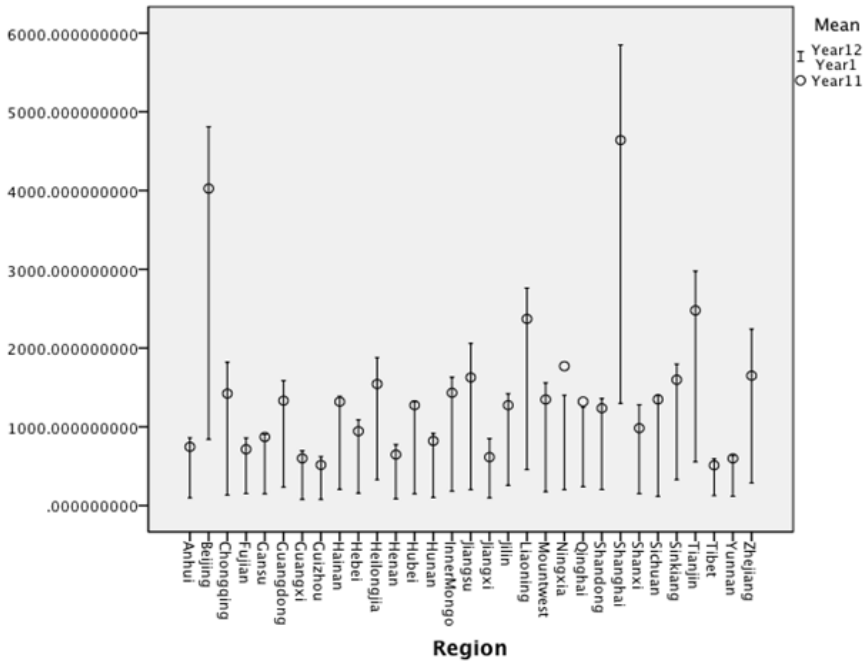


Figure A2. The per capita income of basic pension fund in provinces 2001–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2001 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

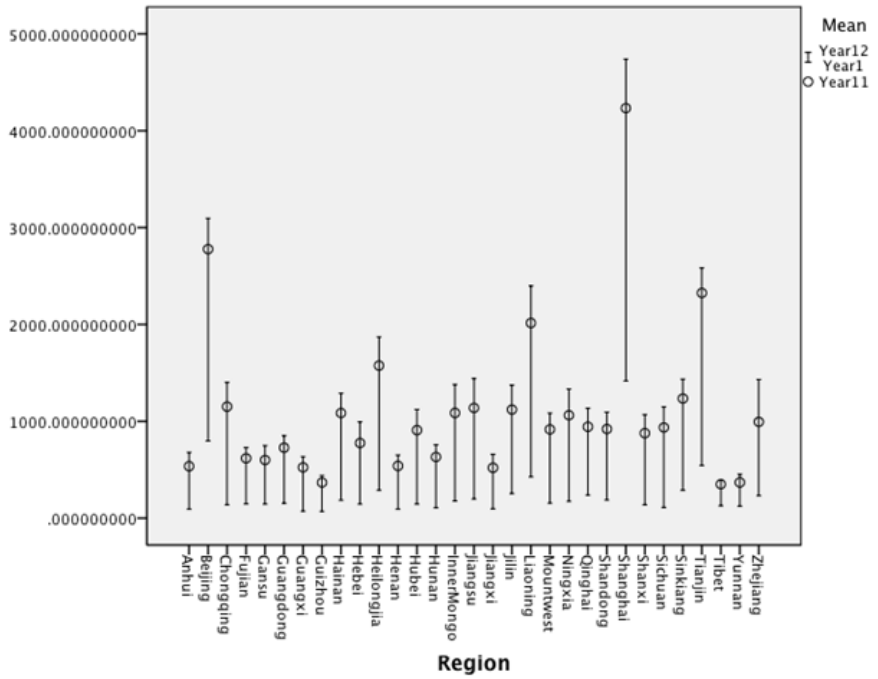


Figure A3. The per capita expenditure of basic pension fund in provinces 2001–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2001 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

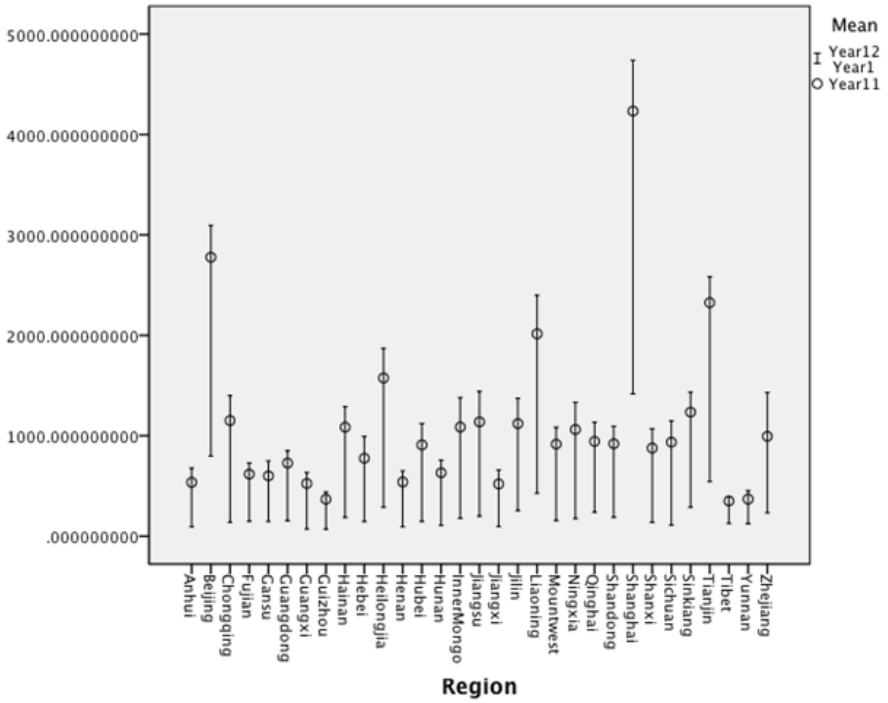


Figure A4. The per capita balance of basic pension fund in provinces 2001–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2001 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

Described by available data, Figure A1 shows that all of the three branches of pension insurance increase quickly and sustainedly, though the income branch always increases quicker than expenditure; and the share of balance branch became bigger than the other two after 2008. When we compare Figures A2, A3, and A4, it is common in all of the three branches that the development is very uneven. People live in different areas of China enjoy very different pension insurance. For example, in all of the three branches, the high development provinces all locate in the east coast of China, the development in west areas lags behind a lot. With the help of above, we can allege that the Chinese pension insurance develops very uneven along provinces and it prefers accumulate money to increase the benefit level.

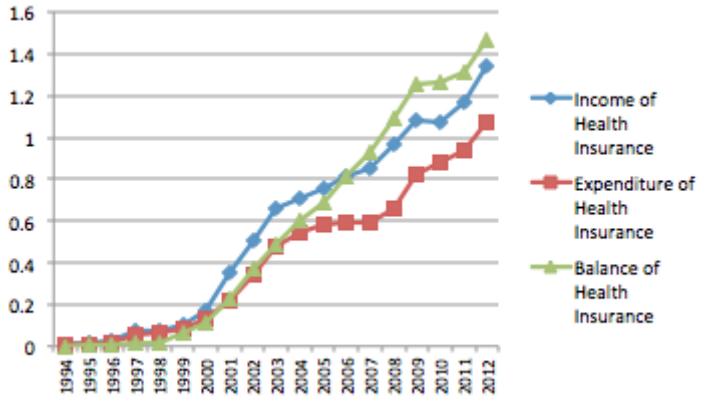


Figure A5. The record of health insurance 1994–2012 (% GDP).
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

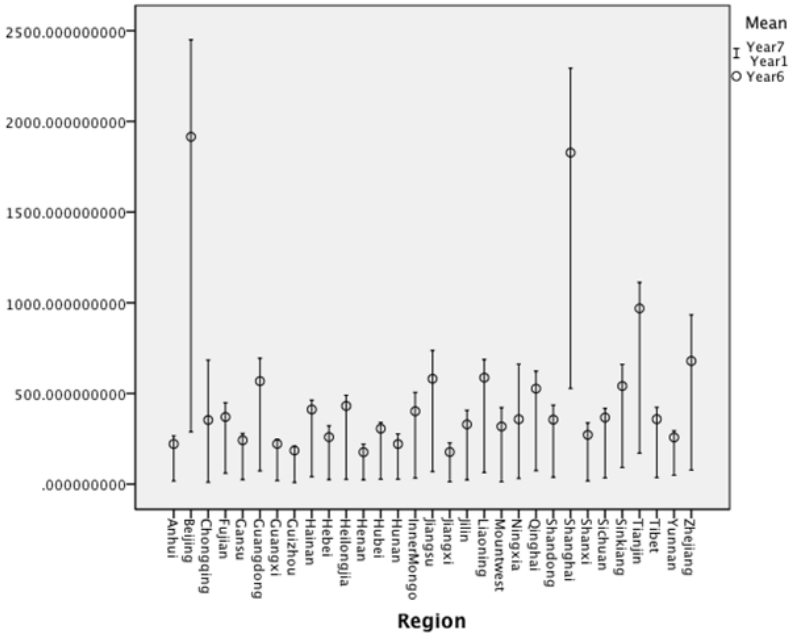


Figure A6. The per capita income of health insurance in provinces 2002–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

The official data of 2007–2010 misses, and Chinese Statistic Bureau does not give any reason.

We use the data of 2012 as the highest point, the date of 2002 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012. Though some data misses, the distance of increase still can be showed.

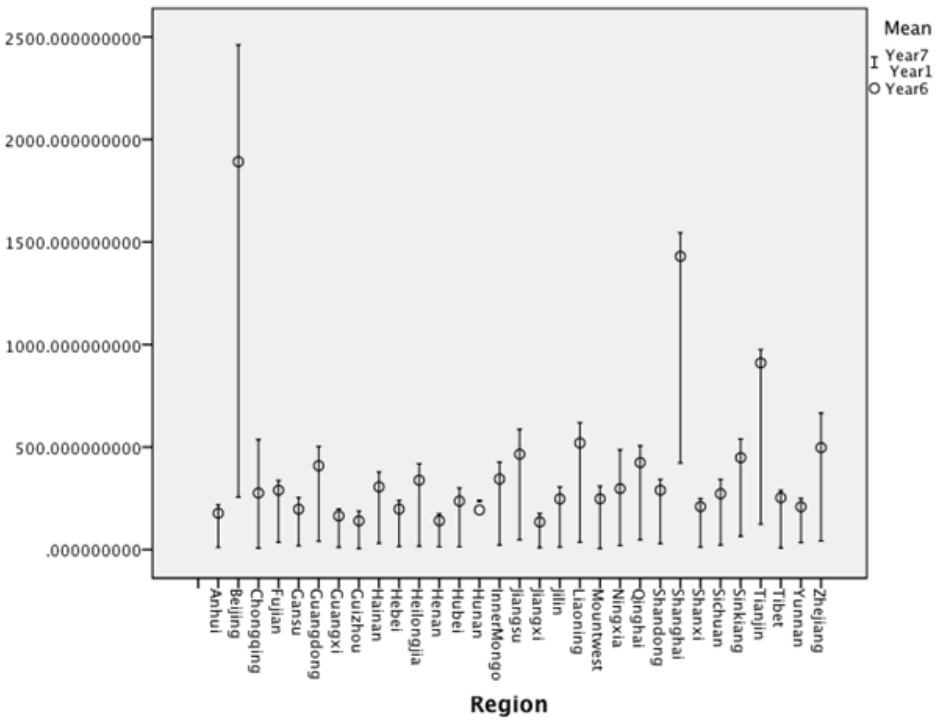


Figure A7. The per capita expenditure of health insurance in provinces 2002–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

The official data of 2007–2010 misses, and Chinese Statistic Bureau does not give any reason.

We use the data of 2012 as the highest point, the date of 2002 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012. Though some data misses, the distance of increase still can be showed.

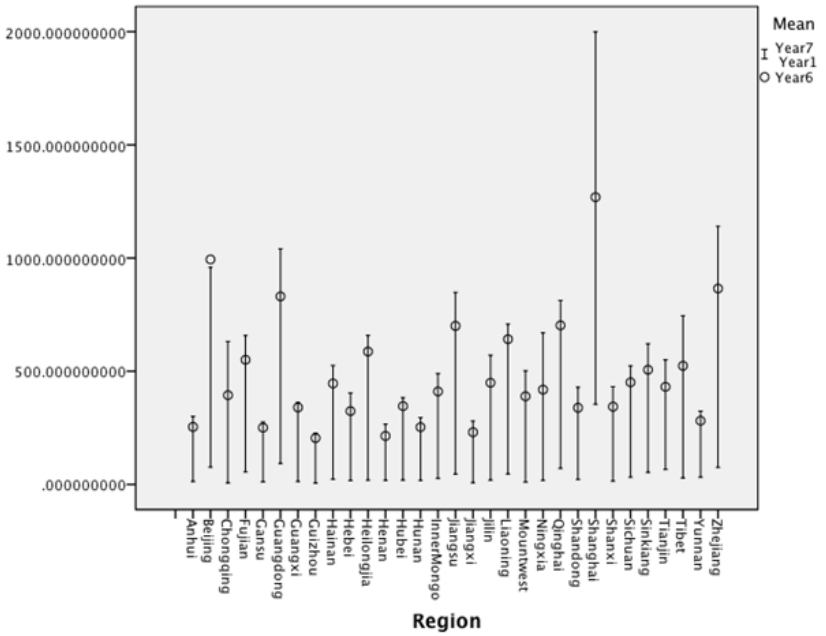


Figure A8. The per capita balance of health insurance in provinces 2002–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

The official data of 2007–2010 misses, and Chinese Statistic Bureau does not give any reason.

We use the data of 2012 as the highest point, the date of 2002 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012. Though some data misses, the distance of increase still can be showed.

Described by available data, Figure A5 shows that all of the three branches of health insurance increase quickly and sustainedly, though the income branch always increases quicker than expenditure; and the share of balance branch became bigger than the other two after 2006. When we compare Figures A6, A7, and A8, it is common in all of the three branches that the development is very uneven. People live in different areas of China enjoy very different health insurance. For example, in all of the three branches, the high development provinces all locate in the east coast of China, the development in west areas lags behind a lot. Besides those, the developments of health insurance in national autonomous areas, even their starting points, are higher than the other middle and west provinces. With the help of above, we can allege that the Chinese health insurance develops very uneven along provinces and it prefers accumulate money to increase the benefit level.

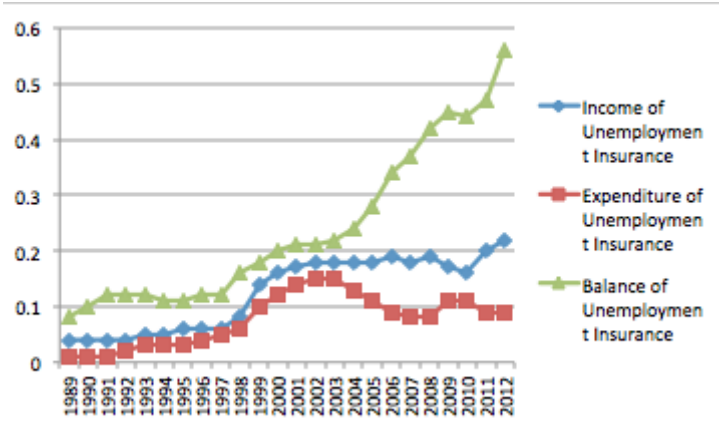


Figure A9. The record of unemployment insurance 1989–2012 (% GDP).
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

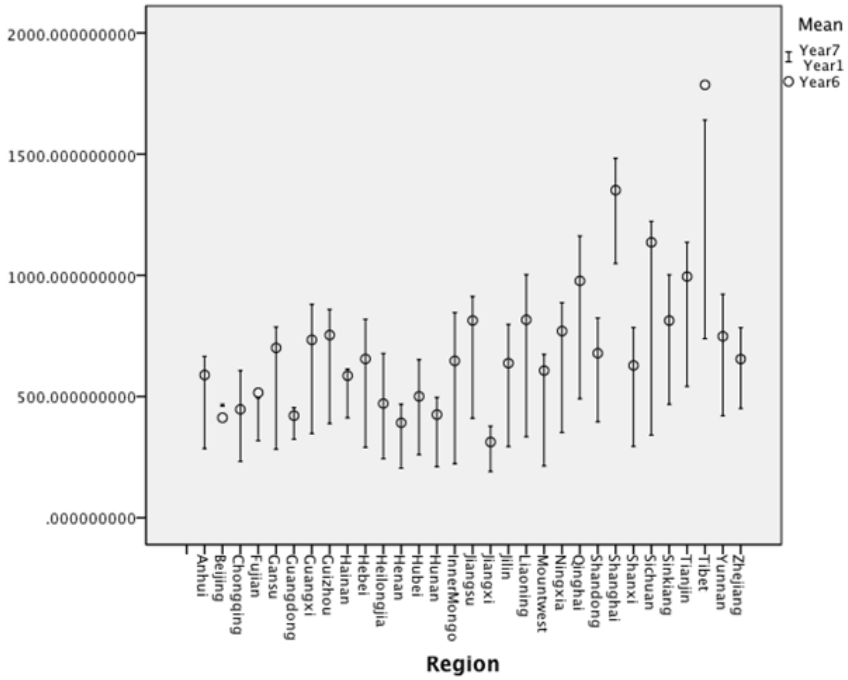


Figure A10. The per capita income of unemployment insurance in provinces 2006–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2006 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

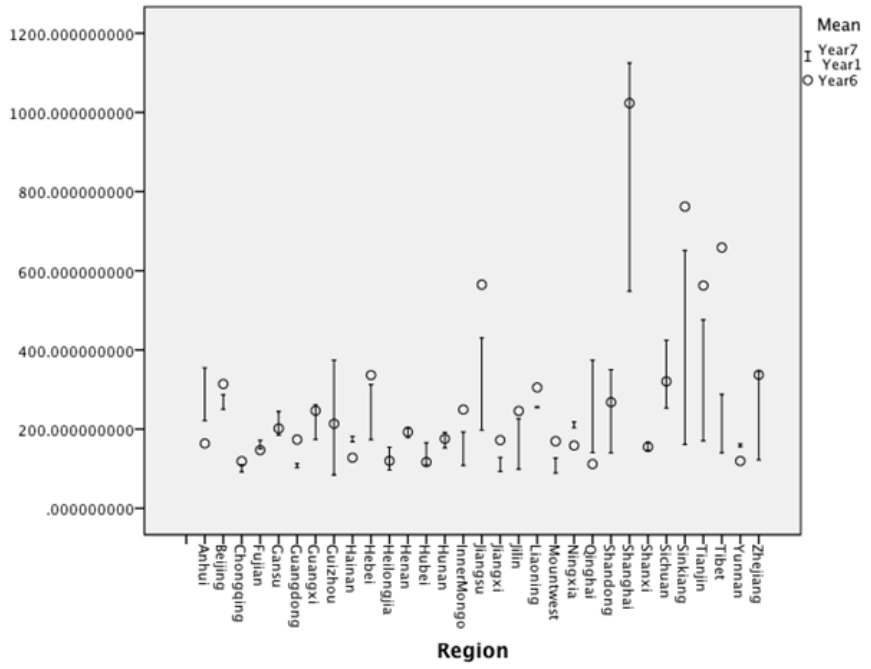


Figure A11. The per capita expenditure of unemployment insurance in provinces 2006–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2006 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

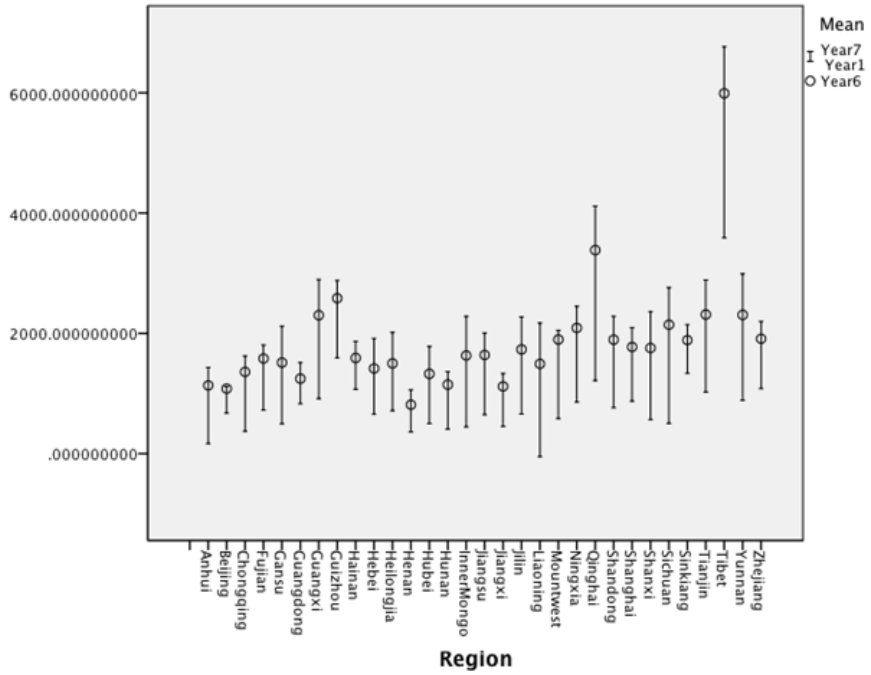


Figure A12. The per capita balance of unemployment insurance in provinces 2006–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2006 as the lowest point, and use the

data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

Described by available data, Figure A9 shows that both income and balance branches of unemployment insurance increase quickly and sustainedly, though the balance branch always increases quicker than expenditure; and the share of expenditure branch significantly decreases after 2003. Consider the Chinese dramatic economy development, it is easy to understand the expenditure's decreasing toward low level. When we compare Figures A10, A11, and A12, it is common in all of the three branches, that the development is very uneven. People live in different areas of China enjoy very different unemployment insurance. For example, in all of the three branches the high development provinces all locate in the west area of China, the development in east areas lags behind a lot. However, there is an exception that the income and expenditure of unemployment insurance in Shanghai significantly higher than that in other areas, though its balance branch sustains at average. With the help of above, we can allege that the Chinese unemployment insurance develops very uneven along provinces and it prefers accumulate money to increase the benefit level.

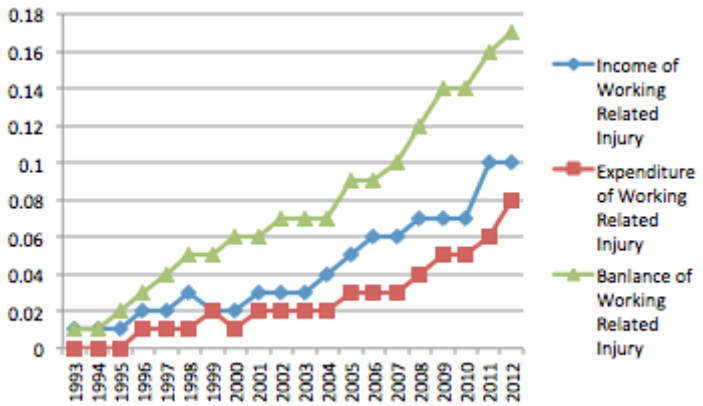


Figure A13. The record of work-related injury insurance 1993–2012 (% GDP).
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

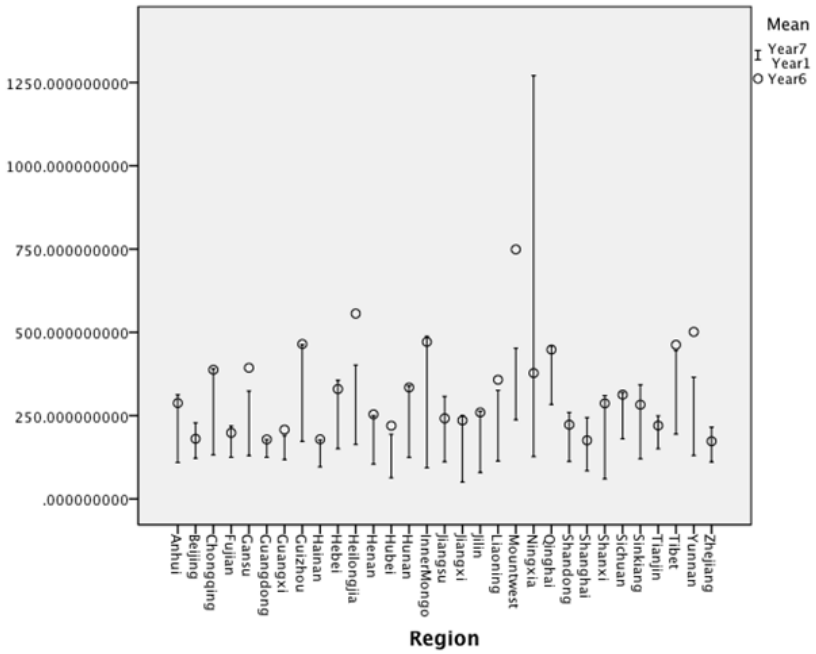


Figure A14. The per capita income of work-related injury insurance in provinces 2006–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2006 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

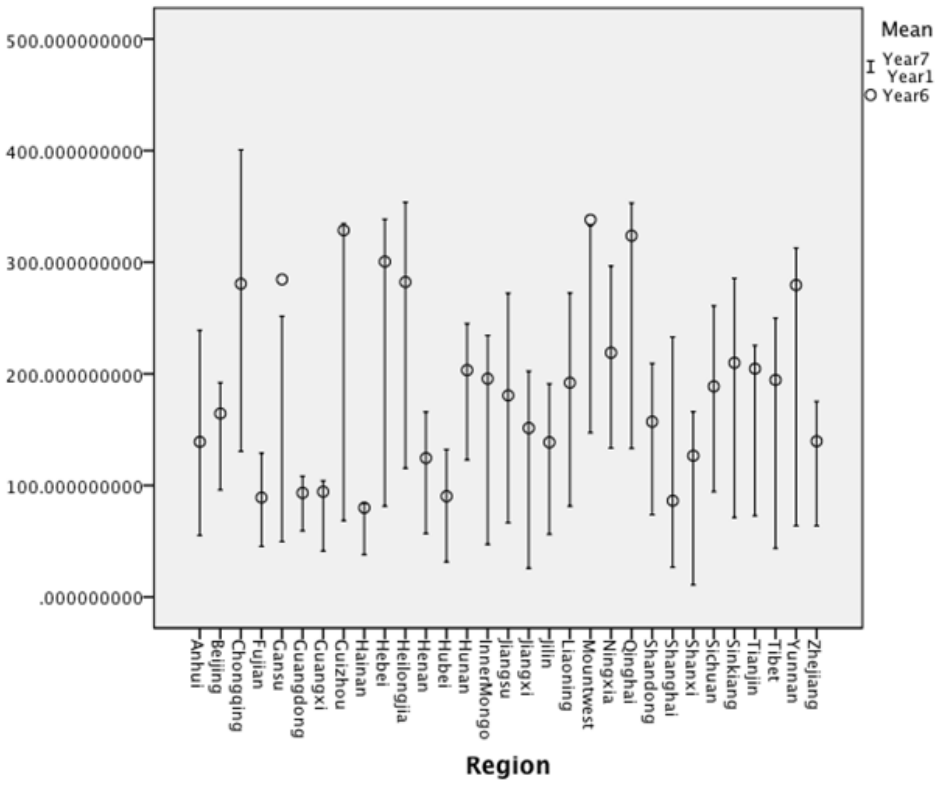


Figure A15. The per capita expenditure of work-related injury insurance in provinces 2006–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2006 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

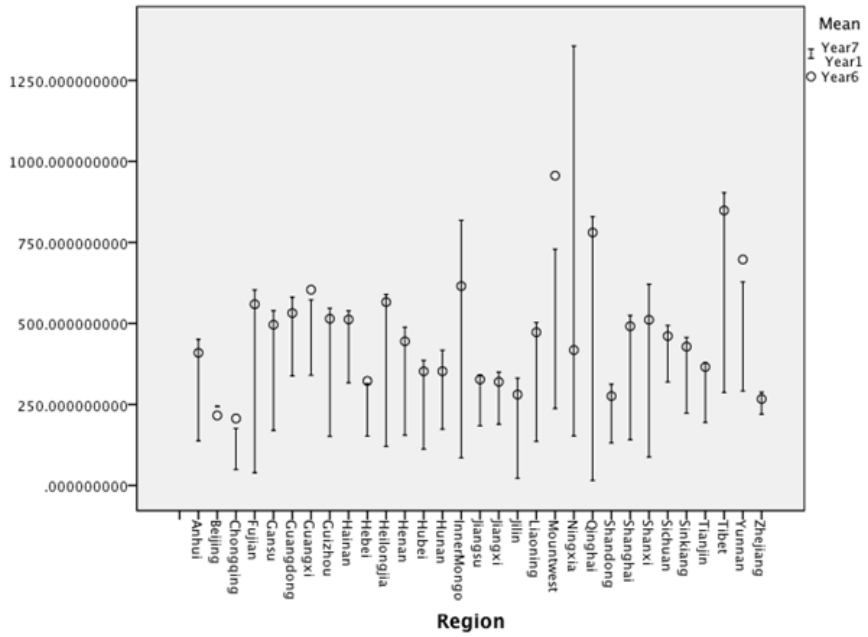


Figure A16. The per capita balance of work-related injury insurance in provinces 2006–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2006 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

Described by available data, Figure A13 shows that all of the three branches of work-related injury insurance increase quickly and sustainedly, though the income and balance branch always increases quicker than expenditure. When we compare Figures A14, A15, and A16, it is common in all of the three branches that the development and increasing rate are very uneven. Unlike in the other two branches, there is no significant high developed province, like Ningxia, in the expenditure branch. The expenditure along provinces is not that different as the income and the balance along provinces. People live in different areas of China enjoy different work-related injury insurance. For example, in income and balance branches, the high development provinces all locate in the west area of China, the development in east areas lags behind a lot. With the help of above, we can allege that the Chinese work-related injury insurance develops uneven along provinces and it prefers accumulate money to increase the benefit level.

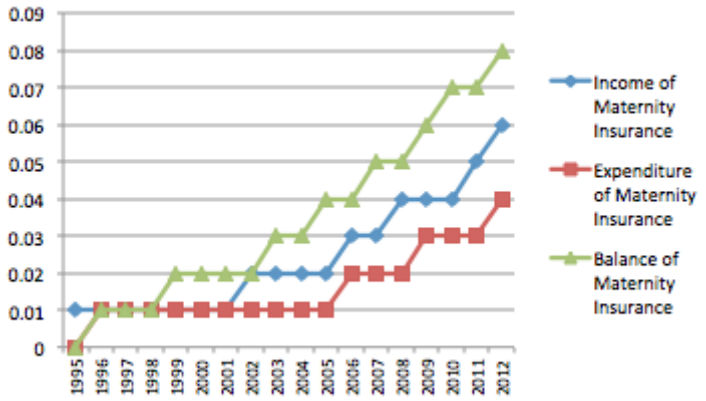


Figure A17. The record of maternity insurance 1995–2012 (% GDP).
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

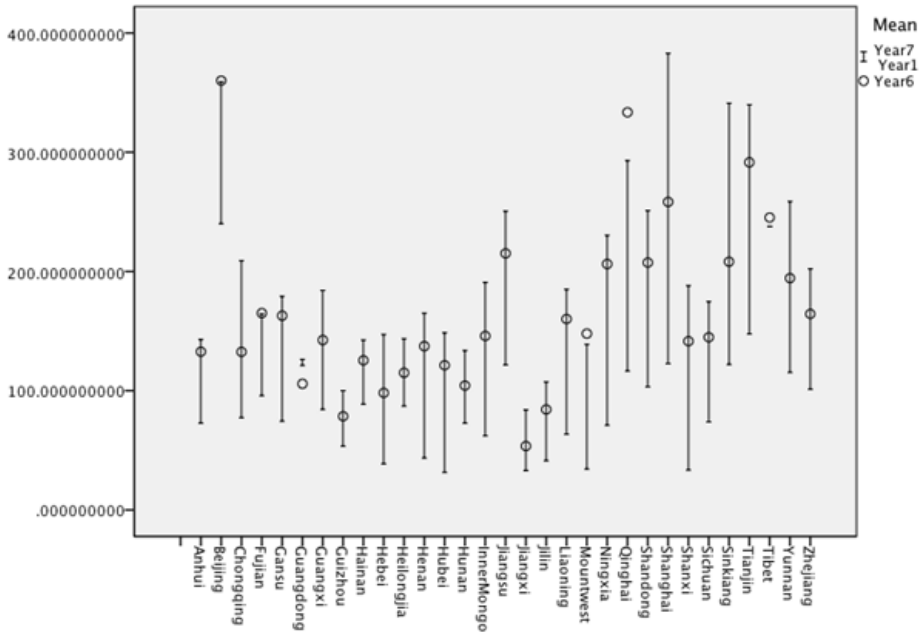


Figure A18. The Per capita income of maternity insurance in provinces 2006–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2006 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

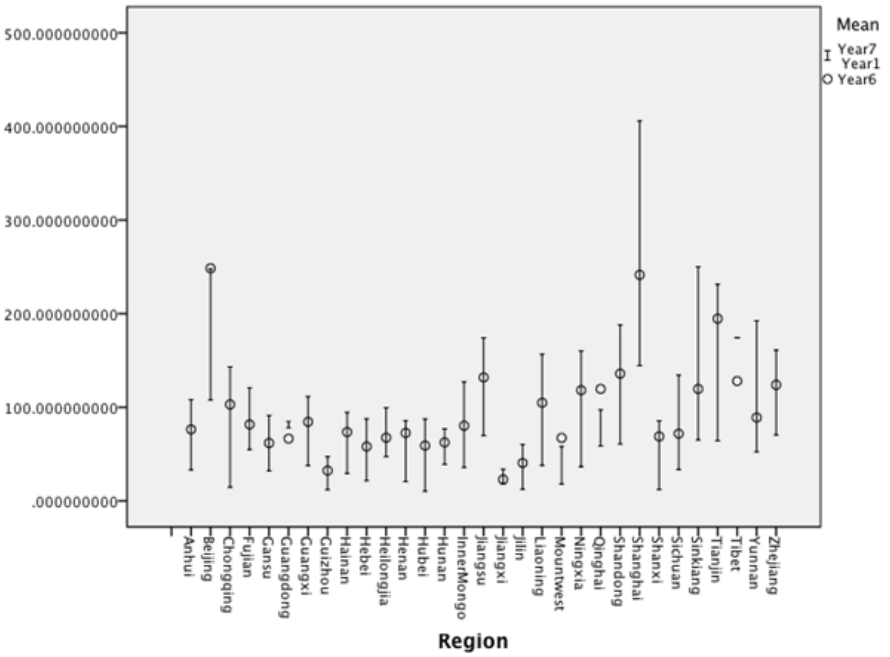


Figure A19. The per capita expenditure of maternity insurance in provinces 2006–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2006 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

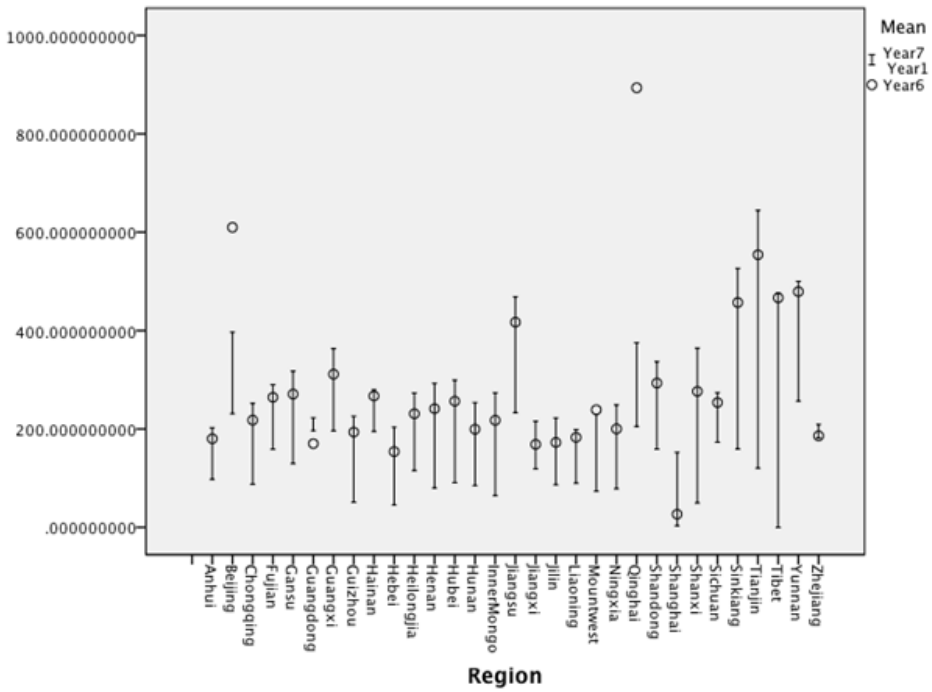


Figure A20. The per capita balance of maternity insurance in provinces 2006–2012.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

We use the data of 2012 as the highest point, the date of 2006 as the lowest point, and use the data of 2011 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2011 and 2012.

Described by available data, Figure A17 shows that all of the three branches of maternity insurance increase quickly and sustainedly, though the expenditure branch always increases slower than the others. When we compare Figures A18, A19, and A20, it is common in all of the three branches that the development is very uneven. People live in different areas of China enjoy very different maternity insurance. For example, in all of the income and expenditure branches, the high development provinces all locate in the east coast of China, but in the balance branch, some west provinces, like Tibet, Yunnan and Qinghai, are also advanced. Besides that, in some advanced provinces, as Shanghai, the income and the expenditure are both high, and that makes the balance accumulate slowly. With the help of above, we can allege that the Chinese maternity insurance develops uneven along provinces, but its preferences of money accumulation is not as high as other insurance departments.

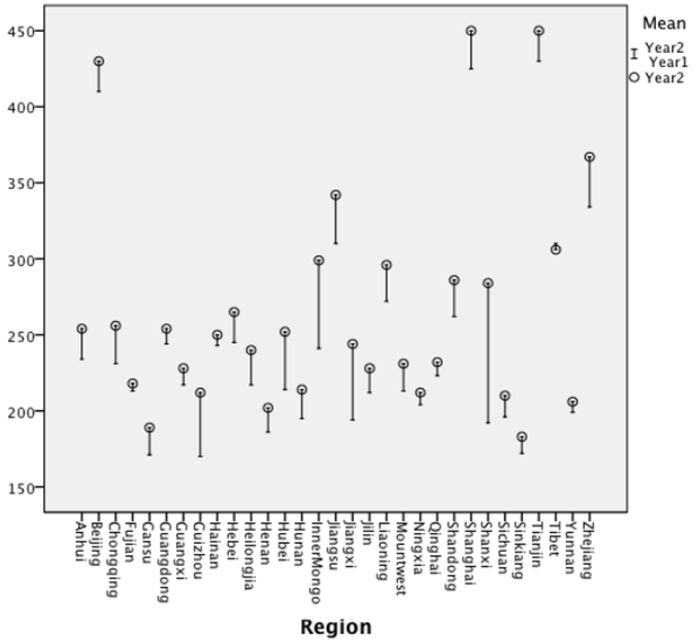


Figure A21. The standard of minimum living insurance in provinces 2009–2010.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

The Chinese Statistic Bureau only releases the data of 2009–2010 of this department, and gives no explain.

We use the data of 2010 as the highest point, the date of 2009 as the lowest point, and use the data of 2010 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2009 and 2010.

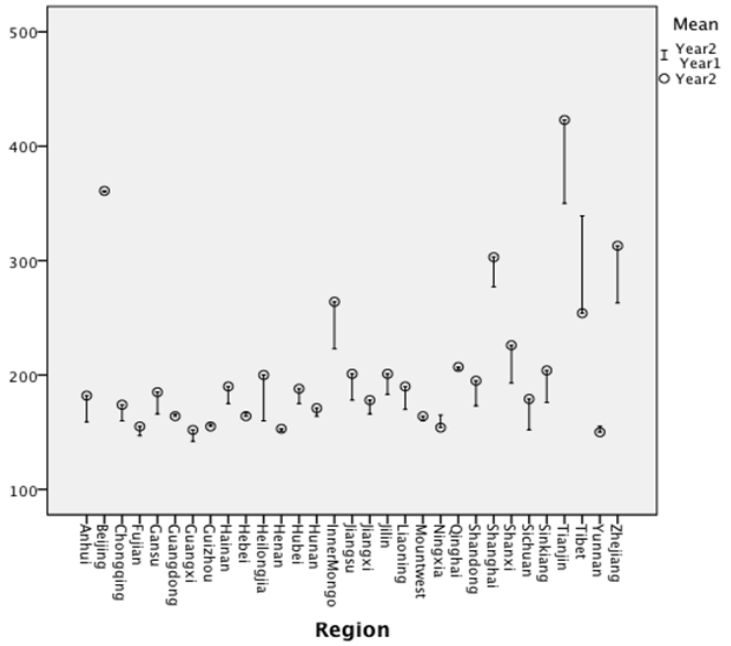


Figure A22. The per capita expenditure of minimum living insurance in provinces 2009–2010.
Source: The Chinese Statistic Bureau, www.stats.gov.cn.

The Chinese Statistic Bureau only releases the data of 2009–2010 of this department, and gives no explain.

We use the data of 2010 as the highest point, the date of 2009 as the lowest point, and use the data of 2010 as the close point. By this way, we could find the distance of the increase and the rate of increase between 2009 and 2010.

From Figure A21, we can find that the standards of minimum living increase so quick, though different provinces have very different minimum living standards. We compare Figures A21 and A22, the differences between the official standard and implemental expenditure are appearing. The expenditures along provinces are not as different as the standards along provinces. Though the standards increase, the expenditure decrease in some west provinces (Tibet, Yunnan, Ningxia, etc.). As happen in other departments, in this department, people live in the provinces along the east coast and national autonomous areas enjoy higher minimum living subsidies than the others.

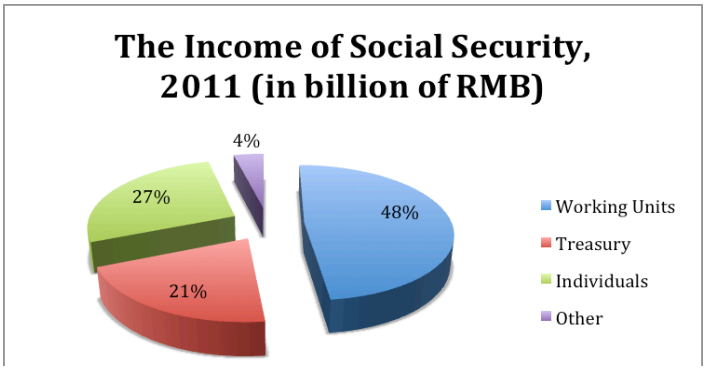
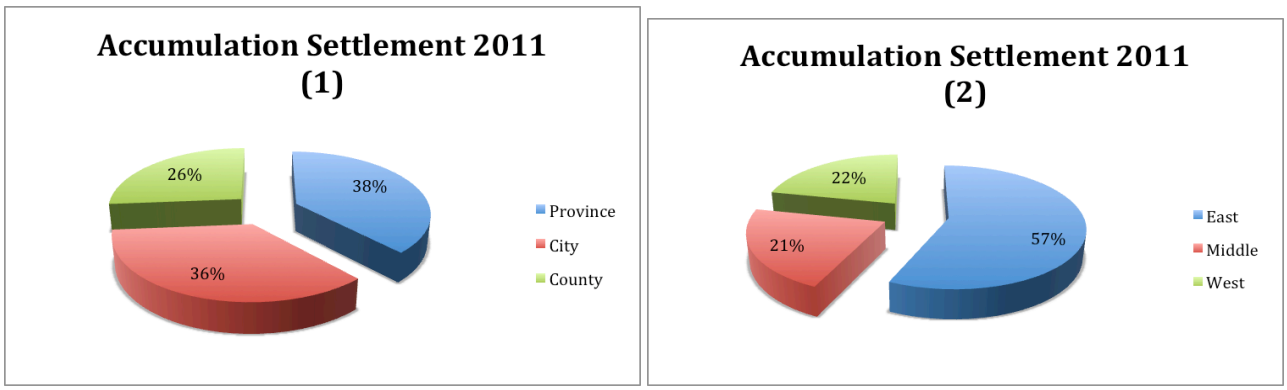


Figure A23. The income of social security, 2011 (in billion RMB).
Source: The Chinese Audit Commission (2012) "Audit Report on Fund of Social Security", Vol. 34.

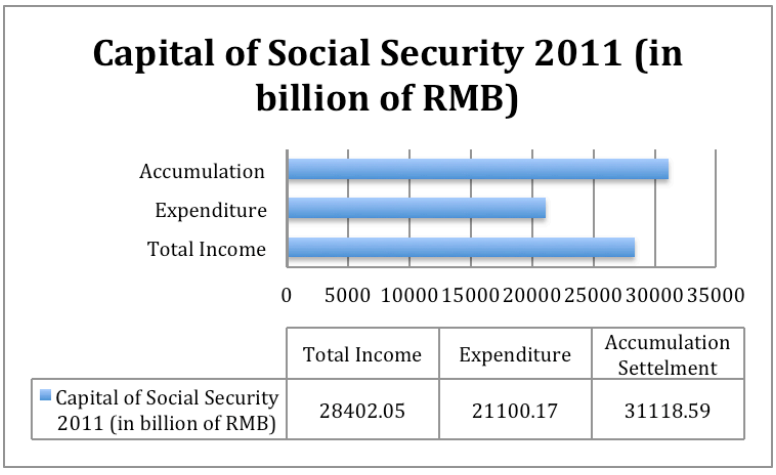
Regarding fund collection, today the capital of the Chinese social support system comes mainly from premiums (both employers and employees), the treasury, and the welfare lottery. From Figure A23, it was easy to discern that working units shouldered the biggest part of fund burden. Even individuals undertook a larger share than the treasury. According to the public finance report from the ministry of finance in 2011, the Chinese government's income was as high as 35.3% of GDP, but the government only spent 1.1% on social support. We could assert that the main body of the funding for the Chinese social support system came from premiums; the treasury and its controlled welfare lottery did not prefer to share a lot of the fund burden.



(1) **(2)**

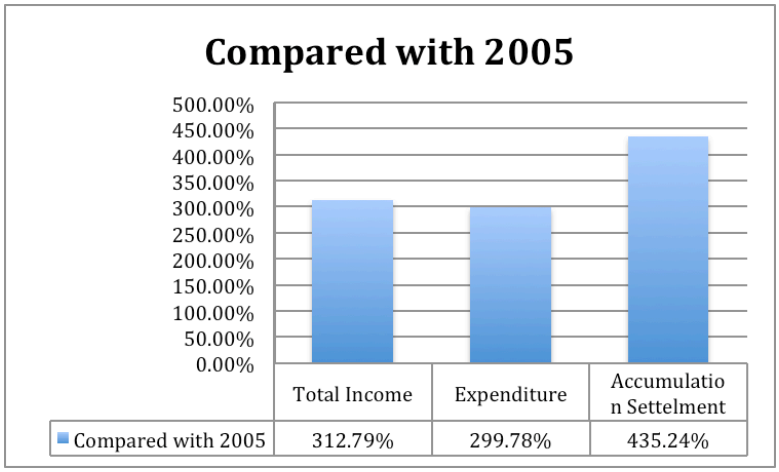
Figure A24. The control of accumulation settlement.
Source: The Chinese Audit Commission (2012) "Audit Report on Fund of Social Security", Vol. 34.

Figure A24 and the figures of each department show a facet of the second aspect of the Chinese social support system—the distribution of social support resource was so uneven. That was shown in two ways: first, the bigger the administrative region, the more resource it controlled; second, the advanced east controlled more resources than the middle and west regions. The uneven distribution of resources between areas had much to do with the uneven distribution of benefits.



(1)

Figure A25. (*Continued*).



(2)

Figure A25. Capital of social security (2011).
Source: The Chinese Audit Commission (2012) "Audit Report on Fund of Social Security", Vol. 34.

Table A1. The structure, principles and the reform process of Chinese urban social support.

	Background	Goal & benefit	Reform process	Government action	Impact
Old-age	1. Aging society. 2. Threaten by "one-child policy", the urban aged can no longer rely on kin-based support structures. 3. Different provinces faced different social and economic problems, the pension system would need to be practically implemented at different levels, making it difficult to universalise.	Accompany with the "productivity" philosophy, in running pension, the government aims to guarantee a basic living standard for the elderly.	First step, maintain and adjust the former pension department of labour insurance.	In 1991, State Council promulgated the "Decision of the Reform of Pension of Company Employees".	It stipulated that the ministries of labour, personnel, and civil affairs should begin to direct pension funds for the employees of urban companies.
			Second step, replace the former "pay-as-you-go" by a money accumulated funding system, although the resulting social pool and personal accounts are still running in a "pay-as-you-go system" way.	In 1995, State Council issued the "Report on Deepening the Reform of Pension of Company Employees".	Set up a pension system that mixed the larger social pool with personal accounts. In this system, both the employers and employees paid the initial premium together.
			Third step, to realise the unification, both constitutional and administrative, of pension system.	In 1997, State Council issued the "Decision of Establishing the Universalised Basic Pension System for Company Employees".	Established a universal city pension system.
				In 1998, the ministry of labour and social security was established, and with it administration of the Chinese social support system was unified.	Administration of the Chinese social support system was unified.
			Furthermore, in order to preserve and increase the value of pension fund.	In 1999, the collection of pension insurance premiums was further reinforced with the investment of personal funds in the capitalist market.	This was tested in the Liao Ning province, in 2001.
			Contemporarily, the Chinese government has attempted to construct a multi-level private pension system.	In 2004, MHSS, CBRC, CSRC, CIRC issued "Proposed Measures of Company Annuity". In 2011, "Measures of Company Annuity".	Enterprises with suitable conditions can provide annuities to their employees (in addition to the basic pension plan), which often compels employees to participate.
	A number of eligible urban employees still have no pension.			In 1996, "Law of PRC for the Protection of Elderly People's Rights and Interests".	A small welfare pool for the elderly has been created, which is service orientated. Community welfare services have found support, with state-run collective social welfare organizations forming the backbone of the service.

Table A1. (*Continued*).

	Background	Goal & benefit	Reform process	Government action	Impact
Health		"Low benefits, wide coverage, joint affordability, using social-personal account cooperation".	First step, maintain and adjust the former medicare department of labour insurance.	In 1993, State Council issued "Decision on Problems in the Chinese Socialist Market Establishment".	Reform of China's medical insurance scheme for urban labour was undertaken.
			Second step, replace the former "pay-as-you-go" by a money accumulated funding system, although the resulting social pool and personal accounts are still running in a "pay-as-you-go system" way.	In 1998, State Council issued "Decision on Establishing a Basic Medical Insurance System for Urban Employees".	A locally managed basic medical insurance system for urban employees, which combined social and personal accounts, was adopted. It was primarily funded by premiums that had been paid for by employers and employees.
		To meet different medical demands, and settle medical expenses that exceed the maximum limit of the basic medical insurance payment.	Third step, meet the medicare needs that had not been covered by the basic health insurance.	Supplementary medical insurance has been established according to policies issued by local governments.	Medical insurance premiums (which is limited to a maximum of 4% of the total wage expenditure), has been further accounted for as a part of production costs.
Unemployment			The funding resources for these centres are primarily drawn from local government treasuries, the social pool, and enterprises.	In 1993, State Council issued a "Stipulation of Insurance of Waiting Positions towards Former State-Enterprise Employees".	Replaced the former scheme, improving its coverage, benefit levels, and the management of its funds. It inherited the former's administration style and capital collection measures.
					A "reemployment" centre has been established in every state-run enterprise. The main function of these is to ensure that people who are "laid off" receive their basic livelihood allowance timeously and in full—the only requirement is that they register at their enterprise's reemployment centre.

Table A1. (*Continued*).

	Background	Goal & benefit	Reform process	Government action	Impact
Unemployment	At the beginning of the 1990s, many workers in state-run enterprises lost their jobs. As the Chinese government tended to avoid using the term "unemployment" in addressing the situation, the term "layoff" was frequently used in labelling the workers and to highlight that their job loss was temporary. The Chinese government further used the term "insurance of waiting positions" to represent its unemployment scheme, with the program first being deployed in 1986.			After 1998, the Chinese government established the "three guarantees" system.	Provide a basic livelihood guarantee for "layoffs", as well as unemployment insurance and the provision of a minimum livelihood allowance for urban residents, for up to three years. Beyond this, if the worker continues to remain unemployed, they will then receive unemployment insurance payments. When the per capita income of a family falls below the local minimum living standard, the provision to guarantee urban residents a minimum livelihood can also be activated .
		The benefit from unemployment insurance should be higher than the minimum living allowance for urban residents, but lower than the minimum wage. The unemployment benefit's time limitation is dependent on the previous period of employment.	Since 1999, unemployment insurance coverage has been extended to all aspects of urban labour. Under the system, employers are forced to share the premium payments. This has, however, negated the employees' privilege of being free from paying into the unemployment insurance premiums. If a recipient of unemployment support is ill during their benefit period, they will receive a medical allowance. If they die, they will enjoy a funeral allowance.	In 1999, State Council issued "Ordinances of Unemployment Insurance"—this formally marked the establishment of the Chinese unemployment insurance system. After 2001, the livelihood guarantee system was integrated into the unemployment insurance scheme. Since then, unemployment insurance has become the main social support program that benefits the unemployed in Chinese urban areas.	The term's previous ideological problems disappeared, as a function of the design and implementation of the Chinese unemployment insurance scheme. Under the new system, the right to distribute unemployment funds has been lowered to the level of city governance. The right to operate and supervise the unemployment fund had been distributed between the ministries of labour and finance, and the banks.
		Previously, in many urban areas, farmers were classified as contract workers when employed by enterprises and institutions. They were free from the obligation of making premium payments, because their employers paid this on their behalf.			If an employee had worked for one continuous year, and their contracts were not renewed or were terminated before they expired, the employee could apply for a living allowance and receive a lump-sum, the amount of which was determined by the length of their serving period.

Table A1. (*Continued*).

	Background	Goal & benefit	Reform process	Government action	Impact
Insurance for work-related injuries	Chinese market economy quickly development, it causes a lot of work-related injuries related conflicts between employers and employees.	Expenditures determine collection levels. "No-fault compensation" has been adopted as the guiding principle. To avoid over-compensation, each provincial area has adopted a working ability assessment system, with cities being divided into districts. An assessment committee has been established in each area, and consists of representatives from the relevant departments of the government, trade unions, and employment units.		In 2004, State Council issued "Regulations on Insurance for Work-Related Injuries"—marked its official establishment.	Under the program, a social fund pool has been adopted to balance the revenue and expenditures. The social pool funds were established by cities at the prefecture level and above, thus ensuring very localized distribution nodes. The different premium rates are determined by local governments, and make reference to the degree of risk of different work-related injuries frequently seen in different sectors. An occupational rehabilitation program has also been adopted throughout China.
Maternity	The former labour insurance system has been abandoned. More and more female workers participate the labour market. Chinese society is quickly aging.	The premiums are paid for by the employers participating in the scheme and are set at no more than one per cent of the total wage expenditure. Individuals or employees do not have to pay any premiums. Employees covered by the insurance receive an allowance of ninety days reprieve upon giving birth. In addition, the wages of female employees are maintained at their original level, and their positions are to be reserved for them after having given birth or after having had an abortion.		In 1988, State Council issued "Stipulation on Female Worker Protection"; the reforms to maternity insurance system were introduced and limited in select places. Ever since 2014, the maternity insurance has become a mandatory insurance.	Their medical expenses are reimbursed by the insurance scheme. Since China has a powerful family planning system, maternity-related benefits are frequently used to reward obedience.
Housing		Expenditures from this fund can be marked as an operating cost for enterprises, and the benefits are free from personal income tax. The funds also benefit from a preferential low-interest loan policy.		In 1999, State Council issued "Regulation for the Management of the Publicly Accumulated Housing Funds", which has been reissued in 2002, and is operated by the Administrative Committee and the Centre of Accumulated Housing Funds.	Employers pay no less than 5% of an employees' wage, and can increase the rate if they wish.

Table A1. (*Continued*).

	Background	Goal & benefit	Reform process	Government action	Impact
Housing	Before the economic reforms, all the houses in urban areas were built and distributed by the CCP, and residents were limited to use-permission. Since then, the government has set up an accumulated housing fund and a policy-based financial channel to solve employees' housing problems. The funds are collected from employers each month, and are limited to a certain proportion of employees' salaries.	This system has been primarily supported by the Chinese treasury, and is managed in multiple ways, although housing rental subsidies are the primary mechanism.		In 1994, Construct Ministry issued "Urban Economical and Applicable Housing Construction Management Measures".	The Chinese governmental housing program is a policy-based, security-type commercial housing system. Although it is commercial, a low-profit standard is applied when a house is sold or rented. Because it is security-oriented, a specified length of time after purchase has to have elapsed if a household wants to sell the house.
				In 1999, Construct Ministry issued "Urban Low-rent Housing Management Measures".	A low-rent housing system for urban minimum-income households has also been established in China. According to the law, the "[t] emporary exemption of property tax and business tax is applied to publicly owned houses and low-rental housing lent out at prices prescribed by the government".
Incapacity		Legally guarantee social support for the disabled, and try to make the operation of the above social support projects efficient.		In 1990, "Law of the PRC for the Protection of Disabled People" has been issued. In 1993, the Ministry of Civil Affairs issued the "Standard of National Social Welfare Institutes" and the "Plan of Social Welfare Enterprises".	The government has realised this responsibility in three ways: (1) it operates numerous welfare enterprises to employ disabled people; (2) it has provided employment opportunities to a certain proportion of the work force in state-enterprises; and (3) it has encouraged disabled people to seek self-employment.
Family	Chinese market economy quickly development, people lose in competition need assistance, and society needs to find a way to assure of solidarity.	This minimum living standard is primarily calculated by averaging the income of urban residents, the consumption level per capita, the price levels from the previous year, the consumption price index, the necessary costs for maintaining a basic livelihood, other connected social security standards, expenditures on children's compulsory education, and materials for basic food needs.		In 1999, State Council issued "Regulation on Guaranteeing Urban Residents' Minimum Standard of Living".	Urban residents who have non-agricultural permanent residence permits, and whose family's per capita income is lower than the local residents' minimum standard of living, can receive basic subsidies from their local governments.

Table A1. (*Continued*).

Background	Goal & benefit	Reform process	Government action	Impact
Others			In 1991, "Law of the PRC for the Protection of Minors" has been issued, and the "Education Law of the PRC" has been issued in 1995.	Government legally shares the responsibility for supporting children. This includes education, planned immunisations, special care to ensure their livelihood, and the recovery and education of children with special needs, by providing welfare projects, facilities, and services.
	Receiving aid of one's own free will, and giving help gratis.		2003, State Council issued "Measures for the Administration of Relief for Vagrants and Beggars without Assured Living Sources in Cities".	The relief for vagrants and beggars is compassionately administered and provided in accordance with the different circumstances and needs of the recipients.

Source: Abstract from CCP Government issued "Decision of the Reform of Pension of Company Employees (1991)", "Report on Deepening the Reform of Pension of Company Employees (1995)", "Decision of Establishing the Universalised Basic Pension System for Company Employees (1997)", "Law of the Peoples' Republic of China for the Protection of Elderly Peoples (2012)", "Decision on Problems in the Chinese Socialist Market Establishment (1993)", "Decision on Establishing a Basic Medical Insurance System for Urban Employees (1998)", "Stipulation of Insurance of Waiting Positions towards Former State-Enterprise Employees (1993)", "Ordinances of Unemployment Insurance (1999)", "Regulations on Insurance for Work-Related Injuries (2004)", "China's Social Security and Its Policy (2004)", "Regulation for the Management of the Publicly Accumulated Housing Funds (2002)", "Regulation on Guaranteeing Urban Residents' Minimum Standard of Living (1999)"; "G. Zheng, 2002", "Su and Yang, 2007","Xu et al., 2012", "Zhang, 2010", "Qi, 2013", "Yang and Hu, 2010", "Lin, 2001", "Han and Zhu, 2011", "Y. Wang and Ma, 2005", and "Ding and Zhu, 2004".

Table A2. The bivariate analysis between the important economic factors and the branches of social support 1989–2012

		Correlations								
		InSI	ExSI	BaSI	InPI	ExPI	BaPI	InUI	ExUI	BaUI
Year	Pearson Correlation	0.990**	0.987**	0.928**	0.993**	0.961**	0.918**	0.922**	0.718**	0.942**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	231.37	166.34	308.15	142.36	100.96	195.62	9.88	5.41	21.80
	Covariance	10.06	7.23	13.40	6.19	4.39	8.51	0.43	0.24	0.95
	N	24	24	24	24	24	24	24	24	24
GDP	Pearson Correlation	0.934**	0.903**	0.984**	0.916**	0.836**	0.986**	0.766**	0.452*	0.980**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
	Sum of Squares and Cross-products	4,575,972.63	3,188,795.34	6,856,015.71	2,753,153.27	1,841,337.59	4,408,116.35	171,934.28	71,398.54	475,350.16
	Covariance	198,955.33	138,643.28	298,087.64	119,702.32	80,058.16	191,657.23	7,475.40	3,104.28	20,667.40
	N	24	24	24	24	24	24	24	24	24
GDPPC	Pearson Correlation	0.937**	0.906**	0.985**	0.919**	0.841**	0.986**	0.769**	0.458*	0.981**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
	Sum of Squares and Cross-products	337,519.03	235,392.12	504,388.76	203,230.78	136,147.87	324,226.51	12,710.87	5,318.08	34,984.21
	Covariance	14,674.74	10,234.44	21,929.95	8,836.12	5,919.47	14,096.80	552.65	231.22	1,521.05
	N	24	24	24	24	24	24	24	24	24
FirstIndusInc	Pearson Correlation	0.940**	0.919**	0.972**	0.929**	0.865**	0.973**	0.782**	0.486*	0.971**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
	Sum of Squares and Cross-products	417,489.89	294,132.41	613,316.26	253,112.87	172,489.84	394,129.63	15,910.33	6,959.06	42,677.79
	Covariance	18,151.73	12,788.37	26,665.92	11,004.91	7,499.56	17,136.07	691.75	302.57	1,855.56
	N	24	24	24	24	24	24	24	24	24
SecondIndusInc	Pearson Correlation	0.936**	0.903**	0.986**	0.917**	0.836**	0.987**	0.767**	0.451*	0.981**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
	Sum of Squares and Cross-products	2,125,954.90	1,479,145.27	3,184,551.88	1,279,028.19	853,797.56	2,047,153.75	79,865.32	33,019.01	220,652.17
	Covariance	92,432.82	64,310.66	138,458.78	55,609.92	37,121.63	89,006.68	3,472.41	1,435.61	9,593.57
	N	24	24	24	24	24	24	24	24	24
ThirdIndusInc	Pearson Correlation	0.929**	0.898**	0.984**	0.910**	0.829**	0.986**	0.760**	0.446*	0.979**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
	Sum of Squares and Cross-products	2,032,527.80	1,415,517.64	3,058,147.50	1,221,012.19	815,050.18	1,966,832.92	76,158.63	31,420.48	212,020.19
	Covariance	88,370.77	61,544.25	132,962.93	53,087.49	35,436.96	85,514.47	3,311.24	1,366.11	9,218.27
	N	24	24	24	24	24	24	24	24	24

Table A2. (*Continued*).

		Correlations								
		InSI	**ExSI**	**BaSI**	**InPI**	**ExPI**	**BaPI**	**InUI**	**ExUI**	**BaUI**
EmpT	Pearson Correlation	0.885**	0.911**	0.765**	0.911**	0.929**	0.754**	0.867**	0.761**	0.795**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	148,206.42	109,940.96	181,994.39	93,616.42	69,867.17	115,186.00	6,656.84	4,109.75	13,178.11
	Covariance	6,443.76	4,780.04	7,912.80	4,070.28	3,037.70	5,008.09	289.43	178.68	572.96
	N	24	24	24	24	24	24	24	24	24
EmpU	Pearson Correlation	0.991**	0.973**	0.969**	0.983**	0.928**	0.962**	0.888**	0.639**	0.976**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	218,449.00	154,716.38	303,765.58	133,009.31	91,927.91	193,600.36	8,972.51	4,542.18	21,310.74
	Covariance	9,497.78	6,726.80	13,207.20	5,783.01	3,996.87	8,417.41	390.11	197.49	926.55
	N	24	24	24	24	24	24	24	24	24
EmpR	Pearson Correlation	−0.668**	−0.590**	−0.814**	−0.610**	−0.467*	−0.817**	−0.480*	−0.13	−0.781**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.55	0.00
	Sum of Squares and Cross-products	−70,242.58	−44,775.42	−121,771.19	−39,392.89	−22,060.74	−78,414.36	−2,315.67	−432.43	−8,132.63
	Covariance	−3,054.03	−1,946.76	−5,294.40	−1,712.73	−959.16	−3,409.32	−100.68	−18.80	−353.59
	N	24	24	24	24	24	24	24	24	24
		InHI	**ExHI**	**BaHI**	**InWRI**	**ExWRI**	**BaWRI**	**InMI**	**ExMI**	**BaMI**
Year	Pearson Correlation	0.954**	0.947**	0.930**	0.955**	0.924**	0.978**	0.942**	0.919**	0.959**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	71.83	55.14	78.67	4.74	3.27	8.41	2.66	1.71	4.01
	Covariance	3.12	2.40	3.42	0.21	0.14	0.37	0.12	0.07	0.17
	N	24	24	24	24	24	24	24	24	24
GDP	Pearson Correlation	0.946**	0.960**	0.970**	0.977**	0.979**	0.969**	0.982**	0.962**	0.978**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	1,493,602.71	1,171,243.68	1,719,955.04	101,599.96	72,537.49	174,545.46	58,115.40	37,456.96	85,656.55
	Covariance	64,939.25	50,923.64	74,780.65	4,417.39	3,153.80	7,588.93	2,526.76	1,628.56	3,724.20
	N	24	24	24	24	24	24	24	24	24
GDPPC	Pearson Correlation	0.947**	0.960**	0.970**	0.978**	0.979**	0.971**	0.983**	0.963**	0.979**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	109,994.31	86,208.45	126,566.13	7,485.12	5,335.72	12,866.31	4,279.09	2,758.01	6,307.38
	Covariance	4,782.36	3,748.19	5,502.88	325.44	231.99	559.40	186.05	119.91	274.23
	N	24	24	24	24	24	24	24	24	24

Table A2. (*Continued*).

		Correlations								
		InHI	ExHI	BaHI	InWRI	ExWRI	BaWRI	InMI	ExMI	BaMI
FirstIndusInc	Pearson Correlation	0.938**	0.951**	0.955**	0.982**	0.979**	0.977**	0.984**	0.968**	0.975**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	134,168.36	105,152.40	153,510.82	9,252.27	6,576.04	15,945.62	5,281.10	3,412.48	7,736.79
	Covariance	5,833.41	4,571.84	6,674.38	402.27	285.91	693.29	229.61	148.37	336.38
	N	24	24	24	24	24	24	24	24	24
SecondIndusInc	Pearson Correlation	0.948**	0.961**	0.972**	0.979**	0.976**	0.970**	0.982**	0.961**	0.979**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	694,026.43	543,709.98	799,556.77	47,236.52	33,542.98	81,038.56	26,960.72	17,351.07	39,775.73
	Covariance	30,175.06	23,639.56	34,763.34	2,053.76	1,458.39	3,523.42	1,172.21	754.39	1,729.38
	N	24	24	24	24	24	24	24	24	24
ThirdIndusInc	Pearson Correlation	0.944**	0.959**	0.969**	0.972**	0.980**	0.964**	0.979**	0.961**	0.976**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	665,407.90	522,381.29	766,887.43	45,111.16	32,418.47	77,561.28	25,873.58	16,693.41	38,144.03
	Covariance	28,930.78	22,712.23	33,342.93	1,961.35	1,409.50	3,372.23	1,124.94	725.80	1,658.44
	N	24	24	24	24	24	24	24	24	24
EmpT	Pearson Correlation	0.806**	0.792**	0.761**	0.815**	0.769**	0.850**	0.791**	0.775**	0.809**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	43,475.14	33,038.53	46,149.48	2,898.46	1,948.65	5,236.27	1,600.83	1,030.95	2,419.49
	Covariance	1,890.22	1,436.46	2,006.50	126.02	84.72	227.66	69.60	44.82	105.20
	N	24	24	24	24	24	24	24	24	24
EmpU	Pearson Correlation	0.977**	0.975**	0.968**	0.975**	0.954**	0.988**	0.967**	0.942**	0.984**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	69,404.50	53,571.64	77,289.50	4,563.71	3,181.42	8,009.33	2,578.18	1,650.64	3,877.04
	Covariance	3,017.59	2,329.20	3,360.41	198.42	138.32	348.23	112.09	71.77	168.57
	N	24	24	24	24	24	24	24	24	24
EmpR	Pearson Correlation	−0.765**	−0.784**	−0.818**	−0.746**	−0.775**	−0.717**	−0.769**	−0.742**	−0.775**
	Sig. (2-tailed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sum of Squares and Cross-products	−25,929.36	−20,533.11	−31,140.02	−1,665.25	−1,232.77	−2,773.06	−977.35	−619.69	−1,457.55
	Covariance	−1,127.36	−892.74	−1,353.91	−72.40	−53.60	−120.57	−42.49	−26.94	−63.37
	N	24	24	24	24	24	24	24	24	24

Source: The Chinese Statistic Bureau, www.stats.gov.cn.
GDPPC = GDP Per Capita; FirstIndusInc = First Industry Income; SecondIndusInc = Second Industry Income; ThirdIndusInc = Third Industry Income; EmpT = Total Employment; EmpU = Urban Employment; EmpR = Rural Employment; InSI = Income of Social Insurance; ExSI = Expenditure of Social Insurance; BaSI = Balance of Social Insurance; InPI = Income of Pension Insurance; ExPI =Expenditure of Pension Insurance; InUI = Income of Unemployment Insurance; ExUI = Expenditure of Unemployment Insurance; BaUI = Balance of Unemployment Insurance; InHI = Income of Health Insurance; ExHI = Expenditure of Health Insurance; BaHI = Balance of Health Insurance; InWRI = Income of Work-Related Injury; ExWRI = Expenditure of Work-Related Insurance; BaWRI = Balance of Work-Related Injury; InMI = Income of Maternity Insurance; ExMI = Expenditure of Maternity Insurance; BaMI = Balance of Maternity Insurance.