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Four Worlds of Welfare in China: Understanding Subnational Variation in Chinese Social Health Insurance

Xian Huang¹

Abstract: China's social health insurance has expanded dramatically over the past decade. The increasing number of beneficiaries and benefits, however, has aggravated rather than mitigated regional disparities in health care. How can the regional variation in Chinese social health insurance be explained? This paper argues that the subnational variation in China's social health insurance results from central and local states' policy choices. The central leadership, which is concerned about regime stability, delegates substantial discretionary authority to local state agents to accommodate diverse social needs and local circumstances. Local officials, who care about their political careers in the centralized personnel system, proactively design and implement social health insurance policy according to local situations such as fiscal resources and social risk. In specifying the rationale, conditions and patterns of regional variation in Chinese social health insurance, this paper addresses the general issue of how political leaders in an authoritarian regime respond to social needs.

Keywords: social welfare, health insurance, subnational variation

One of the most notable changes in the Chinese authoritarian regime over the past decade has been the expansion of social welfare benefits in the absence of substantial political reform. Programs such as the Urban Employee Basic Medical Insurance (UEBMI, cheng zhen zhi gong ji ben yi liao bao xian, 城镇职工基本医疗保险), the New Rural Cooperative Medical Insurance (NRCMI, xin xing nong cun he zuo yi liao, 新型农村合作医疗), and the Urban Resident Basic Medical Insurance (URBMI, cheng zhen ju min yi liao bao xian, 城镇居民医疗保险), which incorporated not only the working population but also non-working urban and rural residents into

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the social health insurance system,² have resulted in a dramatic expansion of social health insurance coverage (Figure 1). By 2010, over 80 per cent of Chinese citizens were covered by social health insurance programs, up from only 34.4 per cent in 2004. Meanwhile, the increase in generosity (measured by *per capita* expenditures for social health insurance) is substantial (Figure 2). A closer look at the social health insurance expansion, however, suggests that it is remarkably uneven across regions. Both the generosity and the population coverage have differed dramatically across provinces during the course of expansion (Figure 3). Data on Chinese social health insurance indicate that up to one-quarter of the population in northern provinces such as Qinghai, Shanxi, and Heilongjiang are still unprotected by social health insurance, while over 90 per cent of the population is covered in the provinces along the Yangtze River such as Sichuan, Chongqing, and Hunan. In terms of generosity, the *per capita* expenditure for urban social health insurance in Beijing is 1,852 yuan per person (averaged from 2007 through 2010), more than four times the outlay in Jiangxi province. Why does such notable regional variation exist in Chinese social health insurance? How might that variation be explained? What does it tell us about Chinese social welfare provisions and authoritarianism more generally? This study addresses these questions by analyzing the political agents and the political economy mechanisms responsible for the regional patterns in Chinese social health insurance.

This paper argues that the regional variation in China's social health insurance results from central and local leaders' policy choices. The Chinese central leaders, whose priority is to maintain regime stability, face a trade-off between control and accommodation of local needs.

² UEBMI is an employment-based contributory social health insurance program financed by defined contributions from employees and employers (including government). URBMI and NRCMI are residency-based social health insurance programs, financed mostly by general taxes in addition to individuals' premium payments.

When the central leaders control the career incentives of local officials, they delegate substantial discretionary power to local officials in health insurance reform to accommodate diverse social needs at the local level. With discretionary power in hand, local officials, who care about their political careers and wish to prevent social unrest from jeopardizing their political survival, design and implement social welfare policy in a way that suits local circumstances. Thus, diverse local socioeconomic conditions lead to different distributional choices in social health insurance. Specifically, local officials in regions with high social risk tend to enlarge the risk pool of social health insurance, while local officials in regions with high fiscal revenues are likely to enhance the generosity of social health insurance. While officials in regions with favorable risk profiles and high fiscal revenues become pioneers in promoting risk- and income- redistribution through social health insurance reform experiment, their counterparts in regions with neither high social risk nor sufficient fiscal resources maintain the status quo of a fragmented and inequitable social health insurance system in their jurisdictions. In specifying the rationale, conditions and patterns of the regional variation in Chinese social health insurance, this paper addresses the more general issue of how authoritarian leaders respond to social needs in designing social policy.

The paper unfolds as follows: Section 2 discusses existing studies of Chinese social welfare. Section 3 develops a theoretical framework to elucidate the rationale, conditions, and policy results of Chinese social welfare provision, and it formulates three hypotheses for empirical test. Section 4 presents and discusses the empirical findings and evidence. Section 5 concludes the paper with a discussion of its implications.

1. The Political Economy of Chinese Social Welfare: Received Wisdom

Studies of Chinese social welfare in the fields of economics, public policy and political science provide insights to understand the Chinese social welfare system from different perspectives. Scholarly work on Chinese social health insurance in the fields of health policy and

economics usually takes benefits (including the number of people who receive benefits and the level of benefits that people receive) as the starting point. Several problems are commonly identified and discussed in this strand of literature: 1) a pro-rich bias, or inequity in social health insurance benefits across social groups;³ 2) unequal health insurance coverage between urban and rural areas, as well as between the poor and affluent social classes;⁴ 3) inter-regional inequalities in social health insurance benefits;⁵ 4) fragmentation of risk pooling and management.⁶ Although this literature has contributed to a rigorous evaluation of the socioeconomic impact of health insurance programs, the causes of those outcomes remain understudied. In the literature on Chinese political economy, some attempts were made to explore the causes of China's fragmented social welfare provision.

The dominant paradigm explaining fragmentation and piecemeal reform over the past decades of the Chinese social welfare system focuses on the transition from a planned economy to a market-oriented one.⁷ Marketization, especially the privatization and reconstruction of the state-owned enterprises (SOEs), is said to have led to a collapse of the "iron rice bowl" (life-time employment) and the work-unit (*danwei*)-based welfare system.⁸ Mass labor dislocation, especially the "laid-off" (*xia gang*) in SOEs that caused popular discontent and a wave of "collective events" (*ji ti shi jian*) such as protests and street demonstrations in the 1990s, induced the establishment of a social insurance system, moving the risk pooling from individual

3 Yip 2009; Wagstaff et al. 2009a.

4 Zhang and Kanbur 2005; Lin, Liu and Chen 2009; Liu, Hsiao and Eggleston 2009.

5 Wagstaff et al. 2009b; Chou and Wang 2009.

6 Liu 2002; Hsiao 2007.

7 For a helpful summary of the economic paradigm, see Duckett 2012.

8 Ho 1995; Gu 2001; Gu and Zhang 2006.

enterprises to regions.⁹ The state's "retreat" from social protection during the earlier stages of economic reform (before 2003) has been systematically studied¹⁰ and criticized by scholars.¹¹

Although the impact of the economic transition on China's social welfare system has received widespread attention, the political mechanism underlying the fragmentation of Chinese social welfare provisions is underspecified in those accounts. Duckett (2012) challenges the economic reform paradigm and shows that elite leadership and ideological changes in the late 1970s help to explain the collapse of the Rural Co-operative Medical System.¹² Her earlier work shows how bureaucratic interests within the central government have influenced the design and adoption of the UEBMI program, which provided only for the urban working population, subsidized civil servants, and was administered locally.¹³ In a similar vein, William C. Hsiao attributes the pendulum in China's health reform policy between health care provision through government funding and through a regulated market to the competition of bureaucratic interests in the Ministry of Health and the Ministry of Labor and Social Security, respectively.¹⁴

Neither the economic-reform paradigm nor the bureaucratic-politics paradigm, however, can sufficiently explain the remarkable subnational variation in China's social health insurance. Recent scholarship has shifted to local leaders—the main providers of social welfare—to understand the political economy of social welfare provision in China. Two different perspectives emerge from these works. One view focuses on local leaders' economic incentives

9 Frazier 2004; Hurst and O'Brien 2002; Cai 2002.

10 Duckett 2011; Li and Zhong 2009.

11 Lue 2012; Zheng 2011.

12 Duckett 2012.

13 Duckett 2003.

14 Hsiao 2007.

for social welfare provision. Mark Frazier uses local leaders' zeal for accumulating social security funds in local coffers to account for the rapid establishment of local-based pension systems in urban China.¹⁵ Yanzhong Huang's research finds that rural leaders with thriving local industrial sectors value their lucrative jobs more highly than do their counterparts and thus are more likely to defer to peasants' welfare demands in order to hold their positions in the community.¹⁶ The other perspective focuses on local leaders' political incentives for social welfare provision. Xiaobo Lü and Mingxing Liu, for example, attribute the different patterns of education spending among Chinese counties to local leaders' differential career trajectories and promotion prospects.¹⁷ In a similar vein, Taiwei Liu contends that ambitious provincial officials—those who seek to advance their careers at the central level—spend more on education and health and less on social security and welfare than their local-oriented counterparts do, because the former are more eager to impress Beijing and increase their chances for promotion.¹⁸

This paper contributes to the literature on Chinese social welfare in three aspects. First, following the recent scholarship that explores the political economy of Chinese social welfare provision at the local level, this study emphasizes various local *constraints* that local leaders face in designing social health insurance policy. Second, I make an effort to clearly identify and characterize the regional patterns of social health insurance in China. Although the subnational variation in Chinese social welfare provisions is not new to many scholars, the variation has not been delineated in a systematic way. Third, the study theorizes the interplay of the central and local leaders' interests and its impact on the multidimensional design of social welfare policy.

15 Frazier 2010.

16 Huang 2004.

17 Lü and Liu 2013.

18 Liu 2011.

Extant studies either focus on the central leadership's interests or emphasize local officials' incentives; few have explicitly studied the interaction of the two. The next section turns to the theoretical analysis of the Chinese social welfare provision and its subnational variation.

2. Social Welfare Provision in Authoritarian China: Theory and Hypotheses

Two features are the key to understand Chinese social welfare provision: the multidimensionality of social welfare policy,¹⁹ and the interplay of central and local leaders' incentives.²⁰ Social insurance is the dominant format of social welfare provision in China.²¹ The distribution of insurance benefits comprises three different dimensions: generosity, coverage, and stratification. Generosity refers to the average level of benefits among people who receive social welfare. Coverage represents the share of the population that has access to the benefits. Stratification captures the inequality in levels of benefits that different groups receive. These three dimensions are correlated in different ways depending on the specific conditions: when the amount of social welfare benefits is fixed, broader coverage might lead to lower generosity, and vice versa.²² Moreover, these different dimensions have distinct distributive implications and outcomes. For instance, a high level of stratification of social welfare implies severe inequalities, while broad coverage implies universalism. Politicians at different levels have different policy

19 Some existing works have alluded to different dimensions of social welfare policy, such as “de-commodification” and “stratification” in Esping-Andersen 1990; and “coverage” and “redistribution” in Mares 2005.

20 China's political hierarchy has multiple levels. For analytical convenience, the political structure can be seen as consisting of only two levels: the central and the local levels. In reality, the local levels consist of provinces, prefectures (cities), counties and townships. It is assumed that the interaction between the central and local levels is portable to the interaction between the upper (e.g. provincial) and lower (prefectural or county) local levels.

21 Other types of social welfare provision in China include social assistance (fully financed by the government), private or commercial insurance (largely financed by individual premium payments). Social insurance in China, including pensions and health insurance, is run and partially financed by the government.

22 The analytical focus of this paper is on generosity and coverage and their variations across regions.

preferences for these dimensions, depending on their interests and policy options in a specific institutional setting.

The Chinese central leaders' top priority in social welfare provision is to maintain regime stability.²³ As the threats to regime stability can come from both elites and the masses, choosing to distribute rents and goods only to the elites or only to the masses is not an optimal strategy from the authoritarian leaders' perspective.²⁴ Instead, authoritarian leaders try to efficiently balance the benefits between elites and the masses so as to maximize their survival prospects.²⁵ Of special importance for the political survival of the Chinese authoritarian regime is to maintain particularly privileged welfare provisions for the elites, while preserving an essentially modest social provision for the masses. To achieve this, the central leaders face a trade-off between control and accommodation of social needs. On one hand, they attempt to control who gets what, distributing more benefits to the social groups with the most political connections or importance for regime stability. The center's control of the stratification patterns of social welfare works through three mechanisms: social legislation, fiscal transfers, and personnel management. Since the 1990s, through a series of legislation and statutes, the central leadership has established a social health insurance system in which social groups are entitled to different programs with distinct levels of benefits depending on their socioeconomic status.²⁶ This fragmented social

23 This is a theoretical assumption commonly adopted in the political economy of dictatorships, which argues that social welfare provision, as repression and terror, is a tool for autocracies to stay in power. Bueno de Mesquita et al. 2003; Haber 2007; Gandhi 2008; Wintrobe 1998.

24 Bueno de Mesquita et al. 2003; Kricheli and Livne 2009.

25 Magaloni and Kricheli 2010.

26 Generally speaking, people without urban household registration (*hukou*) cannot join urban social health insurance; people without formal employment cannot join UEBMI. For details about the stratification pattern and the historical development of Chinese social health insurance. Huang 2014.

welfare system is conducive to weakening social groups' capabilities for horizontal mobilization²⁷ while privileging the groups with political connections or importance to the regime. Moreover, the center allocates huge transfer payments to subsidize the health insurance for the privileged groups such as party officials, civil servants, and concentrated ethnic minority groups, assuring that they receive higher levels of benefits.²⁸ Furthermore, through extensive and centralized personnel control, the center makes local state agents internalize its political priority—maintaining social order—in social policy making and implementation.²⁹

On the other hand, the central leaders want to accommodate most social groups to some extent, avoiding too much of a gap between the haves and have-nots. Since the central leaders have higher information costs and less expertise to distribute benefits among various social groups in a way that maximizes political returns under changing and diverse subnational circumstances, they need to delegate discretionary power to local state agents in making and implementing social welfare policy; the center can do this precisely because it controls the career incentives of local state agents and can control the stratification of social welfare provisions through the aforementioned tools (e.g. social legislation and fiscal transfer). Thus, through various administrative regulations,³⁰ the center has granted substantial discretion to local officials in specifying the policy details that directly determine the coverage and generosity of social

27 For segmentation of the Chinese social classes and its political implications, see Ma 2010; Walder, Luo and Wang 2013.

28 According to the author's calculation, the northwestern ethnic minority regions with small populations but concentrated ethnic minorities, such as Tibet, Xinjiang, Qinghai, and Ningxia, receive a huge amount of fiscal transfers, sometimes over ten times the local-sourced fiscal revenue.

29 In the top-down party cadre evaluation system that governs job assignments, performance appraisals, promotions and demotions, and remuneration, maintaining social stability is a hard target with veto power. Edin 2003a, 2003b; Whiting 2004.

health insurance, such as eligibility requirements, pooling units (e.g. county, city, or province), reimbursement rates, contribution rates, and conditions for premium exemption.

Chinese local leaders are appointed by the center, and they care about their political careers in the established system. In order to advance their careers, they have to meet a variety of policy targets set by the center. Aside from maintaining social stability in their jurisdiction, economic development and public goods provision are also the main responsibilities assigned to local officials. In social welfare policy-making, local officials face various constraints: political, fiscal and social. First, local officials' policy choices are constrained by the political principles set by the center. On the surface, Chinese local officials manage the majority of the social insurance funds and responsibilities over social welfare provisions,³¹ which significantly enhances their power through larger budgets, more personnel slots and greater regulatory power. Nevertheless, the performance of local officials is monitored by the center through top-down personnel control. In addition, local leaders have to abide by the Social Insurance Law that specifically stipulates the fragmentation and stratification patterns of social insurance.³²

The second constraint that local officials face in social welfare provision is fiscal stringency.

Under China's fiscal decentralization or *de facto* "fiscal federalism",³³ local governments are the

30 See, for example, "Guowuyuan guan yu jian li chengzhen zhi gong ji ben yi liao bao xian zhi du de jue ding" ("Decision about establishing urban employee basic medical insurance"). (Beijing: State Council Decree #44, 1998). "Guowuyuan guan yu kai zhan cheng zhen ju min ji ben yi liao bao xian shi dian de zhi dao yi jian" ("Directives about establishing urban resident basic medical insurance") (Beijing: State Council Decree #20, 2007). "Guan yu jian li xin xing nong cun he zuo yi liao zhi du de yi jian" ("Directives about establishing new rural cooperative health insurance") (Beijing: Ministry of Finance Ministry of Health, Ministry of Agriculture, 2003).

31 In 2002, local governments accounted for nearly 70% of all government spending. Wong 2000.

32 According to the Social Insurance Law promulgated in 2010, social insurance should be pooled at (or above) the county or prefectural city level; within each of the pooling units (e.g. county, district or city), social insurance is divided into at least three schemes corresponding to different levels of benefits: urban employee scheme, urban resident scheme, and rural resident scheme.

33 On the partially federal characteristics of China, see Weingast 1995.

main providers and sponsors of social welfare: they bear about 70 per cent of the social health insurance financing for the non-working population, including peasants, the elderly, students and children. Some local governments have faced substantial budget deficits³⁴ so paying the medical bills in full and on time is a burden on local budgets for these localities. Thus, local fiscal revenue is an important predictor of local officials' policy choice regarding the generosity of social health insurance. Importantly, the degree of fiscal constraints on social welfare provision differs across regions depending on local fiscal resources, including fiscal revenue extracted from local sources and fiscal transfers received from the center.

The third constraint that local officials face is social risk.³⁵ Social risk is a crucial factor shaping local officials' policy choice on health coverage for three reasons. First, the nature of social health insurance is pooling and sharing risk across segments of the population. The performance of social health insurance is thus contingent on the demographic or risk profile of localities. A region with a younger population will face lower risk, for example, than a region with an aging population. Second, the lack of a nationwide risk pooling and redistribution mechanism in China's social health insurance system makes the regions with small populations particularly vulnerable to exogenous shocks such as disease epidemics and natural disasters. Third and most importantly, decades of mass migration accompanying economic reform and openness have profoundly changed the risk profiles of some regions. Deng Xiaoping's strategy for economic reform and openness in the 1980s "let some people (regions) get rich first" starting

34 Oi and Zhao 2007; Wong 2009.

35 Here "social risk" is used as a compound of different risks that are covered by or related to social health insurance. For example, localities with a more dependent population (such as elderly and children) have higher health risks than others do. Localities with larger labor-intensive manufacturing sectors have higher risks of workplace injury and sickness than others do. Many scholars of comparative social welfare have argued that social policy responds to demographic and labor market shifts. See, among others, Peng and Wong 2008; Torben 2001; Esping-Andersen 1999.

from the “special economic zones,” creating a domestic labor market in which some inland regions continuously “export” labor to the coastal regions. Labor mobility works as a multiplier of social risk, creating strong preferences for local officials in these regions to enlarge the risk pooling of social health insurance.³⁶

In summary, the Chinese central leadership incorporates elements of both control and accommodation in social welfare provision in order to maintain regime stability. On one hand, the center relies on social legislation, fiscal transfers and personal management to maintain a fragmented and stratified social welfare system that ultimately weakens social groups’ capabilities for horizontal mobilization while privileging certain groups over others. On the other, the center delegates discretionary power to local officials in policy design regarding the coverage and generosity of social insurance, in order to accommodate diverse local situations. Local officials who want to survive under the top-down evaluation system attempt to prevent social unrest from breaking out in their jurisdiction by proactively designing and providing social welfare benefits in a manner that suits the local conditions and social needs of their constituents. Since local officials’ discretion in social welfare policy lies mainly on the dimensions of coverage and generosity, they have four different choices in distributing social insurance benefits: 1) a generous and inclusive model (i.e. giving more people more benefits), 2) a generous yet exclusive model (i.e. giving certain groups more benefits), 3) a strict yet inclusive model (i.e. giving more people benefits but with meager provisions), and 4) a strict and exclusive model (i.e. giving certain groups benefits with meager provisions). The model that local officials

³⁶ This mechanism is the same for labor-inflowing and –outflowing regions. It seems more obvious in labor-outflow regions, where mass labor outflows exacerbate population aging and place burdensome payment pressures on local social health insurance funds. The risk-magnifying mechanism applies to labor-inflow regions too, because the regions receiving mass labor inflows are heavily reliant on labor-intensive manufacturing and service sectors. With potentially high needs of medical service and threats of large labor outflows, local officials in the labor-inflow regions prefer expansive risk-pooling for social insurance to counter the increased social risk.

choose is determined by the configuration of constraints they face, particularly in terms of fiscal resources and social risk in their jurisdictions.

Several empirical implications can be derived from the theoretical analysis. First, the local distribution of social health insurance benefits will differ importantly along the dimensions of generosity and coverage where the center delegates substantial authority to local officials. Second, the generosity and coverage of social health insurance will vary with the fiscal and socioeconomic conditions that constrain local officials' policy choices. Based on these implications, the following hypotheses are formulated for empirical test.

Hypothesis 1: The provision of Chinese social health insurance will display distinct and systematic regional variation in terms of generosity and coverage.

Hypothesis 2: Regions with more fiscal resources will provide more generous social health insurance than others do.

Hypothesis 3: Regions with high social risk will provide broader coverage in social health insurance than others do.

3. Subnational Variation in Chinese Social Health Insurance: Empirical Analysis

The central goal of this section is to empirically elucidate: 1) the regional patterns of China's social health insurance in terms of coverage and generosity; 2) the relations between local socioeconomic conditions and regional patterns of social health insurance; and 3) the mechanism through which local socioeconomic conditions influence distributional patterns of social health insurance benefits (in terms of shaping local officials' policy choices under the framework set by the center). Before proceeding further with the empirical analysis, this section first discusses the data and empirical strategy to be used. In China, all local governments (including provinces,

prefectures and counties) manage certain social health insurance programs.³⁷ The province is selected as the unit of analysis for the quantitative component of this study for two reasons. First, so far all available Chinese social health insurance statistics are reported at the national or provincial levels. The merit of these statistics is that they cover all provinces and time periods from 1999, when social health insurance was established in China. The drawback, however, is that the statistics are too aggregated to conduct intra-province analysis. Considering these limitations, I use province as the unit of quantitative analysis while complementing it with qualitative evidence drawing from field interviews at other local levels (e.g. prefecture and county). Second, for analytical simplicity, the theoretical analysis assumes that the Chinese political structure consists of two levels—the central and the local—and that the logic underlying the interaction between the central and local levels is portable to the relationship between upper and lower levels among local governments. Hence, using province as the unit of quantitative analysis does not undermine the theory, but its limits should be kept in mind when interpreting the quantitative results and the empirical implications.

To test the hypotheses, I constructed a provincial-level panel dataset (1999-2010) using statistics compiled from various sources. The empirical strategy consisted of employing cluster analyses to identify and characterize the regional patterns of social health insurance; I then conduct statistical analysis to evaluate the relations between local socioeconomic conditions and social health insurance. As a final step, I complement the quantitative analysis with qualitative evidence drawing upon 140 field interviews to illustrate how local officials make policy choices regarding health coverage and generosity according to local socioeconomic conditions.

³⁷ Chinese social health insurance programs can be considered as consisting of two types: urban and rural. Urban health insurance that mainly consists of UEBMI and URBMI is pooled at the prefectural or provincial levels and managed by the local governments of the respective level; rural health insurance, which mainly refers to the NRCMS, is pooled at the county or prefectural levels and managed by respective the county or prefectural governments.

4.1. Cluster Analysis: Regional Patterns in Chinese Social Health Insurance

Cluster analysis³⁸ is conducted to examine whether it is possible to discern statistically distinct patterns in Chinese social health insurance. To describe the local distribution of health insurance benefits, I construct two variables—generosity and coverage. Generosity is measured as annual *per capita* expenditures for social health insurance. Coverage refers to the percentage of the population in a particular location covered by social health insurance. Data come from government statistics³⁹ and are averaged for 2007 through 2010.⁴⁰ All Chinese mainland provincial-level units are ranked according to these two variables, and the rank values for each province on both variables are used as inputs for cluster analysis.

Based on conventional procedures for cluster analysis,⁴¹ the results (see Table 1) indicate four significantly distinct clusters among Chinese provinces in terms of generosity and coverage of social health insurance. Table 2 reports the province members of each cluster and their ranks on generosity and coverage. Computing the cluster average ranks on these two indicators makes the features of each cluster readily apparent: cluster 2 and cluster 4 are starkly distinct from one

38 Cluster analysis is a quantitative method that classifies objects into relatively homogenous groups. The objective is to group n units into r clusters where r is much smaller than n . Each group identified by cluster analysis is as internally homogenous as possible, but as distinct as possible from all other groups. For more details of this method, see Lewis-Beck, Bryman and Liao 2004. For examples of using this method in the comparative social welfare studies, see Rudra 2007; Gough 2001; Ragin 1994.

39 They are compiled from *China Human Resource and Social Security Yearbooks* (2007-2010) and *China Health Statistics Yearbooks* (2007-2010). As the data for rural health insurance expenditure are missing in *China Health Statistics Yearbooks*, the generosity variable in the empirical studies of this paper pertains to urban social health insurance only.

40 These are the most recent years on which social health insurance data are completely available as of 2013.

41 There are many procedures (or “stopping rules”) to determine the number of clusters in a dataset. Milligan and Cooper have conducted a well-known study to distinguish between the many stopping rules and assess which criteria provide the most valid test for the existence of a cluster. Their experiment suggests that the Duda and Hart procedure performs best in determining stopping rules. See Milligan and Cooper 1985; Duda and Hart 1973; Tidmore and Turner 1983.

another, as provinces in cluster 2 clearly privilege generosity over coverage, all of them having high ranks on generosity but low ranks on population coverage. Provinces in cluster 4 are just the opposite. Moreover, provinces in cluster 1 appear to favor both coverage and generosity, as they rank relatively high on both. In contrast, provinces in cluster 3 have low values on both generosity and coverage. Based on the characteristics of these clusters, provinces in cluster 2 are referred as the *privileged type*, because they place an emphasis on health generosity. Provinces in cluster 4 are labeled the *risk-pooling type*, as they prioritize broader coverage over generosity in social health insurance. Since provinces in cluster 1 favor both generosity and coverage in social health insurance, they are referred as *dual type*. By contrast, average generosity and coverage are both relatively low for provinces in cluster 3, and hence cluster 3 is called the *status-quo type*.

The cluster analysis results also suggest that the regional patterns of social health insurance correspond to regional socioeconomic differences. The northern and northeast provinces are predominantly of the status-quo type. Their counterparts in the east coastal areas are mainly of the dual type. The populous provinces along the Yangtze River such as Sichuan, Hunan, Hubei, Jiangxi, and Anhui are of the risk-pooling type. Meanwhile, the large cities like Beijing, Shanghai, and the ethnic minority autonomous regions are of the privileged-type. Overall, the results from the cluster analysis support the first hypothesis that systematic patterns exist in Chinese social health insurance. Moreover, the clustering of Chinese provinces in social health insurance appears to correspond to regional socioeconomic differences. The next subsection turns to a more rigorous examination of the correlations between local socioeconomic conditions and the distributional attributes (e.g. coverage, generosity) of social health insurance.

4.2. Statistical Analysis: Social Health Insurance and Local Socioeconomic Conditions

The coverage and generosity variables continue to be used as dependent variables in the regression analysis that follows. The explanatory variables are level of local social risk and fiscal

resources. Two factors are used as proxies of social risk: 1) labor mobility, measured by the ratio of migrants to total local population. The measure of migrants, defined as the absolute value of the difference between provincial total population and local population (i.e. population with local *hukou*), focuses on the magnitude of province-to-province migration;⁴² 2) dependency ratio, measured by the ratio of people aged above 65 or below 15 to the working population (between 15-65). The other key explanatory variable is local fiscal resources, consisting of 1) local-sourced fiscal revenue measured by *per capita* local budgetary revenue and 2) fiscal transfers, measured by *per capita* central-to-local transfer payments. Based on the above theoretical analysis, we should see in the regression results that the level of social risk is positively correlated with health coverage and the level of fiscal resources is positively correlated with health generosity. A number of economic and political control variables are included in the regressions: 1) economic development, using the logarithm of GDP *per capita*; 2) urbanization, using percentage of urban residents in the total population; 3) political standing of provincial governors vis-à-vis central authorities, measured by the bureaucratic integration score (BINT) coded according to local leaders' past career trajectories;⁴³ The BINT variable controls for local leaders' personal ambitions in politics; 4) unobserved year- or region-specific situations, using year and province dummies. Summary statistics of all variables are presented in Table 3.

42 Such a measure does not take intra-province migration into account. Hence, it is a “conservative” approximation of migration for a province.

43 Province is assigned a value from 1 to 4, depending on the applicability of a set of criteria. A value of 4 indicates a provincial governor who holds a provincial post while also serving in a central government position; a value of 3 refers to a provincial official with significant past service in central ministries; a value of 2 means a provincial official with significant service in other provinces; and a value of 1 suggests a provincial official with significant service in that province. The notion of BINT and its coding were first used in Huang 1996. It was further used in Sheng 2010. The data for coding this variable are provincial governors' resumes, collected from *Zheng Tan Wang* (<http://www.zt360.cn/jgzyl/ljll/>), a government-sponsored media in Guangdong.

The data cover 31 Chinese mainland provinces from 1999 to 2010 to take advantage of the large cross-provincial variation in social health insurance and local socioeconomic conditions. Since the data are constructed as a panel dataset, panel-corrected standard errors are applied in the analysis.⁴⁴ The regression results are reported in Table 4. For each dependent variable, Model 1 reports the results of the baseline model that includes only the key explanatory variables; Model 2 presents the results when control variables including year and province dummies (fixed effects, FE) are added;⁴⁵ Model 3 reports the results when control variables and the one-year lagged dependent variable (LDV) are included.⁴⁶

Overall, the regression results lend support to the main theoretical predictions. The first primary finding is that social risk (measured by labor mobility and the dependency ratio) is significantly and positively associated with health coverage. According to Model 2, all else constant, moving from minimal to maximal labor mobility increases coverage by nearly 30 percentage points; according to Model 3, likewise, the dependency ratio increases coverage by 19 percentage points. In the FE model (Model 2), the coefficient for labor mobility is larger and more significant than the coefficient for the dependency ratio, indicating that once we control for unobserved year- or province-specific situations, labor mobility better captures the effect of social risk on coverage. By contrast, in the LDV model (Model 3), in which we control for a

44 For panel or cross-section time-series data, the major concern is the contemporaneous correlation and heteroskedasticity in the error structure, which is normally corrected using panel-corrected standard errors (PCSEs). See Beck and Katz 1995.

45 For panel or cross-section time-series data, another concern is the omitted variable bias (OVB) derived from the unobserved year- or province-specific factors, and the most common way to avoid this bias is to use a fixed-effects (FE) regression.

46 As the results from PCSEs may not be reliable if serial correlation is present in the data, one-year lagged dependent variables (LDV) are included in some of the regressions as a robustness check. Some scholars suggest that we can think of FE and LDV as bounding the true effect of interest. See Angrist and Pischke 2009, 182-186.

province's previous level of health coverage, the dependency ratio better captures the effect of social risk on coverage. In addition, health generosity is positively correlated with labor mobility and dependency ratio in the FE and LDV models, respectively.

The second primary finding is that fiscal resources are significantly and positively associated with the generosity of social health insurance. According to Models 2 and 3, all else constant, moving from minimal to maximal fiscal resources increases health generosity per beneficiary by 681 *yuan* and 607 *yuan*, respectively. These correlations are significant at the 99 per cent confidence level in all model specifications. In addition, the regression results indicate positive correlations between fiscal resources and social health insurance coverage. However, the positive relationship loses statistical significance in the LDV model, indicating that given a province's previous level of health coverage, fiscal resources are no longer predictive of the coverage.

As for the control variables, urbanization is significantly and negatively correlated with health coverage but is positively correlated with health generosity. These quantitative results are in line with the recent observation that despite continuously increasing number of Chinese living in cities (i.e. the high urbanization rate), due to the rigid household registration system and its anachronistic associations with social entitlements, only a portion of the urban residents (usually those with state-sector employment and local urban *hukou*) have full access to urban social health insurance, which has markedly higher generosity than rural health insurance.⁴⁷ Furthermore, BINT—the measure of provincial governors' prior career trajectories—has no significant impact on social health insurance. By contrast, economic development is significantly and positively associated with health coverage and generosity. In addition, the

⁴⁷“The Rural-Urban Divide: Ending Apartheid” 2014.

unobserved year- and region-specific situations (the year and province dummies) account for about 50 per cent of the variation in health coverage and 25 per cent in health generosity.

In summary, the statistical results indicate significant correlations between local socioeconomic conditions and the distributional attributes of social health insurance (coverage and generosity). All other things being equal, regions with higher social risk tend to cover more people in health insurance, while regions with more fiscal resources tend to provide more generous health insurance benefits. The next subsection uses qualitative evidence to illustrate the underlying mechanism—how socioeconomic conditions, particularly labor mobility and fiscal resources, shape local officials' policy choices and thus give rise to the different regional patterns in Chinese social health insurance.

4.3. Evidence from Fieldwork Research: Local Choices in Social Health Insurance Reform

Complementing the statistical analysis, I conducted more than 100 interviews in 16 Chinese regions over the last three years to understand the mechanism underlying local policy choices in social health insurance reform. The fieldwork sites cover the four different types of regions, and interviewees include government officials and health insurance administrators at both the national and local levels. The findings suggest that local officials' priorities and policy choices in social health insurance reform vary markedly with local socioeconomic conditions, as the above theoretical analysis proposed. This subsection discusses the supporting evidence collected from the interviews.

Most local initiatives to expand social health insurance coverage are found in the inland provinces along the Yangtze River such as Sichuan, Hunan, Hubei and Anhui. In interviews, local officials in these regions often reveal strong concerns about existing or looming deficits in local health insurance funds. These concerns are derived from the outflow of millions of labor

that these regions have witnessed in recent decades. According to China's national population census data (Table 5), Henan, Sichuan, Hunan, and Anhui are the provinces with the largest labor outflows. Mass outflows of young labor exerts tremendous pressures on local social health insurance funds because those who stay, especially in the rural areas, are mainly the elderly and children who are more likely to need health care.⁴⁸ As an administrator of social health insurance in the Zhengzhou city of Henan province put it, "Failure or delay in payments will give rise to public grievances and risk collective protests. No local officials dare to take those risks."⁴⁹ This concern drives local officials in these regions to prioritize expansion of social health insurance coverage to obtain a large risk pool for social health insurance funds. Every year those officials utilize propaganda and social media such as microblogs and mobile text message to remind people—especially young people—to join the social health insurance program.⁵⁰ On occasion, the requirement of local household registration (*hukou*) is artificially blurred or ignored in order to obtain higher enrollment.⁵¹ Since 2008, an increasing number of migrant workers who are already in their 30s or 40s have returned from coastal areas to the inland. Local officials actively target the returning laborers, arranging special handlings (e.g. lower premiums, binding work injury, maternity, and health insurances together) to induce them to register for local social insurance. Some local governments go further, negotiating with coastal regions to transfer back

48 Statistics show that 83.9% of migrants in mainland China are younger than 40-years-old and many of them are between 15- and 29-years-old. They migrate across regions mainly for jobs. See National Statistics Bureau 2010; Yu 2008.

49 Interview with municipal official, Zhengzhou, 14 May 2012.

50 Interview with provincial official, Hefei, 17 May 2012.

51 Interviews with municipal officials, Wuhan, 22 May 2012; Changsha, 25 May 2012.

the money in their returning migrants' personal health insurance saving accounts that had been opened in the coastal provinces when they were working there.⁵²

In expanding the coverage of social health insurance, local officials in the inland regions hold conservative and sometimes averse views towards raising the generosity.⁵³ This constitutes a stark contrast with the policy preferences in the coastal regions such as Jiangsu, Zhejiang, Guangdong and Shandong, where the generosity of social health insurance has increased as coverage expands. For example, the local government in Dongguan, a prefectural city in Guangdong province, has since 2008 been generously subsidizing not only the local population but also “outsiders”, such as rural-to-urban migrants and peasant workers, to join local social health insurance. As for the remarkable generosity, Dongguan officials explained that “we receive nothing from the center for social health insurance, but the prosperous local economy is absolutely sufficient to support it [local social health insurance]”.⁵⁴ Similarly, when talking about local social health insurance, a local official in Kunshan, a county-level city of Jiangsu province, commented that “the prosperity of the local economy is impossible without the contributions of the migrant workers [so they deserve the benefits]. But those young people rarely go to hospitals, so [despite high generosity] we have been running a surplus in social health insurance funds for years.”⁵⁵ Indeed, a huge amount of surplus has accumulated in the social health insurance funds of the rich coastal regions (see Figure 4). The surplus contributes to resolving the policy trade-off between coverage and generosity for local officials in these regions.

52 Interview with municipal officials, Chengdu, 17 April 2012.

53 Interview provincial official, Lanzhou, 20 April 2012.

54 Interview with municipal officials, Dongguan, 27 June 2011.

55 Interview with municipal officials, Kunshan, 9 July 2012.

Like their counterparts in the coastal regions, local officials in the “privileged” regions such as Xinjiang, Ningxia, Beijing, Tianjin and Shanghai, which receive either abundant fiscal transfers or political favors from the center, are pioneers in raising the generosity of social health insurance. Nonetheless, the generous health insurance benefits in the privileged regions are exclusive and delimited to only certain groups such as party officials, civil servants, formal state-sector employees, or in general, people with local urban *hukou*. During field interviews, I found that local social health insurance administrators in the privileged regions relentlessly stress local *hukou* as a crucial prerequisite for entitlement to social welfare benefits, a stark contrast to the loose enforcement of the local *hukou* requirement in social health insurance enrollment in the inland regions like Hubei and Hunan. The lack of incentives to expand health coverage is quite apparent in the privileged regions due to low or restricted labor mobility. Moreover, the heavy weight of the center’s fiscal transfer in financing social health insurance in the ethnic minority regions further impedes local incentives to broaden the coverage.⁵⁶ As a social insurance official in Ningxia province put it frankly, “we receive a lot of fiscal transfer from the center, and we want to use that money only on the designated groups.”⁵⁷

In the “*status-quo*” regions such as Guangxi and Heilongjiang, my fieldwork found that under-spending on social welfare was quite common. These provinces have not experienced the mass migration in the past decades that magnified local social risk and drove local officials to enlarge the risk pooling strategically. Moreover, unlike the privileged provinces, which usually receive fiscal or political favors from the center, these provinces with meager local revenues receive only moderate fiscal transfers from the center, which prevents them from overspending

⁵⁶ It is estimated that 60%-70% of government subsidies to URBMI and NRCMI programs in Ningxia province come from the central government.

⁵⁷ Interview with provincial official, Yinchuan, 24 April 2012.

in social welfare. During interviews in these two provinces, fiscal straits were often cited as a reason for which local officials in these regions took “no actions” (*wu zuowei*, 无作为) in social health insurance reform. As one municipal official in Nanning city of Guangxi province pointed out, “some of our local governments cannot even pay their staff’s salaries on time, let alone providing generous social health insurance benefits [to people].”⁵⁸ For local officials in the regions with low labor mobility and with dire fiscal straits, maintaining the “status quo” of the strict and exclusive social health insurance is a less costly policy choice.

5. Conclusion

Despite the increasing scholarly interest in Chinese social welfare, our understanding of the political economy underpinning the distributional patterns of Chinese social welfare benefits has remained preliminary. This paper attempts to contribute to the literature by offering a political economy explanation for the regional variation in Chinese social health insurance. It starts with the puzzling discovery of remarkable regional variation in Chinese social health insurance over the past decade. The explanation is that subnational variation in China’s social health insurance results from central and local leaders’ policy choices. Chinese central leaders, who care about regime survival and stability, delegate substantial discretionary authority to local state agents for making coverage and generosity policies in social health insurance, in order to accommodate diverse local circumstances while maintaining a hierarchy in social welfare provision that favors groups with political connections and influence. Under the framework set up by the center, local officials who care about their political careers in the centralized personnel system proactively design and implement social welfare policy according to local socioeconomic conditions; in doing so, they prevent social unrest in their jurisdictions, which could jeopardize their political

⁵⁸ Interviews with municipal official, Nanning, 8 June 2011, 15 March 2013. Similar answer is found in interview in Harbin, 11 June 2012.

careers. Therefore, the local profile of social health insurance differs in generosity and coverage, the two dimensions in which the center delegates discretionary authority to local officials.

Differences across provinces in health generosity and coverage reflect the diverse local socioeconomic conditions, particularly local fiscal resources and social risk. This paper utilizes a provincial-level panel dataset (1999-2010) to identify the regional patterns of Chinese social health insurance and their correlations with local socioeconomic conditions; it also provides qualitative evidence drawing from 140 field interviews to understand the underlying political economy mechanism.

In specifying the rationale, conditions and patterns of the subnational variation in Chinese social welfare provision, the study addresses a more general issue: how political leaders in an authoritarian regime respond to diverse social needs. This paper suggests that a rationale for widespread social welfare provision exists outside of democracies. In non-democracies, politicians' incentive to provide social welfare benefits is different: it originates primarily from the top—the national leaders' interest in maintaining regime stability— rather than from the bottom as in democracies. Moreover, as this study demonstrates, the role and influence of subnational politicians in authoritarian social welfare provision are interesting and important. Under conditions of political centralization and fiscal decentralization, the Chinese local officials who owe their political careers to the upper-level authority would proactively adapt to and accommodate the local socioeconomic conditions in their policy-making choices. Such accommodation of local situations not only accounts for the subnational variation in Chinese social welfare provision; it also sheds light on the puzzling resilience and flexibility of China's authoritarian regime.

摘要:中国社会医疗保险在过去的十二年里迅速发展,取得了显著的进步。但是,医疗保险覆盖面的迅速扩大和医疗保险项目的增加并没有减轻,反而增大了医疗保险地区间的差异。这些地区差异体现在哪些方面,是由什么因素造成的?本文指出,中国社会医疗保险的地区差异可以通过中央与地方互动的角度来解释:中央政府出于维护社会稳定和因地制宜的目的将医疗保险政策的决策权下放给地方政府;尽职尽责的地方官员会根据地方具体情况,尤其是地方政府财政能力和地方人口风险结构,并结合中央的政策框架或建议来制定医疗保险政策;所以,不同的地方社会经济条件引起了中国社会医疗保险政策明显的地区差异。本文通过阐释和实证中国社会医疗保险背后的政治经济逻辑,也反映了威权政府如何在政策制定中响应社会的需要

关键词: 社会福利, 医疗保险, 地区差异

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Table & Figures

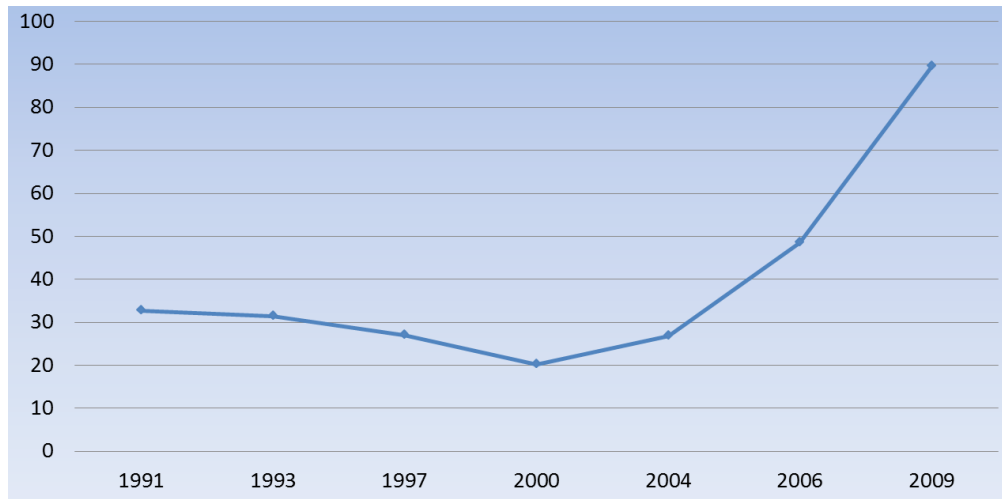


Figure 1 Coverage of China's Social Health Insurance (% of total population)

Data sources: Zhongguo lao dong tong ji nian jian (*China Labor Statistics Yearbook*), Zhongguo ren li zi yuan he she hui bao zhang nian jian (*China Human Resource and Social Security Yearbook*)

Figure 2 Generosity of China's Social Health Insurance (yuan/person)

Data sources: Zhongguo lao dong tong ji nian jian (*China Labor Statistics Yearbook*), Zhongguo ren li zi yuan he she hui bao zhang nian jian (*China Human Resource and Social Security Yearbook*)

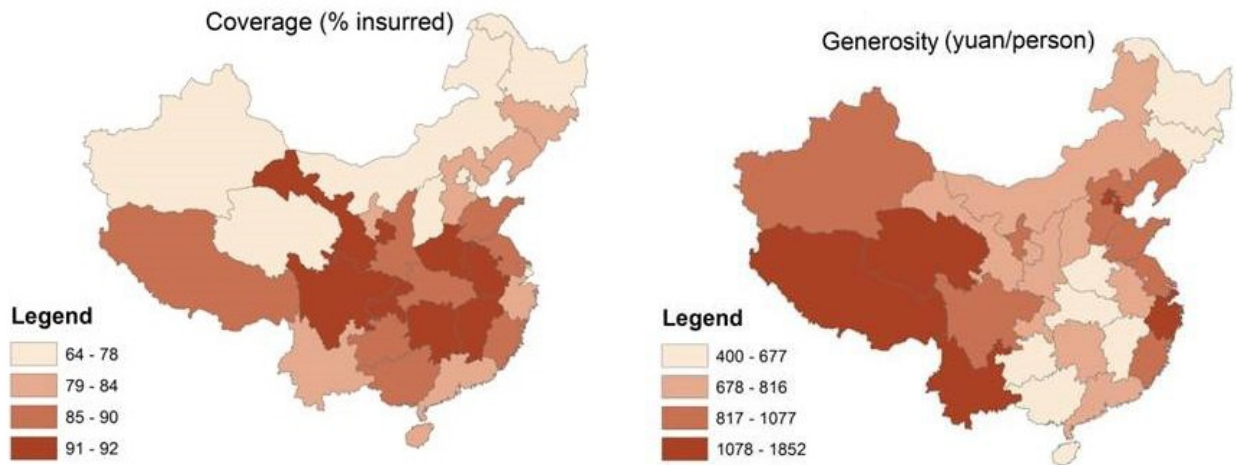


Figure 3 Subnational Variation in China's Social Health Insurance (2007-2010)

Data source: Zhongguo ren li zi yuan he she hui bao zhang nian jian (*China Human Resource and Social Security Yearbook*)

Table 1 Determining the Number of Clusters using the Duda and Hart Method

Number of cluster	Duda/Hart	
	Je (2)/Je (1)	Pseudo T-squared
1	.6236	17.51
2	.4543	21.63
3	.1848	39.71
4	.5148	9.43
5	.2461	18.38
6	.4007	7.48
7	.4517	4.86
8	.2381	9.60
9	.0000	.
10	.3490	5.60
11	.0268	36.33
12	.4105	4.31
13	.4985	3.02
14	.1172	7.53
15	.2786	2.59

Notes:

1. Je (1) is the squared errors when one cluster exists and Je (2) is the sum of squared errors within a cluster when the data are broken into two clusters.
2. The conventional rule for deciding the number of groups is to determine the largest Je(2)/Je(1) value that corresponds to a low pseudo-T-squared value that has a higher T-squared value above and below it.

Table 2 Clustering of Chinese Provinces by Social Health Insurance

Cluster	Province	Coverage	Generosity
1	Shandong	11	12
1	Jiangsu	8	9
1	Zhejiang	16	7
1	Fujian	12	10
1	Guangdong	17	6
1	Tibet	10	3
<i>cluster average</i>		12	8
2	Beijing	28	1
2	Shanghai	29	2
2	Tianjin	30	5
2	Xinjiang	27	8
2	Ningxia	21	11
2	Qinghai	25	4
<i>cluster average</i>		27	5
3	Heilongjiang	31	25
3	Jilin	22	30
3	Liaoning	23	13
3	Neimenggu	26	19
3	Hebei	19	23
3	Shanxi	24	17
3	Shaanxi	15	20
3	Hubei	13	26
3	Guangxi	14	27
3	Hainan	20	24
3	Yunnan	18	14
<i>cluster average</i>		21	22
4	Henan	3	29
4	Anhui	1	21
4	Jiangxi	7	31
4	Hunan	6	22
4	Gansu	5	18
4	Sichuan	4	15
4	Chongqing	2	16
4	Guizhou	9	28
<i>cluster average</i>		5	23

Notes: the cluster analysis results are calculated using *cluster linkage* command in STATA/IC 12.0 for Windows. Ward's linkage is used as the agglomerative linkage method in this cluster analysis. The stopping rule is Duda/Hart Je(2)/Je(1) index stopping rule. Ranks are rounded to the nearest integer to facilitate comparability.

Table 3 Descriptive Statistics of Variables

Variable	Definition	Obs.	Min	Max	Mean	S.D.
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Coverage		343	.02	102.57	42.50	32.63
Generosity		354	18.56	3204.43	666.26	461.67
Labor mobility		372	.02	63.04	6.32	9.34
Dependency		372	20.94	64.49	39.66	7.48
Urbanization		358	21.99	99.40	47.07	17.74
Fiscal transfer		372	165.86	17641.20	1463.97	1850.25
Fiscal revenue		371	104.75	12490.34	1548.45	1986.00
Fiscal resource	fiscal transfer + fiscal revenue	371	377.11	18858.80	3014.11	2856.02
GDP	logged value of GDP per capita	372	7.81	11.24	9.48	11.24
BINT	Huang (1996), pp. 210-211	372	1	4	1.64	.97

Notes:

1. Local population is defined as people holding local residency registration status (*hukou*).
2. The maximum of coverage exceeds 100% because of duplicate enrollment problem (i.e. some people are enrolled to more than one social health insurance program).
3. Data sources: China Statistics Yearbook (2000-2011), *China Labor Statistics Yearbook* (2000-2009); *China Human Resource and Social Security Yearbooks* (2009-2011); *China Population Statistics Yearbook* (2000-2011); *China Finance Statistics Yearbook* (1999-2011); *Local Finance Statistical Data* (2000-2010).

Table 4 Determinants of Social Health Insurance Coverage and Generosity

	DV: Coverage			DV: Generosity		
	(1)	(2)	(3)	(1)	(2)	(3)
Labor mobility	.704*** (.158)	.498*** (.115)	.183 (.123)	4.786 (4.194)	4.539 (4.037)	6.859** (2.731)
Dependency	.387 (.315)	.289 (.266)	.432*** (.143)	4.430 (3.469)	7.029** (3.228)	3.538 (3.382)
Fiscal resource	.003*** (.001)	.003*** (.001)	.001 (.001)	.056*** (.020)	.055*** (.015)	.049*** (.013)
Log(GDP pc)		23.899*** (5.971)	15.859*** (3.943)		5.006 (71.390)	159.331** (74.837)
Urbanization		-.263*** (.044)	-.312*** (.074)		2.048*** (.649)	1.981 (1.509)
BINT		1.221 (.821)	.669 (.446)		.746 (10.452)	-7.210 (14.257)
Lagged DV			.757*** (.089)			.249*** (.079)
Year dummy	Yes	Yes	No	Yes	Yes	No
Province dummy	Yes	Yes	No	Yes	Yes	No
R-squared	.942	.950	.837	.854	.856	.677
N	342	342	307	353	341	313

Notes:

- 1) Results are estimated using cross-section-time-series regression model with panel-correction standard errors (PCSEs); standard errors are in parentheses;
- 2) To economize on space, values of intercept and year/province dummy variables are not reported;
- 3) *** p<.001, ** p<.05, * p<.1.

Table 5 Chinese Migration by Province during 1995-2010

Province	1995-2000 migration (10,000 person)			2005-2010 migration (1,0000 person)		
	Inflow	Outflow	Inflow- Outflow	Inflow	Outflow	Inflow- Outflow
Eastern China	2466.64	597.48	1869.16	4357.92	1193.36	3164.56
Beijing	188.97	17.44	171.53	382.78	40.6	342.18
Tianjin	49.20	10.43	38.77	149.71	21.34	128.37
Hebei	76.99	87.22	-10.23	92.41	201.74	-109.33
Shandong	90.41	87.82	2.59	133.56	201.50	-67.94
Liaoning	75.48	37.99	37.49	117.19	68.54	48.65
Shanghai	216.78	16.29	200.49	490.05	40.10	449.95
Jiangsu	190.84	124.10	66.74	488.73	189.35	299.38
Zhejiang	271.47	96.98	174.49	837.29	133.94	703.35
Fujian	134.62	62.45	72.17	244.99	111.37	133.62
Guangdong	1150.11	43.80	1106.31	1387.44	161.29	1226.15
Hainan	21.77	12.96	8.81	33.77	23.59	10.18
Central China	353.93	1743.59	-1389.66	606.61	2941.43	-2334.82
Guangxi	28.75	183.81	-155.06	59.78	282.05	-222.27
Anhui	31.35	289.30	-257.95	82.21	552.56	-470.35
Shanxi	38.27	33.36	4.91	49.82	79.37	-29.55
Neimenggu	32.55	44.11	-11.56	82.77	64.76	18.01
Jiangxi	23.59	268.06	-244.47	69.84	348.33	-278.49
Jilin	25.40	52.93	-27.53	33.84	85.39	-51.55
Heilongjiang	30.12	93.98	-63.86	32.19	146.32	-114.13
Henan	46.99	230.90	-183.91	42.97	543.04	-500.07
Hubei	60.65	221.02	-160.37	84.35	380.42	-296.07
Hunan	36.26	326.12	-289.86	68.84	459.19	-390.35
Western China	400.61	883.61	-483	525.67	1358.39	-832.72
Sichuan	58.96	439.55	-380.59	105.28	498.81	-393.53
Chongqing	44.78	110.31	-65.53	73.56	184.41	-110.85
Guizhou	26.15	123.19	-97.04	59.19	268.08	-208.89
Yunnan	73.27	39.81	33.46	62.09	108.91	-46.82
Shaanxi	42.30	71.93	-29.63	73.4	134.75	-61.35
Gansu	20.36	56.08	-35.72	26.02	104.69	-78.67
Qinghai	7.69	12.32	-4.63	18.25	15	3.25
Ningxia	12.88	8.74	4.14	23.9	15.07	8.83
Xinjiang	114.22	21.68	92.54	83.98	28.67	55.31

Notes: 1995-2000 migration data are computed from China's 5th Population Census Statistics (2000); 2005-2010 migration data are from China's 6th Population Census Statistics (2010). Labor-outflowing regions are heighted.

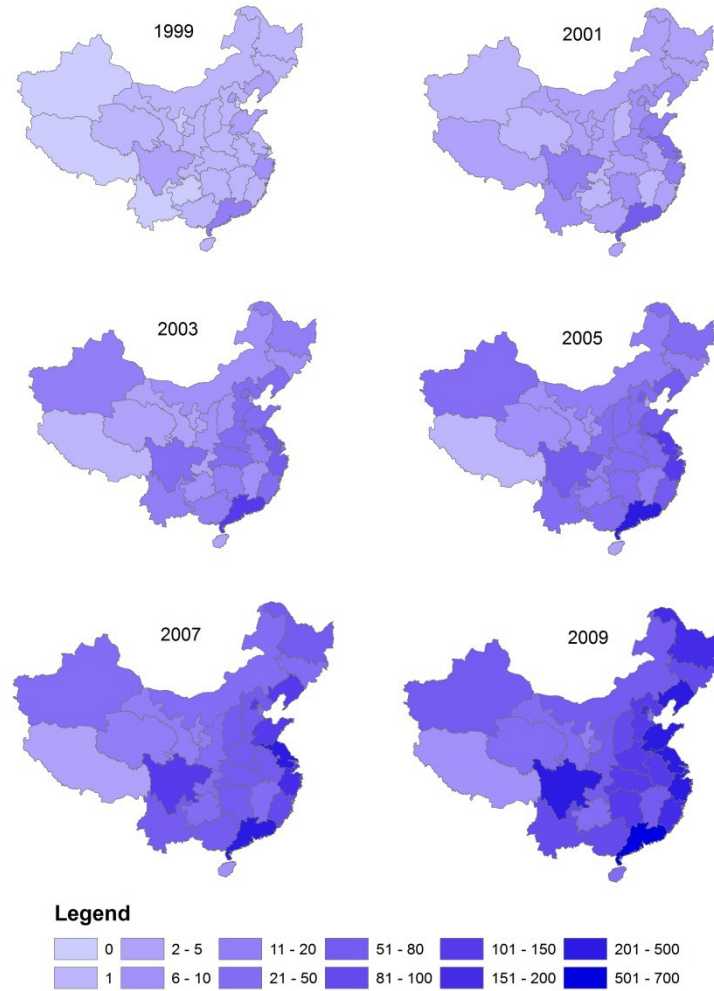


Figure 4 Surplus of Urban Social Health Insurance Funds by Province (Unit: 100 million yuan)

Data source: Di fang cai zheng tong ji zi liao hui bian (*Collection of Local Financial Statistics*)