The Development of China’s Urban Social Security System, 1949–1988

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Abstract
This study examines the records of urban social security in China between 1949 and 1988 to test the applicability of the popular theory on social security development, thereby elucidating the impact of a country’s politics on the modification of the design, operation, and transformation of its social security. This study complements existing theories and questions regarding the correlation between industrialisation and the development of social security and tests the utility of popular theories of social security development for understanding the Chinese case. In order to conduct cross-period comparison and identify the changes in China’s urban social security, the study period—namely, 1949 to 1988—is divided according to changes in the doctrine of the Chinese Communist Party (CCP). Focusing on the emergence of and modifications to China’s social security system before its reform in 1988, this study identifies the structural features and philosophy of its institutional design and analyses its development using statistical data. More specifically, this study reveals how changes in the doctrine of the CCP decisively impacted the development of China’s urban social security. In doing so, this study demonstrates a new means of predicting a country’s social security development.

Keywords Urban social security · State-work unit coalition · China · Chinese communist party · Reform and opening-up

Introduction

China experienced significant political turmoil between 1949 and 1988, including the establishment of the Chinese Communist Party (CCP) regime, numerous destabilising political movements, and the country’s eventual ‘reform and opening-up’. This study demonstrates how changes in the CCP regime have determined the nature of China’s urban social security system over time. The development of the Chinese
social security underwent a critical change following the death of Chairman Mao in 1976. Indeed, Mao’s death became a turning point in the CCP’s rule, as the party shifted from totalitarian to authoritarian rule and introduced intensive economic reform and ‘opening-up’ policies (hereinafter, ‘economic reform’). Scholars have observed a negative correlation between the levels of economic development and social security spending in the former period (before Chairman Mao’s death) and a positive correlation in the latter period (after Chairman Mao’s death) [9]. Given the well-established positive correlation between economic growth and social security development in industrialisation theory, the Chinese case poses an interesting puzzle.

Certainly, the impact of a country’s politics on the modification of its social security has been subject to significant analysis in advanced Western capitalist countries [10]. However, while such studies have investigated the impact of different institutional designs implemented by governments in developing a country’s social security, the studied regimes have shared a similar political foundation. Moreover, although numerous studies have examined the influence of different political parties on the development of a state’s social security [4], they have typically concentrated on capitalist contexts. Therefore, few have discussed the impact of a communist party on the development of a social security system.

This oversight is particularly pressing insofar as the development of pre-reform Chinese urban society meets the basic requirements of industrial theory application. Certainly, China’s GDP and public expenditure were relatively small, the majority of the population remained rural, and industrialisation was limited to urban areas. Nonetheless, as in Western society, industrialisation undermined the traditional family and social structure in urban China. Significantly, social security was a by-product of industrial development—a system designed for and provided to workers, all of whom belonged to and lived within specific work units. Indeed, while scholars have recognised the relatively uniqueness of the Chinese system, they have tended to overlook pre-reform social security and assumed the applicability of western theory to the Chinese case.

Those popular theories of social security development have not been tested in non-Western and non-capitalist contexts raise further questions. For instance, what happens to a country’s social security when an autocratic government changes its doctrine? Significantly, social security development in advanced Western capitalist and democracy countries cannot be used to answer such questions. China presents a useful means of addressing these gaps. While the design of China’s urban social security system did not undergo significant revision between 1949 and 1988, the doctrine of the CCP was modified frequently. More specifically, CCP doctrine fundamentally changed with the transfer from the first to the second leader generation following the death of Mao Zedong in 1976. Accordingly, this study examines the development of social security in China between 1949 and 1988 in order to discern the impact of changes in the doctrine of an authoritarian communist government on the modification of a country’s social security.

Changes in the development of China’s urban social security are typically attributed to political changes, economic reform, and the systematic reform of the social security system. However, which of these three factors has the most decisive impact
remains disputed. This study solves this puzzle by excluding systematic reform and limiting the comparison between politics and economics. Certainly, by demonstrating or refuting the decisive impact of politics or economics, this study also verifies the impact of systematic reform on urban social security development. Nonetheless, limiting the study period to 1949–1988 enables the exclusion of the impact of systematic reform initiated in 1988, allowing for a more precise comparison of the impacts of political change and economic reform. This study’s examination of pre-reform China’s urban social security development reveals the decisive impact of CCP doctrine, enhancing our understanding of how a ruling party’s doctrine shapes the design and development of a country’s social security.

The rest of this study is structured as follows. The next section provides a brief literature review covering theories of social security development as understood and applied to the Chinese context—the issue addressed in this study. The third section presents an historical overview of China’s urban social security system between 1948 and 1988, showing how it served CCP goals. It also delineates the six observational periods at the core of this study’s analysis. The fourth section presents this study’s methodology, while the fifth and sixth sections discuss the results in terms of public expenditure and modification mechanism, respectively. The final section concludes this study.

**Literature Review**

While the development of urban social security between 1949 and 1988 forms the basis of China’s current social security system, it has never been a primary focus of study. Of course, several seminal studies noted the emergence of social security in the rebuilding of Europe after the Second World War (1939–1945) [6, 14, 20, 21, 28, 29]. Nonetheless, the bulk of contemporary research focuses on social security development in the 1970s, with industrialism used to illustrate the development of social security in affluent democracies. Initially, using economic growth to explain social security development, Wilensky and Lebeaux [28] identified a new impersonal factor—namely, demographic profile—to illustrate the variations between different countries [27]. According to Kerr et al. [14], industrialisation eroded the kinship support system of the traditional agrarian world and created demands for public compensation to replace this support structure. A greater proportion of the population exchanging labour for wages resulted in less labour being available to provide such support [19], forcing states to develop a social security system in order to maintain their labour force and achieve harmony in a rapidly industrialising society [18]. Following this thesis, Wilensky [27] argued that the impact of economic growth modified by demographic factors fundamentally decided social security development.

These popular explanations of social security development have seldom been questioned. Most scholars accept that economic growth and population ageing constitute the fundamental reason for social security development in industrial societies. Wilensky [27] was the first to empirically test alternative theories of social security development. Thereafter, scholars began using economic growth measured by GDP
per capita, demographic profile according to the percentage of people unable to sell their labour, and system rigidity based on path dependence theory to empirically explain public expenditure on social security [33]. Scholars like Kasza [13] have adopted the industrialisation theory and method to illustrate and test social security development in emerging economies.

Extant studies on the Chinese case essentially focus on urban China after 1949 and particularly after economic reform [8]. Regarding pre-economic reform China, Dixon [3] was the first and only scholar to analyse the Chinese case in the Mao period, introducing ‘productivity’ as the philosophical underpinning of the institutional design of China’s urban social security system. In this respect, social security was intended to facilitate the CCP government’s ability to accrue capital and increase its political power. This corresponds with [5] argument that bureaucratic governments prefer maximising their fiscal control.

Recent studies have focused on China’s social security system following the country’s economic reform. As the first generation of major Chinese scholars in this field appeared in the 1990s, their studies were deeply influenced by Esping-Andersen’s *The Three Worlds of Welfare Capitalism* [4]. Supporting the divergency school, these scholars classified the Chinese system as a unique or hybrid system, although they also believed that economic and demographic factors shaped public expenditure. The difference between Chinese social security development and that of other countries was recognised from the outset. Nonetheless, scholars used the theories derived from advanced Western countries to explain and predict the development of China’s social security system without critically testing the applicability of these theories.

These studies can illustrate some aspects of the development of China’s urban social security. However, no theory provides an adequate answer to the question of which variable and mechanism of action have been fundamental to the development of urban social security in China. Even for the popular theory, it is difficult to calculate the impact of industrialisation on the development of urban social security before China initiated its ‘reform and opening-up’ in 1978. Few Chinese scholars have attempted to test the popular theory for pre-reform China’s urban social security development as they believe that Western-based development theory can only predict the development of a Western-style system. Unlike carefully analysed Western cases, which trace the development of the system from its outset, Chinese social security before the introduction of social insurance reform in 1988 has seldom been studied. In other words, the origin of contemporary China’s urban social security lacks investigation. As such, there is a gap between studies on the same topic in the Chinese and Western capitalist contexts, especially in regard to pre-reform China’s urban social security.

In addressing this gap, this study verifies whether the popular theory of social security development—originating from and tested on Western capitalist

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1 This can be described as the government’s attempt to use social security for political means to earn social support and collect revenue. The political and economic income of social security was always intended to exceed expenditure.
context—is applicable to the Chinese case. In order to do so, this study has two objectives: first, test the explanatory power of the popular theory on Chinese case; and second, demonstrate how the CCP government consistently modified both the institutional design and operation of its social security system to accommodate the party’s changing doctrine (hereinafter, study hypothesis). In doing so, this study identifies the decisive variable in the development of China’s urban social security system and the fundamental mechanism of its modification.

Urban Social Security in Pre-reform China: an Overview

Between 1949 and 1988, the main body of Chinese urban social security comprised two schemes: (a) labour insurance, which favoured the proletariat; and (b) community-based urban social security, which was adopted to meet the needs of urban residents that had not been covered by labour insurance. As urban residents employed by the same work unit lived in the same apartment block during this time, the community-based urban social security benefits distributed to recipients also depended on their work units and job grades. These social security schemes have gradually been reformed since 1988.

The extension of social security coverage in this period reflected the class revolution logic of the CCP [32]. After distributing specific and short-term social security to the people that needed to be pacified most urgently, the CCP government began expanding urban social security coverage step-by-step [30]. The most important social groups for the strengthening of the CCP regime—namely, the proletariat—were covered first, and their vested interests secured. Those important for development—such as college students—were covered second, while those that played a role in expanding CCP influence—such as foreign experts—were covered last. Vulnerable groups were never integrated into the CCP’s social security plan.

Prior to the system’s overhaul in 1988, social security coverage was broadest at the end of 1956, when some 94% of industrial workers (2.3 million individuals) were covered by labour insurance, while the remaining population (604.8 million individuals) had no official insurance support. Social security thus reflected the CCP’s attempt to strengthen its domination by intensifying class stratification and earn support from the class most important to its domination and the communist ideology, as well as the notion of class-led revolution underpinning CCP doctrine. This section explores the development of the main components of social security—namely, labour insurance and community-based insurance—during the study period, 1949–1988, in order to determine whether theories of social security development created in and for a capitalist context suitable for explaining Chinese case in this period. Doing so will facilitate identifying the most decisive variable in and fundamental mechanism of China’s urban social security modification. This section reviews the construct and principles of the system and deduces its characteristics and delineates the six observational sub-periods for quantitative analysis.
Labour Insurance

Labour insurance comprised several functional components, including pension, healthcare, unemployment, housing, and coverage for incapacitated or injured workers as well as the families and widows/widowers of workers. However, coverage and benefits depended on a worker’s class status and job grade, as well as their value to the CCP regime. Table 1 presents the principles of urban social security in China between 1949 and 1988. Various institutions were responsible for the operation of social security, their management often overlapping. Direct co-operation between the CCP government and work units—that is, businesses, factories, and other bodies—was a common feature in the design and operation of social security during this period. While the CCP government designed the main body of the system and distributed resources, the work units were responsible for executing that system and modifying the level of benefits. Consequently, workers were bound to their work units. A worker’s social security benefits thus depended on the class status of their work unit and job grade. As all members of a worker’s family could share their benefits, the size of a recipient’s family was also included in the calculation of their social security provision.

As noted, a worker’s social security benefits depended on the class status of their work units. Those serving industries with closer ties to the CCP received more generous coverage and provided more comprehensive programmes. For example, public servants enjoyed the most extensive and consistent social security coverage during this period. Although social security programmes for public servants emerged later than others, they provided greater coverage as a successor of a more comprehensive ‘supply system’. Significantly, workers who received high salaries and controlled more resources enjoyed greater social security benefits, strengthening existing class stratification. As such, the social security system’s redistribution function amplified pre-existing vertical income gaps between classes.

The social security benefits were first divided according to employment category. For instance, the average social security benefit for a state enterprise worker was 1.4–1.6 times that of an average collective-enterprise worker. Benefits then varied according to category of industry. For example, workers in the construction, transportation, and exploration industries enjoyed the highest average social security benefits, which were about 1.4–1.9 times that of those employed in the trading, health, and education industries, who received the lowest social security benefits [32]. As such, this study argues that the CCP government designed its urban social security

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2 Before economic reform, each work unit submitted its budget plan to government at the beginning of the fiscal year. The government audited the work units’ use of the appropriation, reducing it for the following year if it had not been exhausted. Accordingly, increasing the social security benefits for the workers was an effective legal way for work unit leaders to exhaust residual appropriation, increase their personal legal benefits, and earn the support of workers. However, if a work unit did not have enough resources, it had to reduce social security benefits to ensure resource provision and realise its main function.

3 The supply system is a type of communist wartime production, providing all CCP cadres and employees living resources and allowances at a guaranteed level. After the Civil War, it became a special welfare department that only served government cadres.
| China’s urban social security | Labour insurance | Functions | Programmes | In-charging Office |
|------------------------------|-----------------|-----------|------------|-------------------|
| Pension                      |                 | Pension programme for state staffs | Ministry of Labour and Every work unit |
|                              |                 | Pension of employees in state-enterprises workers | Ministry of Labour, Home Office and Finance Department and Every work unit |
|                              |                 | Pension of employees in collective enterprises | Second Light Industry Department and Chinese Organization of Industrial, Artisanal and Service Producers’ Cooperatives and Finance Department and Every work unit |
| Health                       |                 | Public health system | Ministries of Health, Finance& Medical Committees and Every work unit |
|                              |                 | Workers’ medical-care system | Ministries of Health, Finance& Medical Committees and Every work unit |
| Unemployment                 |                 | National job distribution programme | Ministry of Labour, Ministry of Personnel and Every work unit |
|                              |                 | De-industrialization | Ministry of Labour, Ministry of Personnel and Every work unit |
| Family                       |                 | Maternity department | China Central Workers Association and Every work unit |
|                              |                 | Wage subsidy | Local Trade Union and Every work unit |
| Incapacity and working-related injuries | | Support for the disabled | Western Left Charity Associations |
|                              |                 | Support to workers that had been suffered by work-related injuries | Ministries of Health, Finance & Medical Committees and Every work unit |
| Housing                      |                 | Housing welfare distribution system | Ministry of Building and Every work unit |
| Survivors                    |                 | Funeral allowances | Ministry of Labour, Ministry of Personnel and Every work unit |
|                              |                 | Support to widows | China Central Workers Association and Every work unit |
|                              |                 | Support to widowers | China Central Workers Association and Every work unit |
| Community-based social security | Livelihood stations | Neighbourhood Committee |
|                              | Neighbourhood stations | |
|                              | Commune company | |

*Resource: Abstract from CCP Government issued ‘Interim Regulation on Labour Insurance of Workers in Northeast Public Enterprises in the Wartime (1948)’, ‘Central Commission on Manufacture Disaster Relief (1949)’, ‘Direction on Unemployment Relief(1950)’, ‘Interim Measures of Unemployment Relief (1950)’, ‘Notification on
Interim Regulations and Measures for Social Security and Labour Rights of Retirees in China: A Historical Overview (1950-1978)
system to sustain the pre-existing horizontal and vertical stratifications [26]. The labour insurance recipients were urban workers employed by state bureaus, as well as state and collective enterprises. Therefore, ordinary urban residents could not officially participate in labour insurance, although they could share insurance benefits if they were family members of recipients.

The measures of collection and distribution of labour insurance premiums also varied according to the class status of different industries, which presents the economic side of the CCP’s notion of revolution centred on class struggle. As ‘pay-as-you-go’ scheme had only been adopted in the financing of labour insurance for state- and collective-enterprise workers, labour insurance premiums were the main financial resource of the urban social security system during this period. Approximately 30% of the total insurance premiums paid from the administration budgets of railway, sailing, and postal work units were submitted to the fund account of the Federation of Trade Unions and accumulated as the national fund of labour insurance, while 70% of these collected premiums were submitted to the fund account of each work unit’s trade union and used to operate the labour insurance scheme. Meanwhile, all the premiums collected from the work units of other industries were submitted to the fund account of each work unit’s trade union and used to operate the labour insurance scheme only. This financing measure let the CCP government collect and control more resources and freed them from most of the financial burden accrued by social security funding.

**Community-Based Social Security**

The political side of the notion of revolution had a more significant influence on the operation of community-based social security. After 1949, the so-called Baojia system[^4] was replaced by the neighbourhood committee system[^5]. Directed by district authorities and intended to supervise urban residents, neighbourhood committees were responsible for ‘affairs relating to the public welfare of the masses’ [3].

Social security was the main means through which neighbourhood committees supervised and intervened in the daily operation of communities. In doing so, social security supported the realisation of the CCP’s notion of communist revolution. The social security needs of urban residents not or only partially covered by the labour insurance could be met by subsidies provided by this community-based social security department. Community-based social security covered nearly all areas of citizens’ livelihoods, providing support ranging from childcare to marriage. These committees even dispensed allowances for the urban unemployed [22].

Fund collection for community-based social security was more complicated than that of labour insurance, particularly insofar as its operators paid more attention

[^4]: Designed as an all-knowing entity by the KMT government, the Baojia supervised and controlled the actions of the Chinese urban community administration.

[^5]: The Baojia system was a community-based system of law enforcement and civil control originally introduced in 1069 and re-introduced to modern China by the KMT.
to increasing available funding. Approximately 30% of committee activities were funded by the treasury, and 60% through solicited contributions, namely, the fees charged for using collective support facilities and the welfare fund. Committees utilised different ways to find the remaining 10%.

Communes consisted of workers from a single work unit and were strictly tied to that work unit. The stratification between different work units amplified the differences in the resources that committees received. These differences strengthened the stratification of residents from different work units by providing community-based social security benefits. The ‘solidarity funds’ financed by the government treasury covered a significant part of the expenditure [1] as the neighbourhood committees took responsibility for supervising workers’ lives outside of work. This aligned with the CCP’s concept of class-led revolution. However, few committees were able to collect sufficient resources to fulfil their social security functions, with most capable of supporting only modest services for eligible applicants [11].

Periodisation

This study differentiates between two types of reform: economic reform, which began in 1978, and urban social security reform, which began in 1988. Urban social security is further divided into two periods: pre-reform or the labour security period, and post-reform or the social security period. This study focuses on the pre-reform urban social security. The study period (1949–1988) is divided into six observational periods, namely, four sub-periods and two variations in the pre-reform period. The four sub-periods comprise 1949–1958, 1959–1966, 1967–1976, and 1977–1988. Between 1949 and 1958, the urban social security system was established and extended nationwide [30], while CCP doctrine sought to realise the goal of proletarian revolution. Between 1959 and 1966, the system’s operation was severely affected by the ‘Great Leap Forward’, the Great Chinese Famine, and the Anti-Rightist Movements. While social security coverage and benefits were extended at the beginning of this period, they were considerably reduced by the end [17]. Between 1967 and 1976, the ‘Cultural Revolution’—exemplifying the CCP’s focus on class struggle—resulted in the suspension of the main components of labour insurance, with the exception of health [26]. Labour insurance was revived between 1977 and 1988—the death of Chairman Mao resulting in the CCP abandoning its focus on class struggle and concentrating on economic development and reform. In addition to these four sub-periods, this study observes the variations

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6 A CCP-led nationwide movement that wanted to bring about a communist society as quickly as possible.

7 The three years of the Great Chinese Famine (1958–1961), referred to by the CCP as ‘the Three Years of Natural Disasters’ or ‘Three Difficult Years’, were characterised by widespread famine. Drought, poor weather, and the policies of the CCP contributed to the famine, although the relative weight of their contributions is disputed due to the Great Leap Forward.

8 Between 1957 and 1959, the CCP arranged a series of campaigns to purge alleged ‘rightists’ within the party and elsewhere in the People’s Republic of China in what became known as the Anti-Rightist Movement.
in the pre-reform period (1949–1988), as well as that before Chairman Mao’s death (1949–1976).

Methodology

Data

This study quantitatively analyses data provided by *Chinese Labour Statistic Book 1949–1985* (1985) [2]. Compiled by the Ministry of Labour in accordance with the statistical standards adopted by the State Bureau of Statistics, this source provides annual data of China’s public expenditure, economic development, and urban demographics from 1949 to 1985. Although this source provides GDP and public expenditure data at the national level, the statistics primarily cover urban areas. The calculation of GDP is based on the records of industrial production because pre-reform China adopted the Soviet Union’s approach to economic statistics and only recorded data related to industrial production. As both industrialisation and social security were urban phenomena in the study period, the so-called national data of GDP and public expenditure can be considered equivalent to urban data. Study periodisation, variables, and measures are discussed as follows.

Study Variables

Independent Variable: CCP Doctrine

The CCP intends to sustain its political domination over China. Although the foundation of the CCP’s domination is its control of the military—to which it has never received domestic challenge—the party has adopted various doctrines to facilitate and enhance its rule. Various generations of CCP leadership have adopted different doctrines, with a significant change following the death of Chairman Mao in 1976 [24, 25]. Before Mao’s death, CCP doctrine focused on revolution centred on class conflict. CCP doctrine immediately began changing following Mao’s death. Accordingly, CCP doctrine constitutes this study’s independent variable, changes to which are discussed through an examination of historical records.

Changes in CCP doctrine influence the intermediate variables, resulting in socioeconomic reform impacting the development, operation, and modification of China’s urban social security system. Although urban social security was designed to indirectly supplement and enhance CCP rule, changes to the ruling party’s doctrine have fundamentally decided the modification of the urban social security system. Following a qualitative analysis, this study divides changes to CCP’s doctrine into two periods, namely, before and after Chairman Mao’s death, when the doctrine changed from focusing on revolution led by class struggle to reform via economic development; these changes are expressed through dummy variables (1, 0) in the co-integration model.
Control Variables: China’s Economic and Demographic Profile and the Maturation of Urban Social Security

According to Wilensky and Lebeaux [28], who first advanced the industrialisation theory and quantitative testing methods, several aspects of state development support the evolution of its social security system: namely, individual economic situations, the maturation of the social security system, and the relative size of the non-productive population. This study considers these variables in the Chinese context, adopting them as references to construct an evaluation model for the development of China’s urban social security system, as well as to test and demonstrate its main hypothesis.

More specifically, although this study seeks to demonstrate that politics is a more powerful independent variable than the economy when examining urban social security, the economic status of citizens is used to identify a state’s economic capacity to support social security. In accordance with extant research and available data, GDP per capita is used to estimate individual economic situations, with the log format used to signify its impact in calculating coefficients. As a control variable, the maturation of the social security system is used to test the correlation between institutional rigidity and the development of social security. The maturation of China’s urban social security system is individually calculated for each period of reform. Finally, as the other control variable, the relative size of the non-productive population in urban areas is used to present the proportion of the population served by the social security system. This variable is used to express the scale of social security recipients in relation to the total population.

These variables comprise the economic, institutional, and demographic factors that have the most significant external impact on the development of a state’s social security. The adoption of these variables enables this study to highlight the decisive impact of the independent variable—both in demonstrating the main hypothesis and in testing current theories regarding the mechanism of social security development.

Dependent Variable: the Development of China’s Urban Social Security System

As the dependent variable, the development of China’s urban social security system is valued both systematically and quantitatively. After presenting the utility of urban social security for CCP governance, this study identifies its features and institutional design preferences by reviewing the modifications to the urban social security system across different periods. Extant research on urban social security—particularly empirical studies published in the respective periods—is used to describe the operation of the urban social security system. The institutional modifications to urban social security are recorded in CCP and government documents. This study applies the abovementioned measures to align pre- and post-economic reform statistical records, thereby enabling a comparison of urban social security records over the study period. This study estimates the system’s efficacy by analysing the priority of benefit distribution, the results of the redistribution, and construct features, among other aspects. Likewise, this study uses data regarding the proportion of GDP expenditure on China’s social security in order to evaluate the
macro-development of social security, with log format used to reveal its impact in calculating coefficients.

Extant studies have examined contemporary China’s urban social security system using both quantitative and qualitative approaches [8, 9, 12, 32]. Employing relevant published material from all levels of government, archival analysis can reveal the structure of and modification to China’s social security system, with these results examined against statistical records. However, this method is more appropriate for the post-reform system, which is more difficult to analyse quantitatively due to a lack of statistical records and detailed research. Scholars prefer to focus their research on contemporary social security and use ‘labour insurance’ to repudiate the pre-reform system as the origin of Chinese social security [16]. Both systematic and quantitative studies are thus needed to address the research gap between pre- and post-reform urban social security in China.

After 1949, the most important change in Chinese politics was the modification of CCP doctrine following the death of Chairman Mao. While the CCP initially set revolution as the central tenet of its doctrine, this shifted to economic reform following the death of Chairman Mao in 1976 [24, 25]. Focusing on reform directed towards economic development, the CCP initiated China’s ‘reform and opening-up’ in 1978 [7, 23]. Testing the impact of this change in CCP doctrine on the operation of urban social security, this study hypothesises that this change decisively reversed the impact of economic development on social security. In order to observe the impact of the change in doctrine, this study analyses and compares the operations of urban social security before and after Chairman Mao’s death. In reviewing the urban social security system, this study determines its characteristics and benefit levels, as well as the CCP’s logic in extending social security coverage.

As noted, this study comprises six observation periods to test the bicorrelations of the four variables cited in popular theory of social security development: namely, the percentage of GDP spent on social security, GDP per capita, the proportion of the non-productive population, and the maturity of the social security system. More specifically, following the theories of Wilensky [27] and Kasza [13] and based on this study’s main hypothesis, this study determines the relationships of the maturity of China’s social security system and its demographic profile, economy, and politics with the degree of expenditure on urban social security. After observing the correlations between these factors, this study tests the explanatory power of the equation drawn from extant theories and verifies the validity of the data. In doing so, this study considers whether the Chinese government’s design and operation of the urban social security system corresponded to changes in CCP doctrine.

In order to test this hypothesis, CCP doctrine (the dummy variable) during the 1952–1976 period (i.e. CCP doctrine centred on class revolution) is set as 1, and CCP doctrine in the period after 1977 (i.e. CCP doctrine centred on reform) is set as 0. As the statistical data are time series, a simple regression model cannot be applied for analysis without testing. Rather, a ridge regression model must be applied first. In applying a ridge regression model, this study found that while the results are acceptable, the DW is 0.8, indicating that spurious regression may exist. A stationary test using the ADF method was then conducted, revealing some non-stationary series, except in the record of GDP per capita. This reiterates that a regression model
cannot be used to analyse the data. However, these variables were integrated in an order of 1. Accordingly, this study tested the co-integration relation among variables using the Johansen procedure and EG two-step methods. After applying the OLS to estimate the long-term static regression equation of these variables, the residuals of the estimation were tested using the ADF method, revealing that the residual was stationary at a 95% significance level. This means that a co-integration relation exists among these variables and can be described by the co-integration model.

Quantitative analysis of the bicorrelation between economic growth, the country’s demography, the maturity of the system, and the development of urban social security in the study period does not reveal the positive bicorrelations predicted by industrialisation theory. Therefore, this study’s hypothesis is quantitatively tested to illustrate the challenge that the Chinese case presents to current explanations, as well as highlight the necessity of this research. In testing this hypothesis, this study examines the correlations between China’s economy, demography, the maturity of the urban social security system, and the development of this system. Then, focusing on modifications to China’s urban social security between 1949 and 1988, this study presents the decisive impact of changes to the CCP regime on social security development.

Changes in Public Expenditure on Urban Social Security, 1949–1988

This study conducted a comparative analysis to identify the main characteristics of the operation of the system expressed by the expenditure on social security in urban China between 1949 and 1988. As Fig. 1 illustrates, GDP expenditure on social security increased rapidly between 1949 and 1988. More specifically, while it increased consistently for much of the 1959–1966 period, it decreased rapidly towards the end of 1966. During the Cultural Revolution (1967–1976), expenditure fluctuated at a markedly low level before increasing rapidly between 1977 and 1988. These changes indicate that the expenditure on social security decreased as class struggle intensified.

![Fig. 1 The percentage of GDP spent on social security 1952–1984. *Resource: the Documents of Chinese Labour Statistic 1949–1985. EXPSI = expenditure on social insurance](image)
Moreover, while the amount of money spent on social security kept on increasing between 1949 and 1988, the proportion of GDP expenditure fluctuated at a very low level. This indicates that the increase in expenditure on urban social security lagged behind China’s general economic growth. As shown in Fig. 2, it is significant that GDP per capita continuously increased, only fluctuating at the beginning of the Great Chinese Famine, the first 2 years of the Cultural Revolution, and the year Chairman Mao died. However, unlike GDP per capita, the proportion of GDP expenditure on social security did not increase beyond the 1957 level until the beginning of the 1980s.

According to Fig. 3, the non-productive proportion of the population quickly and continuously decreased. The decrease in GDP expenditure on social security became more significant as labour conditions and GDP per capita improved. These observations contradict the predictions of the popular theory that the percentage of GDP expenditure on social security will be positively correlated with economic growth and the maturity of the system [13, 28]. Moreover, as China’s urban social security was designed to favour the proletariat, the decrease in the size of the non-productive population cannot be used explain fluctuations in social security expenditure.

The Development Mechanism of Urban Social Security, 1949–1988

The features of China’s social security system between its establishment (1949) and later overhaul (1988) can be summarised as follows. First, the CCP sought to avoid injuring vested interest groups by continuing the pre-existing programmes inherited from the KMT. Second, the CCP tried to strengthen its social revolution while freeing itself from sole responsibility for social security by sharing the operation of urban social security with work units. Third, the CCP government preferred satisfying the social security requirements of those who were important to implementing its doctrine. Fourth, the CCP government used the redistribution function of social security to strengthen existing stratification and class identification. Fifth, the order

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Fig. 2 Amount of GDP per capita and the percentage of GDP spent on social security 1952–1984. *Resource: the Documents of Chinese Labour Statistic 1949–1985
in which social security was expanded was based on CCP doctrine. This summary indicates that there must be a factor that had a more significant impact on the development of China’s urban social security than economic and social factors. This section identifies this factor.

As noted, the development of social security in urban China and the corresponding political changes between 1949 and 1988 can be divided into four sub-periods. It is well-established that a country’s social security development and its economy are closely related, although politics also has a significant influence on social security development. This study argues that the popular theory of social security development is not applicable to the Chinese case. To strengthen this assertion, it is necessary to calculate the possible coefficients of these variables—that is, the proportion of GDP spent on social security, the size of the non-productive population, GDP per capita, and the maturity of the social security system. This study tested the bicorrelations of these four variables in the four sub-periods, as well as the period in which CCP doctrine centred on the idea of revolution (1949–1976). Figure 4 presents the bicorrelations between the four variables in these periods.

As shown in Fig. 4, the bicorrelations of the four variables were reversed twice during the four sub-periods. For the 1952–1958 period, the bicorrelations of the proportion of GDP spent on social security, size of the non-productive population, and GDP per capita are not significant; however, the bicorrelation of the proportion of GDP spent on social security and the maturity of the social security system correspond with what theorists like Wilensky [27] and Kasza [13] suggested. For the 1959–1966 period, the bicorrelations between the proportion of GDP spent on social security, GDP per capita, and the maturity of the social security system are significantly negative. The negative bicorrelation between GDP per capita and the proportion of GDP spent on social security continued to the next period, 1967–1976. The bicorrelation between the proportion of GDP spent on social security and the size of the non-productive population is positive for the two periods of 1959–1966 and 1967–1976, although the bicorrelation between the proportion of GDP spent on social security and the maturity of the social security system becomes insignificant.
Meanwhile, significant negative bicorrelations can be observed between the proportion of GDP spent on social security, the maturity of the social security system, and GDP per capita during the 1952–1976 period. However, the bicorrelations of the proportion of GDP spent on social security and the size of the non-productive population are negative, which constitutes a major challenge to the popular theories of social security development [13, 28]. The changes in these bicorrelations indicate that social security in urban China did not fulfil its design proposes when the CCP ruled according to their doctrine of revolution. Although social security was designed to favour the proletariat, social security expenditure had a positive bicorrelation with the size of the non-productive population. In the 1977–1984 period—that is, the period after the CCP modified its doctrine to centre on reform—the bicorrelations between the proportion of GDP spent on social security, the maturity of the social security system, and GDP per capita correspond with popular theory. However, the bicorrelation between the proportion of GDP spent on social security and the size of the non-productive population size is negative.

As such, neither archival nor statistical analysis supports the use of the popular theory of social security development to illustrate the Chinese case. However, as the popular theory can explain the development of urban social security after Chairman Mao’s death, there must be at least one important variable overlooked by this theory for explaining the

Fig. 4 The bi-variate analysis between the important social factors, economic factors, and the expenditure on social security in each periods of 1952–1984. **Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed). Resource: the Documents of Chinese Labour Statistic 1949–1985
Chinese case. Accordingly, it is necessary to identify the most important change in China that may have influenced the development of urban social security: of the four sub-periods, the modification of CCP doctrine constitutes the most important change. After abandoning their doctrine centred on the notion of class-led revolution as a result of losing control [24, 25], the CCP adopted economic reform [7, 23]. Therefore, this study uses the modification to the doctrine of the CCP as its independent variable, hypothesising that the expression of the impact of social economic growth on social security development was decisively reversed by the change in CCP doctrine.

This study argues that the reversal in bicorrelations is a result of the change in CCP doctrine as the ruling party abandoned the idea of revolution in favour of economic development and reform [25]. This change decisively impacted the decisions and priorities of the official regime, including urban social security. Significantly, the political movements promoted by the CCP to motivate class struggle and revolution undermined the consistency of social security operation and frequently modified its principles.

When correlating the operational modification of China’s urban social security system and changes in Chinese politics, urban social security between 1949 and 1988 can be divided into two general periods: operation under the CCP’s first leader generation (1949–1976) and operation under the second leader generation (1977–1988). The bicorrelations of the four variables were reversed between these two periods.

As the theories of Wilensky and Lebeaux [28] and Kasza [13] cannot explain the data presented in Fig. 4, this study conducted further analysis to demonstrate the main hypothesis and determine the mechanism of the change in the development of urban social security in China. As noted, the modification to CCP doctrine constitutes the most important change in the political history of the People’s Republic of China. Table 2 presents the results of further analysis using the change in CCP doctrine as an independent variable.

**Table 2** The co-integration model of the expenditure on China’s urban social security, 1952–1984

| Residuals | Min | 1Q  | Median | 3Q  | Max  |
|-----------|-----|-----|--------|-----|------|
| −0.44082  | −0.09418 | −0.04545 | 0.10609 | 0.31275 |

| Coefficients | Estimate | Std. Error | t value | Pr(>|t|) |
|--------------|----------|------------|---------|---------|
| (Intercept)  | −1.726760 | 3.313720 | −0.521  | 0.6064  |
| GDPPer       | 15.251140 | 8.799300 | 1.733   | 0.09406 |
| Non-productive | −3.078150 | 4.989520 | −0.617  | 0.54227 |
| legitimacy   | −0.250570 | 0.141900 | −1.766  | 0.08833 |
| Years        | −0.032860 | 0.011080 | −2.967  | 0.00609** |

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘1’
Residual standard error: 0.1808 on 28 degrees of freedom
Multiple R-squared: 0.4651, Adjusted R-squared: 0.3887
F-statistic: 6.087 on 4 and 28 DF, p-value: 0.001179

*Resource: the Documents of Chinese Labour Statistic 1949–1985

GDPPer = GDP per capita; NONPROPOP = non-productive population; EXPSS = expenditure on social security
Table 2 shows the result of co-integration model analysis. The model’s degree of fit is nearly 50%. While the coefficient of GDP per capita and the impact of CCP doctrine on social security expenditure are also significant at the 90% level, the significance of the coefficient of the maturity of the social security system is higher. Based on the results in Table 2, the equation for the mechanism of the operation of social security in urban China in this period can be expressed as follows:

\[
\ln(\text{EXPSS}_t) = 15.25114 \cdot \text{GDPPC}_t - 3.07815 \cdot \text{NONPROPOP}_t \\
- 0.03286 \cdot \text{MATUREITY}_t - 0.25057 \cdot \text{DOCTRINE}_t \\
- 1.72676 + u_t
\]

In this equation, only the coefficient of GDP per capita is positive, while those of the size of the non-productive population, the maturity of the social security system, and the impact of CCP doctrine are negative. As the doctrine of CCP transfers from 0 (after 1977) to 1 (before 1976), the proportion of GDP spent on social security decreases by 25%. This confirms that CCP doctrine constitutes the most decisive variable in the equation.

The coefficient of GDP per capita is positive, which conflicts with the former bicorrelation analysis results. This indicates the existence of another influential variable and impacts the expression of the correlation between the social security expenditure and GDP per capita between 1952 and 1976. The same phenomenon is observed in the expression of the bicorrelation between social security expenditure and the maturity of the social security system. The equation above can explain these paradoxes: the bicorrelations of these variables perform as expected by the likes of Wilensky and Lebeaux [28] and Kasza [13] after CCP doctrine changes from 1 to 0.

Therefore, this study argues that the change in the doctrine of the CCP impacts the expression of the bicorrelations of social security expenditure and other variables. This strongly supports this study’s main argument: a change in the doctrine of the CCP reversed the correlation between economic growth and social security development. However, the expression of bicorrelation between social security expenditure and the size of the non-productive population cannot be perfectly explained by this equation. Rather, the answer to this problem lies in the examination of the design of the urban social security system and its focus on class, as discussed in the “Urban Social Security in Pre-reform China: an Overview” section.

**Conclusion**

Unlike advanced Western countries [27], the improvement in per capita income did not lead to a consistent increase in public expenditure on China’s urban social security between 1949 and 1988. Although located on the margin of the CCP’s governing system, urban social security was an important means of implementing CCP doctrine. Throughout this period, the operation and implementation of China’s urban social security was promoted or interrupted by national political movements. This is reflected in the country’s fluctuating increases in social security expenditure,
which lagged behind economic growth. Moreover, the system’s redistribution function was not very efficient, with social security benefits and resources varying across industries and work units. However, this too reflected CCP doctrine. Designed as a multi-tier system, social security was realised by dividing the extension of coverage according to value and status: the benefits received depended on the recipient’s class status and value to the CCP. Accordingly, the system served to strengthen existing class stratification.

In the Chinese case, the bicorrelations between the development of social security and socio-economic conditions do not align with the predictions of popular theories of social security development. Rather, as this study demonstrates, the doctrine of the ruling party determines social security development. This difference alters the expected impact of the economy and society on social security development. Accordingly, the unequal development of China’s urban social security system can be attributed to the country’s politics, particularly insofar as politics plays a major role in decisions regarding social security expenditure. These findings complement the popular understanding of social security development and offer new insight into social security variation. The results of this study also indicate that the widely accepted correlation between economic growth and social security development is only applicable to specific political contexts.

This study has some limitations. Extant studies have established that the bicorrelation between economic development and the proportion of GDP spent on social security has been significantly positive since Chairman Mao’s death [9]. However, findings regarding the pre-reform period—in which CCP doctrine centred on class-led revolution—underscore the need for further comparative analysis in respect to pre- and post-Mao politics and reform. While, this study conducts detailed comparative analyses of shorter periods of social security development in pre-reform China in order to elucidate the impact of modifications in CCP doctrine, further studies of this nature are required to facilitate and improve regression analyses of Chinese social security development. Indeed, although. Although the very small sample sizes of each sub-period may illuminate unforeseen phenomena, the observation of these sub-periods is only the first step in verifying the results of regression analysis. This limitation will be addressed in future research comprising long-term longtime comparison between China’s pre- and post-reform urban social security.

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