THREE ESSAYS ON RURAL-URBAN INTEGRATION IN CHINA: HEALTH INSURANCE, URBAN IDENTITY, AND SOCIAL JUSTICE

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Three Essays on Rural-urban Integration in China: Health Insurance, Urban Identity, and Social Justice

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Certificate of Originality

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Abstract

This dissertation, comprising three essays, examines the ongoing rural-urban integration in China and its impact on individual citizens. The first essay traces the changing configuration of the Chinese health insurance system from 1949 to 2020. From a policy perspective, the study identifies four stages throughout the health insurance reform history and examines the most recent integration reforms based on an analysis of policies from 31 provinces. The findings highlight the need for systematic adjustments of the hukou-based system to achieve full integration. The second essay builds a theoretical framework to understand the way social insurance enrolment influences urban identification. Using data from the 2018 Urbanization and Quality of Life Survey, it assesses the efficacy of four types of social insurance in promoting urban identification. The study reveals the divergent effects resulting from the institutional boundary formed along China's long-lasting rural-urban disparities. The third essay combines the 2015 CGSS data and the Index of Rural-urban Development Integration of 28 provinces to investigate the influence of rural-urban integration on individuals' perception of social justice. The results suggest that building a more equitable social development system in education, health insurance, and social security would mitigate multi-dimensional inequities, promote social mobility, and boost a sense of social justice. The three essays contribute to a better understanding of China's ongoing rural-urban integration reforms and how they affect individuals' identity and perception in the context of social transitions and institutional adjustments.

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Chapter 1: Introduction

Under the context of a rural-urban dual system, a great body of research has discussed the impact of China's hukou-based institutional design on individuals, economies, and societies. The enlarged rural-urban inequities are considered a result of the previous urban-biased strategies, guided by which more development resources were diverted from the countryside to the cities (Zhang & Kanbur, 2005). The policy goal of the early stage of reforms was to "let some people get rich first" as proclaimed by the Chinese leader Deng Xiaoping. In recent decades, both researchers and governments have criticized that the enlarged rural-urban inequities hindered China from becoming a well-off society (Feng et al., 2009; Gao et al., 2018). Taking measures against these inequalities, the central government has adopted a series of policies oriented towards a coordinating approach of rural-urban development. Under this policy direction, rural-urban integration becomes a predominant trend to guide local reforms in economy, living quality, and social welfare.

Building a universal health insurance system represents one the most important advances in the quest for rural-urban integration. Health insurance coverage ensures the basic right to access affordable health services of individuals. From a societal perspective, a well-established health insurance system also plays a role in supporting equality, social justice, and security of rights and opportunities (Marmot, 2007; Sabates-Wheeler & Devereux, 2008; Gao et al., 2018). The outcome of health insurance reform affects not only the welfare entitlement of every Chinese citizen but also the legitimization of the leadership of the Chinese Communist Party (Huang, 2020). In 2016, the Chinese government announced to build a national unified health insurance system by merging existing rural and urban subsystems. As China is one of the world's most populated countries, this rapid and radical integration has consequences for global health as well as the wellbeing of Chinese citizens and certainly merits research attention.

Studies have demonstrated the ways in which the division of the rural and urban systems in China has shaped the structure of society and the socio-economic status of individuals (Bian, 2002; Whyte & Im, 2014). Few studies, however, have examined the effects of the transition to a rural-urban integrated system. Moreover, due to the lack of empirical data, it is difficult to find studies that measure the degree of integration and its impact on Chinese citizens. According to Howell (2019), the top-down institutional adjustments can reconstruct the distribution rule of power and resources. Therefore, the evolution of the rural-urban integrated system provides a new context for understanding the elements that contribute to individuals' identities and perceptions.

This dissertation seeks to understand the effects of undergoing rural-urban integration reforms. The first essay, "Towards Universal Health Coverage in China: Policy Transitions, Institutional Arrangements, and Reform Suggestions," traces the path of China's health insurance reform in the past 70 years. It illustrates how fragmented rural and urban subsystems were gradually established as a result of hukou-based policy design and institutional arrangements. Using policy documents from the PKU Law's Local Laws and Regulations Database, the study investigates the latest reform stage based on the experiences of 31 provinces. The analysis of administrative authorities, integration patterns, benefit designs, and other institutional deployments shows that, at the provincial level, the integration process has been carried out in a piecemeal fashion and lacks coordination. Detailed guidance and institutional innovation are necessary to effect a transition from rural and urban health care systems to an integrated system. Policy recommendations based on the current reform are discussed.

The second essay, "Disparities in Social Insurance Participation and Urban Identification among In-situ Urbanized Residents in China," investigates the relationship between social insurance participation and identity. While existing literature mostly focuses

on migrant workers, this study is based on data collected from 40 areas that have undergone in-situ urbanization and estimates the efficacy of four major social insurance schemes in promoting urban identification on the part of residents. The study reveals that both urban health insurance schemes and the newly integrated health insurance program have a positive effect on establishing urban identity. The findings support the first essay by providing empirical evidence of the impact on identity of various social insurance programs. The study also highlights the need to build an equitable, efficient, and equal-access social insurance system in China.

The third essay, "Towards a More Equitable Society? Rural-urban Integration and Perceived Social Justice in China," takes a broader view: it explores the impact of China's rural-urban integration on citizens' perceptions of justice. Drawing on data from the 2015 CGSS and the yearbook of the Index of Rural-Urban Development Integration of 28 provinces, this study examines whether rural-urban integration in economy, quality of life, and social development are factors in individuals' perception of social justice. Using three-level mixed-effects models, the results suggest that the current reforms to build a more integrated social welfare system have enhanced citizens' perception of social justice nationwide. Meanwhile, rural-urban integration of economy and quality of life have given a rise to the "critical citizens" phenomenon. Like Essays 1 and 2, the third study deals with the effects of measures that promote rural-urban integration reform.

Chapter 2: Towards Universal Health Coverage in China: Policy Transitions, Institutional Arrangements, and Reform Suggestions

Abstract

In the past few decades, the Chinese government has made repeated efforts to build a consolidated health insurance system for all the citizens. The introduction of the Urban and Rural Resident Medical Insurance (URRMI) scheme in 2016 marked a critical stage in the reform process. The study provides a retrospective review of the changes in policy and institutional arrangements that have characterized China's health insurance reform. The study identifies four essential stages of reform, which correspond to a movement from rural-urban division to integration. Based on data from the PKU Law's Local Laws and Regulations Database, this study further reveals that the recent push towards further integration has been problematic. Analyses of administrative authorities, integration patterns, benefit packages, and other institutional deployments in 31 provinces show that, at the provincial level, the integration process has been haphazard. Drawing on the examples provided by other local and global reforms, this study suggests that national-level guidance, a feasible implementation plan, and institutional innovations are the key elements for future policy adjustments.

Keywords: Health insurance integration, Universal coverage, Policy transitions, Institutional arrangements, China

Introduction

Achieving universal health coverage, which ensures that all individuals are provided with affordable health services, is one of the main features of the Sustainable Development Goals set out by the United Nations in 2015 (WHO). Universal health coverage would require raising revenues for health care, strengthening health systems, and improving social risk protection in many low- and middle-income countries (Evans & Etienne, 2010). The ultimate goal of such coverage is to provide equitable, affordable, and efficient health care for all citizens (Lagomarsino et al., 2012). A number of countries have achieved universal health coverage via social insurance. Cambodia, South Africa, and Malaysia are considering a shift to social health insurance, while Thailand, the Philippines, and Indonesia have embarked on the process (Carrin & James, 2005; Tulchinsky, 2018). Globally, health insurance reform is one of the top issues on policy agendas.

China, like many other countries, has made its commitment to build a social insurance system to meet public demand for health coverage. The basic plan for a social health insurance system is to collect contributions from various units and pool health risks among social members. It is believed that a social insurance system can provide stable funding for health insurance protection, which would eliminate the underfunding experienced by health care providers (Bhattacharyya et al., 2011). The social health insurance system in China consists of three major insurance schemes: the New Rural Cooperative Medical Scheme (NRCMS) scheme for rural residents, the Urban Employee Basic Medical Insurance (UEBMI) scheme for urban employees, and the Urban Resident Basic Medical Insurance (URBMI) scheme for urban residents not covered by UEBMI. Targeting different rural and urban populations, this system was characterized with a hukou-based institutional design, which in turn has limited its flexibility and capacity to deal with the growing demands of health insurance (Yip et al., 2019; He & Wu, 2017). In 2009, the Chinese government stated

the goal to establish a consolidated health insurance system by 2020 (Central Committee of CCP and State Council, 2009a). In line with this goal, in 2016, the new scheme, the Urban and Rural Resident Medical Insurance (URRMI), was introduced by merging existing health insurance programs (Central Committee of the Communist Party and State Council of China, 2016). Today, this health insurance system, the largest in the world, is facing challenges in its endeavor to effect a completely unified system. Against this backdrop, this article addresses the following questions: How has China's health insurance reform shaped its path towards a unified health system? Was the stated goal of social health insurance reform achieved by 2020? What progress has been made in promoting a national unified program in China? What lessons can be learned from the current reforms?

The literature on China's health insurance reform has focused on three aspects. First, there are studies that stress the necessity of social insurance integration, given the fragmentation and inefficiency of the current social insurance system. They argue that building a unified program would narrow the existing rural-urban gaps and the consequent social inequities (Chen et al., 2018b; Wang et al., 2012a). The establishment of a more equitable health insurance system is also viewed as an indication of the government's determination to pursue the goals of equality and justice (Liu et al., 2017). Second, a growing body of studies have suggested integration measures based on some pilot reform experiences (Zhou & Zhuang, 2014; Fu et al., 2017; Yang & Liu, 2014). The findings indicate that one of the main obstacles to effective integration lies in the risk pooling design (Zhu et al., 2017). The third group of scholars have undertaken various empirical investigations on the effects of health insurance integration. Zhao et al. (2019) demonstrate the impact of health insurance integration on health service utilization. Other studies examine the relationship between URRMI enrollment and medical expenditure (Liu et al., 2018; Wang et al., 2020a), inpatient

care benefits (Yang et al., 2018), and health outcomes (Huang & Wu, 2020), and health care utilization behavior (Li et al., 2019).

Few researchers, however, have taken a long-term perspective to investigate the changing configuration of China's health insurance system. Meanwhile, as the nationwide unification reform has been endorsed by the central government, it is not clear whether this transition goal has been translated into effective policies and procedures in lower levels of government. Building on previous studies, this article aims to provide an overview of health insurance reform policies in China over the past seven decades. It also supplies an update on the recent integration reforms conducted by provincial governments. With reference to policy documents from the PKU Law's Local Laws and Regulations Database, the article evaluates provincial integration strategies from the perspectives of administrative arrangement, implementation patterns, benefit design, and other institutional deployments. The article provides policy alternatives based on the ongoing integration reform in China.

This article structures as follows: Section 2 provides an analysis of the four stages of policy reform from 1949 to 2020. Section 3 examines the current progress towards integration in terms of the promotion of URRMI in 31 provinces.[1] Suggestion for policy adjustments for future reforms are provided Section 4. Section 5 presents the conclusions of our research.

The evolution of China's health care system from 1949 to 2020

Since the founding of the People's Republic of China (PRC) in 1949, China has been committed to establishing and improving its health insurance system. The long process to achieve universal health coverage in the country has been unique. From a policy perspective,

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[1] The 31 provinces refer to 31 China's provincial administrative units, including 22 provinces, 4 centrally administered municipalities (Beijing, Tianjin, Shanghai, Chongqing), and 5 autonomous regions (Guangxi, Inner Mongolia, Tibet, Ningxia, Xinjiang).

this section reviews China's health insurance system reform in history and its institutional dynamics towards unification.

According to previous research, the term "institution" is defined as a broad range of constraints to structure political, economic, and social interactions (Ostrom, 1990; North, 1991). The institutional arrangements include formal rules such as policies and informal constraints such as traditions (North, 1991). In China's case, the establishment of health insurance system evolves a series of hukou-based institutional deployments, undertaken in different reform stages.

The first stage of China's health insurance system (1949–1998)

After the foundation of the PRC, the Chinese government strictly controlled resource allocation system to promote urban development in order to achieve economic recovery (Appleton et al., 2014). Three health insurance programs were established during this "command and control" era. The Co-operative Medical System (CMS) was established for rural population. For urban population, the Labor Insurance Scheme (LIS) covered state-owned enterprises employees, retirees, and their dependents. The Government Insurance Scheme (GIS) covered governmental officials and staff, university teachers, and students.

The institutional arrangements for these three programs were shaped by the structure of the planned economy. In a planned economy, health insurance provision hinges on the employment system (Qin et al., 2014). Each urban worker was assigned to a working unit (danwei), while farmers were organized into each community based on the collective ownership of land. With more resources invested in the provision of public services in urban centers, urban workers were given more comprehensive welfare entitlements provided through their danweis (Saunders & Shang, 2001). Farmers, however, were expected to follow the principle of "standing on their own feet": rural workers and committees became the primary providers of their own public services, with meagre support from local government

(Chan & Peng, 2011). This division was further entrenched after the household registration system (hukou)[2] was introduced in 1958, which reinforced the dual rural-urban administration (Cheng & Selden, 1994).

With the advent of marketization and opening-up reform, a rural-urban segmented health insurance system showed its vulnerabilities. The economic reforms initiated in 1978 confirmed the transition to a market economy, and the privatization process was accelerated in both rural and urban sectors. In the countryside, the collective farming mechanisms were replaced by the household responsibility system, which undermined the institutional foundation of CMS (Chan & Peng, 2011). In the cities, market-oriented reforms and privatization caused millions of employees to lose their jobs as well as their health insurance protection. Chinese policy-makers were caught off-guard by the drastic challenges brought about by market-oriented transformation. The traditional health insurance programmes collapsed quickly.

The shaping of China's health insurance system (1998–2009)

Beginning in the 1990s, China implemented a whole series of policies to rebuild a nationwide system through the creation of social insurance platforms. The first social insurance program, the Urban Employees Basic Medical Insurance (UEBMI), was introduced in 1998, aiming to replace the previous LIS and GIS programs. UEBMI offered a comprehensive range of benefit packages to urban workers and urban retirees.

China did not replace the social welfare system for rural residents until 2003. The outbreak of severe acute respiratory syndrome (SARS) impelled the Chinese government to take prompt action (Barber & Yao, 2010). In 2003, a social insurance program for rural residents, the New Rural Cooperative Medical Scheme (NRCMS), was launched in rural areas. Unlike CMS, NRCMS improved its funding system and introduced risk pooling at the

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[2] The Chinese hukou system classifies each citizen as either rural or urban and distinguishes local and non-local residents depending on their place of hukou registration.

county level. The Urban Resident Basic Medical Insurance (URBMI) was introduced in 2007, targeting migrant workers and unemployed urban residents such as young children, students, and the elderly. The social risk pooling of URBMI and UEBMI were both at the prefecture level.

From 2003 to 2009, the three social insurance schemes underwent major expansion due to financial and social stimuli. Mindful of the problems arising from underinvestment in the previous system, the government made sizable contributions to public health development (Rao et al., 2010). The increased financial investment contributed to health insurance coverage expansion. The number of NRCMS enrollees increased tenfold, with the participation rate increasing from 75% to 94% among the rural population (Qin et al., 2014). The number of pilot cities for URBMI grew from 79 in 2007 to 317 by October 2008 (Central Committee of the Communist Party and State Council of China, 2007). By the end of 2010, the multiple social insurance schemes had covered the vast majority of Chinese citizens.

The new policy goal to building a more inclusive social welfare system also shaped China's health insurance reform. During the period from 2002 to 2013, when China was under the leadership of Hu Jintao and Wen Jiabao, a number of far-reaching policy changes were initiated to narrow social welfare gaps (Zheng & Tok, 2007). For the first time, a set of social policies was introduced with the aim of reducing rural-urban inequities and extending social insurance protection for previously unprotected populations (Gao et al., 2019). According to Howell (2019), the policy changes and institutional adjustments during the Hu-Wen era have arguably restructured a more equitable distribution rule of resources and opportunities. It is undoubted that the idea of equality promoted during this stage has guided China's health integration reform in the long run.

The adjustment period of China's health insurance system (2009–2016)

During this reform stage, the focus of China's health initiatives shifted from establishing a framework to performing systematic adjustments. The landmark reform plan announced in 2009 marked a break from earlier practices. The Chinese central government issued "Opinions on Deepening the Health Care System Reform" (hereinafter "the Plan") (Central Committee of the Communist Party and State Council of China, 2009a). The Plan outlined a wide range of goals to be achieved during a three-stage reform. The first stage of the reform would target five goals: accelerating the growth of the basic health insurance system, establishing a national basic drug system, improving medical and health services, gradually promoting equal access to social health services, and boosting the pilot projects of public hospitals (Central Committee of the Communist Party and State Council of China, 2009b). Between 2012 and 2015, the second stage of reform focused on improving the basic health insurance for all citizens, reducing the inequities in the essential drug system, and deepening the reform of public hospitals (Central Committee of the Communist Party and State Council of China, 2012). The third stage, which was initiated in 2016, aims to further enhance the availability, equality, and affordability of the health care system (Yip et al., 2019).

Meanwhile, laws and regulations initiated during this reform stage have gradually formed a supportive institutional basis for the health care system. In October 2010, the Social Insurance Law was introduced, which was the first time that the country's top legislature had regulated the social insurance system. The Social Insurance Law is considered a milestone in the construction of China's social insurance system as it provides a legal basis for the overall planning of the health care systems in rural and urban areas (Rickne, 2013). Social Assistance Regulations was further issued by the government in 2014, to ensure the special assistance to more vulnerable groups and strengthen the legislation of the social welfare system. Some

provinces have also attempted to loosen the ties binding social welfare provision to enhance the transferability of local health insurance programs (Cheng et al., 2014).

Although the reform efforts have contributed to the goal of universal coverage, the disparity between rural and urban insurance programs remained due to the serious hukou-based segmentations. In specific, rural and urban insurance schemes were operated and administered independently. While the Ministry of Health was in charge of administering NRCMS, URBMI and UEBMI were administered by the Ministry of Human Resources and Social Security. There was no central agency responsible for health insurance management. For each insurance program, its target population, revenue collection, eligibility criteria, and benefit package were coupled to registration locality and hukou status. Even within the same program, the benefit levels of NRCMS and URBMI varied across regions, and there remained a marked gap between these two schemes and UEBMI (Li et al., 2017).

The integration period of China's health insurance system (2016–2020)

In a recent decade, the long-lasting systematic division in health insurance system has become the main obstacle to meet a growing demand of social protection. First, the systematic segmentation severely restricts flexibility of access to social services. Cities now house millions of migrants and in-situ urbanized residents, but the current system acts as an institutional barrier to urban insurance services. Second, the current social insurance system is inefficient and has failed to match the pace of urbanization. One of the main goals of recent urbanization program is to meet the basic needs of individuals (Chen et al., 2017), but in the context of social insurance provision, the benefits available to previously rural residents are so limited that they fail to reduce financial burdens and lead to social exclusion (Cheng et al., 2015; Müller, 2017). Third, the general public's demand for a more equitable system has become more vocal: discontent due to the unfair distribution of benefits is likely to lead to

social unrest and instability (Munro & Duckett, 2016; Yip et al., 2019). Given these circumstances, the consolidation of the various health insurance systems requires policy-makers' urgent attention.

In early 2016, the State Council issued the "Opinion on integrating the basic medical insurance systems for rural and urban residents" (hereinafter "the Opinion") to build a national unified health insurance system by merging existing rural and urban insurance schemes (Central Committee of the Communist Party and State Council of China, 2016). The Opinion confirmed the long-waited integration reform and endorsed a plan to build URRMI nationally. The integration reform shares the consistent goal of people-oriented urbanization, that is, to provide more equitable welfare entitlement to rural and urban populations. The establishment of URRMI is also considered advance towards the third stage of reform planned in 2009, which reflects the government's strong commitment to universal health care (He & Wu, 2017). Guided by the Opinion, provincial governments have complied with the central government's mandates by releasing the official guidance of local integration plans. China's health insurance reforms have been mainly centered on the promotion of URRMI.

Recent progress of integration reform: an analysis of provincial policy

To investigate the recent integration progress, provincial government regulations and documents related to health insurance integration were collected from the PKU Law's Local Laws and Regulations Database (available at http://www.pkulaw.cn/). The Opinion specifies that local governments should pursue unification of coverage scope, social risk pooling, benefit package, catalogues of reimbursable drugs and services, administrative authorities, and funds management. Accordingly, this study focuses on four specific aspects of local integration in policy design: administrative authorities, integration patterns, benefit packages, and other institutional deployments.

Provinces were chosen as the unit of analysis for several reasons. First, top-down policy guidance of the Chinese central government allows provincial governments to make modifications and practical plans based on their local conditions. Prefecture- or county-level governments make more concrete plans and carry them out under the guidance of provincial governments accordingly. Thus, the integration strategy adopted by province-level governments plays a dominant role in shaping local policies. Second, for purposes of comparison, reform proposals are more available and consistent at the provincial level. Official annual reports and policy documents are more consistent than those of sub-provincial governments, where information is not comparable or complete. Third, the health insurance integration at province level is the precondition of building a national unified health insurance system. The comparison of province-level integration strategies should provide valuable information in order to close the inter-province gaps in equalizing the benefit packages and the institutional administration system for all enrollees.

Timeline of releasing provincial integration guidance

The Opinion set a deadline for local governments to propose their own integration plan: all provincial governments were required to complete the policy design and deployments by June 2016 and draft a plan of local integration reform by the end of December 2016. The provinces responded to this by releasing their own provincial version of the Opinion to guide local integration reforms. Relevant policy documents were released under the title of "Implementation opinion of (province name) on integrating the basic medical insurance systems for rural and urban residents" (hereinafter 'Implementation Opinion'). As shown in Table 2.1, only eight provinces took initiative to implement health integration reform in advance, and most provinces began their integration as a policy response to the central government after 2016.

Researchers have argued that the policy adoption of health integration reform can be determined by several factors. For instance, local integration reform is associated with the political will of local governments, the governance ability to narrow the gaps between the subsystems, or other external environmental conditions, such as local fiscal capacity and urbanization level (Zhu, 2018; Li, 2014; Huang & Kim, 2020). A group of studies also indicate that the motivation to promote health insurance reform can be driven by the characters of local leaders, that is, how leaders respond to social needs based on their consideration of political interests (Huang, 2004). According to Huang and Kim (2020), health insurance reform that involves vertical integration of rural and urban insurance programs may lead to distributive conflicts and bureaucratic reorganization. Under this circumstance, top-down pressure from the central government is a dominant driver for local policy adoption. Results in Table 2.1 echoes Huang and Kim (2020) by showing that the top-down pressure for compliance has been driven the policy adoption of building URRMI at each province. The timeline further shows that at the national scale, the integration reform has received policy attention, albeit at different paces, from 31 provincial-level governments by the end of 2019.

Table 2.1 Timeline of releasing provincial integration guidance in 31 provinces

Province	Integration time	Order	Province	Integration time	Order
Qinghai	2008.05	1	Guangxi	2016.10	17
Tianjin	2010.04	2	Shanxi	2016.11	18
Guangdong	2012.03	3	Gansu	2016.11	19
Ningxia	2012.10	4	Heilongjiang	2016.11	20
Chongqing	2012.12	5	Jilin	2016.12	21
Shandong	2014.01	6	Sichuan	2016.12	22
Zhejiang	2014.12	7	Anhui	2016.12	23
Shanghai	2015.12	8	Hainan	2016.12	24
Hebei	2016.05	9	Jiangsu	2016.12	25
Inner Mongolia	2016.06	10	Guizhou	2016.12	26
Jiangxi	2016.06	11	Hubei	2017.03	27
Hunan	2016.07	12	Fujian	2017.06	28
Xinjiang	2016.07	13	Beijing	2017.10	29
Yunnan	2016.08	14	Tibet	2018.10	30
Henan	2016.10	15	Liaoning	2019.07	31
Shaanxi	2016.10	16			

Integration strategies based on four aspects of policy design

The administrative authorities of integration reform

Local administrative bodies have assumed the main responsibility for the design and implementation of the integration policy. In the Opinion, the central government advised local authorities to streamline the management systems and consolidate the administrative functions for the operation of an integrated system. The Opinion did not, however, specify which department would deal with these issues or provide detailed guidance on how this new administrative authority would be established. As a result, there was significant variation among the 31 provinces in the choice of bureaucracies to be in charge of local integration reforms. As shown in Table 2.2, these arrangements fall into four patterns:

(1) In 21 provinces, the integration process is led by the Ministry of Human Resources and Social Security of local government.

(2) Shaanxi proposed that the Ministry of Health take charge of local health care integration.

(3) Fujian set up an independent Healthcare Security Administration to implement URRMI. The committee reports to the medical security management office and is in charge of integration planning and responsible for assigning responsibilities to other ministries, including the Ministry of Health, the Ministry of Finance, and the Ministry of Civil Affairs.

(4) There are six provinces that divided responsibility for local integration reforms over several local ministries.

As noted above, a significant majority of provincial governments assigned the implementation of the integrated system to the Ministry of Human Resources and Social Security. Only Fujian province assigned an independent medical security management committee affiliated to the Ministry of Finance. Provinces such as Gansu, Julin, and Guizhou have divided the responsibility of integration policy design and implementation among several authorities.

The Ministry of Human Resources and Social Security (MOHRSS) was in charge of previous URBMI and UEBMI schemes and was assumed as the most cost-effective body to lead the integration (Zheng, 2007; Li, 2014). Following this rationale, most of the provinces have considered local MOHRSS to take charge of integration reforms. The unification of administrative bodies is essential in dealing with the potential interests conflicts during integration reforms. According to relevant studies, merging administrative offices and staff provides the foundation to create the uniformity of risk pooling, benefit package, and information system (Müller, 2017). As shown in Table 2.2, however, the institutional segmentation of the integrated schemes remains across 31 provinces. As a result, multiple

administrative authorities with disparate responsibility are likely to hinder effective

coordination in future integration actions.

Table 2.2 Assigned administrative authority in integration documents of 31 provinces

Assigned administrative authority of local government	Provinces
Ministry of Human Resources and Social Security (MOHRSS)	Chongqing, Tianjin, Ningxia, Shandong, Shanghai, Qinghai, Hebei, Hubei, Inner Mongolia, Jiangxi, Xinjiang, Hunan, Guangxi, Yunnan, Henan, Guangdong, Zhejiang, Shanxi, Heilongjiang, Jiangsu, Beijing
Ministry of Health	Shaanxi
Ministry of Healthcare Security	Tibet
Ministry of Finance	Fujian
Several bureaucracies	Gansu, Jilin, Guizhou, Hainan, Sichuan, Anhui, Liaoning

Provincial guidance on integration patterns

Unification can take multiple paths. Table 3 illustrates several patterns can be seen in the

adopted integration strategies of the 31 provinces:

(1) The pattern of merging three into one: The unified program is established by merging

URBMI, NRCMS, and UEBMI into URRMI. At present, only Guangdong and Fujian

have followed this pattern. The unified scheme provides health care service to all

population groups.

(2) The pattern of merging two into one without restrictions: Twenty-two provinces are

taking a step at a time by consolidating the NRCMS and URBMI schemes into the

integrated program first and then considering the next step. Without other institutional

restrictions, all rural and urban residents are eligible to access the integrated URRMI

scheme.

(3) The pattern of merging two into one with hukou restrictions: Beijing, Tianjin, Shanghai,

Zhejiang, Chongqing, Qinghai, and Ningxia have created an integrated program but

specified that eligibility for the URRMI scheme is only for students or people with a local

hukou.

Regarding the first pattern, Guangdong and Fujian province have consolidated the three health insurance programs, which represents a typical consolidation mechanism. Consolidating three social insurance programs by this direct approach is challenging. The success of Guangdong and Fujian depends on several preconditions. From the supply side, the local fiscal resources and social risk are critically important (Ratigan, 2017; Meng & Su, 2021; Huang, 2015). Local governments with higher fiscal strength and social risk are more capable to extend generous health insurance benefits. Also, the rural-urban welfare gaps in Guangdong is relatively small. From the demand side, labor-inflow regions tend to be more initiative to promote the employment-based insurance reform, allowing migrant workers with formal employment positions to enter the local welfare system (Huang, 2015). The consolidation of all three schemes together will increase local health insurance coverage more efficiently while minimizing potential social instability (Fu et al., 2017).

If some of these preconditions are not satisfied, it may be preferable not to unify radically at the beginning. As illustrated in Table 2.2, Hebei Province has consolidated the NRCMS and URBMI, representing another typical consolidation mechanism. Other provinces including Shanxi, Inner Mongolia, and Liaoning all followed the similar approach. The stepwise integration strategy is more feasible because NRCMS and URBMI share many similarities in program design (Meng et al., 2015). For the second type of this integration pattern, seven provinces still consider hukou a criterion for welfare entitlement and administration. The remained hukou restriction will turn to obstacles for the operation of the newly integrated system. More importantly, no matter which approach is followed, the essential subsequent step is to make these integrated schemes transferrable across regions, but this has not received sufficient policy attention at the provincial level.

Table 2.3 Integration patterns for URRMI in 31 provinces

Integration pattern	Provinces
Three insurance schemes integrated into one covering urban employees and rural and urban residents with a local hukou	Guangdong, Fujian
Two insurance schemes for rural and urban residents integrated into one covering the previously insured populations	Hebei, Shanxi, Inner Mongolia, Liaoning, Jilin, Heilongjiang, Jiangsu, Anhui, Jiangxi, Shandong, Henan, Hubei, Hunan, Guangxi, Hainan, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Xinjiang
Two insurance schemes for rural and urban residents integrated into one, but the integrated program is only eligible to those with local household registration or full-time students	Beijing, Tianjin, Shanghai, Zhejiang, Chongqing, Qinghai, Ningxia

The level of benefits in the integrated scheme

As required by the Opinion, local integration reform should provide equitable benefit package for the insured. The welfare standards designed by provincial governments, however, show different approaches to the level of welfare that unification will provide. According to Table 2.4, Tianjin, Shanghai, Chongqing, Jiangxi, Qinghai, and Ningxia have stated the policy goal to build a unified set of welfare criteria across the province. Provinces such as Liaoning, Jiangsu, and Zhejiang plan to provide city-level benefits for all, so the unification process requires upgrading the diverse range of criteria systems within the province. Provinces such as Shanxi, Inner Mongolia, and Shandong do not clearly state the level of benefits that they intend to provide in their integrated system. According to Table 2.4, it is clear that the unification level of welfare entitlement varies both within and across provinces.

Three provinces—Tianjing, Chongqing, and Ningxia—have set various levels of benefit packages corresponding to payments made into the scheme. The welfare levels of the integration programs also vary across different groups in Shanghai. Government representatives in Qinghai and Jiangxi have stated that welfare in the province should be unified but do not specify the integration details. Meanwhile, some governments have

concentrated on closing the gaps in catalogues of reimbursable drugs and services of the integrated programs. In Hebei province, for example, the rural residents will receive a benefit package equivalent to that of urban residents. Drugs in the NRCMS list were extended after integration of the two schemes because more drugs are covered in the URBMI list. Provinces such as Jilin, Shanxi, and Guizhou have also attempted to introduce a supplementary package covering diseases with potential catastrophic expenditure for both rural and urban residents.

Equalizing the benefit packages of all enrollees at the provincial level is one of the objectives of URRMI. However, this is particularly challenging for provinces with huge internal disparities (He & Wu, 2017). In the integration of NRCMS and URBMI, the risk pooling and administrative management of NRCMS will be raised from the county level to the prefecture level. Closing the welfare gap between these two programs and UEBMI would further require the government to allocate more public resources to subsidize the premiums of the enrollees. To achieve this unification goal, the integration reform not only requires financial support from government, but also calls for improved risk pooling design to ensure stable funds (Müller, 2017). However, the current provincial integration policies demonstrate that these problems are not addressed at present.

Table 2.4 The levels of welfare offered by URRMI across provinces

Welfare level design	Provinces
Set a unified welfare criteria at the provincial level	Tianjin, Shanghai, Chongqing, Jiangxi, Qinghai, Ningxia
Set a unified welfare criteria at the city level	Beijing, Liaoning, Jiangsu, Zhejiang, Fujian, Henan, Guangdong, Sichuan, Guizhou
Establish and gradually implement a unified system of benefits (but no level specified)	Hebei, Jilin, Heilongjiang, Anhui, Hubei, Guangxi, Hainan, Yunnan, Xinjiang, Tibet, Shaanxi
No mention of the unification of welfare criteria	Shanxi, Inner Mongolia, Shandong, Hunan, Gansu

Other institutional deployments guided by provincial government guidance

For quite a long time, hukou had played an important role in determining health benefits and maintaining the rural-urban segmentation. In seeking to build a unified welfare system, the

current reform should pay attention to the supportive hukou reforms (Zhu & Österle, 2017). Informed by the Implementation Opinions, provinces such as Zhejiang, Qinghai, and Ningxia still consider hukou status a criterion in their establishment of an integrated social insurance system. As a result, institutional barriers to full integration will persist. The hukou restrictions applied to the current reform will obstruct its goals and implementation (Liu et al., 2017).

In addition, consolidating social insurance schemes will not automatically lead to improvements in efficiency and health service quality of the newly integrated system. Appropriate institutional adjustments are needed to upgrade its operational mechanisms. For example, provider payment mechanisms and information systems are the two keys to support efficient health service provision (Meng et al., 2015). As the Implementation Opinions make clear, around half of the 31 provinces do not specify the plans to deal with these issues. Furthermore, the lack of the institutional design for inter-province integration will also lead to substantial problems in future reforms.

Summary

The achievement of universal health coverage in China largely depends on the success of consolidating the social health insurance schemes. The implementation of integration reforms has been ongoing. Analyses confirm that the political will to unify rural and urban health care systems is clear and provincial governments have responded to the call for reform. The determination to effect this reform, however, has not been successfully translated into systematic policies and procedures in lower levels of government. The absence of clear guidelines from the national government is one of the most crucial constraints. Local governments have variously interpreted the key elements of the integration policy. The current integration reform process lacks not only consistent institutional adjustments but also coordination within and between provinces. As a result, future integration reforms will be carried out slow and lack of coordination.

Suggestions based on the current reforms

There are lessons to be learned from the recent reform that can help us promote China's health insurance reform. This section examines policy alternatives for future development. The suggestions highlight several requirements: central government must propose an institutional design and strategic guidelines; at the local level, there must be a flexible and long-term coordinated integration plans; and innovative institutional and policy adjustments must be made.

First, the provision of a design and long-term guidelines for integration from the national government is critically important. The reform goals outlined in the Opinion constitute a first step, but long-term guidance based on a commitment to consolidation still needs to be clearly specified. The guidelines should confirm a clear consolidation framework to ensure that the objectives and principles of equality and efficiency are emphasized, the administrative responsibilities of national and local governments are stipulated, and the necessary institutional adjustments are implemented (Liu et al., 2017).

Second, reform at local level should follow a flexible and coordinated approach. The varied pace of health insurance consolidation across regions is a phenomenon that is common in global experiences (Carrin & James, 2005). Given the differences in economies, cultures, and local governments across regions, local reform should adopt a flexible strategy to meet the goals within its specific context. Provinces with advanced economies or high insurance demands could consolidate health schemes by taking the three-into-one integration approach, while relatively underdeveloped provinces, such as Gunagxi, Guizhou, and Tibet, are more likely to succeed with a step-by-step strategy. The central government should provide additional financial and policy support in areas where sufficient resources are lacking. As long as the goal of unification and the key elements of the policy design remain consistent, local governments should be given discretionary powers to come up with feasible plans.

Furthermore, it is essential to close the gaps caused by the uneven pace of reform strategies and to ensure that these integrated programs are transferable. The current integration plan must include a long-term strategy to strengthen coordination between integrated programs and cross-border co-operation.

Finally, the promotion of integration reform requires institutional innovation. In the case of Germany, for example, a risk adjustment mechanism was introduced to redistribute risks in the integrated system and legislation was introduced to make consolidation reform compulsory (Bärnighausen & Sauerborn, 2002). In the case of China, its hukou-based health insurance system has been characterized by dual rural-urban divisions. To achieve the goal of effective integration, reform measures are needed to loosen hukou-related restrictions and restructure a supportive institutional system (Phua & He, 2013). Also, consolidation will not automatically lead to improvements of efficiency, therefore, local officials should adopt innovative policy design and institutional deployments to ensure the operation efficiency of the new integrated system.

Conclusion

The past can provide lessons for the present. China's health insurance reform has witnessed an evolved path from rural-urban division to integration. In analysis of the current practices to promote URRMI, this article traces the changing configuration of China's health insurance system from 1949 to 2020. To address the first research question (How has China's health insurance reform shaped its path toward a unified health system?), the study argues that there have been continuous policy changes and institutional adjustments to support the trend from rural-urban division to integration, but the institutional legacy of the hukou system remains the main obstacle to the eradication of segmentation across various schemes. In the face of

emerging challenges, the introduction of URRMI is not an end but a critical beginning to build a truly equitable, equal-access, and efficient health insurance system.

The second research question (Was the stated goal of social health reform achieved by 2020?) must receive a qualified answer. There is certainly the political will for the integration reform and this transition has received nationwide policy response. To date, however, the principle of unification has not been translated into effective integration plans and institutional deployments. The current integration reform has been carried out in a piecemeal manner. This finding also pertains to the third research question (What progress has been made in promoting a national unified program in China?). Progress has been hampered by the fact that the policy designs of the 31 provinces lack long-term coordination and cross-regional transferability. Finally, in response to the fourth question (What lessons can be learned from the current reforms?), the study found that these experiences support the need to establish detailed national guidelines, flexible local consolidation patterns, and innovative institutional and organizational arrangements.

Countries and regions that have consolidated their health insurance have shown a significant reduction in administrative costs and improvements in efficiency (Evans & Etienne, 2010; Fu et al., 2017). In the long run, unification of the health insurance systems in China can not only facilitate labor mobility but also promote social integration (Chen, 2017). Strategic reform plans are urgently needed at the current reform stage. The Chinese government needs to grasp this opportunity to integrate the current health insurance schemes into a new promising scheme. It is also vitally important, given the differences among the UEBMI, URBMI, and NRCMS schemes, that policy-makers should ensure equality during the rural-urban integration transition and abolish institutional discrimination.

This study has several limitations. First, it focuses on the progress of integration at the provincial level, so the consolidation of schemes that was undertaken in municipalities or

prefectures was not fully explored. Second, the study adopted the perspective of policy design in analyzing integration reform policies. The implementation of policy, however, depends on the government's practical capacity. While implementation is linked with design, there can certainly be gaps that lead to differences in outcomes (Easton, 1979). More statistical data is needed for further policy evaluation in follow-up research.

Chapter 3: Disparities in Social Insurance Participation and Urban Identification among In-situ Urbanized Residents in China

Abstract

Although studies have suggested that social insurance plays a role in encouraging urban identification, empirical evidence in this field remains scarce. Highlighting the identity construction experience of in-situ urbanized residents, this study assesses the efficacy of major health and pension insurance in promoting a sense of urban identity. We analyze data from the 2018 Urbanization and Quality of Life Survey (N=3,229) conducted in 40 localities that undergo in-situ urbanization. The multi-level modelling results show that those participated in urban insurance schemes such as the Urban Employee Basic Medical Insurance (UEBMI) are more likely to identify as urban. Enrollment in the New Rural Social Pension Scheme (NRSPS), however, has a significant negative impact on urban identification. There is also an effect variance caused by the interaction of social insurance and hukou status. To promote people-oriented urbanization, it is essential to build an equitable, efficient, and equal-access social insurance system for all Chinese citizens.

Introduction

As a result of the rapid urbanization in recent decades, China is undergoing a process of transformation, which can be attributed to two independent phenomena (Chen et al., 2015). The first, which has received a great deal of research and policy attention, was the influx of more than 200 million internal migrants from the rural countryside to cities and towns (Chan, 2013). The second, which is less researched, is in-situ urbanization, whereby former villagers become urban residents as a result of the reclassification of their home as urban instead of moving to the city (Friedmann, 2005). In March 2014, the Central Committee of the Communist Party and the State Council jointly released the National New-Type Urbanization Plan (2014–2020), which marked the official start of a new era of urbanization (Wang et al., 2015). While the plan contains various specific policy targets, the most important one is a guiding principle shift for future urbanization, that is, transferring from a land-centered mode to a people-oriented pattern (Chen et al., 2017). As the first national strategy on urbanization, the plan outlines the blueprint for China's urban development.

Guided by the plan, a growing number of localities participated in the National New Urbanization Comprehensive Pilot Program have initiated reforms to promote in-situ urbanization both spatially and socially. More policy emphasis has been placed on promoting infrastructure investment, encouraging local initiatives in hukou reforms, and improving social welfare provision for the citizens (Guan et al., 2018). The increasing demands of social insurance have also driven local governments to make strong commitments to expanding social insurance protection for in-situ urbanized residents (Wang et al., 2015). By 2020, China should have promoted the relocation and/or reclassification of 100 million rural residents to urban; moreover, another 200 million farmers without urban household registration should be given equal access to social insurance (Chen et al., 2018b).

Against the backdrop of these policy shifts, urban identity has been researched in a number of studies. The concept is used as an important indicator to evaluate the urban adaption process of individuals (Colic-Peisker & Walker, 2003; Yue et al., 2020; Gui et al., 2012). For instance, using survey data collected in Wuhan, Wang and Fan (2012) reveal that facing various barriers in adapting to the host city, the majority of migrants still view themselves as rural residents rather than the urban. Similar conclusion has been drawn by other scholars, arguing that migrant workers are trapped in the dilemma caused by their rural identity and live as "outsiders" in cities (Du et al., 2018; Tang, 2015). While existing studies suggest that urban identification is not an easy process, the research has primarily focused on the migrant population. Nonetheless, the establishment of urban identity is a relevant and important issue for in-situ urbanized rural residents as well. This is not only because the rapid social and environmental changes arise with in-situ urbanization can trigger identity shock (Zhang & Tong, 2006), but also the identity adaptation process lagging behind the conversion of urban material systems could lead to even more serious psychological problems or social conflicts (Berkman & Glass, 2000; Belanche et al., 2017).

Empirical studies have investigated both socio-demographic and institutional factors contributing to the formation and development of urban identity. Huang and her colleagues (2020) suggest human capital and social network are important determinants to urban identity because the related resources and opportunities can benefit the process of urban adaptation. Other scholars have also tried to reveal identity heterogeneity among people with different individual attributes and investigated the impact of age, education, occupation, and homeownership on urban identification (Cai & Cao, 2009; Yue et al., 2013; Lin et al., 2020; Xie & Chen, 2021). When it comes to institutional constraints, previous research has been concentrated on the household registration (hukou) system: the lack of urban hukou is regarded as the key obstacle to successful urban identification (Afridi et al., 2015; Chen et al.,

2020; Zhang & Treiman, 2013). Scant attention has been paid to other specific institutional factors, such as social insurance. During the process of urban integration, individuals can benefit directly from the social insurance system, yet the relationship between social insurance and urban identity adoption remains unclear.

To fill the research gap, the present study estimates the association between social insurance and urban identity. Drawing data from the 2018 Urbanization and Quality of Life Survey, this study focuses on the identity construction experience of China's in-situ urbanized residents and answers how, and to what extent, their urban identity can be shaped by social insurance status. This article proceeds as follows. In the next section, we first introduce the current health and pension insurance systems in China. Section 3 outlines the theoretical linkages and hypotheses regarding the heterogenous effects of social insurance. Section 4 presents the data and methods and Section 5 analyses the results. The study concludes by discussing the findings and policy recommendations in the final section.

The social insurance system in China

Like many other developing countries, China have been bearing the main role in providing social insurance protection for its citizens by building a nationwide social insurance system. The formation of this system is signified by three turning points in history. The reform practices during the 1990s were swift and dramatic. While the market-oriented reforms led to the collapse of the traditional community- and working unit-based programs, it had also driven the introduction of social insurance programs in China. The success of the systematic reforms launched in 2009 marked another turning point. The policy goal during this reform period is to narrow down the welfare gaps between the rural and urban populations (Gao et al., 2019). Beginning from 2014, a new shift in focus was apparent in the latest round of China's social insurance reforms, that is, to establish a consolidated health and pension

insurance system for all Chinese citizens. Today, social insurance reform continues to be driven by the demands and challenges arising from Chinese ongoing urbanization.

As a result of these decades-long reform efforts, social insurance in China now covers various types of benefits. Health insurance and pension insurance are the two pillars of the social protection system. With respect to health insurance, the Urban Employee Basic Medical Insurance (UEBMI) was introduced in 1998, aiming to cover all workers in the urban formal sector (Bairoliya et al., 2018). For urban residents but not employees, the Urban Resident Basic Medical Insurance (URBMI) was established in 2007 to provide coverage for social groups such as children, older adults, and students. Targeting the rural population, the New Rural Cooperative Medical Scheme (NRCMS) was rolled out nationwide since 2003. More recently, a national unified health insurance program, the Urban and Rural Resident Medical Insurance (URRMI), was established on a pilot basis. The new program aims to provide more equitable and efficient health care for all citizens, merging the existing rural and urban insurance schemes. However, the reform pace of the URRMI program varies across regions (Shan et al., 2018). Each of the four health insurance schemes has an associated pension scheme: the Urban Employee Basic Pension Insurance (UEBPI) introduced in 1998, the Urban Resident Basic Pension Insurance (URBPI) and the New Rural Social Pension Scheme (NRSPS) which were established in 2009 and 2011, respectively. The Urban and Rural Resident Pension Insurance (URRPI) was introduced in 2014. Similar like the URRMI, the implementation of this new integrated pension program is slow (Liu & Sun, 2016).

China's social insurance system has been characterized by the hukou-based rural-urban divisions. Within the hukou system, each Chinese citizen is classified as either rural or urban. Such classification provides an administrative basis for the rural and urban insurance systems, which are separately administered and operated (Meng et al., 2015; Gao et al.,

2018). For quite a long time, having an urban or rural hukou has been the key determinant of access to specific insurance programs that vary in welfare entitlement. Taking pension insurance as an example, the median pension benefit in 2013 was around RMB 3000 per month for urban employees and RMB 2300 per month for urban residents, respectively, while that for rural enrolees was just RMB 60 per month (Zhu & Österle, 2017). Similarly, health insurance for urban employees provides the most comprehensive health care service, while that of the rural insurance scheme, the New Rural Cooperative Medical Scheme (NRCMS), is the least advantageous (Yang & Wu, 2017). The existing welfare gap has been considered a result from the urban-biased strategy, guided by which more resources and opportunities have been allocated to urban development (Zhang & Kanbur, 2005).

Studies focusing on the welfare gap in different types of social insurances have shown that the disparity underlying the rural and urban insurance systems has wide-ranging effects. Research demonstrates that participation in the New Rural Cooperative Medical Scheme (NRCMS) has not significantly improved health status (Lei & Lin, 2009). Nor has it resulted in a reduction of out-of-pocket payment (Cheng et al., 2015), catastrophic health expenditure (Liang et al., 2012), or poverty (Wang et al., 2020b). In contrast, the performance assessments of the urban insurance schemes are relatively optimistic (Liu & Zhao, 2014; Qin et al., 2014). These studies, however, mainly centre on the specific social insurance impact on services and physical outcomes; few consider the role of social insurance in identity formation. Few empirical studies have devoted attention to the effect of social insurance on urban integration of migrants, and, as these studies aggregated data from different insured fields or insurance schemes into one variable in regression, none of them have considered the effects of variations across schemes (Shi & Shi, 2014; Huang et al., 2020; Qin et al., 2021).

The linkage between social insurance and urban identity

An identity is a set of meanings individuals hold for themselves as members of a social group or category (Stets & Burke, 2000). Aspects of identity linked to urban settings can be described as "urban identity". Referring to Lalli's (1988) definition, urban identity is viewed as a substructure of self-identity, with which people view themselves as a member of the city. For in-situ urbanized residents, the adoption of urban identity means they could identify themselves as a member of the newly urbanized city based on the recognizable characteristics describing themselves as similar to other urban counterparts and dissimilar to the past themselves with rural living experience. Individuals identified with the city will attach emotionally to the places and people that interact in the city they belong (Proshansky, 1978; Lewicka, 2011).

Informed by urban identity theory, the construction of urban identity is largely determined by the interaction between person and urban environment (Lalli, 1988). The theory believes the formation of urban identity is based on the subjective reconstruction of the town (Hauge, 2007; Lewicka, 2011). Thus, not only the city provides a necessary environment for individuals to identify with, but the geographical, cultural, and institutional borders of the city convey the ingroup-outgroup distinctions (Hauge, 2007). This theoretical perspective also suggests that individuals' identity can be viewed as a result of boundary formation (Barth, 1998). In Chinese specific context, the institutional border shaped by the rural-urban disparity in social insurance leads to contrast between "them" and "us", acting as an "invisible wall" for new urbanites to identify with the city. The relationship between social insurance and urban identity may vary across schemes.

Thus theoretically, the participation of social insurance plays a vital role in dis/encouraging urban identification during the rural-urban transition. People with rural insurance membership will be less likely to adopt urban identity. This is mainly because the

uneven distribution rule adopted by China's social insurance system has shaped the stereotypes of rural and urban identities (Afridi et al., 2015). The identity change process requires crossing or shifting the existing boundaries (Huang & Guo, 2015), yet remained urban welfare exclusion for in-situ urbanized residents can hardly trigger their urban identification. Also, the meagre benefits provided by rural insurance is associated with perceived disadvantaged social status (Wang et al., 2012a), with which in-situ urbanized residents will tend to build rural identity.

Meanwhile, people covered by urban insurance programs will be more likely to adopt urban identity. On the one hand, the substantial benefits provided by urban insurance can facilitate the process of urban adaption. Previous research has confirmed the role of health insurance in protecting individuals from the risk of unforeseen medical expenditure (Bairoliya et al., 2018). Besides, the pay-as-you-go pension system can protect participants from the uncertainties of the labour market as well as the economic ramifications of poor health. These benefits are ensured by a well-developed urban welfare system, with which new urbanites will be more capable of dealing with difficulties and adapting to urban life. Consequently, they will be more likely to adopt an urban identity. On the other hand, an inclusive insurance program is a part of the city system. The involvement of urban insurance can provide a platform for individuals to identify with the city and build a sense of belonging as beneficiaries. Based on these speculations, we propose Hypotheses 1 and 2:

Hypothesis 1: Enrolment in the rural health and pension insurance programs will be associated with a lower level of urban identity.

Hypothesis 1 is supported by most empirical studies demonstrating the negative effects of NRCMS on medical expenditures (Cheng et al., 2015; Liang et al., 2012).

According to Cheng et al. (2015), benefit packages offered by rural insurance schemes were too low to produce positive impact on and health related outcomes. The design deficiencies of rural insurance cause its unsatisfied performance, thus it may also lead to a negative impact on urban identification.

Hypothesis 2: Enrolment in the urban health and pension insurance schemes will be associated with a higher level of urban identity.

In line with the theoretical arguments, the adoption of urban identity for urban insurance participants hinges on two factors. On the objective side, in-situ urbanized residents can benefit from the generous welfare entitlement (Qin et al., 2014). On the subjective side, urban insurance membership will reinforce the advantaged social status and boost a sense of belonging to the urban system (Chen, 2017).

Hypothesis 3: Enrolment in the national unified health and pension insurance schemes will be associated with a higher level of urban identity.

Hypothesis 3 is proposed to testify the potential positive relationship between the newly established program and urban identification. As a national unified scheme, the new health and pension insurance are characterized by its program design to provide equal access to improved welfare entitlement (Wang et al., 2020a). The integration reform of social insurance has been regarded as an attempt to eliminate the institutional barrier to truly rural-urban integration (Meng et al., 2015); therefore, it is reasonable to hypothesize that participation in this program will promote urban identity establishment.

Hypothesis 4: Hukou status will moderate the relationship between social insurance and urban identity: the positive impact of urban insurance and the newly integrated insurance on urban identity will be stronger for rural hukou holders, whereas the negative impact of rural insurance on urban identity will be stronger for urban or jumin[1] hukou holders.

The study further estimates the potential effect variance caused by the moderation effect of social insurance and hukou status. Previous studies claim that people with rural or urban hukou have different expectations for the benefits, which will further shape their attitudes or perceptions (Whyte & Im, 2014; Huang & Gao, 2018). In the case of in-situ urbanized residents, we speculate that rural hukou holders would be more sensitive to the positive effect of urban insurance because the welfare provisions exceed their meagre expectations. In contrast, the positive impact of urban insurance on non-rural hukou holders will be less significant because the fulfilment of basic needs might not be enough to trigger their identity change. Nevertheless, urban or jumin hukou holders will be more subject to the negative effect of rural insurance as the provisions fall short of their high welfare expectations.

Data and methods

Data

We used data from the 2018 Urbanization and Quality of Life Survey, a GIS (geographical information system) assisted household survey conducted in China from April to June of 2018. This survey adopted a carefully constructed multi-stage sampling design for data collection. In general, the survey covers 40 township-level administrative units as primary sampling units (PSUs), including 32 jiedaos (street districts) and zhens (towns) in newly

[1]The new policy introduced in July 2014 set up a unified category of resident household registration.

urbanized areas and eight zhens (towns) and xiangs (rural townships) in potential sites of urbanization. Twenty of the survey sites are township units participating in the 2014 National New Urbanization Comprehensive Pilot Program; the other 20 were selected from non-pilot areas using the Coarsened Exact Matching (CEM) technique (Iacus et. al., 2011).

The target population was adults aged from 18 to 75 who have resided in the selected townships for more than six months, regardless of their official hukou status. After data checking and cleaning, the final completed sample size was 3,229, with a response rate of 65.2%. Post-stratification weights were calculated according to data from the China 2010 Township Population Census Data on key variables such as gender and migration status, and were applied throughout the analysis.

Measures

The dependent variable is the score of self-rated urban identity, measured by participants' response to the question, "To what extent do you consider yourself as an urbanite?" on a Likert scale ranging from 1 to 7 ("strongly disagree" to "strongly agree").

The core independent variable is social insurance status. Respondents were asked, "Have you participated in the following social insurance programs?" We included four types of health insurance in the analysis: the Urban Employee Basic Medical Insurance (UEBMI), the Urban Resident Basic Medical Insurance (URBMI), the New Rural Cooperative Medical Scheme (NRCMS), the Urban and Rural Resident Medical Insurance (URRMI), and four pension insurance of the corresponding schemes. Because the benefits of these programmes are often non-transferable across cities or from rural to urban areas, a number of respondents were enrolled in multiple schemes. According to the policy guidance, individuals are not allowed to receive duplicate benefits from various schemes in the same insured field. The double covered should be considered the enrolees of the program with higher benefit package when claiming reimbursement. This study recode the data accordingly, and participants in the

four social insurance schemes are mutually exclusive after recoding. Each variable of medical and pension insurance is dichotomously coded, with 1 referring to "participating in the scheme" and 0 "not participating in the scheme".

Drawing on the literature, we include a number of covariates in the model estimation. At the individual level, demographic characteristics include age (years), gender (1=female; 0=male), and marital status (1=married; 0=others). Educational attainment was treated as a categorical variable with four levels (1=primary school or below; 2=middle school; 3=high school; 4=college and above). Occupational status was coded as a binary variable with 1 indicating a professional/managerial occupation. We use household wealth as the control variable for family economic status. A seven-item list used in previous studies was employed based on the household ownership of a number of consumer items, such as an LCD television and a piano (Córdova, 2009). Other covariates include hukou and migration status. By adding the newly integrated jumin hukou, the hukou variable falls into three categories: 0=rural hukou, 1=urban hukou, and 2=jumin hukou. Cross-town migrants were coded as 1.

Two township-level factors are coded to control the sampling design effects: whether the townships were in a pilot site of the 2014 National New Urbanization Comprehensive Pilot Program (1=pilot site; 0=non-pilot site) and whether the places were undergoing urbanization (1=undergoing urbanization; 0=potential site of urbanization).

Analysis

Because the dependent variable is an ordinary variable coded on a seven-point Likert scale and the survey data has a hierarchical structure, we performed multi-level ordinal logistic regression analysis to determine whether social insurance participation can affect the likelihood of urban identification among those experiencing in-situ urbanization (Hedeker & Gibbons, 1994; Snijders & Bosker, 1999).

We first estimated the baseline Model 1, which is an empty model without any predictors except the intercept. This model measures only the variations in urban identity between individuals within townships and those between townships. It serves as a benchmark for the size of township-level differences in all subsequent models. Following Snijders and Bosker (1999), we computed the intra-class correlation coefficient (ICC) to be 0.278 which indicates that 27.8% of the total variance in individuals' adoption of urban identity is caused by variations among townships, suggesting that a multi-level approach is appropriate.

We then included socio-demographic covariates at the individual level and the two township level controls in Model 2, based on which a set of dichotomous variables of medical insurance and pension insurance were added to Model 3 and Model 4, respectively. These two models allow us to test Hypothesis 1 to Hypothesis 3. To testify Hypothesis 4, we estimated separate models on rural, urban, and jumin hukou subsamples, while the covariates remain the same. The models were estimated in State 15.1.

Results

Descriptive statistics

Table 3.1 presents the descriptive statistics of the whole sample and by hukou subgroups. The mean level of urban identification for the whole sample is 2.230—relatively low, suggesting that most respondents do not view themselves as urbanites. Among the three hukou subgroups, jumin hukou holders had the highest score of urban identity (4.782), followed by urban hukou holders (4.023). People with rural hukou were the least likely to consider themselves as urbanites (1.811).

**Table 3.1 Descriptive statistics of individual characteristics
for the whole sample and by hukou status**

Variables	Whole sample	Rural hukou	Urban hukou	Jumin hukou
Urban identity (1-7, mean)	2.230 (0.098)	1.811 (0.063)	4.023 (0.279)	4.782 (0.254)
Age (years, mean)	51.118 (0.651)	51.432 (0.701)	49.031 (1.540)	49.766 (1.758)
Gender (female, %)	49.243 (0.011)	50.946 (0.013)	49.269 (0.047)	50.107 (0.037)
Marital status (married, %)	79.154 (0.146)	79.586 (0.016)	80.017 (0.042)	74.526 (0.033)
Education (%)				
Primary school or below	45.840 (0.189)	50.071 (0.019)	24.690 (0.037)	22.328 (0.040)
Middle school	32.549 (0.150)	32.712 (0.017)	30.835 (0.036)	32.310 (0.031)
High school	15.150 (0.011)	13.296 (0.112)	26.360 (0.031)	24.026 (0.028)
College or above	6.461 (0.008)	3.922 (0.005)	18.115 (0.037)	21.336 (0.035)
Occupation (professional/managerial, %)	8.726 (0.009)	7.107 (0.009)	12.670 (0.024)	20.774 (0.034)
Household wealth (0–7, mean)	2.360 (0.086)	2.208 (0.092)	3.060 (0.165)	3.252 (0.135)
Cross-town migrants (%)	16.626 (0.023)	15.968 (0.025)	26.001 (0.058)	15.807 (0.029)
Number of respondents	3,229	2,674	229	326

Notes: Data were weighted. Means or percentages are reported. Robust standard errors are in parentheses.

Table 3.2 shows the coverage rates of major social insurance schemes for the whole sample and by hukou subgroups. The results illustrate that almost all (more than 90%) of the participants are covered with health insurance; by comparison, the coverage rate of pension schemes is much lower (only 53%). The majority of respondents are still covered by rural insurance programs, which indicates that the social insurance transition lags behind the pace of in-situ urbanization as only a small fraction of local residents has been included into urban insurance system. For both rural and urban insurance programs, there exists heterogeneity of hukou status of the participants. It is also noteworthy that the coverage rate gaps among hukou subgroups are sharply narrowed in the new schemes. More rural or urban hukou holders have participated in the Urban and Rural Resident Medical Insurance (URRMI) or the Urban and Rural Resident Pension Insurance (URRPI), although the participation rates

are quite low. This result implies that the access to the newly unified program is out of hukou restriction, and its integration process is still at a preliminary level.

Table 3.2 Participation in health and pension insurance schemes

	Whole sample	Rural hukou	Urban hukou	Jumin hukou
Medical insurance (%)				
New Rural Cooperative Medical Scheme (NRCMS)	67.762 (0.025)	77.250 (0.017)	21.260 (0.046)	14.317 (0.032)
Urban Employee Basic Medical Insurance (UEBMI)	10.886 (0.011)	6.011 (0.007)	41.290 (0.050)	33.522 (0.256)
Urban Resident Basic Medical Insurance (URBMI)	6.070 (0.010)	1.750 (0.003)	22.889 (0.046)	33.600 (0.039)
Urban and Rural Resident Medical Insurance (URRMI)	6.253 (0.010)	6.394 (0.010)	6.711 (0.024)	4.604 (0.015)
Total	90.971 (0.021)	91.405 (0.006)	92.150 (0.012)	86.043 (0.173)
Pension insurance (%)				
New Rural Social Pension Scheme (NRSPS)	31.453 (0.026)	35.920 (0.028)	7.709 (0.019)	7.729 (0.022)
Urban Employee Basic Pension Insurance (UEBPI)	10.971 (0.012)	6.205 (0.017)	41.768 (0.050)	32.312 (0.042)
Urban Resident Basic Pension Insurance (URBPI)	4.814 (0.007)	1.890 (0.004)	15.866 (0.034)	23.719 (0.031)
Urban and Rural Resident Pension Insurance (URRPI)	5.580 (0.009)	6.323 (0.012)	2.381 (0.014)	1.073 (0.005)
Total	52.818 (0.027)	50.338 (0.096)	67.724 (0.011)	64.833 (0.040)
Number of respondents	3,229	2,674	229	326

Notes: Data were weighted. Percentages are reported. Robust standard errors are in parentheses.

The study aims to examine the relationship between social insurance and urban identity, and as shown in Table 3.3, on average the urban identity of rural insurance participants is lower than that of urban insurance enrolees. The urban identity of people covered by the New Rural Cooperative Medical Scheme (NRCMS) and the New Rural Social Pension Scheme (NRSPS) are 1.715 and 1.646, which are lower than that of the uninsured residents. The gap is more substantial by taking into account the hukou type difference. Generally, people with non-rural hukou tend to report a higher level of urban identity.

Table 3.3 Urban identity of social insurance participants and the uninsured

	Whole sample	Rural hukou	Urban hukou	Jumin hukou
Medical insurance				
New Rural Cooperative Medical Scheme (NRCMS)	1.715 (0.069)	1.669 (0.068)	2.539 (0.382)	3.076 (0.468)
Urban Employee Basic Medical Insurance (UEBMI)	3.759 (0.206)	2.651 (0.184)	4.560 (0.310)	4.868 (0.374)
Urban Resident Basic Medical Insurance (URBMI)	4.364 (0.305)	2.735 (0.356)	4.238 (0.588)	5.212 (0.349)
Urban and Rural Resident Medical Insurance (URRMI)	2.679 (0.188)	2.233 (0.155)	4.917 (0.579)	5.992 (0.538)
Uninsured by any type of health insurance	2.509 (0.211)	1.993 (0.168)	3.833 (0.596)	4.891 (0.414)
Pension insurance				
New Rural Social Pension Scheme (NRSPS)	1.646 (0.062)	1.598 (0.061)	3.164 (0.554)	2.592 (0.510)
Urban Employee Basic Pension Insurance (UEBPI)	3.632 (0.227)	2.443 (0.193)	4.436 (0.315)	4.974 (0.377)
Urban Resident Basic Pension Insurance (URBPI)	4.001 (0.337)	2.266 (0.318)	3.952 (0.617)	5.300 (0.408)
Urban and Rural Resident Pension Insurance (URRPI)	2.260 (0.216)	2.128 (0.207)	4.000 (0.000)	3.308 (0.720)
Uninsured by any type of pension insurance	2.109 (0.118)	1.828 (0.100)	3.584 (0.483)	4.783 (0.304)

Notes: Data were weighted. Means are reported. Robust standard errors are in parentheses.

Regression results for the whole sample

Table 3.4 reports multi-level modelling results on urban identification among the whole sample. Model 1 is the baseline model. Model 2 includes both individual- and township-level covariates. As shown in Model 2, marital status is the only demographic variable associated with a lower level of urban identity. Both urban and jumin hukou are positively associated with urban identity, indicating that the hukou is still a persistent institutional factor in the determination of urban identity (Cai & Cao, 2009; Chen et al., 2020). In line with previous research, this result further reveals that the likelihood of jumin hukou holders viewing themselves as urbanites is 5.590 ($e^{1.721}$) times higher than that of rural hukou holders. Migration status is not significantly linked with urban identity.

Table 3.4 Multi-level mixed effects models on urban identity and social insurance

	Model 1	Model 2	Model 3	Model 4
Individual-level variables				
Age (years)		-0.005	-0.006	-0.004
		(0.349)	(0.260)	(0.465)
Gender (ref. male)		-0.073	-0.062	-0.073
		(0.514)	(0.590)	(0.510)
Marital status (ref. unmarried)		-0.268*	-0.289**	-0.276**
		(0.062)	(0.043)	(0.040)
Education (ref. primary school or below)				
Middle school		0.171	0.141	0.153
		(0.186)	(0.280)	(0.227)
High school		-0.011	-0.091	-0.057
		(0.954)	(0.612)	(0.745)
College and above		0.334	0.175	0.210
		(0.275)	(0.545)	(0.470)
Occupation (ref. not professional)		0.269	0.236	0.266
		(0.114)	(0.177)	(0.111)
Household wealth		0.0521	0.056	0.062
		(0.367)	(0.314)	(0.279)
Hukou (ref. rural hukou)				
Urban hukou		1.399***	1.089***	1.197***
		(0.000)	(0.000)	(0.000)
Jumin hukou		1.721***	1.437***	1.523***
		(0.000)	(0.000)	(0.000)
Cross-town migrants		0.006	0.024	-0.019
		(0.980)	(0.926)	(0.936)
Health insurance (ref. the uninsured)				
New Rural Cooperative Medical Scheme (NRCMS)			-0.079	
			(0.716)	
Urban Employee Basic Medical Insurance (UEBMI)			0.670***	
			(0.006)	
Urban Resident Basic Medical Insurance (URBMI)			0.559**	
			(0.017)	
Urban and Rural Resident Medical Insurance (URRMI)			0.448**	
			(0.050)	
Pension insurance (ref. the uninsured)				
New Rural Social Pension Scheme (NRSPS)				-0.585***
				(0.001)
Urban Employee Basic Pension Insurance (UEBPI)				0.341*
				(0.072)
Urban Resident Basic Pension Insurance (URBPI)				0.153
				(0.521)
Urban and Rural Resident Pension Insurance (URRPI)				0.067
				(0.754)
Township-level variables				
Urbanizing townships		0.687**	0.575*	0.694**
		(0.021)	(0.052)	(0.019)
In Pilot site		0.005	-0.007	-0.013
		(0.986)	(0.979)	(0.959)
Constants				
Constant cut1	0.903***	1.433***	1.296***	1.337***

	(0.000)	(0.002)	(0.005)	(0.002)
Constant cut2	1.228***	1.781***	1.648***	1.690***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant cut3	1.338***	1.899***	1.768***	1.810***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant cut4	2.187***	2.821***	2.701***	2.743***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant cut5	2.374***	3.024***	2.906***	2.948***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant cut6	2.556***	3.221***	3.104***	3.147***
	(0.000)	(0.000)	(0.000)	(0.000)
Random-effects Parameter				
Var (county/township)	1.268***	0.581***	0.519***	0.538***
	(0.000)	(0.002)	(0.002)	(0.002)
ICC	0.278	0.150	0.136	0.141
Observations				
Number of respondents	3,229	3,229	3,229	3,229
Number of county/townships	40	40	40	40
Prob > Chi^2	0.000	0.000	0.000	0.000
Log pseudolikelihood	-3199.181	-3080.222	-3062.112	-3059.462

Notes: Data were weighted. Coefficients are reported. Standard errors in parentheses.

 * p < 0.1, ** p < 0.05, *** p < 0.01.

Model 3 displays the regression results on urban identity after the four health insurance schemes were added. As shown in Table 3.4, the relationship between rural health insurance (NRCMS) and urban identity is negative but not statistically significant. By comparison, two urban health insurance schemes and the newly integrated program are positive indicators of urban identity establishment. The sequence of the coefficients demonstrates that among the three schemes, participants in the Urban Employee Basic Medical Insurance scheme (UEBMI) are more likely to identify as urban, followed by participants in the Urban Resident Basic Medical Insurance scheme (URBMI) and then those in the Urban and Rural Resident Medical Insurance (URRMI). In particular, the membership of the Urban Employee Basic Medical Insurance (UEBMI) is associated with a 95% ($e^{0.670}$) increased likelihood of urban identification than those uninsured. The comparison of the coefficients on urban identity is further illustrated in Figure 3.1. These findings confirm Hypothesis 2 and Hypothesis 3 regarding health insurance.
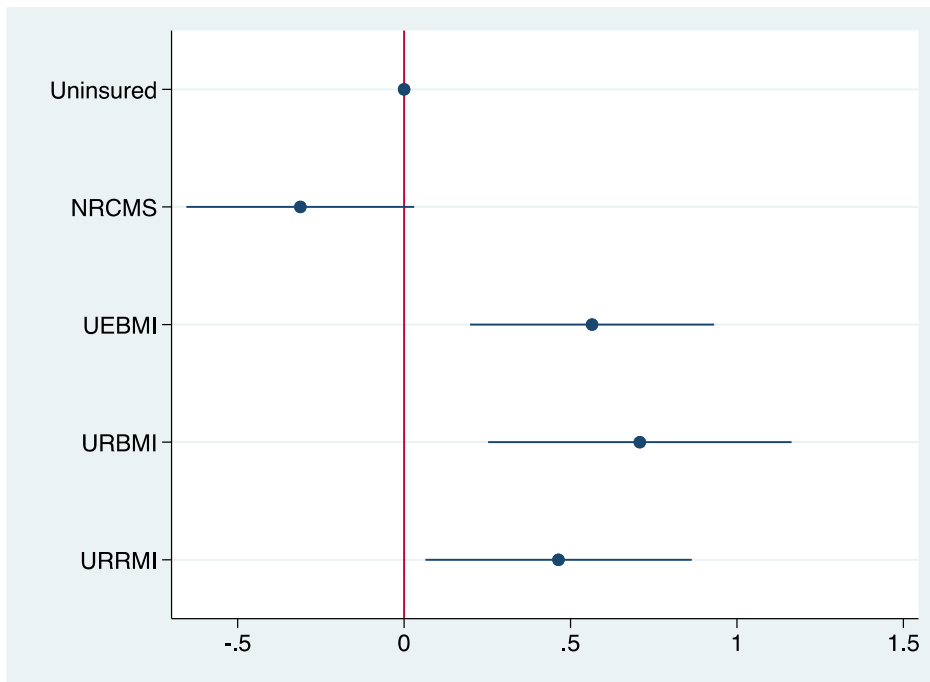
Figure 3.1 Comparison of coefficients of health insurance on urban identity
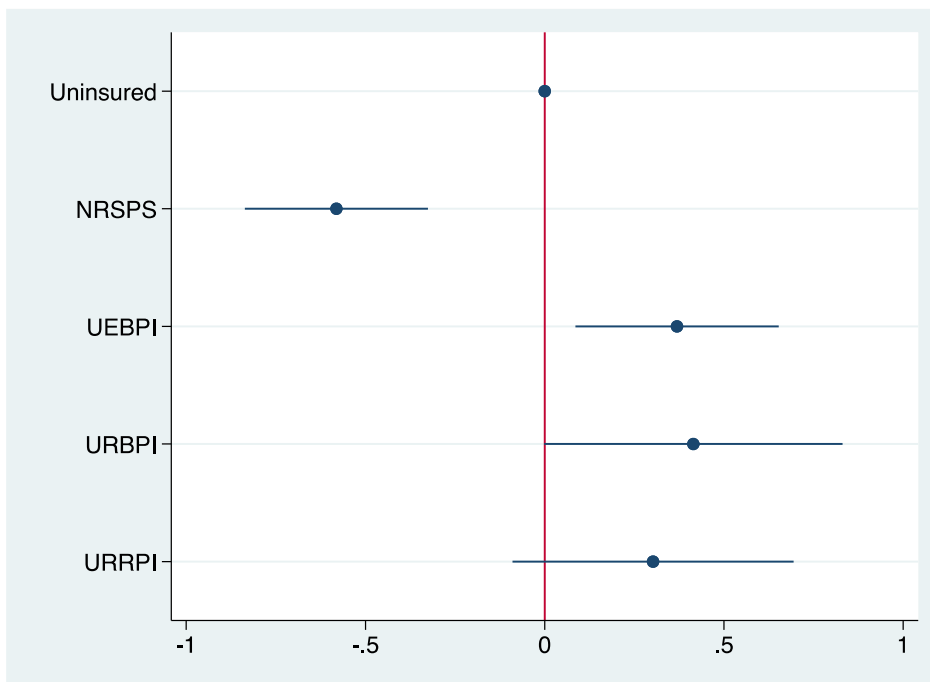
Figure 3.2 Comparison of coefficients of pension insurance on urban identity

Model 4 includes pension insurance schemes in the multi-level regressions. Based on the results, rural pension insurance is significantly and negatively associated with urban identity. Among the four types of pension insurance, the enrollers of New Rural Social

Pension Scheme (NRSPS) are 1.795 ($e^{-0.585}$) times less likely to build urban identity. The result reveals a lagging behind effect of rural insurance enrolment, which supports Hypothesis 1 regarding pension insurance. With aspect to urban pension schemes, the Urban Employee Basic Pension Insurance (UEBPI) is positively associated with a 41% ($e^{0.341}$) increased likelihood of urban identification than the uninsured. This finding reconfirms the positive contribution of a generous pension program on urban identity adoption. The parameter of another urban scheme, the Urban Resident Basic Pension Insurance (URBPI), is also positive but not statistically significant. In addition, the relationship between the Urban and Rural Resident Pension Insurance (URRPI) and identity outcome is positive, although the coefficient is not statistically significant. This is probably caused by the slow implementation process of this new scheme. Owing to the unstable welfare benefits and changeable institutional adjustments, its contribution on urban identification is still limited (Liu & Sun, 2016). The above findings partially confirm Hypothesis 2, showing that urban pension inclusion will encourage urban identification. Figure 3.2 shows the comparison of the coefficients of pension insurance on urban identification.

Subsample analysis by hukou categories

Multi-level regressions by subgroups were further conducted to testify Hypothesis 4. The results reveal an effect variation of health insurance among three hukou subgroups. As presented in Table 3.5, the positive relationship between the Urban Employee Basic Medical Insurance (UEBMI) only remains in the rural hukou group, indicating that rural hukou holders can be more benefited from the positive effect of this scheme. On the other hand, the negative effect of the New Rural Cooperative Medical Scheme (NRCMS) is evident among the urban subsamples. The result exhibits that for urban hukou holders, they are still under the negative influence of rural insurance enrolment. These findings partially confirm Hypothesis 4 regarding health insurance.

**Table 3.5 Multi-level mixed effects models on urban identity
and health insurance by hukou subsamples**

	Rural hukou	Urban hukou	Jumin hukou
New Rural Cooperative Medical Scheme (NRCMS)	-0.058 (0.266)	-0.679* (0.386)	-1.065 (0.648)
Urban Employee Basic Medical Insurance (UEBMI)	0.648** (0.323)	0.571 (0.385)	-0.025 (0.500)
Urban Resident Basic Medical Insurance (URBMI)	0.686 (0.431)	0.227 (0.666)	-0.123 (0.325)
Urban and Rural Resident Medical Insurance (URRMI)	0.340 (0.289)	1.002 (0.651)	0.556 (0.620)
Prob > Chi^2	0.000	0.000	0.004
ICC	0.164	0.170	0.202

Notes: Data were weighted. Individual and township level covariates were controlled in the model estimation. Coefficients are reported. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

The effect variation of pension insurance among rural, urban, and jumin hukou subsamples are provided in Table 3.6. Other things being equal, two pension schemes appear to be significantly associated with urban identity. First, the New Rural Social Pension Scheme (NRSPS) is negatively associated with urban identity among rural and jumin group members. It is worth noting that the absolute value of the coefficient shown in jumin group ($\beta = -1.253$, $p < 0.1$) is two times larger than that of urban group ($\beta = -0.569$, $p < 0.001$), which suggests jumin hukou holders can be more affected by the adverse impact of rural insurance. This is understandable by considering the gaps between low welfare provision of rural insurance and high expectations hold by jumin hukou holders. The finding supports Hypothesis 4 regarding the stronger negative identity influence on non-rural hukou holders.

Second, the effect of Urban and Rural Resident Pension Insurance (URRPI) is also shown among two subgroups, and presents a divergent impact: there is a positive relationship with urban identity among urban hukou members, but a negative linkage for jumin hukou holders. The inconsistency can be understood from following aspects: firstly, the consolidation of pension schemes is still in progress, and the provided annuity is temporary low (Liu & Sun, 2016). Thus, similar to the previous rural program that fails to provide stable and adequate benefits, participating in the newly integrated pension scheme will lead to a

negative impact on urban identity. This relationship is particularly manifested among the jumin hukou members who have higher welfare expectations (Kongshøj, 2017; Cai, 2011). Nonetheless, the positive effect shown in urban subgroup can still indicate the potential of the newly integrated program in promoting urban identification. Overall, these results confirm the moderation effect of pension insurance and hukou status on urban identity and partially confirm Hypothesis 4.

**Table 3.6 Multi-level mixed effects models on urban identity
and pension insurance by hukou subsamples**

	Rural hukou	Urban hukou	Jumin hukou
New Rural Social Pension Scheme (NRSPS)	-0.569*** (0.187)	0.314 (1.142)	-1.253* (0.760)
Urban Employee Basic Pension Insurance (UEBPI)	0.246 (0.209)	0.482 (0.496)	0.300 (0.413)
Urban Resident Basic Pension Insurance (URBPI)	-0.027 (0.411)	-0.057 (0.650)	0.104 (0.284)
Urban and Rural Resident Pension Insurance (URRPI)	0.075 0.220)	0.832** (0.423)	-1.257** (0.600)
Prob > Chi^2	0.000	0.000	0.000
ICC	0.168	0.226	0.327

Notes: Data were weighted. Individual and township level covariates were controlled in the model estimation. Coefficients are reported. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Robustness checks

The findings survive several robustness checks. First, alternative ordered logistic regression models were estimated. Second, alternative measures of township-level variables were controlled, taking into account the fixed effects of urbanization paths at different regions. Third, respondents who are double covered were excluded from the model estimations. The number of respondents was reduced from 3,229 to 3,043, but the statistical results remained largely unchanged. Lastly, respondents who are cross-town migrants were excluded from the model estimations and the results remained stable. For detailed results, please see the Appendices.

Conclusion and discussion

Although previous studies have speculated about the connection between social insurance and urban identity, they provide little empirical evidence of such a link. Drawing data from the 2018 Urbanization and Quality of Life Survey, this study answers how social insurance is associated with one's sense of identity. The regression results show that enrolling in urban health insurance programs, such as the Urban Employee Basic Medical Insurance (UEBMI), is positively associated with urban identity, whereas participating in the New Rural Social Pension Scheme (NRSPS) scheme is negatively associated urban identity. Hypothesis 1 regarding pension insurance and Hypothesis 2 regarding health insurance are confirmed, respectively. The Urban and Rural Resident Medical Insurance (URRMI) is also linked with significantly higher urban identity, which partially supports Hypothesis 3.

The subsample analysis further reveals that the positive relationship between the Urban Employee Basic Medical Insurance (UEBMI) and urban identity is the strongest for rural hukou holders, while the negative relationship between the New Rural Cooperative Medical Scheme (NRCMS) and urban identity is the strongest for urban hukou holders. For the newly integrated health insurance, no significant difference is observed across the three hukou groups; however, the newly integrated program of pension insurance shows a strong and positive association with urban identity for urban hukou holders and a strong and negative association with urban identity for jumin hukou holders. These results may well indicate that although the integration of the pension insurance schemes has been implemented, the actual pension funds have not been adjusted to the urban levels (Liu & Sun, 2016). Therefore, it still shows a negative impact particularly among the jumin hukou holders, whose welfare expectations are higher. We also find evidence regarding the negative effect of New Rural Social Pension Scheme (NRSPS) among two subgroups. In particular, the greater impact on jumin hukou subgroup confirms non-rural hukou holders are more

subject to the lagging behind impact of rural insurance. Hypothesis 4 is also partially supported.

This research is embedded in a broad literature that concerns the institutional factors on urban identification. The research contribution to the literature is threefold. First, this study is among the first to comprehensively evaluate the efficacy of the current health and pension insurance schemes in shaping urban identity among in-situ urbanized residents. As the recent studies point out that the restrictions surrounding the hukou system have been loosening (Cheng et al., 2014; Huang & Guo, 2017), this paper explores the specific role of social insurance on urban identity establishment, which can be negative or positive. In the context of China's in-situ urbanization, the study explains the effect variance resulting from the boundary formation shaped by existing rural-urban inequities. Last but not least, the moderation effect illustrates how the relationship between social insurance and urban identity can be affected by the welfare expectations hold by different hukou holders.

From the policy perspective, this study demonstrates an urgent need for social insurance unification in urbanizing China. Our descriptive results show that the current insurance reform falls behind the pace of in-situ urbanization. The remained urban insurance exclusion will not only cause an objectively disadvantaged status of in-situ urbanized residents, but act as an institutional barrier when they build identity bond with the city. Therefore, more policy attention should be paid to extending urban insurance coverage and improving the level of actual benefits the participants (Chen, 2017). The regression results suggest that hukou conversion can hardly become a guarantee of urban identification; instead, non-rural hukou holders can be more subject to the negative impact of rural insurance membership. Informed by these findings, China's ongoing hukou reform should be processed with timely welfare improvement. As a long-term plan to eventually ameliorate institutional disparities in welfare arrangements in newly urbanized cities, future reform also requires

more effective integration of existing social insurance schemes, especially considering the current unified program has much room for improvement. Additionally, the varied conditions and expectations of different hukou holders should not be neglected by local governments in policy design.

As we conclude, a few shortcomings of the present study should be noted and addressed in future research. First, the ability to draw causal inferences in this study is limited by the use of cross-sectional data. Longitudinal research with a richer set of theoretically relevant measures is needed to better understand the identity outcome of social insurance. Second, given the small subsample size of URRPI participants, the relationship regarding this program should be interpreted with caution. Third, existing studies on urban identity also suggest that transformation from rural to urban identity is not straightforward; rather, it is an ongoing and complicated process (Bernardo & Palma-Oliveira, 2016). Therefore, based on the findings of this study, future research could further explore how social insurance plays a role during the dynamic process.

Chapter 4: Towards a More Equitable Society? Rural-urban Integration and Perceived Social Justice in China

Abstract

Rural-urban integration has been an attempt to strike a balance between growth and equality in China since 2002, yet its impacts on perceived social justice are rarely investigated. Using a unique dataset from the 2015 Chinese General Social Survey (CGSS, N = 10,870) and the yearbook of the Index of Rural-urban Development Integration of 28 provinces, this study investigates how variations in rural-urban integration can explain individuals' perceptions of social justice. Multi-level modelling results show that a higher level of rural-urban integration in the economy and quality of life are negatively associated with perceived social justice. By contrast, a higher level of rural-urban integration in social development is positively associated with social justice perception. A greater degree of change in quality of life over time also appears to shape a higher sense of social justice. The study explores the divergent impact achieved through resource effect approach or value-orientation effect approach. Facing a growing number of "critical citizens", it is suggested that Chinese government should devote policy attention to more equitable distribution of the fruits of rural-urban integration and building a national unified social welfare system.

Keywords: Perceived social justice; Rural-urban integration; Social inequity; Value-orientation effect; China

Introduction

Justice is a vital goal to pursue in a society. Scholars have identified three major categories of social justice: distributive justice (Adams, 1965), procedural justice (Thibaut & Walker, 1975), and interactional justice (Jost & Kay, 2010). Justice can also be distinguished by scale: micro-justice is concerned with the fairness of rewards to individuals, while macro-justice deals with the aggregate fairness of distributive outcomes and distributive procedures of the whole society (Wegener, 1991). Perceived social justice is a subjective estimation from a macro-justice perspective. It reflects an individual's evaluation of the degree of social equality in areas such as opportunity, resource distribution, social mobility, and so forth (Ornstein, 2017). A sense of social justice can be also shaped by one's normative beliefs in the role of social-economic institutions (Hu & Chen, 2019).

Experience from both developing and developed countries has confirmed the need to pay close attention to perceived social justice during periods of social transition (Jost & Kay, 2010). A wide variety of studies have further demonstrated the links between measures that promote social justice and positive consequences such as improvements in subjective well-being, social stability, and harmonious development (Rözer & Kraaykamp, 2013; Whyte, 2010; Tyler, 2000; Sun & Xiao, 2012). In countries experiencing rapid socio-economic growth like China, the perception of social justice has attracted particularly close attention. Previous studies on perceived social justice in China were preoccupied with one question: since rapid economic growth had resulted in far greater social inequality, why has there not been an outraged response? Many of these scholars came to the conclusion that China's social stability is ensured by the perception of a high degree of social justice on the part of the rural population who tend to be more tolerant in viewing social inequities (Whyte & Im, 2014; Li & Wu, 2012; Ma & Liu, 2010). Further studies have investigated the determinants

of perceived social justice such as gender, health, education, human capital, and social status (Chen, 2016; Li & Wu, 2012).

While continuous social and economic growth has led to many social transitions in China, the recent movement toward rural-urban integration has attracted wide public attention. From a policy perspective, rural-urban integration has been seen as an attempt to strike a balance between growth and equality in future development (Ye & Christiansen, 2009). Studies have explored the consequences of this movement on regional development, land use, and health insurance reforms (Long et al., 2011; Li, 2012; Liu et al., 2016). Chen and his coauthors (2018a) have shown that the raft of policy measures promoting rural-urban integration have narrowed existing regional inequities and led to the integrated development of rural and urban regions. Few studies, however, have addressed the question of whether these developments have resulted in an increase in perceived social justice.

This study seeks to disentangle the relationship between rural-urban integration and individuals' perception of social justice. Rural-urban integration involves a variety of reform measures in rural and urban development. Specifically, this article focuses on three specific areas: the economy, the quality of life, and social development. The study aims to answer two questions: how does rural-urban integration affect perceived social justice? and how do changes in the level of rural-urban integration over time shape perceived social justice?

Multi-level analyses allow researchers to include important contextual factors and to compare the effect of these factors across social units (Davis, 2005). Following this research approach, this study evaluates the variations in rural-urban integration at the provincial level and the effects of these variations on individuals' perception of social justice, which have political as well as scholarly implications.

Background: from rural-urban division to rural-urban integration

"Rural" and "urban" are terms that denote distinct cultures, values, life patterns, and social identities. The rural-urban division has long been an accepted fact in many developing countries (Harriss & Moore, 2017). The transition from rural-urban isolation to interaction involves various institutional arrangements that reflect changes in the social environment (Montgomery, 2008). These institutional arrangements determine economic, political, and social interactions by means of formal rules such as policies and informal constraints such as traditions (North, 1991). In China's case, the rural-urban dichotomy was reinforced by a set of urban-biased development strategies that isolated the interactions between rural and urban sectors (Li, 2011; Xu et al., 2021).

During the economic reform that followed the foundation of the People's Republic of China in 1949, the central government introduced strict controls over resource allocation to effect a quick economic recovery (Appleton et al., 2014). During this "command and control" period, priority was given to urban development. Rural development was valued insofar as it supplied the material for industries and urban development. The rural-urban dichotomy was entrenched by the household registration (hukou) system, established in 1958. The hukou system provided an administrative basis for the strict control of rural-to-urban migration and created a rural-urban division in the dispensation of housing, education, social insurance, and other social benefits (Cheng & Selden, 1994). Urbanites had an "iron rice bowl" (generous benefit package), while rural hukou holders "stood on their own feet" (with minimal benefits) (Chan & Peng, 2011). In the ensuing decades, the rural-urban dichotomy has become deeply rooted: China's development entrenched the disparities.

Since the opening reform in 1978, there has been greater integration of the rural and urban sectors, which has corresponded to the rapid growth of urbanization (Li, 2011; Fang & Yu, 2016). During the early stage of urbanization, rural-urban integration was encouraged by

the scale of internal migration. With millions of migrant workers moving from the countryside to the cities, the flow of resources, including goods, capital, information, and technology, between rural and urban sectors increased significantly (Guan et al., 2018). After China's urbanization entered a new phase in the 2000s (Fang & Yu, 2016), rural-urban interaction was further intensified. Hukou restrictions on internal migration were loosened, allowing more originally rural residents to settle in cities and acquire urban hukou (Cheng et al., 2014). Rural-urban interaction has been advanced by the follow-up policies promoting rural industrialization, in-situ urbanization, and people-oriented urbanization. As a result, rural-urban integration in China is stronger than it ever has been and governments have been pressured to build a more balanced approach of resource and benefits allocation to adapt to this change.

From a policy perspective, rural-urban integration now high on the agenda. The goal of creating an integrated rural-urban society was announced in 2002 at the Sixteenth National Congress of the Chinese Communist Party. It was the first time that the countryside had been recognized as an essential party in the pursuit of a more equitable and harmonious society (Ye & Christiansen, 2009). From 2004 to 2020, the No. 1 document issued by the central government dealt with strategies to encourage rural-urban integration: ensuring rural-urban coordination in economic development; narrowing the income gap between rural and urban areas; and ensuring equal access to resources through more equitable allocation. At the provincial level, these goals have been put into practice in various ways by local governments, and these changes may also reshape the perceived social justice of Chinese citizens.

In general, rural-urban integration refers to a wide range of government-driven institutional deployments that make rural-urban development interdependent (Li & Hu, 2015). The implementation of various policies lies behind the marked rural-urban gaps.

Guided by the existing policy documents, the integration reform involves not only the integration of the economy but also integration on multiple dimensions including population, society, living condition, and environment (Ma et al., 2020). Each facet may has its own distinct effect on individuals. Following this rationale, this study considers rural-urban integration as multi-faceted transition and further examines its impact from three specific aspects including economy, quality of life, and social development.

Perceived social justice in the context of rural-urban integration

Numerous studies have demonstrated the ways in which the Chinese rural-urban division has shaped its people's perception of social justice. Whyte (2010), for example, argues that rural populations are less likely to perceive social injustice because the distribution of resources and opportunities in rural regions are evenly low. Studies on perceived social justice of urban populations are often concerned with whether it is determined by objective structural factors or subjective comparisons. No matter what approach is taken, related studies agree that the rural-urban dual system has exerted a profound effect on perceived social justice, either by establishing an objectively advantaged social status or by shaping the standards for subjective comparisons (Ma & Liu, 2010; Whyte & Im, 2014; Zhang et al., 2018). While these studies present a general picture of Chinese people's perception of social justice, none of them explores the independent impact of rural-urban institutional arrangements, especially when they are transiting from segmentation to integration.

The uneven pace of recent reforms across localities has triggered a branch of social justice research that takes regional factors into consideration. These studies mainly focus on the heterogeneity caused by variations in economic, geographic, and political conditions across regions (Wang et al., 2012b; Li et al., 2018; Meng & Su, 2021). Data such as GDP per capita, Gini index, and public expenditures have been employed in these analyses. Using Gini

coefficients as the measurement of regional income inequity, Wu (2009) maintains that perception of justice is correlated with objective income inequities. Zhao (2015) found a negative relationship between non-agricultural investment by local governments and perceived social justice: people living in more modernized areas are more inclined to see a lack of social justice in the whole society. Mei et al. (2020), however, observed a positive relationship between local fiscal investments in social service and individuals' perception of social justice.

The above studies demonstrate that regional factors should be considered in accounts of perceived social justice. Nevertheless, there are several gaps in existing research. First, although rural-urban integrated reforms have been promoted at nationwide, few studies provide empirical evidence or theoretical discussions of its impact on social justice perception. Second, when considering provincial factors, studies have merely drawn data from economic or financial investment statistics. Economic indicators alone, however, do not provide sufficient insight into regional impacts. Other aspects such as education, health insurance, and living condition that involve in rural-urban integration reforms are also essential gains that may shape individuals' perception of social justice. Third, in addition to the level effect of rural-urban integration, hardly can we find empirical study that rigorously measured the change of rural-urban integration or assessed its effect on perceived social justice.

Theoretical framework and research hypotheses

The perceptions of social justice refers to individuals' subjective assessment of the degree of social inequity (Wegener, 1991). It is not surprising, then, that the research on this topic has explored and confirmed correlations between perceived social justice and objective social inequity conditions (Bussolo et al., 2019; Wu, 2009). According to social justice theory, the

perception of justice is influenced by contextual factors because the evaluation criteria people use to make social justice judgments are dependent upon specific contexts (Davis, 2005; Cook, 1975). Various contextual factors have been examined in the literature, including cultural effects, socio-political conditions, and institutional procedures (Gilbert et al., 1998; Wegener, 1991; Cook, 1975). The last has suggested that the changing institutional rules that reconfigure the structure of resources and opportunities play a determinant role in shaping individuals' beliefs about justice (Cook, 1975). Building on these studies, this study argues that rural-urban integration may affect perceived social justice via resource effect or value-orientation effect.

Resource effect

The impact of rural-urban integration may be achieved through the resource effect. According to existing studies, the structural characteristics of existing policies affect how resources and opportunities are distributed and how much each individual receives, which in turn will influence their appraisal of social justice (Tyler, 2000). China's rural-urban gaps are rooted in a variety of social inequities at different levels (Bian, 2002). Moreover, the current empirical studies have revealed the positive effects of rural-urban integrated reforms in narrowing social structural inequities and boosting distribution outcomes and social mobility (Chen et al., 2018a; Scheil-Adlung, 2014). These factors are positively associated with a higher sense of social justice. Therefore, because rural-urban integration has narrowed the objective rural-urban gaps, it may also reconstruct the subjective view of social justice of individuals.

Value-orientation effect

Meanwhile, value-orientation effect may also be achieved during rural-urban integration reforms. Cook (1975) argues that people's beliefs regarding social justice are

formed and reinforced by certain rules of social distribution. For example, members of disadvantaged groups may internalize their social status when determining the level of reward to expect, which will then shape their perception of social justice (Davis, 2005; Mettler & Soss, 2004). Recent empirical research also suggests that a more developed social setting will give rise to critical citizens who have more demands for rewarding distribution (Mei et al., 2020). Following this rationale, we expect that a more balanced distribution principle adopted by integration reform may foster value-orientation effect and thus negatively shape social justice perception.

Furthermore, the degree of change in rural-urban integration over time may also shape social justice perception. On the one hand, the positive resource effect lies in the improvements in distributed benefits and social motility. Facing the great decrease in rural-urban gaps over the years, individuals may hold a positive expectation of future reforms and adopt a more favourable view on perceived social justice. On the other hand, a greater change in rural-urban integration may lead to a shift in social values so that citizens were more inclined to see the whole society as less fair. The rationales as described above lead to competing hypotheses concerning the impact of the level or change of rural-urban integration on perceived social justice among citizens. Accordingly, we propose to test empirically three sets of hypotheses concerning the impact of rural-urban integration (as manifested in the economy, the quality of life, and social development) on the perception of social justice.

> ***Hypothesis 1a****:* The level of rural-urban integration of the economy will be positively associated with individuals' perception of social justice.

> ***Hypothesis 1b****:* The level of rural-urban integration of the economy will be negatively associated with individuals' perception of social justice.

Hypothesis 1c: The greater positive change in the rural-urban integration of the economy will be positively associated with individuals' perception of social justice.

Hypothesis 1d: The greater positive change in the rural-urban integration of the economy will be negatively associated with individuals' perception of social justice.

Hypotheses 1a and 1c indicate that the level or change of economic integration will shape a more positive attitude towards social justice. Conversely, hypotheses 1b and 1d propose that economic integration will lead to more critical citizens, whose perception of social justice will be negatively affected.

Hypothesis 2a: The level of rural-urban integration of quality of life will be positively associated with individuals' perception of social justice.

Hypothesis 2b: The level of rural-urban integration of quality of life will be negatively associated with individuals' perception of social justice.

Hypothesis 2c: The greater positive change in the rural-urban integration of quality of life will be positively associated with individuals' perception of social justice.

Hypothesis 2d: The greater positive change in the rural-urban integration of quality of life will be negatively associated with individuals' perception of social justice.

Analogously, Hypotheses 2a and 2c postulate that the integration of quality of life in rural and urban regions will generate a positive effect on perceived social justice. Hypotheses 2b and 2d assert that the effect would be negative.

Hypothesis 3a: The level of rural-urban integration in social development will be positively associated with individuals' perception of social justice.

Hypothesis 3b: The level of rural-urban integration in social development will be negatively associated with individuals' perception of social justice.

Hypothesis 3c: The greater positive change in the rural-urban integration of social development will be positively associated with individuals' perception of social justice.

Hypothesis 3d: The greater positive change in rural-urban integration of social development will be negatively associated with individuals' perception social justice.

Hypotheses 3a and 3c are supported by studies indicating that people entitled to more welfare provision are more likely to perceive higher levels of social justice (Li et al., 2018; Mei et al., 2020). Hypotheses 3b and 3d, however, are based on conflicting studies that suggest the improvements in social welfare may lead to more demands for public goods and services, and prompt individuals to perceive lower levels of social justice. (Li & Wu, 2012; Yeh & Harmel, 2021).

Data and methods

Data from CGSS 2015

Data were drawn from two sources. The individual-level data came from the Chinese General Social Survey (CGSS). Introduced in 2003, the CGSS is China's first nationwide large-scale social survey project. It provides detailed information on changes in the social structure and on the population's attitudes and perceptions. Using a multi-stage sampling method, the survey covers a nationally representative sample of adults living in both rural and urban regions (see Bian & Li, 2012). The 2015 data were collected from 28 provinces, 89 prefecture-level cities, 134 county-level administrative units, and 370 township-level administrative units. A total of 10,968 respondents were interviewed. After eliminating cases with missing values, the final sample size for the present study was 10,870. Sampling weights provided by CGSS were used throughout the analysis.

Perceived social justice

Perceived social justice was the dependent variable. The CGSS survey asked respondents, "Overall, do you think the society is fair?" Based on this question, perceived social justice was coded as an ordinal variable, with a possible value from 1 to 5 (1=unfair, 2=not very fair, 3=average, 4=quite fair, and 5=fair).

Individual-level covariates

In line with previous research, this study included individual-level covariates as controls in the analysis. Socio-demographic variables included age, gender, marital status, ethnicity, education, occupation, Chinese Communist Party (CCP) membership, income, hukou, and migration status. Age was a continuous variable. Gender was dichotomously coded with female as 1 and male as 0. Marital status was a binary variable with 1 for currently married

and 0 for otherwise. People who were ethnic minorities were coded as 1 and others as 0.

Education was a continuous variable coded according to the years of schooling the

respondents had completed. For occupation, professional or managerial roles were coded as 1

and other jobs as 0. People who were CCP members were coded as 1 and those who were not

as 0. The respondents' annual income was coded as a continuous variable. For any missing

income data, we conducted multiple imputations to estimate missing values. Hukou status

included rural hukou, urban hukou, and jumin hukou, all coded as dummy variables. Intra- or

inter-prefecture migrants were coded as 1 and others as 0.

Rural-urban integration index

The key independent variables are the rural-urban integration variables, drawn from the

yearbook of the Index of Rural-urban Development Integration in China published by Zhu

and his colleagues in 2018 (Zhu et al., 2018). At the provincial level, the yearbook provides a

specialized dataset to assess the degree of rural-urban integration yearly from 2010 to 2016.

Related data were derived from various sources, including statistical yearbooks, political

guidance documents, official annual reports, etc. In this study, we used the data regarding

rural-urban integration on the economy, the quality of life, and social development, coded as

continuous variables.

The value of the rural-urban integration index quantitatively describes the degree of

integration between urban and rural areas in the specific reform area. More specifically, the

index of economic integration was constructed by nine specific indicators including GDP,

urbanization population rate, and relative utilization rate of land, and so forth. Rural-urban

integration of quality of life was assessed using measures of income, consumption, and living

conditions. Rural-urban integration of social development was measured by rural-urban gaps

in social welfare area, including education, health insurance, cultural resources, and social

assistance. The change over time in rural-urban integration was calculated based on the index

changes from 2010 to 2015, coded as continuous variables. Details of the construction of the index system are presented in Appendix 4.1.

Provinces are the analysis units in this study. Policy decisions in China are usually made by the central government, but provinces are allowed to modify and implement plans according to their local conditions. Prefecture- and county-level governments are under the mandate of provincial policies. The pace of rural-urban integration reform, therefore, is more consistent within provinces than across provinces (Wang et al., 2012b).

After matching the index with the CGSS data, the final sample for the analysis was 10,870 respondents from 28 provinces. To control for economic variations across regions, provincial GDP per capita in 2014 was also included in the analysis. The GDP data were taken from the 2015 China Statistical Yearbook.

Analysis

Because the data have a hierarchical structure, we estimated three-level mixed-effects models. In addition to the provincial data, township data were used to provide another level in the analysis because townships are widely considered a stable control for the subordinate level of regional differences (Wu et al., 2011). Given the categorical nature of the outcome variable, we employed ordered logistic regressions. The three-level ordered logistic regression models were used to account for the effects of individual characteristics and contextual factors on the outcome variable. This model also corrects the biases in parameter estimates for the clustering data and, therefore, obtain more accurate parameter estimates (Goldstein, 2011). The general form of the three-level ordered logistic regression model is as follows:

$$y_{ijk} = X'_{ijk}\beta + v_k + \upsilon_{jk} + \varepsilon_{ijk}$$

In the equation, y_{ijk} represents the measure of the perception of social justice of individual i in township j and province k. X_{ijk} is the covariate vector; β represents estimated regression parameters; v_k is the unknown random effect at the provincial level; v_{jk} indicates the random effect at the township level; and ε_{ijk} are the model residuals following a logistic distribution.

We estimated five models. Model 1 was the baseline model with a constant term in the fixed effects. Individual socio-demographic characteristics such as, age, gender, marital status, education, occupation, CCP membership, income, and hukou status were added in Model 2. Model 3 included the three indicators of rural-urban integration. Model 4 further controlled for the provincial GDP per capita in 2014. Finally, in Model 4, we added variables representing the change in rural-urban integration while keeping other control variables. All coefficients were standardized to allow comparisons across variables. Using the methods established by Hedeker and Gibbons (1996), we calculated the intra-unit correlation coefficients (ICCs) of each model.

Results

Descriptive statistics

Table 4.1 displays the weighted descriptive statistics of individual-level variables. The sample included 5,778 men (53%) and 5,092 women (47%), with an average age of around 53 years. Most of the respondents (69%) were married. The average years of schooling were 8.456, indicating a low level of educational attainment. The percentage of respondents with professional or managerial occupations was lower than 9%. Annual income on average was around RMB 29,035. More than half of the respondents (54%) were rural hukou holders,

followed by urban hukou holders (28%) and jumin hukou holders (18%). Non-migrants and migrants represented 72% and 28% of the sample, respectively.

Table 4.1 Descriptive statistics of socio-demographic characteristics of CGSS 2015

Variables	Mean/percentage	Range
Perceived social justice (SE)	3.224 (0.997)	1-5
Age (SE)	52.711 (17.331)	18-95
Gender (female, %)	46.840	0,1
Marital status (married, %)	69.290	0,1
Ethnicity (ethnic minority, %)	7.225	0,1
Years of schooling (SE)	8.456 (4.834)	0-18
Occupation (professional/managerial, %)	8.724	0,1
CCP membership (CCP members, %)	11.185	0,1
Income (SE)	29035.300 (58570.650)	0-1000000
Hukou status (%)		
Rural hukou	54.362	0,1
Urban hukou	28.147	0,1
Jumin hukou	17.491	0,1
Cross-town migrants	27.466	0,1

Notes: N=10,870. Data were weighted. Means or percentages are reported. Standard errors in parentheses.

Table 4.2 reports the descriptive statistics of the provincial variables. The average level of rural-urban integration of the economy was relatively low (around 46). By comparison, rural-urban integration of social development had the highest average (63), which is likely the result of nationwide progress in consolidating health and pension insurance. The average level of rural-urban integration of quality of life was around 58. Table 4.2 also demonstrates the degree of change in the three measured aspects from 2010 to 2015. The average change in the integration of quality of life is the highest (31.742), followed by the change in the integration of the economy (21.770) and, finally, the change in the integration of social development (21.167).

Figures 1 and 2 illustrate the levels and changes in rural-urban integration of 28 provinces. Figure 4.1a shows the degree of rural-urban integration in economy. Figure 4.1b shows the degree of rural-urban integration of quality of life, with an overall positive value for all 28 provinces. Figure 4.1c depicts the level of rural-urban integration of social

development: all provinces scored positively except Qinghai. Figure 4.2 shows that the

majority of the provinces witnessed a positive change in rural-urban integration from 2010 to

2015. Yet the degree of change varies across the three measures and the regions. The results

demonstrate the significant variations in rural-urban integration at the provincial level, which

could lead to variations in individuals' perceptions of social justice.

Table 4.2 Descriptive statistics of rural-urban integration indexes and GDP per capita at province level (N=28)

Rural-urban integration variables	Definitions	Mean	SE	Min	Max
Rural-urban integration of economy	Constructed index based on regional statistics in 2015	46.392	0.261	-31.140	82.660
Rural-urban integration of quality of life	Constructed index based on regional statistics in 2015	58.327	0.196	34.820	100
Rural-urban integration of social development	Constructed index based on regional statistics in 2015	63.311	0.208	-39	94.040
Change in rural-urban integration of economy	Change in economic integration from 2010 to 2015	21.770	2.252	-0.344	9.268
Change in rural-urban integration of quality of life	Change in quality of life integration from 2010 to 2015	31.742	2.932	-1.244	10.668
Change in rural-urban integration of social development	Change in social development integration from 2010 to 2015	21.167	1.823	0.824	9.206
GDP per capita	GDP per capita at province level in 2014	49202.700	207.889	9995	105231

Note: Means are reported. Robust standard errors are in parentheses.
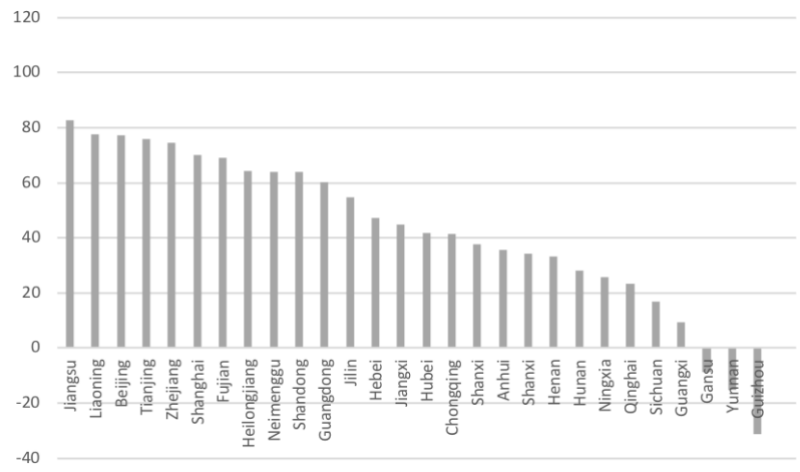
(4.1a) Rural-urban integration of economy in 2015
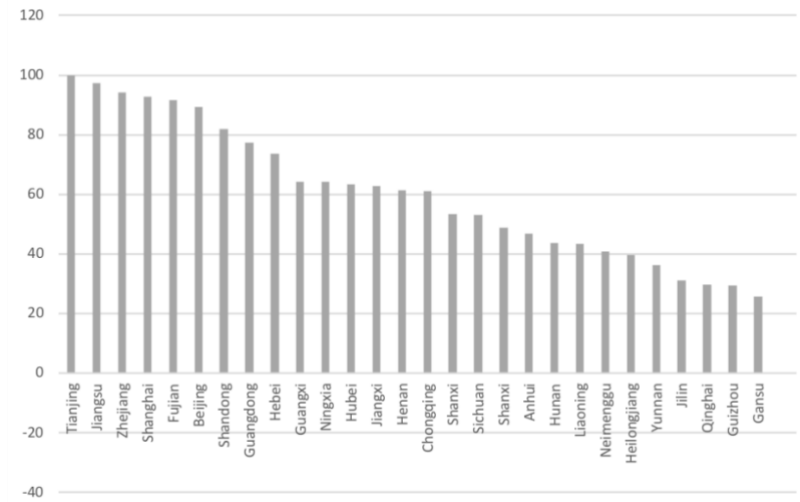
(4.1b) Rural-urban integration of quality of life in 2015
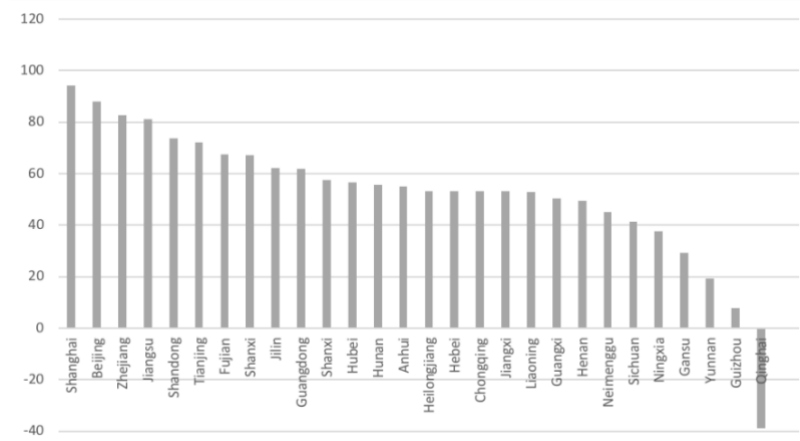
(4.1c) Rural-urban integration of social development in 2015

Figure 4.1 Rural-urban integration in 28 provinces in China (2015)
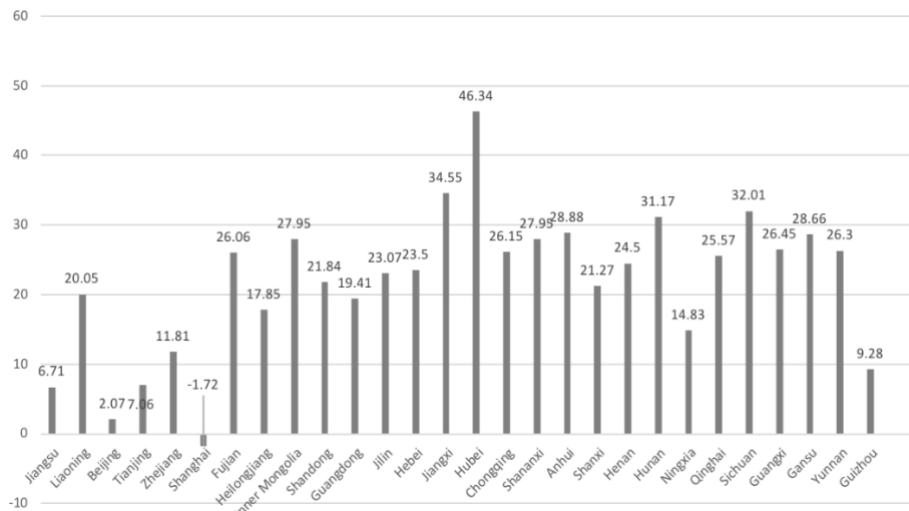
(4.2a) Rural-urban integration change in economy
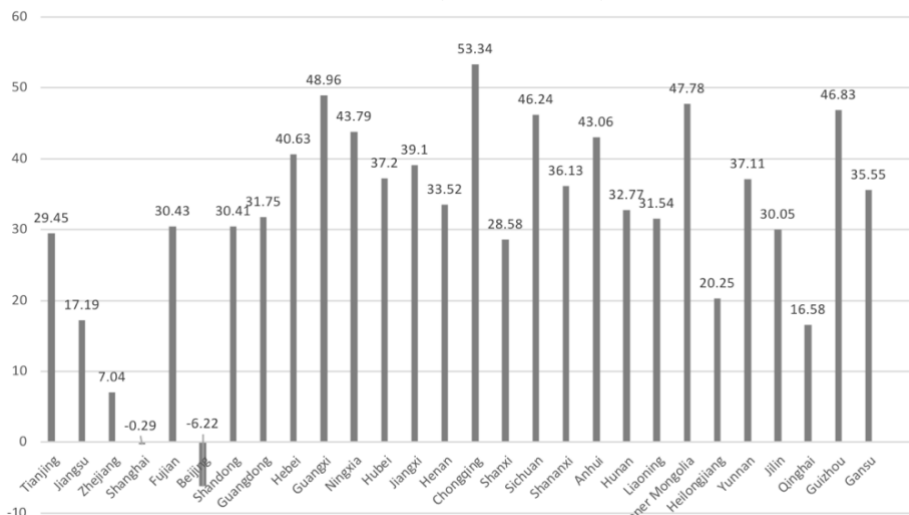
(4.2b) Rural-urban integration change in quality of life
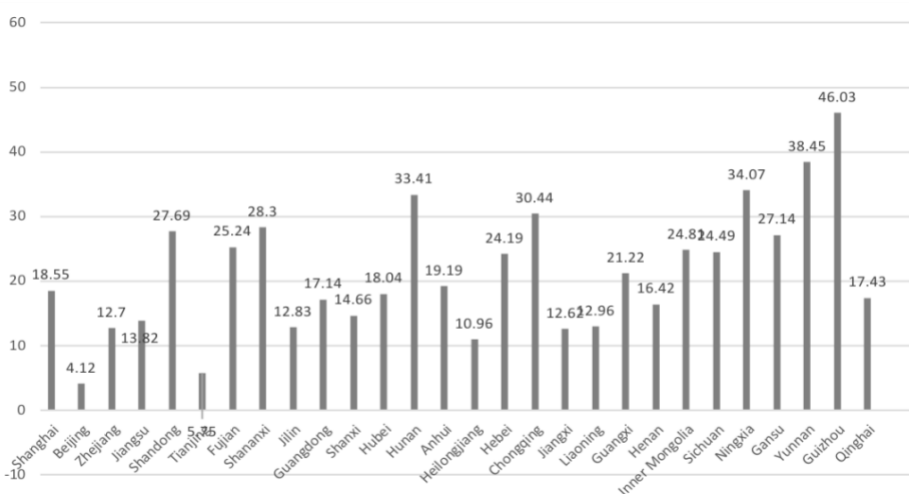
(4.2c) Rural-urban integration change in social development

Figure 4.2 The change of rural-urban integration in 28 provinces from 2010 to 2015

Regression results

Three-level ordered logistic regressions were used to assess the relationship between rural-urban integration and perceived social justice. The standardized coefficients are presented in Table 4.3. The results of Model 1 indicate the statistically significant variations in social justice perception at the individual, township, and provincial levels. The intraclass correlations (ICCs) in Model 1 were 0.069 and 0.024, suggesting that 6.9% and 2.4% of the variations in the dependent variable can be attributed to the provincial and township differences, respectively. Though the ICCs do not seem significantly high, previous scholars have suggested that multi-level modelling should be considered in analysing hierarchical (clustering) data (Snijders & Bosker, 2011). In evaluating the effects of individual characteristics, Model 2 shows that age had a non-linear association with perceived social justice as its coefficient that was significantly negative while that of age squared was positive. Ethnicity was a significant predictor for perceived social justice: people belonging to ethnic minorities were more likely to view society as fair. Professional occupation was also significantly and positively correlated with perceived social justice. CCP membership showed a positive effect on social justice perception. Hukou was not significant, but migrants were less likely to think that society is fair.

Model 2 and Model 3 display the effects of rural-urban integration on social justice perception, and the results are consistent across models after GDP per capita is controlled. As shown in Model 3, rural-urban integration of the economy was negatively associated with the outcome variable (β = -0.127, p < 0.01). The standard coefficients were substantial and statistically significant. This result suggests that people living in provinces with more integrated rural-urban economies were less likely to think society is fair. Similarly, there is a negative relationship between rural-urban integration of quality of life and social justice perception (β = -0.142, p < 0.01). The results reflect that, the current integration reforms in

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the two specific areas have led to a more critical social values among the population, resulting in a lower level of perceived social justice. Hypothesis 1b and Hypothesis 2b were confirmed.

On the contrary, rural-urban integration of social development showed a significantly positive effect on social justice perception. According to the results, the integrated reform in social welfare area was associated with an increase in the perception of social justice (β = -0.230, p < 0.001), which underlines the significant role welfare provision plays in satisfying the individuals' desire for justice (Li et al., 2018). The positive result is supported by existing literature which shows that improvements in education, health care, and social security can promote social mobility, narrow structural inequities, and enhance perceived social justice (Anderson, 2001; Marmot, 2007; Scheil-Adlung, 2014). Our findings further suggest that integration reform measures in social development have translated into an increase in the perception of social justice nationwide. Therefore, Hypothesis 3a was confirmed.

According to the regression results shown in Model 4, changes in rural-urban integration in the economy and the social development over time are not significantly associated with individuals' perception of social justice. There is, however, a positive relationship between the changes over time in rural-urban integration of quality of life and perceived social justice (β = -0.585, p < 0.001). This result implies that greater integration of quality of life can contribute to a favourable view of social justice over time. It is understandable given people might be more sensitive to income and consumption level changes over time. If people witness the decreasing disparities of living quality conditions, they may envisage a more equitable society in the future (Wu et al., 2017). The positive expectation will contribute to a favourable view of social justice. Thus, Hypothesis 2c was confirmed.

Table 4.3 Three-level mixed-effects ordered logistic regressions on perceived social justice

	Model 1	Model 2	Model 3	Model 4
Individual-level variables				
Age (years)		-0.532***	-0.531***	-0.531***
		(0.163)	(0.163)	(0.165)
Age (squared)		0.825***	0.825***	0.825***
		(0.164)	(0.164)	(0.165)
Gender (female)		-0.039	-0.040	-0.040
		(0.034)	(0.034)	(0.034)
Marital status (married)		0.020	0.020	0.018
		(0.060)	(0.060)	(0.060)
Ethnicity (ethnic minority)		0.254***	0.253***	0.252***
		(0.094)	(0.093)	(0.091)
Education (years of schooling)		0.061	0.060	0.061
		(0.044)	(0.044)	(0.045)
Occupation (professional/managerial)		0.147*	0.147*	0.149*
		(0.078)	(0.078)	(0.078)
CCP membership (CCP members)		0.156**	0.156**	0.157**
		(0.078)	(0.078)	(0.078)
Annual income (ln)		-0.025	-0.025	-0.024
		(0.035)	(0.035)	(0.035)
Hukou status (ref. urban hukou)				
Urban hukou		-0.068	-0.067	-0.061
		(0.057)	(0.057)	(0.055)
Jumin hukou		-0.087	-0.087	-0.086
		(0.073)	(0.073)	(0.074)
Cross-town migrants		-0.114***	-0.114***	-0.112***
		(0.038)	(0.038)	(0.038)
Province-level variables				
Rural-urban integration of economy		-0.131**	-0.127**	-0.122
		(0.052)	(0.054)	(0.106)
Rural-urban integration of quality of life		-0.144**	-0.142**	-0.108*
		(0.065)	(0.063)	(0.060)
Rural-urban integration of social development		0.231***	0.230***	0.238***
		(0.050)	(0.049)	(0.042)
GDP per capita in 2014 (ln)			-0.009	-0.033
			(0.052)	(0.035)
Change in rural-urban integration of economy				0.006
				(0.058)
Change in rural-urban integration of quality of life				0.157**
				(0.073)
Change in rural-urban integration of social development				-0.089
				(0.083)
Constants				
Constant cut1	-2.914***	-2.958***	-2.959***	-2.960***
	(0.117)	(0.123)	(0.123)	(0.119)
Constant cut2	-1.034***	-1.058***	-1.058***	-1.060***
	(0.079)	(0.093)	(0.093)	(0.091)
Constant cut3	-0.005	-0.008	-0.008	-0.009
	(0.070)	(0.091)	(0.090)	(0.081)
Constant cut4	3.446***	3.506***	3.505***	3.504***

	(0.156)	(0.169)	(0.168)	(0.164)
Random-effects Parameters				
Variance (Township | Province)	0.157***	0.144***	0.144***	0.144***
	(0.031)	(0.031)	(0.031)	(0.031)
Variance (Province)	0.085***	0.057***	0.057***	0.041*
	(0.031)	(0.022)	(0.021)	(0.023)
ICC				
ICC (Township | Province)	0.069	0.058	0.058	0.041
ICC (Province)	0.024	0.016	0.016	0.012
Observations				
Number of Provinces	28	28	28	28
Number of Townships	357	357	357	357
Number of respondents	10,870	10,870	10,870	10,870
Log pseudolikelihood	-13913.423	-13765.337	-13591.263	-13587.249

Notes: Data were weighted. Standardized coefficients are reported. Robust standard errors are in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Robustness checks

To check the robustness of the multi-level regression results, a series of ordered logistic regressions were estimated, taking into consideration of the potential mediating effects. As shown in Appendix 4.2, Model 1 to Model 3 show that social mobility serves as a mediating variable between rural-urban integration of social development and perceived social justice. The results verify the resource effect approach and provide more support for Hypothesis 3a. Results illustrated in Appendix 4.3 suggest that social values also mediates the relationship of social justice perception with rural-urban integration of economy, and with quality of life, confirming Hypothesis 1b and Hypothesis 2b. One caveat is that the mediating variables checked here are also measures of subjective attitudes. Unfortunately, objectives measures are not available in the dataset to check the potential mediating pathways.

Conclusion and discussion

Pooling data from the 2015 CGSS and the yearbook of China's Rural-Urban Integration Index, this study investigates whether rural-urban integration at the provincial level can explain individuals' perception of social justice in the context of ongoing reforms in China.

With responses from 10,870 interviewees in 28 provinces, the multi-level modelling regression results suggest that rural-urban integration is significantly correlated with perceived social justice, yet the effects of rural-urban integration on the perception of social justice diverge depending on the specific integration field.

More precisely, the results indicate that people residing in provinces with a higher levels of rural-urban integration of the economy or quality of life tend to perceive a lower degree of social justice. The results show that rural-urban integration in the specific aspects have negatively shaped social justice perception via value-orientation effect. Rural-urban integration reform in these fields have given a rise to the "critical citizens" phenomenon (the rationale underlying Hypotheses 1b and 2b). This finding is complementary to previous studies that focus on the value shift during economic growth (Norris, 1999; Wang, 2005). It shows the China's regional integration reform have generated a similar value change, which reshapes the way of individuals in viewing social justice.

By contrast, rural-urban integration of social development is positively correlated with social justice perception as postulated in Hypothesis 3a. Informed by previous studies, a more equitable distribution of resources and opportunities is the potential mechanism, through which social justice perception was positively affected. A rural-urban integrated system in social development system has proved to be effective in reducing social inequities and encouraging a perception of social justice. The results further confirm Hypothesis 2c that a greater change in rural-urban integration of quality of life over time is positively associated with perceived social justice.

This study has several implications for future practice and research. First, in the promotion of future rural-urban integration reforms, the Chinese government should adjust policies accordingly to address the increasing demands for social justice. Policy-makers should ensure a more equitable distribution of the fruits of economic rural-urban integration.

Second, this study underscores the importance of building a national unified social welfare system. The finding was consistent with the previous conclusion that a rights-based social welfare system is the key to reducing long-term social inequities in Chinese society (Gao et al., 2018). Governments, then, should concentrate their attention and resources on promoting education, health care, and social security in rural and urban regions. Third, given the fact that the greater integration of quality of life will increase individuals' perception of social justice, it is imperative to encourage efficient integration by increasing fiscal subsidies to this field.

To conclude, this study contributes to the body of literature on the factors determining individuals' perception of social justice. Its contribution is threefold. First, building on the theories demonstrated in earlier studies, the study explored and evaluated the divergent relationships between rural-urban integration and social justice perception. Second, we reinforce the benefits of viewing rural-urban integration as a multi-faceted process and the importance of considering the context when interpreting social justice perception. Third, while countries and regions on a global scale share the goal of pursuing justice (ECLAC, 2016), this study deals with the way China should adjust its institutional reforms to shape the perception justice. Our findings suggest that continued progress on the road towards equality cannot merely rely on economic performance. Instead, the government should improve its capacity to meet a rising demand for the more equitable distribution of social welfare entitlements.

Despite these findings, there are limitations. First, the ability to draw causal inferences in this study is limited by the use of cross-sectional data. Longitudinal data are required to better delineate causal mechanisms. Second, the theoretical approaches need further verification with more supportive data. Finally, "perceived social justice" covers a wide range of interpretations. It would useful for future studies to have a more specific focus

and to determine how rural-urban integration shapes perceptions of distributive justice, procedural justice, or interactional justice.

Chapter 5: Conclusion

Although different countries have diverse history, culture, identity, and economic circumstances, many suffer from uneven development between rural and urban areas (Dudwick et al., 2011). Across the world, there is a growing realization that promoting integrated regional reforms is vital to drive inclusive growth and sustainable development (Harriss & Moore, 2017). Under the context of China's ongoing reforms, the more equitable distribution of social welfare entitlements plays a role in equalizing rural-urban gaps and mitigating multi-dimensional social inequities. In particular, building a national unified health care system becomes an unfulfilled and promising target for future growth.

China's rural-urban integration reforms signaled the government's commitment to meeting public demand. As discussed in earlier research, the integration reform focuses on resolving the differences in policies and systems between rural and urban areas and guiding a coordinating approach for future growth (Chen et al., 2018a). Little attention, however, has been paid to the effects of the process on individuals. There is a need to consider how citizens will respond to this radical transition. This thesis discusses an evolved approach to building a unified health insurance system from 1949 to 2020. The results highlight the role of policy and institutional design in the shift from rural-urban division to integration. Moreover, the thesis offers theoretical insights into the effects of rural-urban integration. It provides empirical answers to key questions about the impacts of a rural-urban integrated system on Chinese citizens.

One of the most important findings is that the top-down policy guidance from Chinese governments plays a role in achieving integration goals. Consolidating rural and urban insurance schemes is an advance of previous reforms and has become critically necessary. After decades spent creating the preconditions for consolidation, the main challenge to the current reform is the continuation of institutional segmentation despite the integrated

schemes. As discussed in the second essay, the fact that social insurance enrollment affects urban identification in different ways depending on the context reveals that entrenched rural-urban disparities act as an institutional barrier to urban identity. In the third study, the relationship between social benefits integration and the perception of social justice confirmed the transformative effects of a more equitable welfare system on social mobility and equality of opportunity. These findings support other studies that have demonstrated a well-developed social welfare system can ensure the basic rights and opportunities of disadvantaged citizens, eliminate institutional discrimination, and construct a more equitable society (Sabates-Wheeler & Devereux, 2008; Gao et al., 2018).

This thesis makes both theoretical and practical contributions to a better understanding of the rural-urban integration reform in China. The concept of urban identity is indebted to Barth's (1998) notion of social identities. The thesis provides a theoretical underpinning to explain the existing effect variance of social insurance participation on the urban identification of in-situ urbanized residents. It explores whether the dynamics of provincial integration are determining factors of perceived social justice. The findings reflect the significant role of institutional boundaries on an individual's identity and perception. The application of social identity theory in a Chinese context is enlightening. In addition, this study employs multi-level modelling to determine contextual effects on individuals, which will be helpful in future rural-urban integration studies.

The practical contributions of the thesis lie in its application to future reforms in China. Both policy and empirical analyses strongly suggest that the main obstacle to integration is the entrenched rural-urban division. Detaching health care provision from the hukou system is essential to building a more integrated social welfare system and eliminating rural-urban inequities in the long run. The thesis demonstrates that reform efforts should concentrate on improving national guidance on integration reform, expediting health care

service in areas undergoing urbanization, enhancing positive perceptions of social justice, and fulfilling the commitments that China has made to its citizens.

There are several aspects in this dissertation that require further investigation. First, the study suffers from the inherent limitations of the quantitative method. The generalized conclusions may be difficult to apply to the specific mechanism of the identity formation process (Creswell & Creswell, 2018). A wider range of information obtained by detailed observation, such as ethnographic research, would lead to a more nuanced interpretation of the relationships studied. Second, given the heterogeneity within areas of in-situ urbanization, more detailed comparisons of social groups could be achieved in future research. Finally, the analytical framework of the thesis focuses on the influence of institutional changes on the construction of identity and the perception of justice. Other dimensions, such as attitudes, subjective well-being, and health-related outcomes, were not directly addressed yet are worthy of attention. They also provide important evidence of the overall impact of rural-urban integration in contemporary China.

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Appendices

Appendix 3.1 Robustness check: Ordered logistic regression results

	Model 1	Model 2	Model 3
Individual-level variables			
Age (years)	-0.005	-0.006	-0.004
	(0.135)	(0.107)	(0.277)
Gender (ref. male)	-0.018	-0.019	-0.021
	(0.857)	(0.843)	(0.826)
Marital status (ref. unmarried)	-0.373***	-0.385***	-0.373***
	(0.005)	(0.009)	(0.003)
Education (ref. primary school or below)			
Middle school	0.276**	0.223*	0.256**
	(0.027)	(0.073)	(0.038)
High school	0.245	0.125	0.180
	(0.121)	(0.431)	(0.251)
College and above	0.577***	0.368*	0.427**
	(0.006)	(0.078)	(0.040)
Occupation (ref. not professional)	0.306*	0.266	0.305*
	(0.068)	(0.106)	(0.072)
Household wealth	0.060*	0.071*	0.074**
	(0.100)	(0.063)	(0.043)
Hukou (ref. rural hukou)			
Urban hukou	1.721***	1.295***	1.450***
	(0.000)	(0.000)	(0.000)
Jumin hukou	2.328***	1.863***	2.060***
	(0.000)	(0.000)	(0.000)
Cross-town migrants	0.398**	0.373**	0.375**
	(0.017)	(0.032)	(0.018)
Health insurance (ref. the uninsured)			
New Rural Cooperative Medical Scheme (NRCMS)		-0.312*	
		(0.074)	
Urban Employee Basic Medical Insurance (UEBMI)		0.565***	
		(0.003)	
Urban Resident Basic Medical Insurance (URBMI)		0.708***	
		(0.002)	
Urban and Rural Resident Medical Insurance (URRMI)		0.464**	
		(0.023)	
Pension insurance (ref. the uninsured)			
New Rural Social Pension Scheme (NRSPS)			-0.581***
			(0.000)
Urban Employee Basic Pension Insurance (UEBPI)			0.369**
			(0.011)
Urban Resident Basic Pension Insurance (URBPI)			0.415*
			(0.051)
Urban and Rural Resident Pension Insurance (URRPI)			0.302
			(0.131)
Township-level variables			
Urbanizing townships	0.495***	0.342***	0.488***
	(0.000)	(0.006)	(0.000)

In Pilot site	0.012	-0.008	-0.020
	(0.910)	(0.940)	(0.845)
Constants			
Constant cut1	1.370***	1.024***	1.297***
	(0.000)	(0.001)	(0.000)
Constant cut2	1.690***	1.351***	1.623***
	(0.000)	(0.000)	(0.000)
Constant cut3	1.799***	1.463***	1.735***
	(0.000)	(0.000)	(0.000)
Constant cut4	2.656***	2.341***	2.608***
	(0.000)	(0.000)	(0.000)
Constant cut5	2.844***	2.533***	2.800***
	(0.000)	(0.000)	(0.000)
Constant cut6	3.027***	2.719***	2.985***
	(0.000)	(0.000)	(0.000)
Observations			
Number of respondents	3,229	3,229	3,229
Prob > Chi^2	0.000	0.000	0.000
Log pseudolikelihood	-3171.393	-3136.910	-3140.661

Notes: Data were weighted. Coefficients are reported. Standard errors in parentheses.

 * p < 0.1, ** p < 0.05, *** p < 0.01.

Appendix 3.2 Robustness check: Multi-level regression models with township-level fixed effects

	Model1	Model2	Model3	Model4
Individual-level variables				
Age (years)		-0.004	-0.005	-0.003
		(0.005)	(0.004)	(0.004)
Gender (ref. male)		-0.078	-0.068	-0.077
		(0.111)	(0.115)	(0.110)
Marital status (ref. unmarried)		-0.266*	-0.287**	-0.275**
		(0.143)	(0.142)	(0.134)
Education (ref. primary school or below)				
Middle school		0.166	0.136	0.148
		(0.131)	(0.132)	(0.128)
High school		-0.010	-0.090	-0.054
		(0.185)	(0.180)	(0.175)
College and above		0.336	0.178	0.217
		(0.302)	(0.285)	(0.287)
Occupation (ref. not professional)		0.270	0.237	0.265
		(0.169)	(0.173)	(0.165)
Household wealth		0.046	0.049	0.057
		(0.058)	(0.056)	(0.057)
Hukou (ref. rural hukou)				
Urban hukou		1.394***	1.089***	1.196***
		(0.246)	(0.224)	(0.240)
Jumin hukou		1.703***	1.422***	1.512***
		(0.233)	(0.228)	(0.242)
Cross-town migrants		-0.023	-0.009	-0.049
		(0.248)	(0.254)	(0.238)
Health insurance (ref. the uninsured)				
New Rural Cooperative Medical Scheme (NRCMS)			-0.077	
			(0.216)	
Urban Employee Basic Medical Insurance (UEBMI)			0.661***	
			(0.248)	
Urban Resident Basic Medical Insurance (URBMI)			0.541**	
			(0.235)	
Urban and Rural Resident Medical Insurance (URRMI)			0.436*	
			(0.227)	
Pension insurance (ref. the uninsured)				
New Rural Social Pension Scheme (NRSPS)				-0.605***
				(0.169)
Urban Employee Basic Pension Insurance (UEBPI)				0.332*
				(0.191)
Urban Resident Basic Pension Insurance (URBPI)				0.123
				(0.244)
Urban and Rural Resident Pension Insurance (URRPI)				0.027
				(0.212)
Township-level variables				
In the 2014 Pilot Program		0.018	0.003	0.002
		(0.218)	(0.213)	(0.210)
Towns with no reclassification (reference)				
Towns or rural townships converted to street districts		1.288***	1.140***	1.259***

		(0.386)	(0.380)	(0.374)
Towns or rural townships incorporated into development zones		0.465	0.401	0.443
		(0.320)	(0.306)	(0.302)
Towns or rural townships incorporated into urban districts		0.823***	0.678**	0.937***
		(0.290)	(0.298)	(0.286)
Rural townships converted to towns		-0.046	-0.105	-0.044
		(0.351)	(0.345)	(0.331)
Constants				
Constant cut1	0.903***	1.394***	1.258***	1.306***
	(0.186)	(0.454)	(0.456)	(0.422)
Constant cut2	1.228***	1.742***	1.610***	1.659***
	(0.198)	(0.462)	(0.464)	(0.432)
Constant cut3	1.338***	1.860***	1.730***	1.779***
	(0.195)	(0.466)	(0.468)	(0.438)
Constant cut4	2.187***	2.783***	2.664***	2.714***
	(0.200)	(0.468)	(0.475)	(0.439)
Constant cut5	2.374***	2.986***	2.869***	2.919***
	(0.205)	(0.471)	(0.476)	(0.443)
Constant cut6	2.556***	3.183***	3.067***	3.117***
	(0.216)	(0.486)	(0.490)	(0.458)
Random-effects Parameter				
Var (county/township)	1.268***	0.363***	0.336***	0.323***
	(0.343)	(0.093)	(0.085)	(0.086)
ICC	0.278	0.130	0.126	0.121
Observations				
Number of respondents	3,229	3,229	3,229	3,229
Number of county/townships	40	40	40	40
N	3,229	3,229	3,229	3,229
Prob > Chi^2	0.000	0.000	0.000	0.000
Log pseudolikelihood	-3199.181	-3071.722	-3054.239	-3050.358

Notes: Data were weighted. Coefficients are reported. Standard errors in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 3.3 Robustness check: Multi-level regression results excluding the double covered respondents

	Model 1	Model 2	Model 3	Model 4
Individual-level variables				
Age (years)		-0.005	-0.006	-0.003
		(0.326)	(0.237)	(0.486)
Gender (ref. male)		-0.073	-0.071	-0.082
		(0.518)	(0.546)	(0.469)
Marital status (ref. unmarried)		-0.263*	-0.294*	-0.274*
		(0.075)	(0.052)	(0.053)
Education (ref. primary school or below)				
Middle school		0.183	0.156	0.171
		(0.180)	(0.251)	(0.204)
High school		-0.053	-0.114	-0.077
		(0.786)	(0.551)	(0.680)
College and above		0.593*	0.459	0.503
		(0.081)	(0.168)	(0.135)
Occupation (ref. not professional)		0.235	0.233	0.270
		(0.230)	(0.252)	(0.165)
Household wealth		0.067	0.075	0.081
		(0.254)	(0.200)	(0.170)
Hukou (ref. rural hukou)				
Urban hukou		1.282***	1.037***	1.138***
		(0.000)	(0.000)	(0.000)
Jumin hukou		1.729***	1.477***	1.553***
		(0.000)	(0.000)	(0.000)
Cross-town migrants		-0.027	-0.007	-0.056
		(0.914)	(0.978)	(0.819)
Health insurance (ref. the uninsured)				
New Rural Cooperative Medical Scheme (NRCMS)			-0.0418	
			(0.849)	
Urban Employee Basic Medical Insurance (UEBMI)			0.709**	
			(0.023)	
Urban Resident Basic Medical Insurance (URBMI)			0.543**	
			(0.021)	
Urban and Rural Resident Medical Insurance (URRMI)			0.480**	
			(0.041)	
Pension insurance (ref. the uninsured)				
New Rural Social Pension Scheme (NRSPS)				-0.602***
				(0.001)
Urban Employee Basic Pension Insurance (UEBPI)				0.319
				(0.227)
Urban Resident Basic Pension Insurance (URBPI)				0.102
				(0.665)
Urban and Rural Resident Pension Insurance (URRPI)				0.048

				(0.828)
Township-level variables				
Urbanizing townships		0.661**	0.560*	0.681**
		(0.027)	(0.061)	(0.021)
In Pilot site		0.058	0.040	0.041
		(0.831)	(0.875)	(0.875)
Constants				
Constant cut1	0.958***	1.486***	1.359***	1.407***
	(0.000)	(0.002)	(0.006)	(0.002)
Constant cut2	1.299***	1.849***	1.726***	1.775***
	(0.000)	(0.000)	(0.001)	(0.000)
Constant cut3	1.412***	1.970***	1.848***	1.898***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant cut4	2.257***	2.886***	2.773***	2.825***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant cut5	2.441***	3.086***	2.974***	3.026***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant cut6	2.633***	3.296***	3.185***	3.237***
	(0.000)	(0.000)	(0.000)	(0.000)
Random-effects Parameter				
Var (county/township)	1.295***	0.616***	0.539***	0.569***
	(0.000)	(0.002)	(0.003)	(0.001)
ICC	0.281	0.210	0.131	0.163
Observations				
Number of respondents	3,043	3,043	3,043	3,043
Number of county/townships	40	40	40	40
Prob > Chi^2	0.000	0.000	0.000	0.000
Log pseudolikelihood	-3190.181	-3081.112	-3032.112	-3049.312

Notes: Data were weighted. Coefficients are reported. Standard errors in parentheses.

 * p < 0.1, ** p < 0.05, *** p < 0.01.

Appendix 3.4 Robustness check: Multi-level regression results excluding cross-town migrants

	Model 1	Model 2	Model 3	Model 4
Individual-level variables				
Age (years)		-0.007	-0.006	-0.005
		(0.175)	(0.186)	(0.263)
Gender (ref. male)		-0.159*	-0.142	-0.151
		(0.100)	(0.153)	(0.129)
Marital status (ref. unmarried)		-0.146	-0.160	-0.165
		(0.311)	(0.265)	(0.246)
Education (ref. primary school or below)				
Middle school		0.130	0.120	0.110
		(0.324)	(0.372)	(0.394)
High school		0.015	-0.065	-0.041
		(0.945)	(0.760)	(0.844)
College and above		0.142	0.008	0.025
		(0.692)	(0.981)	(0.942)
Occupation (ref. not professional)		0.389**	0.309	0.348*
		(0.044)	(0.136)	(0.069)
Household wealth		0.002	0.003	0.0123
		(0.966)	(0.950)	(0.794)
Hukou (ref. rural hukou)				
Urban hukou		1.032***	0.732***	0.832***
		(0.000)	(0.008)	(0.003)
Jumin hukou		1.531***	1.220***	1.309***
		(0.000)	(0.000)	(0.000)
Health insurance (ref. the uninsured)				
New Rural Cooperative Medical Scheme (NRCMS)			-0.361*	
			(0.084)	
Urban Employee Basic Medical Insurance (UEBMI)			0.491*	
			(0.071)	
Urban Resident Basic Medical Insurance (URBMI)			0.420**	
			(0.047)	
Urban and Rural Resident Medical Insurance (URRMI)			0.241	
			(0.271)	
Pension insurance (ref. the uninsured)				
New Rural Social Pension Scheme (NRSPS)				-0.582***
				(0.004)
Urban Employee Basic Pension Insurance (UEBPI)				0.320
				(0.158)
Urban Resident Basic Pension Insurance (URBPI)				0.362
				(0.162)
Urban and Rural Resident Pension Insurance (URRPI)				0.0316
				(0.886)
Township-level variables				
Urbanizing townships		0.833**	0.689**	0.847**
		(0.010)	(0.031)	(0.011)
In Pilot site		-0.222	-0.241	-0.228
		(0.465)	(0.406)	(0.445)
Constants				

Constant cut1	0.849***	1.212**	0.891*	1.143**
	(0.000)	(0.011)	(0.054)	(0.011)
Constant cut2	1.172***	1.548***	1.233***	1.484***
	(0.000)	(0.001)	(0.009)	(0.001)
Constant cut3	1.274***	1.655***	1.342***	1.593***
	(0.000)	(0.001)	(0.004)	(0.000)
Constant cut4	2.115***	2.525***	2.223***	2.473***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant cut5	2.265***	2.679***	2.377***	2.628***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant cut6	2.445***	2.864***	2.563***	2.814***
	(0.000)	(0.000)	(0.000)	(0.000)
Random-effects Parameter				
Var (county/township)	1.701***	0.780***	0.698***	0.737***
	(0.001)	(0.003)	(0.002)	(0.001)
ICC	0.302	0.225	0.295	0.316
Observations				
Number of respondents	2,781	2,781	2,781	2,781
Number of county/townships	40	40	40	40
Prob > Chi^2	0.000	0.000	0.000	0.000
Log pseudolikelihood	-2333.770	-2281.081	-2265.140	-2264.461

Notes: Data were weighted. Coefficients are reported. Standard errors in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 4.1 Index of rural-urban integration: economy, quality of life, and social development

First-level indicators	First-level indicators	Second-level indicators	Specific indicators	Unit
Rural-urban integration of economy	Economic development	GDP level	GDP per capita	RMB
		Urbanization rate	The percentage of urbanized population	%
	Industry coordination	Rural-urban dual economy	Dual contrast coefficient	
		Agricultural development	Labor productivity of primary industry	10,000 yuan / person
			Agricultural comprehensive mechanization rate	%
	Factors allocation	Allocation of labor force	Ratio of non-agricultural labor	%
		Capital allocation	Relative intensity of agricultural credit	
			Relative degree of fiscal expenditure on agriculture	
		Land allocation	Relative utilization rate of land	Billions of yuan/ square kilometer
Rural-urban integration of quality of life	Income and consumption level and rural-urban gap	The income of rural residents and the gap between rural and urban areas	Per capita disposable income of rural residents	yuan
			The ratio of average income between rural and urban residents	
		Consumption gap between rural and urban residents	Ratio of living consumption expenditure between rural and urban residents	
	Sanitary conditions of residence	Safe drinking water in rural regions	Penetration rate of rural tap water	%
		Sanitary toilet in rural regions	Prevalence of harmless sanitary toilets in rural areas	%
Rural-urban integration of social development	Balanced development of education	The level of human resources in rural education and the difference between rural and urban areas	The average length of schooling of compulsory education teachers in rural areas	Year
			The ratio of average education years between rural and urban compulsory education teachers	

		The level of rural human resources and the difference between rural and urban areas	The average length of schooling of rural population	Year
			Ratio of the average years of compulsory education for rural and urban populations	
Rural-urban integration of social development	Balanced development of health	Health and health-care level of rural women	Maternal mortality rate in rural areas	1/100,000
		The level of human resources in medical and health in rural areas and the gap between rural and urban areas	Health technicians per thousand people in rural areas	Person
			Ratio of health technicians per thousand population in rural and urban areas	
	Balanced development of culture	The accessibility of cultural communication	Proportion of administrative villages carrying out internet business	%
			The rate of broadband installation in rural areas	%
	Balanced development of social security	Difference in basic health care between rural and urban areas	Ratio of health-care levels for rural and urban residents	
		Difference in minimum subsistence allowance between rural and urban areas	Ratio of subsistence allowance levels for rural and urban residents	

Source: Data were extracted from the *Index of Urban-rural Development Integration in China (2018): To Build a Moderately Prosperous Society in an All-round Way* published by Zhu, Zhang, & Chen in 2018.

Appendix 4.2 Robustness check: Mediation analysis on resource effect hypothesis

	Model 1	Model 2	Model 3
	Perceived social justice	Social mobility	Perceived social justice
Individual-level variables			
Age (years)	-0.533***	-0.094	-0.514***
	(0.132)	(0.066)	(0.133)
Age (squared)	0.805***	0.137**	0.774***
	(0.132)	(0.064)	(0.133)
Gender (female)	-0.048	0.051**	-0.065
	(0.043)	(0.023)	(0.044)
Marital status (married)	0.023	0.044	0.021
	(0.055)	(0.029)	(0.056)
Ethnicity (ethnic minority)	0.264***	0.0234	0.275***
	(0.087)	(0.043)	(0.087)
Education (years of schooling)	0.015	-0.075***	0.032
	(0.036)	(0.019)	(0.036)
Occupation (professional/managerial)	0.115	0.042	0.097
	(0.072)	(0.041)	(0.073)
CCP membership (CCP members)	0.160**	-0.024	0.164**
	(0.071)	(0.040)	(0.072)
Annual income (ln)	-0.011	0.048***	-0.027
	(0.029)	(0.015)	(0.030)
Hukou status (ref. urban hukou)			
Urban hukou	-0.158***	-0.081***	-0.137**
	(0.056)	(0.030)	(0.057)
Jumin hukou	-0.187***	0.006	-0.188***
	(0.064)	(0.033)	(0.064)
Cross-town migrants	-0.191***	-0.043*	-0.182***
	(0.047)	(0.026)	(0.048)
Province-level variables			
Rural-urban integration of economy	-0.066*	-0.039**	-0.048
	(0.038)	(0.020)	(0.039)
Rural-urban integration of quality of life	-0.120***	-0.081***	-0.106***
	(0.034)	(0.017)	(0.034)
Rural-urban integration of social development	0.149***	0.040*	0.141***
	(0.043)	(0.022)	(0.043)
GDP per capita in 2014 (ln)	-0.024	-0.031**	-0.015
	(0.023)	(0.013)	(0.023)
Social mobility			0.250***
			(0.022)
Constants		-0.038	
		(0.030)	
Constant cut1	-2.958***		-2.994***
	(0.074)		(0.075)
Constant cut2	-1.100***		-1.117***
	(0.060)		(0.061)
Constant cut3	-0.091		-0.098
	(0.059)		(0.060)
Constant cut4	3.330***		3.352***
	(0.083)		(0.084)
Number of respondents	10,847	10,795	10,740

Pseudo R^2		0.015	
Log pseudolikelihood	-13840.977		-13589.376

Notes: Data were weighted. Standardized coefficients are reported. Standard errors in parentheses.

Linear OLS regression was conducted in Model 2. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Appendix 4.3 Robustness check: Mediation analysis on value-orientation effect hypothesis

	Model 1	Model 2	Model 3
	Perceived social justice	Social values	Perceived social justice
Individual-level variables			
Age (years)	-0.533***	0.082	-0.502***
	(0.132)	(0.068)	(0.133)
Age (squared)	0.805***	-0.044	0.773***
	(0.132)	(0.067)	(0.133)
Gender (female)	-0.048	-0.009	-0.049
	(0.043)	(0.023)	(0.044)
Marital status (married)	0.023	-0.009	0.024
	(0.055)	(0.030)	(0.056)
Ethnicity (ethnic minority)	0.264***	-0.021	0.257***
	(0.087)	(0.041)	(0.088)
Education (years of schooling)	0.015	0.078***	0.022
	(0.036)	(0.019)	(0.036)
Occupation (professional/managerial)	0.115	0.055	0.120*
	(0.072)	(0.038)	(0.072)
CCP membership (CCP members)	0.160**	-0.024	0.153**
	(0.071)	(0.038)	(0.071)
Annual income (ln)	-0.011	-0.024	-0.018
	(0.029)	(0.016)	(0.030)
Hukou status (ref. urban hukou)			
Urban hukou	-0.158***	0.110***	-0.142**
	(0.056)	(0.030)	(0.057)
Jumin hukou	-0.187***	0.009	-0.184***
	(0.064)	(0.034)	(0.064)
Cross-town migrants	-0.191***	0.049*	-0.189***
	(0.047)	(0.026)	(0.048)
Province-level variables			
Rural-urban integration of economy	-0.066*	0.054***	-0.069*
	(0.038)	(0.018)	(0.039)
Rural-urban integration of quality of life	-0.120***	0.053***	-0.112***
	(0.034)	(0.017)	(0.034)
Rural-urban integration of social development	0.149***	-0.047**	0.147***
	(0.043)	(0.019)	(0.044)
GDP per capita in 2014 (ln)	-0.024	-0.027**	-0.023
	(0.023)	(0.011)	(0.023)
Social values			-0.090***
			(0.021)
Constants		-0.035	
		(0.031)	
Constant cut1	-2.958***		-2.954***
	(0.074)		(0.075)
Constant cut2	-1.100***		-1.092***
	(0.060)		(0.061)
Constant cut3	-0.091		-0.088
	(0.059)		(0.060)

Constant cut4	3.330***		3.348***
	(0.083)		(0.084)
Number of respondents	10,847	10,753	10,704
Pseudo R^2		0.016	
Log pseudolikelihood	-13840.977		-13607.032

Notes: Data were weighted. Standardized coefficients are reported. Standard errors in parentheses.

Linear OLS regression was conducted in Model 2.

 * p < 0.1, ** p < 0.05, *** p < 0.01.