



## **ADB Working Paper Series**

### **Can Social Security Boost Domestic Consumption in the People's Republic of China?**

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**Abstract**

This paper reviews the development of the social security system and trends in the urban labor market in the People's Republic of China (PRC). Despite its remarkable economic achievement, the PRC faces a difficult path before it can reform and improve its social security system and provide basic support for all of its people. The unemployment shock has caused rural and urban household income to decrease and has thus slowed down household consumption growth. The provision of broader social security would not only mitigate unemployment shocks in the short term, but it would also guarantee individuals and households more security for spending that could reduce the high savings rate and help achieve a balanced growth path in the long run. The author's findings argue that households with social security coverage spend more and income distribution among urban households is improved through public transfers.

**JEL Classification: D12, H55, J26, D63**

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## 1. INTRODUCTION

There has been much public concern in recent years over rebalancing the economy of the People's Republic of China (PRC). The PRC's growth pattern that has relied heavily on investment and export has caused a tremendous trade surplus, suppressed domestic consumption, and placed huge pressures on natural resources, energy, and the environment. The excessive reliance on investment and capital-intensive industries has posed a threat to the sustainability of the PRC's economic growth, evident in the decline in total factor productivity from 4% per annum during 1978–93 to less than 3% per annum since 1993 (Kuijs and Wang 2005) with the rising investment share of gross domestic product (GDP). The household consumption share of GDP dropped from an average of 51.2% in the 1980s to 46.0% in the 1990s. This share fell sharply after 2000, and accounted for only 35.3% in 2008, the lowest among major economies in the world.

In order to overcome its structural imbalance, the PRC government has decided to rebalance its economy through a new approach that focuses on expanding domestic consumption (Lardy 2006; Blanchard and Giavazzi 2006). However, the decreasing household consumption share of GDP reflects the fact that the savings rate in the PRC has increased along with the rapid growth of rural and urban income. This phenomenon raises an important question to be answered: why does the savings rate in the PRC remain so high? A cross-country study (Schmidt-Hebbel and Servén 1997) pointed out that saving rates show considerable inertia and are highly correlated with income and growth. In general, growth has a larger effect on savings in developing countries, but this effect may be transitory due to the response to unexpected growth. Sustained accelerations in growth are indeed associated with permanent hikes in saving. Higher uncertainty can also raise savings as risk-averse consumers set aside resources to protect against adverse changes in income and other factors. Therefore, high saving rates can be attributed to income growth and demographics (Modigliani and Cao 2004); to unemployment shocks (Meng 2003); to the rising private burden of expenditures on housing, education and health care in cities (Chamon and Prasad 2008); and to natural or market risks in rural areas (Giles and Yoo 2006).

This paper focuses on the impacts of social security on consumption and income distribution instead of examining the driving factors of savings. The provision of social security has important implications for the PRC's socioeconomic transition and long-term development. A well designed social security scheme can provide the necessary support for people facing uncertainty to mitigate shocks and steady their consumption. At the same time, it can maintain its financial sustainability through adequate financing without causing a large fiscal burden. At the aggregate level, it can help boost household consumption, correct structural imbalances, and help achieve balanced growth in the long run. Thus, a well designed social security system can help correct the global imbalance by reducing the PRC's tremendous trade surplus. Empirical evidence from this paper demonstrates that social security can encourage households to spend more by making them feel more secure. Moreover, social security can improve income distribution through effective public transfer. The rest of paper is organized as follows: section two briefly describes the development of social security system in the PRC; section three examines labor market trend and unemployment shocks; section four investigates the impacts of social security system on consumption, income inequality and labor supply; and the final section concludes with policy implications.

## 2. THE DEVELOPMENT OF SOCIAL SECURITY SYSTEM IN THE PRC

The PRC took a radical approach in reforming its social security system in the late 1990s. The approach aimed to accelerate the transition from the traditional state provision system to

a social security system consistent with market-oriented reform. The PRC established a social security framework in urban areas and tried to cover workers in private and informal sectors, the self-employed, and rural migrants. However, the extension of the social security system in cities has been challenged by high contribution rates, a tremendous legacy cost, empty individual accounts, and policies and institutions that are discriminatory against rural migrants. The development of social security system in rural areas lagged far behind that of urban areas, but sped up after 2003.

The social security system mainly consists of the four components of social insurance, social relief, housing services, and social welfare.<sup>1</sup> However, it differs between rural and urban areas and across different population groups (see Table 1). In urban areas, the formal social security framework includes social relief, housing security, and five types of social insurance schemes: pension, unemployment insurance, medical insurance, work injury insurance, and maternity insurance. As shown in Table 2, urban participants covered by the five types of social insurance have increased over time, especially in the past three years. Due to the expansion of the social security system to cover children and elderly people in 2007, basic medical insurance has the highest number of participants, amounting to 317 million in 2008, a number greater than urban employment. The number of urban pension participants doubled, reaching 218.9 million in 2008, or 74.3% of urban employment. The proportion of urban contributors who participated in unemployment insurance and work injury insurance were together less than half of urban employment in 2008. Urban participation in maternity insurance was quite low, only accounting for one-third of total urban employment.

**Table 1: Development of the PRC's Social Security System**

	Urban Residents	Rural Migrants	Rural Residents
Social Insurance			
Pension	Formal	Partial	Partial
Unemployment Insurance	Formal	Partial	Not Applicable
Medical insurance	Formal	Partial	NCMS
Work Injury Insurance	Formal	Partial	Not Applicable
Maternity Insurance	Formal	Not Covered	Not Applicable
Social Relief			
<i>Dibao</i> Scheme	Formal	Not Covered	Formal
Medical Assistance	Formal	Partial	Formal
Five Guarantees	Formal	Not Applicable	Formal
Housing Security			
Housing Funds	Formal	Not covered	Not Applicable
Affordable, Low-Rent Housing	Formal	Not Covered	Not Applicable

Notes: (1) The PRC's social security system includes social insurance, social welfare, the special care and placement system, social relief, and housing services. Social welfare provides benefits for the elderly, orphans, and the disabled. The special care and placement system provides materials and expresses compassion mainly for servicemen and their families. (2) "Formal" indicates that a formal system that has been established. "Partial" indicates that there is no a formal system designed at the national level but some local governments allow rural migrants to participate in urban systems or pilot experiments for them. "Not covered" indicates that rural migrants are excluded from urban systems. (3) NCMS = New Collective Medical System. (4) *Dibao* = urban minimum living allowance.

Source: Author's summary.

<sup>1</sup> This program is designed to provide social welfare benefits for the elderly, orphans and the disabled.

**Table 2: Social Security Progress in the PRC, 2001–2008**

	2001	2002	2003	2004	2005	2006	2007	2008
<b>Urban Areas</b>								
<b>Contributors (million)</b>								
Pension	108.0	111.3	116.5	122.5	131.2	141.3	151.8	218.9
Unemployment Insurance	103.5	101.8	103.7	105.8	106.5	111.9	116.4	124.0
Basic Medical Insurance	72.9	94.0	109.0	124.0	137.8	157.3	223.1	317.0
Work Injury Insurance	43.5	44.1	45.7	68.5	84.8	102.7	121.7	137.9
Maternity Insurance	34.6	34.9	36.6	43.8	54.1	64.6	77.8	92.5
<b>Beneficiaries (million)</b>								
Unemployment Insurance	3.1	4.4	4.2	4.2	3.6	3.3	2.9	2.6
Work Injury Insurance	0.2	0.3	0.3	0.5	0.7	0.8	1.0	1.2
Maternity Insurance	0.2	0.3	0.4	0.5	0.6	1.1	1.1	1.4
<i>Dibao</i>	11.7	20.6	22.5	22.1	22.3	22.4	22.7	23.3
Medical Assistance					1.2	1.9	4.4	5.1
<b>Rural Areas</b>								
<b>Contributors (million)</b>								
Pension	60.0	54.6	54.3	53.8	54.4	53.7	53.7	56.0
NCMS				80.0	179.0	410.0	726.0	815.0
<b>Beneficiaries (million)</b>								
NCMS				76.0	122.0	272.0	453.0	580.0
<i>Dibao</i>	3.0	4.1	3.7	4.9	8.3	15.9	35.7	43.1
Medical Assistance				6.4	8.6	15.6	29.0	37.3

Source: National Bureau of Statistics (NBS) (2001, 2002, 2003, 2004, 2005c, 2006, 2007, 2008); Ministry of Human Resources and Social Security and NBS (2008); Ministry of Health (2009); Ministry of Civil Affairs (2008).

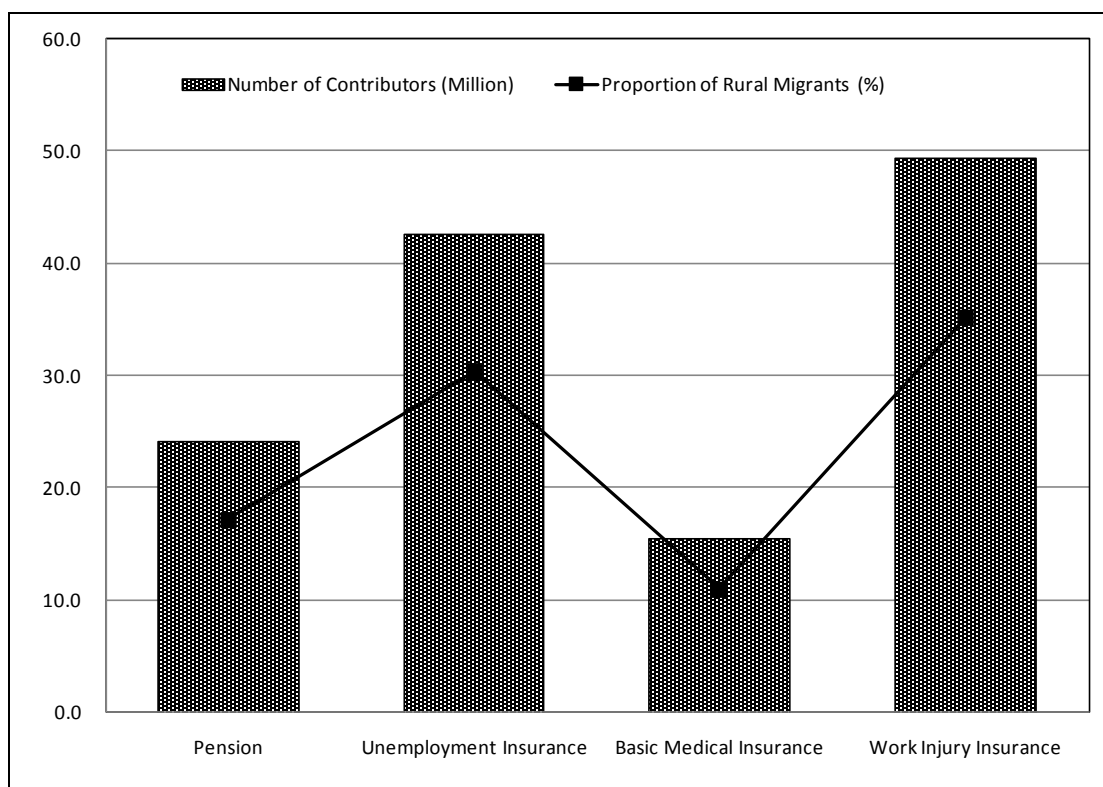
With the development of the urban social security system, more workers and families have benefited from formal support. The urban minimum living allowance (*dibao*) scheme is designed to provide basic subsistence assistance to the urban poor and to low-income families. The number of beneficiaries who received urban *dibao* increased significantly from 11.7 million in 2001 to 23.3 million in 2008. The number of urban residents who received medical assistance has increased significantly since 2007 with more public input. The percentage of urban unemployed who received unemployment insurance was highest in 2002 but declined between 2002 and 2008 with the improved labor market situations in cities. However, the shock of the global financial crisis will reverse this trend in 2009.

In rural areas, a formal social security system consists mainly of the New Cooperative Medical System (NCMS), social relief, and rural pension (see Table 1). Rural health and medical system reform was prioritized and the NCMS was launched in 2003. With tremendous public financial input, this new system has provided a strong incentive for farmers' participation. In 2004, the number of NCMS participants was only 80.0 million, accounting for 10.6% of the rural population; in 2008, this new system covered almost all of the rural population with 815.0 million contributors. The rural medical assistance system has also been established and provided support for families who suffered from serious illnesses. In 2007, rural minimum living allowance scheme (*dibao*) was introduced and rapidly extended to cover all counties. The number of beneficiaries who received rural *dibao* increased from 8.3 million in 2005 to 43.1 million in 2008. At present, a rural pension system does not exist, but the PRC government has begun pilot experiments in 10% of counties since 2009.

It is embarrassing that more than 140 million rural migrants have been excluded from the urban social security system (see Table 1) due to the household registration system (*hukou*)

and policies biased toward urban residents (Wang et al. 2009), even though they are equivalent to 47.8% of urban employment. Some progress has been made in recent years to include rural migrants in the social security system. According to the statistics of the Ministry of Human Resources and Social Security, the number of rural migrants who participated in pension, unemployment insurance, basic medical insurance, and work injury insurance were 24.2 million, 42.7 million, 15.5 million, and 49.4 million, respectively, in 2008. Therefore, about 30% of rural migrants participated in unemployment insurance and work injury insurance, while between 10% and 20% of rural migrants participated in pension and basic medical insurance (see Figure 1). The mandatory provision of work injury insurance to rural migrants as a precondition for employers and enterprises in mining and construction sectors to run business led to the corresponding higher participation rate.

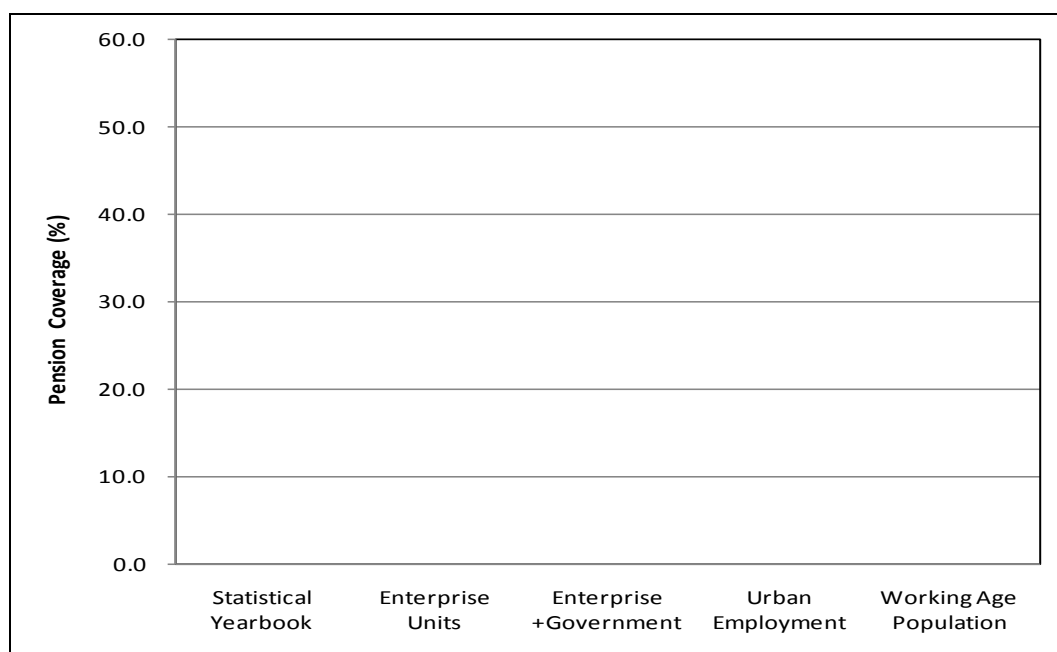
**Figure 1: Social Insurance Coverage for Rural Migrants in the PRC**



Source: Ministry of Human Resources and Social Security and NBS (2008).

There is a large difference between social security coverage rates in data from national statistics and from population surveys. The data source from the statistical yearbook is from a bottom-to-top reporting system in which the aggregate data at the national level is based on the information collected by local governments. This method is different from that of representative household surveys, so it tends to over-estimate the numbers and participation rates in social security schemes. Compared with results from the 2005 1% population sample (see Figure 2), the coverage rates from statistical yearbook over-report the proportions of people who participated in social security schemes. Taking urban pension participation in 2005 as an example, the proportion from statistical yearbook was 55.2%, but as shown in Figure 2, this proportion falls to between 33% and 39% if different denominators are taken into account. Choosing the same definition as that in statistical yearbook, the rate from the 2005 1% population sample was 33.6%, so the gap between statistical yearbook and population sample is 21.6 percentage points.



**Figure 2: Pension Coverage in Urban Areas by Different Sources**

Source: NBS (2005b, 2006).

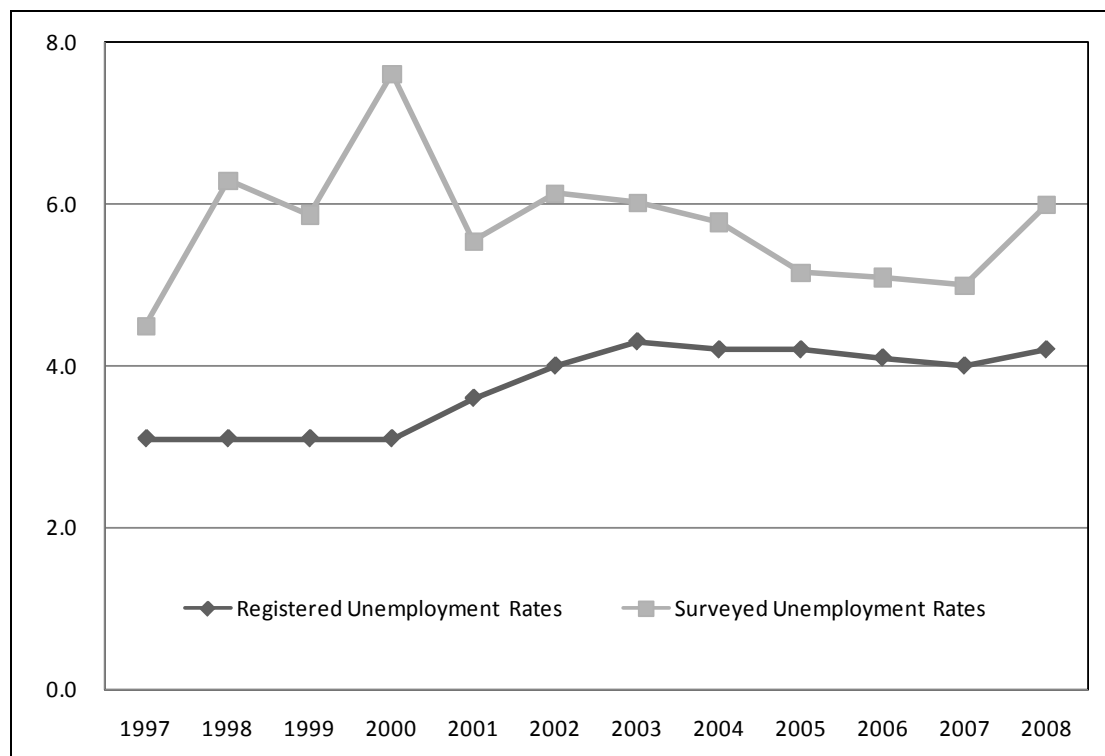
Several factors could have contributed to low social security coverage: firstly, high contribution rates provide disincentives to workers and firms to participate in social security schemes. According to urban social security framework, workers are asked to contribute more than 11% of their individual wages to their individual accounts and enterprises are required to contribute as much as 30% of their total payroll to social pooling accounts. If contributions for housing funds are considered, the contributions of workers and enterprises are much higher. The contribution rates are so high that workers and enterprises are discouraged from complying with social security policies. Secondly, the fragmentation of the social security system has restricted the social pooling functions of social security schemes through local management and operations that hinder the portability of individual and social pooling accounts. Finally, fiscal decentralization and the *hukou* system are reinforced to exclude rural migrants from urban social security system. Under the framework of fiscal decentralization, local governments are responsible for the provision of social welfare for residents with local *hukou*. Lagged *hukou* system reform creates a barrier against the inclusion of rural migrants in the social security system.

### 3. LABOR MARKET TREND AND UNEMPLOYMENT SHOCK

Prior to the second half of 2008, the labor market in urban areas of the PRC was loose (see Figure 3). In the late 1990s, deepening the reform of state-owned enterprises (SOEs) released millions of urban workers who were laid off or unemployed and caused the surveyed unemployment rate to rise. With the completion of this reform, rapid growth between 2001 and 2007 had generated millions of employment opportunities that created changes in urban labor market trends. As shown in Figure 3, the surveyed unemployment rate declined from 7.6% in 2000 to 5.0% in 2007, indicating an improved labor market. Unlike the surveyed unemployment rate, the registered unemployment rate has followed a steady upward trend and increased from 3.1% in 1997 to 4.2% in 2008 (see Figure 3). The registered unemployment rate is a ratio of registered unemployment to urban labor force, which is highly related to the entitlement of unemployment insurance benefits. Under the segregation of the *hukou* system, rural migrants are excluded from the statistics of registered unemployment rate. Workers are not registered if they did not go to local agencies and

report that they are unemployed. Therefore, the registered unemployment rate is not a good indicator for labor market trends in urban areas of the PRC.

**Figure 3: Trend of Unemployment Rates in PRC, 1997–2008**



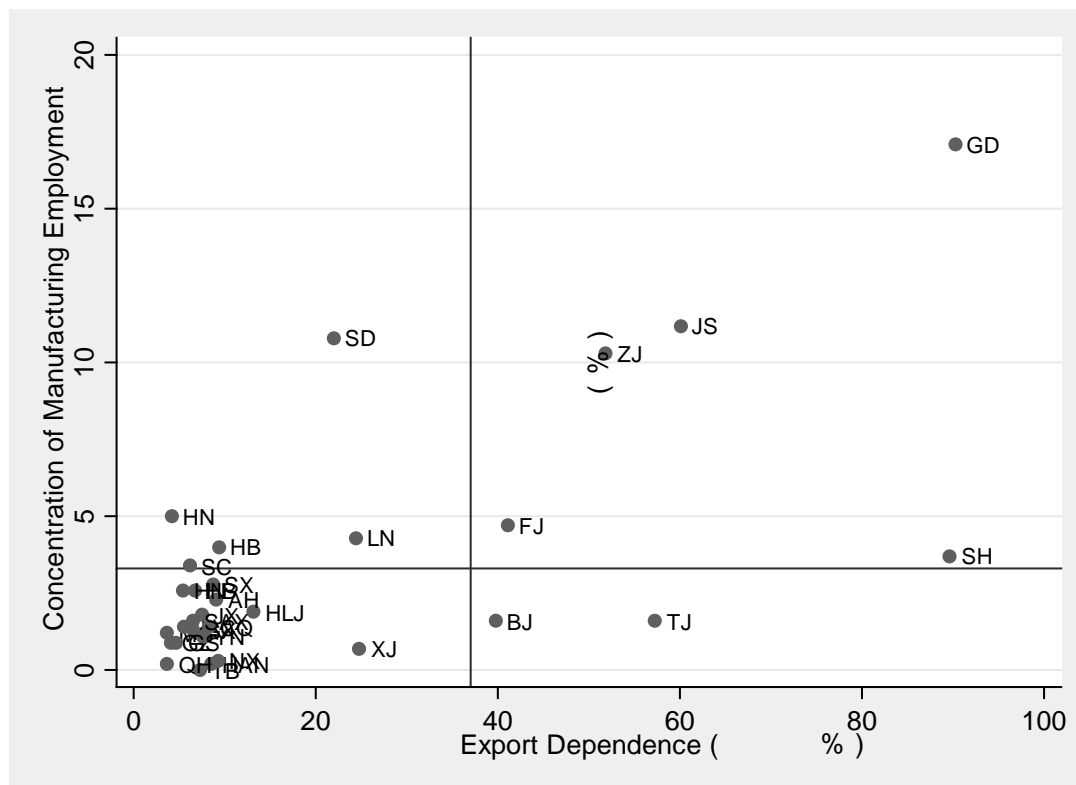
Sources: NBS (2009a); Ministry of Human Resources and Social Security and NBS (2009); Cai and Wang (2009).

The rising unemployment in 2008 indicates that the urban labor market was hit by the global financial crisis. A survey conducted by the Ministry of Human Resources and Social Security in December 2008 showed that the number of early returned migrants was about 4.85 million, accounting for 5.4% of total rural migrants. However, this number increased at the beginning of 2009. According to a rural survey of 150 villages in 15 provinces conducted by the Ministry of Agriculture before the Spring Festival of 2009, about 15.3% of total rural migrants returned home ahead of schedule; that is to say approximately 20 million lost their jobs due to economic recession or downturn. The National Bureau of Statistics (NBS) in February 2009 estimated that about 23 million rural migrants lost their jobs due to the shock of the global financial crisis, accounting for 16.4% of total migration outside their townships. According to the NBS statistics, about 11 million rural migrants who flew into cities are still hunting for jobs, and about 14 million rural migrants had to stay at home and tried to find job opportunities locally.

The global financial crisis hit the eastern coastal regions and export-oriented manufacturing sectors of the PRC heavily. The eastern coastal regions took the lead in market reforms during the reform and opening up and are now deeply integrated into the global trading system. The rapid growth of the manufacturing sectors in those regions generated millions of employment opportunities to attract the inflow of rural migrants. Guangdong, for example, had both the highest ratio of export to GDP and the highest concentration of manufacturing employment (see Figure 4). As the sharp decline of foreign demand forced firms to cut production, postpone recruitment and/or go bankrupt, leading to job losses and layoffs, so the Pearl River Delta area in Guangdong province was the first to witness the phenomenon of early returned rural migrants when the global financial crisis emerged. The unemployment shock then spread to the Yangtze River Delta areas and inland areas, weakened employment generation, and intensified competition in the urban labor market. The surveyed unemployment rate was estimated at about 6.0% in 2008, 1.0 percentage points higher than that in 2007. In 2008, the number of urban employment was 302.1 million. The

unemployment rate increased by 1%, which means a huge number of workers lose their jobs.

**Figure 4: Regional Variation of Employment Concentration and Export Dependence**



Note: Province names are abbreviated as follows: Beijing (BJ), Tianjin (TJ), Shanghai (SH), Guangdong (GD), Jiangsu (JS), Zhejiang (ZJ), Fujian (FJ), Shandong (SD), Liaoning (LN), Hebei (HEB), Shanxi (SX), Inner Mongolia (IM), Liaoning (LN), Jilin (JL), Heilongjiang (HLJ), Anhui (AH), Jiangxi (JX), Henan (HN), Hubei (HUB), Hunan (HUN), Guangxi (GX), Hainan (HAN), Chongqing (CQ), Sichuan (SC), Guizhou (GZ), Yunnan (YN), Xizang Autonomous Region (Tibet Autonomous Region) (TB), Shaanxi (SAX), Gansu (GS), Qinghai (QH), Ningxia (NX), Xinjiang (XJ).

Source: NBS (2008).

Rural migrants bear the brunt of the unemployment shock caused by the global financial crisis. With an average age of 29, they are young, highly mobile, and hard to trace for policy targeting. They are more vulnerable under low social security coverage when facing unemployment shocks. As a new generation of rural migrants, most of them will choose to stay in cities in the future, so the provision of public services such as employment, training, and social security will be very important for them to migrate to and live in cities. A study shows that more than 95% of returned migrants have already flowed backed into cities (Wang et al. 2009). By the end of 2008, the number of urban registered unemployment was around 8.3 million. On top of the 6.1 million new college graduates in 2009, 1.5 million recent graduates from previous years remained unemployed in 2008. So the total number of new urban entrants is about 15 million. Without considering further loss of employment opportunities, total number of rural and urban entrants on urban labor market will cause a demand for 30 million new employment opportunities. However, urban employment generation has averaged about 9 million in recent years, which is insufficient to fill in the gap between labor supply and labor demand in the urban labor market. With the excess of labor supply, the urban labor market in PRC will face an unprecedented amount of pressure.

The economic slowdown caused by the global financial crisis will further worsen the urban labor market situation, which will cause income and poverty issues. In an unfavorable employment environment, rural migrants who flow into cities may face a declining wage. In a survey of fifty rural households, nearly 20% reported that out-migrating household members suffered from a wage cut (Wang et al. 2009). In poor areas, non-agricultural earnings are the

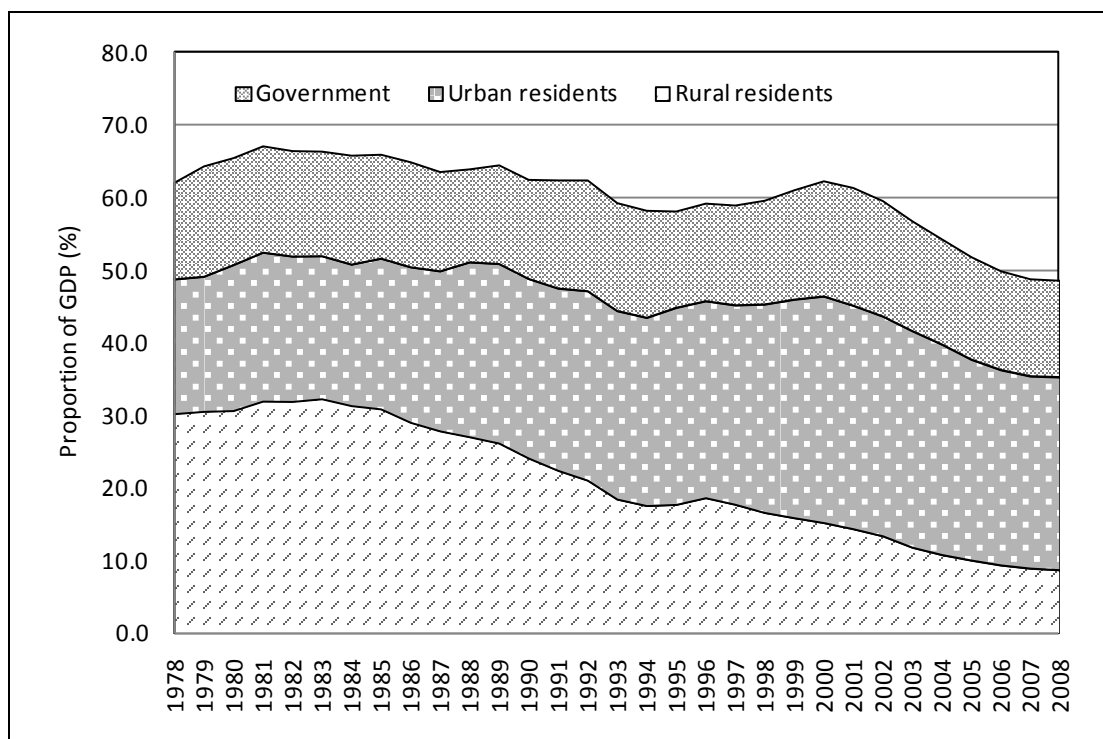
main source for income growth and poverty alleviation. The decline of non-agricultural earnings put many in the central and western poor areas in danger of slipping into poverty. Most rural migrants do not receive income support from urban unemployment insurance and the *dibao* scheme when they are unemployed. Once rural migrants use up individual savings, they become new urban poor (Asian Development Bank 2009). The unemployment shock may also cause the decline of income growth for urban poor and low-income families. The decline of income growth will then cause low consumption growth, which runs counter to achieving the goal of boosting domestic consumption.

## 4. IMPACTS OF SOCIAL SECURITY ON CONSUMPTION, INEQUALITY AND LABOR SUPPLY

### 4.1 Consumption and Savings

Domestic consumption comprises household consumption and government consumption. As shown in Figure 5, the overall domestic consumption has kept a downward trend over time, but its components vary significantly. From 1978 to 2008, the proportion of government consumption stabilized at around 12–16%, while that of rural household consumption declined sharply from 30.3% to 8.9%. The proportion of urban household consumption rose from 18.5% to 26.5%, an increase of 8 percentage points, but it has not caught up with changes in the urban share of population that went up from 17.9% to 45.7% in the same period.

**Figure 5: Declining Trends of Domestic Consumption, 1978-2008**

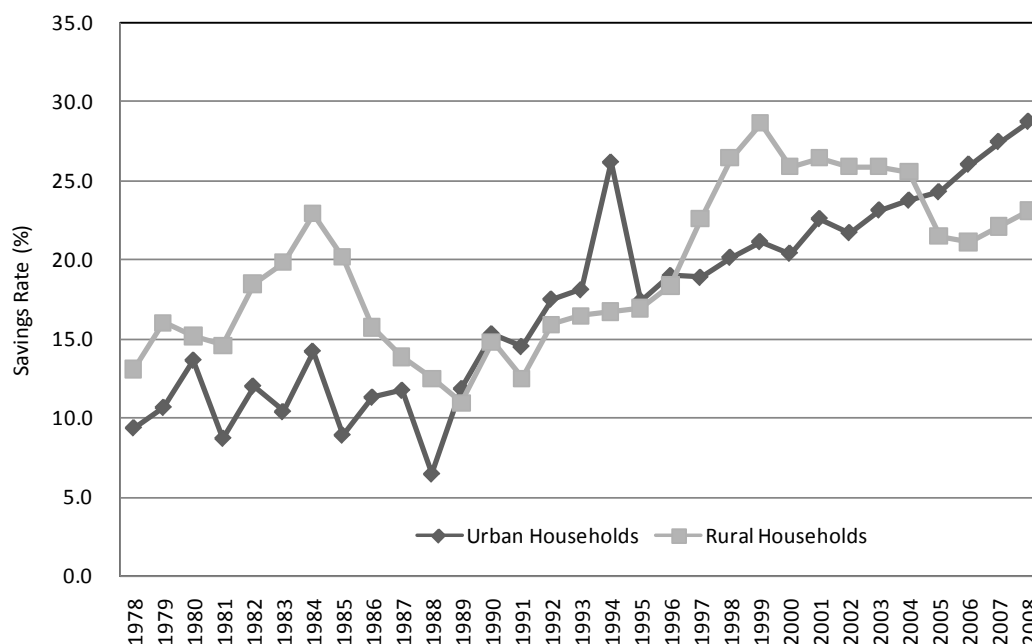


Source: NBS (2009a).

The rise in the household savings rate explains the declining trend in domestic consumption (see Figure 6). From 1978 to 2008, the rural savings rate rose from 13.1% in 1978 and peaked at 28.6% in 1999. It leveled out at above 25% for the following four consecutive years, and dropped sharply in 2003, but rebounded back to 23.1% in 2008. Unlike the trend in the rural savings rate, the urban savings rate has fluctuated less around a consistent

upward trend since the early 1990s, and in recent years, it has been higher than the rural savings rate.

**Figure 6: Trends of Household Saving Rates in Rural and Urban PRC**



Note: Savings = Net Income-Consumption Expenditure.

Source: NBS (2000, 2005a, 2009a, 2009b).

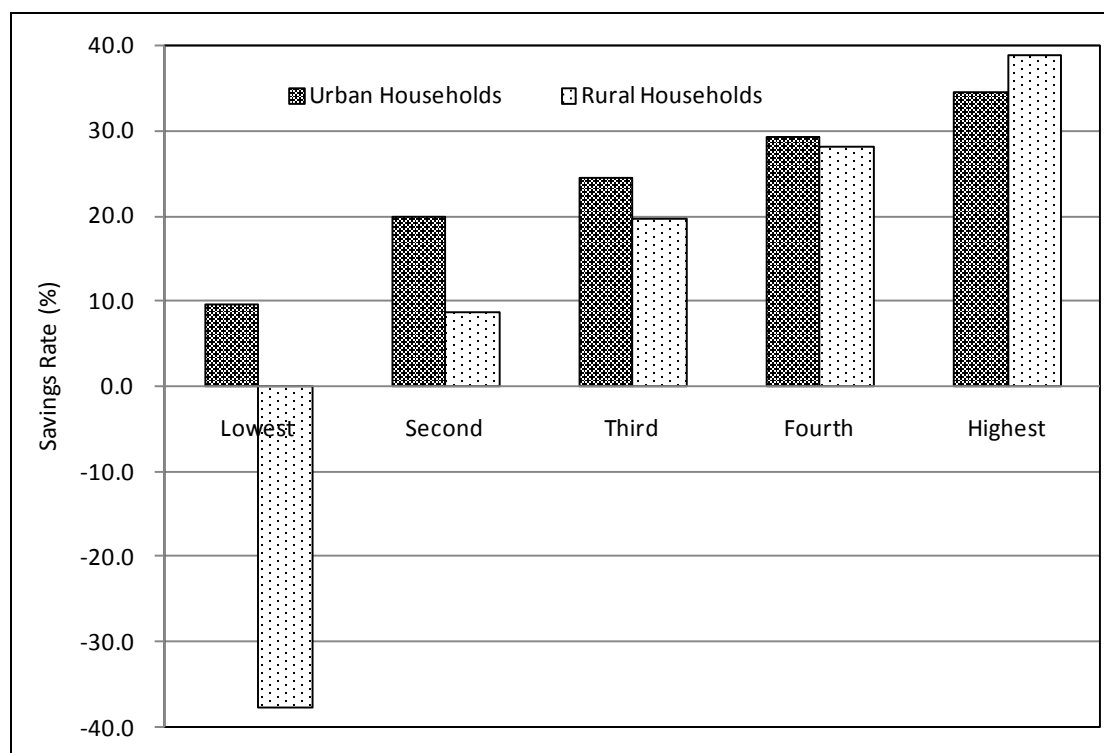
The decline in the rural savings rate in recent years may be driven by a reduction in two other motives for saving: reductions in the cost of compulsory education and the potential cost of health shocks. In recent years, the PRC government has introduced policies to provide free compulsory education to rural residents and to lower exposure to financial risk associated with health shocks by establishing the NCMS. These policy measures can reduce burdens on rural households and reduce the precautionary motives for saving associated with the potential for high education and health care costs. Changes in rural consumption composition show that the education expenditures share dropped from 12.1% in 2003 to 9.5% in 2007, but that health and medical expenditures increased from 6.0% to 6.5% over the same period. The proportion of food expenditures dropped from 45.6% in 2003 to 43.1% in 2007, but that of other expenditures including clothing, housing, durable goods, communications and transportation increased over the same period.

The continuing increase of urban savings rate could be attributed to the responses of individuals and households to increasing risk and uncertainty during economic transition. The reform of SOEs in the late 1990s raised unemployment shock faced by urban households. In order to cope with potential layoffs and dislocation, urban households increased their precautionary savings (Meng 2003). From 1995 to 2005, the average urban household savings rate in the PRC rose by 7 percentage points, to about one quarter of urban income. The unusual age pattern of savings rates, in which younger and older households save more than the middle-aged, reflects the rising private burden of expenditures on housing, education, and health care (Chamon and Prasad 2008), which may be felt more keenly as a result of credit constraints and financial underdevelopment.

Similar to the cross-country findings, a high savings rate is positively correlated with high income in both rural and urban areas. As shown in Figure 7, in 2007, rural households in the highest income group save 38.8% of their capita income, while those in lowest income group dissave at a rate of -37.4%, presumably to smooth their consumption. Urban households save more than rural households from the lowest income group to the fourth income group,

but lower than rural households in the highest income group. These patterns for savings are consistent with predictions of the permanent income hypothesis in an environment in which there is considerable variability in household income. Under the permanent income hypothesis, households consume what they perceive to be their permanent income in any year and tend to save (or dissave) their transitory income (Deaton 1990; Paxson 1992). In years in which there are large positive shocks to income, savings rates would be high, and in years with sharp negative shocks, dissaving would be significant.

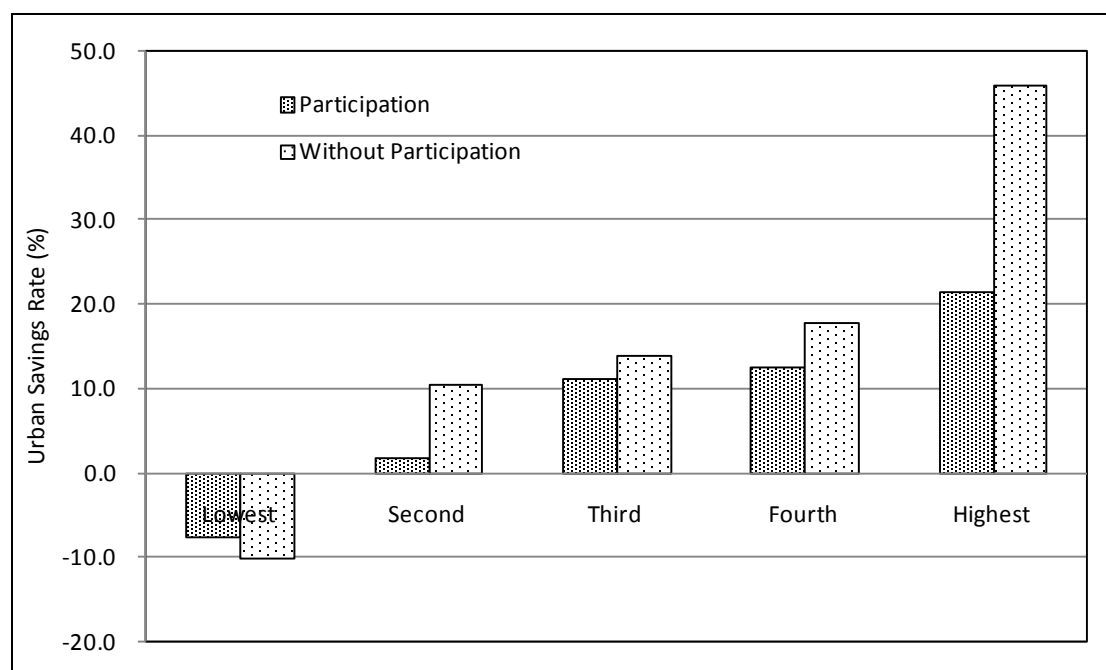
**Figure 7: Saving Rates by Income Quintile**



Note: Saving = Net Income-Consumption Expenditure.

Source: NBS (2008).

A significant difference in the consumption and savings behaviors can be observed between urban households with social security coverage and those without (see Figure 8). In the quintile income groups, urban households with social security coverage save less than those without social security coverage. The highest income group has the largest difference of savings rate as urban households with social security coverage save 21.5% of household income, while those without social security coverage save 46.0% of household income. In the lowest income group, the difference in savings rates between urban households with social security coverage and those without is -2.5%. As discussed before, the provision of social security services can make individuals and households feel more secure in their spending, which is helpful to reducing savings and boosting household consumption.

**Figure 8: Urban Household Saving Rates with/without Participation in Social Security**

Note: Saving = Net Income–Consumption Expenditure.

Source: Institute of Population and Labor Economics (2007).

A proxy variable of social security coverage was introduced into a simple consumption function to examine the impact of social security on urban household consumption. Table 3 represents the quantile regression results of per capita consumption. In addition to per capita income as explanation variable, I included social security coverage ratio as a variable to represent the impacts of social security on household spending, the dependency ratio as a variable to represent household demographic burden, and household head characteristics (age, gender, education and marital status) as variables to control household characteristics. As shown in Table 3, most of the coefficients of variables are significant at 1%, and their signs are consistent with theoretical expectation. Our interest was in the variable of the ratio of social security coverage, which yielded meaningful results. In the lowest 25% income quantile group, a 1% increase of social security coverage ratio will have a marginal effect of 13.37 yuan on per capita consumption, while its marginal effect in the 75% income quantile group is 10.37 yuan, indicating the provision of social security will produce significant impacts on household consumption. In order to overcome heteroskedasticity, a logarithm for per capita consumption and income was taken to run the quantile regression, and the results reach similar findings.

**Table 3: Quintile Regression Results of Consumption**

VARIABLES	Per Capita Consumption			Log (Per Capita Consumption)		
	(1) q25	(2) q50	(3) q75	(4) q25	(5) q50	(6) q75
Per capita income (Yuan)	0.328*** (0.0183)	0.463*** (0.0217)	0.630*** (0.0308)	0.543*** (0.0206)	0.584*** (0.0221)	0.579*** (0.0267)
Proportions of social security participation (%)	13.37*** (2.891)	11.92*** (3.492)	10.37** (4.633)	0.00130*** (0.000319)	0.00104*** (0.000299)	0.00116*** (0.000342)
Dependency Ratio %	7.106*** (1.141)	8.972*** (1.319)	9.748*** (1.722)	0.000715*** (0.000111)	0.000768*** (9.96e-05)	0.000781*** (0.000138)
35-49 (head age)	520.4** (221.4)	45.08 (266.5)	-120.5 (313.2)	0.0583** (0.0253)	0.0320 (0.0222)	0.00994 (0.0287)
50-64 (head age)	481.5* (261.6)	26.88 (289.7)	141.3 (407.7)	0.0409 (0.0290)	0.0207 (0.0271)	0.0383 (0.0376)
65 and over (head age)	1013*** (391.5)	404.7 (382.5)	122.7 (545.1)	0.0868** (0.0414)	0.0537 (0.0460)	0.0558 (0.0531)
Male (Head, =1)	-340.0** (160.7)	-569.4** (221.3)	-726.4** (290.5)	-0.0321 (0.0217)	-0.0468** (0.0198)	-0.0608** (0.0244)
Middle School (head education)	479.4* (283.8)	922.0*** (270.4)	-74.76 (447.2)	0.0489 (0.0328)	0.0717* (0.0401)	0.0356 (0.0525)
High School (head education)	897.3*** (299.8)	1104*** (281.1)	310.2 (477.3)	0.0917*** (0.0340)	0.0949** (0.0415)	0.0804 (0.0533)
College and above (head education)	1842*** (330.8)	2148*** (368.2)	1080** (538.5)	0.185*** (0.0374)	0.184*** (0.0460)	0.160*** (0.0573)
Living with Spouse	384.9 (461.6)	440.2 (825.6)	861.4 (1201)	0.0165 (0.0524)	0.0554 (0.0631)	0.0672 (0.0903)
Divorced/widowed	-17.89 (612.4)	368.6 (935.5)	604.1 (1226)	-0.0165 (0.0672)	0.0555 (0.0826)	0.0297 (0.122)
Constant	5247*** (766.5)	4579*** (1314)	5776*** (1531)	3.982*** (0.212)	3.685*** (0.220)	3.928*** (0.273)
Observations	3104	3104	3104	3104	3104	3104

Note: (1) Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; (2) Per capita income in regression equations (4), (5) and (6) is in logarithm form

Source: Institute of Population and Labor Economics (2007).

## 4.2 Income Inequality

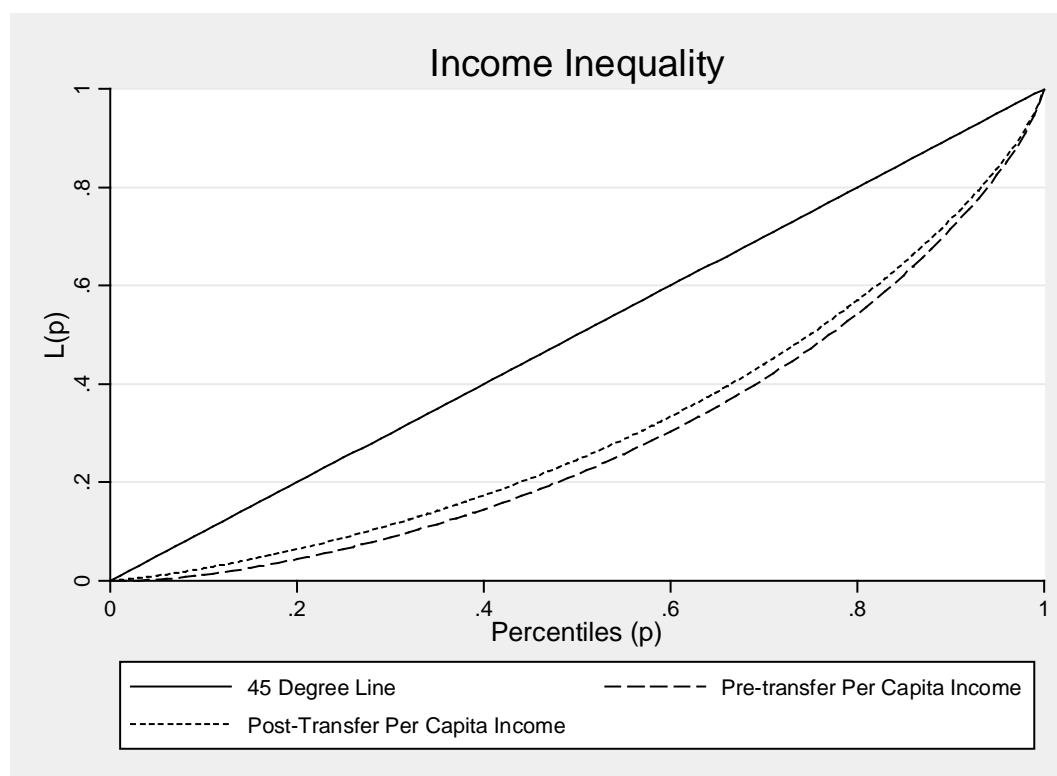
The worsened income inequality has been a big concern of the whole society in the PRC. The Gini coefficient of household income at the national level rose from 0.310 in 1978 to 0.447 in 2001. Looking at rural and urban income inequality separately, the rural Gini coefficient rose from 0.247 to 0.365, while the urban Gini coefficient rose from 0.185 to 0.332 over the same period (Ravallion and Chen 2004). In 2005, the Gini coefficients of rural and urban household income rose to 0.380 and 0.340, respectively (Li 2008). The real urban–rural income ratio deflated by consumer price index in rural and urban areas increased from 2.57:1 in 1978 to 2.64:1 in 2008, larger than the initial figure.

Income inequality is the outcome of opportunity inequality in the process of income generation. Improving the accesses to equal opportunities including education and training, health, credit, and public services will largely lead to narrowing income inequality. The provision of social security can be a policy tool to reduce income inequality. Using urban household data, I can explore the impacts of public transfer on income inequality by comparing the income Lorenz curves of pre-transfer and post-transfer per capita income. As shown in Figure 9, the Lorenz curve of post-transfer per capita income is at the left of the



Lorenz curve of pre-transfer per capita income, indicating that public transfer has a positive impact on income distribution.

**Figure 9: Pre- and Post-Transfer Income Inequality**



Source: Institute of Population and Labor Economics (2007).

I can examine the marginal impact of different income sources that will have on income inequality. Following the methods of Shorrocks (1982) and Lerman and Yitzhaki (1985), the Gini coefficient for total income inequality can be decomposed into the weighted Gini coefficients of different income sources. The influence of any income component upon total income inequality depends on the relative importance and distribution of the income source and its correlation with the distribution of total income (Stark, Taylor, and Yitzhaki 1986).

Table 4 reports the results of marginal impact of different income sources on per capita income inequality. Results show that all else being equal a 1% increase in public transfer decreases the Gini coefficient of per capita income by 0.039%. Private transfer of income can slightly equalize per capita income distribution. Although the Gini correlation between earnings and per capita income is high, the Gini coefficient of earnings is lower than that of other income sources, resulting in an equalizing effect on per capita income. Both business and assets returns are unequally distributed, and their correlations with the distribution of per capita income are high, indicating that both of them favor the rich more than any other income sources. Our findings show that increasing public transfer by providing social security is indeed helpful to narrowing income inequality.

**Table 4: Gini Decomposition by Income Source**

Source	Income Share	Gini Coefficient	Correlation	Share	% Change
Earnings	0.748	0.462	0.787	0.742	-0.006
Business activities	0.134	0.906	0.528	0.175	0.041
Assets return	0.012	0.975	0.556	0.018	0.006
Public transfer	0.101	0.859	0.264	0.062	-0.039
Private transfer	0.005	0.986	0.203	0.003	-0.002
Per capita disposable income		0.367			

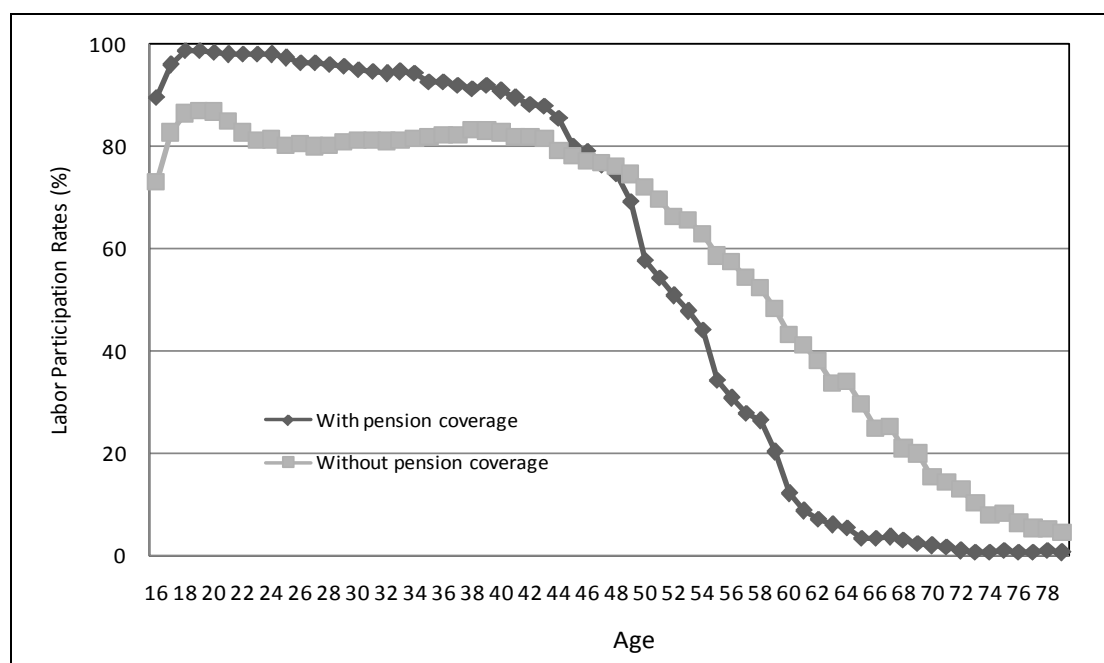
Source: Institute of Population and Labor Economics (2007).

### 4.3 Labor Supply

Although our findings illustrate that the provision of social security has positive impacts on consumption and income distribution, it should be noted that it may have adverse impacts on labor supply. According to academic literature, social insurance programs may discourage labor supply and encourage earlier retirement if their benefits are generous. Studies show that a 10% increase in unemployment insurance benefits is associated with about a 10% decline in work time in the United States (Krueger and Meyer 2002). The unemployment insurance benefits may also affect intra-household labor allocation. Cullen and Gruber (2000) found that for each dollar of unemployment insurance received during husbands' period of unemployment, wives earned up to 73 cents less and their hours of work were reduced over 40%. However, Sjöberg (2000) argued that no systematic evidence shows that countries with more generous unemployment have experienced higher levels of unemployment or that reforms to increase the generosity of unemployment benefits have caused unemployment rates to increase in Organisation for Economic Co-operation and Development countries.

Few studies have been done to examine the impact of unemployment insurance on labor supply in the PRC because high quality data for this kind of analysis is unavailable. Unlike in developed countries, in which the unemployment insurance system is mature and compulsory, in the PRC, the coverage of unemployment insurance scheme is low, accounting for only about 41.1% of urban workers in 2008. Among the number of registered unemployment in 2005, only 38.6% of them received unemployment insurance benefits and the average of unemployment benefits was around 20% of the average of urban workers' monetary wages. Low coverage and benefits of unemployment insurance in the PRC may not have adverse impacts on labor supply decision.

It is unclear whether the pension scheme has had an adverse impact on retirement in the PRC. In the United States, Ruhm (1996) found that pensions are associated with higher work involvement for males in their late fifties and early sixties but with lower rates of job holding for those aged 65–69. He suspected that the broadened pension coverage may not have a relation with a substantial portion of the trend toward earlier male retirement. Using the 2005 1% population sample, I compared labor participation rates between individuals with pension coverage and without pension coverage. As shown in Figure 10, the labor participation rate of individuals with pension coverage is higher than those without pension coverage before 47 years of age, and individual with pension coverage have a sharp decline in labor participation rate when aged 44 and above. In order to examine the impacts of pension coverage on retirement, I ran a nonlinear probit model and reported the results in Table 5. Considering the causal relation between pension coverage and labor market participation, I used the number of other household members covered by pension insurance as a proxy variable to overcome the endogenous issue.

**Figure 10: Pension Coverage and Labor Participation**

Source: NBS (2005b).

The results in Table 5 show that pension coverage seems to have a negative impact on labor market participation. In contrast, I also introduced the number of other household member covered by basic medical insurance as a proxy variable in the probit model 2, the results also illustrate that basic medical insurance coverage has negative impact on labor market participation, but the coefficient turns out to be positive when I introduced two proxy variables into the probit model 3. The marginal impact of pension coverage does not change too much when compared between the probit models 1 and 3, suggesting there is a negative impact on early retirement. However, high quality data, when available, can be used to examine this issue.

**Table 5: Probit Model Results of Labor Market Participation (Participation=1)**

	(1)	(2)	(3)
35-44	2.770 (339.27)**	1.656 (280.24)**	2.776 (339.27)**
45-54	2.163 (277.81)**	1.033 (184.03)**	2.165 (277.93)**
55-64	1.136 (144.10)**		1.137 (144.12)**
65+		-1.139 (145.14)**	
Male	0.865 (204.01)**	0.874 (206.67)**	0.867 (204.24)**
Primary School	-0.021 (2.59)**	-0.031 (3.79)**	-0.023 (2.81)**
Secondary School	-0.239 (28.66)**	-0.279 (33.65)**	-0.240 (28.82)**
High School	-0.131 (14.64)**	-0.200 (22.46)**	-0.134 (14.89)**
College and above	0.342 (33.10)**	0.264 (25.76)**	0.336 (32.56)**
Marriage (Yes=1)	-0.024 (3.40)**	-0.018 (2.64)**	-0.022 (3.09)**
Pension proxy variable	-0.155 (65.91)**		-0.173 (61.89)**
Basic medical insurance proxy variable		-0.056 (25.55)**	0.032 (11.75)**
Household size	0.056 (39.43)**	0.033 (22.69)**	0.052 (35.39)**
Constant	-2.242 (102.62)**	-1.087 (52.07)**	-2.251 (102.94)**
Observations	602854	602854	602854

Notes: (1) absolute value of z statistics in parentheses; (2) \* represents significant at 5%; \*\* represents significant at 1%.

Source: NBS (2005b).

## 5. CONCLUSION

This paper reviews the development of social security system and urban labor market trends in the PRC. Despite its remarkable economic achievement, the PRC faces a difficult challenge before it can reform and improve its social security system and provide basic support for all of its people. Under the shock of the global financial crisis, the urban labor market has become tight and posed serious challenges to employment and income for rural and urban households. Rising unemployment together with wage cuts will cause rural and urban household income to decrease and thus slowdown household consumption growth. However, the provision of social security will not only mitigate shocks on employment and income in the short term, but also guarantee individuals and households more security for spending, which is helpful for reducing the high savings rate and achieving a balanced growth path in the long run. Our findings verify that households with social security coverage spend more and income distribution among urban households is improved through public transfers.

How to design and establish a sound social security system in the PRC remains an important question. Demographic factors such as population aging, migration, and urbanization present a dynamic and broad picture of the challenges facing the PRC in the

future. At present, low coverage rates and fragmented schemes across population groups highlight the issues of incentives, financing, portability, and institutional reforms. The tremendous legacy cost also calls for a clear road map to solve this transition burden. Looking ahead, the key is to adapt the current system toward a new one that can both meet the basic requirements from society and make it sustainable. In the meantime, this new system should minimize the adverse effects on labor supply and efficiency. Those issues should be left for further studies, but for now it is clear that the PRC government has announced its intention to establish a basic social security system and expand its coverage to all people by 2020. If it does so, it will construct a solid institutional basis for the PRC to boost household consumption and achieve balanced growth.

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