

# Health Insurance and “Unemployment Lock”: evidence from China

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## **Abstract:**

The potential impact of health insurance on labor mobility has been extensively studied in the U.S. and elsewhere. As health insurance becomes a more important means of financing health care, and as individual choice is playing a greater role in allocating labor, this issue is beginning to be recognized in China as well. In this paper, we investigate the effects of the introduction of the subsidized China Urban Resident Basic Medical Insurance (URBMI) insurance plan on people’s job market entry decisions, using data from a of new survey of the population eligible to enroll in this plan. In order to deal with an endogeneity problem, we use the enrollment rates of each community as an instrumental variable of the individual probability of participation in the plan.

Our results show that URBMI, which is mainly available to people not in formal employment, leads to a significant 4.8% reduction in the individual probability of entering labor market, an effect we term “Unemployment Lock”. We also find that the negative effects of health insurance on labor force participation are larger for less healthy people than for healthy ones.

The results indicate that China Urban Resident Basic Medical Insurance, whose availability is related to employment status, may lead to a specific type of moral hazard; namely, that people who are not in formal employment become more reluctant to enter the job market because of the insurance program. Further research could involve separate analyses of full-time employees and temporary employees.

## **Key words:**

Urban Resident Basic Medical Insurance; Labor Force Participation; Moral Hazard; Unemployment Lock

JEL: I18, J64, H55

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# 1. Introduction

In the U.S. labor economics literature there has been a considerable amount of empirical research on the importance of health insurance with respect to individuals' decisions regarding labor mobility, retirement, and reliance on social assistance. Labor mobility may be affected if workers covered by their current employers' health insurance plans are unsure whether they will be able to get coverage from a new employer. Retirement decisions of older workers or reliance on social assistance can be affected by whether or not retired workers can continue to be covered by their employers' group insurance plans, and by the fact that recipients of social assistance have automatic coverage by state Medicaid plans which they may lose if they become employed and no longer receive welfare.

In China, the issue of labor market effects of health insurance has been largely irrelevant until recent years. Before the opening up of the economy in the 1980s, labor mobility was restricted; moreover the cost of health care was essentially covered by the government, with limited patient out-of-pocket payments required by patients. However, in the last several decades, health care has been financed to a much greater extent through patient charges, and health insurance has become much more important as a way of protecting patients against high health care costs. As a result, access to health care and health insurance has become major policy issues in China.

As demonstrated in (Wanchuan Lin et al, 2009), prior to 2007, there were two primary insurance programs: Urban Employee Basic Medical Insurance (UEBMI) for the urban employed and New Cooperative Medical Scheme (NCMS) for the rural population. But nearly a third of the population, some four hundred twenty million urban residents without formal employment, was completely left out of the state healthcare safety net. As a crucial step in closing the insurance policy coverage gap, following the guidelines outlined in State Council Policy Document 2007 No. 20 (State Council Document No. 20, 2007), a large-scale pilot program, Urban Resident Basic Medical Insurance (URBMI) was initially launched in seventy-nine cities. Enrollment in URBMI is on a voluntary basis. In each city, the government collects different premiums from the enrollees. For example, in Nanjing, children pay a premium of 50 RMB each year and the government subsidy is 50 RMB; the old pay 112.5 RMB and the government subsidy is 112.5 RMB; other adults pay 225 RMB and the government subsidy is 225 RMB.<sup>4</sup>

Although access to subsidized health insurance through URBMI obviously has benefits to patients, it may also affect the labor market. Before the existence of URBMI,

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<sup>4</sup> Wanchuan Lin, Gordon G. Liu and Gang Chen. 2009. "The Urban Resident Basic Medical Insurance: a landmark reform towards universal coverage in China," *Health Economics*, vol. 18(S2): S83-S96.

the only realistic way for an urban resident to obtain affordable health insurance coverage was to get a job in the formal sector and hence get coverage through the (compulsory) UEBMI for formal sector-employees. When the URBMI option is available, however, that plan represents a (subsidized) substitute for UEBMI. The hypothesis that we investigate in this paper is that the introduction of URBMI weakened the incentive to seek formal-sector employment

Specifically, we postulate that at the margin, an individual chooses whether or not to seek formal employment by comparing the expected utility of being or not being employed in the formal sector. One determinant of the latter is the availability and cost of health insurance if you are not in formal employment; since one component of expected utility is that you may get sick and have high medical expenditure in the future. The introduction of the URBMI program raises the expected utility of not being formally employed for those who enroll in the plan. Therefore we hypothesize that they will have a lower propensity to seek employment in the formal market.

To test this hypothesis, we estimate a model using data from the Survey of Urban Resident Basic Medical Insurance (URBMI), collected annually in China since 2007 to the present. Our empirical work identifies the effect of this insurance expansion on labor force participation by exploiting the fact that this insurance was only made available to people who do not have formal employment in 2007. We find that URBMI leads to a significant 4.8% decline in the propensity for a person to switch to formal employment from one year to the next. We term this effect “Unemployment Lock”. This result emerges from an instrumented probit model and is robust to a separate check.

## 2. Literature review

The availability of health insurance in the U.S., which is related to the employment status has potentially quite important implications for the functioning of labor markets, and a large part of the relevant literature has studied the effect of health insurance on various labor market decisions.

In the U.S., people who are aged 65 and over have Medicare coverage, and single mothers on welfare have Medicaid coverage which they may lose if they take a job. According to the literature review of Gruber and Madrian (2002), health insurance is an important factor in the retirement decisions and the labor supply decisions of secondary earners, but not a major determinant of the labor supply and welfare exit decisions of low income mothers. While there is some division in the literature, the most convincing evidence suggests that health insurance plays an important role in these decisions.

There is considerable evidence that health insurance should be an important determinant of retirement. Several papers have estimated reduced form models of the impact of employer-provided post retirement health insurance, such as retiree health

insurance and continuation benefits, on retirement. For instance, Retiree Health Insurance, it is suggested in these papers, increases the retirement hazard by 30%-80% (Gruber and Madrian, 1995; Blau and Gilleskie, 2001a) and reduces the age at retirement by 6 to 24 months (Madrian 1994a; Blau and Gilleskie, 2001a). Furthermore, the availability of continuation coverage after early retirement or layoff might mitigate “job lock”, by providing insurance to those who would otherwise be temporarily uncovered during their job search or on their new job.<sup>5</sup> Based on Survey of Income and Program Participation (SIPP) data for 1983-1989, Gruber and Madrian (1994) found that one year of continuation coverage raises mobility rates by 12-15%, which is a sizable effect.

The effects of health insurance on labor supply exit decisions have been ambiguous. For example, Mitchell (1982) found that having health insurance on the job resulted in a substantial 22% reduction in the odds of quitting that job for men, but the estimate was not significant; there was no effect for women.

However, when this approach is augmented to consider not only whether the worker held insurance on his current job, but also the possibility of finding insurance on his new job, there is a large and significant effect on mobility, with health insurance reducing the odds of leaving a job by 23-39% across the different demographic groups that were studied (Cooper and Monheit, 1993). Moreover, based on difference-in-differences model and data from the national medical care expenditure survey (NMES), Madrian (1994a) found significant and sizable estimates, suggesting mobility reductions on the order of 30-67%.

Anderson (1997) estimates the effect of job lock in the National Longitudinal Survey of Youth (NLSY), which follows a sample of 14-21 year olds in 1979 over the subsequent years. She drew a potentially important distinction between “Job Lock” and “Job Push”, where the latter is defined as individuals who leave jobs without health insurance because of a desire for coverage. She finds “job push” among men with a pregnant spouse increases mobility by about 17%.

A similar topic to job-job mobility is the decision to move into self-employment. Holtz-Eakin, Penrod and Rosen (1994) examined the transition from being employed to self-employment and their estimates of this “Employment Lock” from the SIPP program are quite large, ranging from 9.2% to 15.3%, but they are generally insignificant.

Another margin along which health insurance might affect labor supply is public assistance participation. The major plans in the U. S. are the Aid to Families with Dependent Children (AFDC) program and the Temporary Assistance for Needy Families and Supplemental Security Income (SSI) program for low income disabled

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<sup>5</sup> The term “job lock” is commonly used in the U.S. literature to refer to the fact that employees covered by work-related health insurance may be reluctant to change jobs or search for a new job because by switching employers or quitting, they will lose their current coverage and cannot be sure they will be able to get equivalent coverage in a new job.

persons and elderly. Under U.S. rules, persons who participate in these programs are automatically eligible for the highly subsidized Medicaid plans that are available in each U.S. state; exiting the public assistance program may imply that a person loses his or her Medicaid coverage. Several papers use differences in individual characteristics to predict who is likely to be “locked” into the AFDC program, and then to assess differential participation rates by Medicaid. The results are fairly similar, showing sizable decreases in the probability of exiting AFDC as the imputed value of Medicaid rises.

Using a pooled cross-section data set constructed from the 1988 through 1993 Current Population Survey March Supplements, Montgomery and Navin (2000) studied whether or not different benefit levels across states impact labor supply behavior. OLS results support the prediction that Medicaid expenditures reduce labor supply, but controlling for state fixed or random effects alters the effect of both the AFDC and Medicaid programs on both the decision to participate and the number of hours worked of female heads of households.

Although the institutional setting in China is quite different, the idea behind our study is somewhat similar to that in Holtz-Eakin, Penrod and Rosen (1994) and that in Montgomery and Navin (2000). While the eligibility for URBMI is not tied to a social welfare program, it reduces the incentive to obtain (or stay in) formal employment in the same way that Medicaid does for welfare recipients. Moreover, it also potentially affects a person’s choice between formal employment and self-employment, though in the opposite direction from that studied by Holtz-Eakin, Penrod and Rosen (1994) where the SIPP program implied a disincentive to enter self-employment, while the Chinese URBMI constitutes an implicit subsidy to self-employment.

## 3. Study Design

### 3.1 The regression framework

Since URBMI offers the option of subsidized health insurance coverage to people not in formal employment, it may make people less likely to enter the job market in search of formal employment. Therefore, our hypothesis is that for the urban population who are not in formal employment, they will be less likely to be in formal employment in the following year if they are insured by URBMI. We term this effect “Unemployment Lock” by analogy with the term “Job Lock”.

Our whole sample is from the population who are **not formally employed** in 2007, but in the regressions we exclude observations on children, students, and the retired/elderly (defined as over 65 years old). We expect that people who were insured

by URBMI in 2007 will be less likely than the uninsured to have formal employment in 2008. We estimate the following probit model of “Unemployment Lock”:

$$\Pr(work_i) = \Phi(\alpha + \beta \times ins_i + \theta \times X_i + \mu_i)$$

where  $i$  indexes individuals, the vector  $X_i$  contains a set of individual demographic characteristics: gender, age, marital status, education, health status, economic situation and a city fixed effects control for any time-invariant characteristics of a city which may be correlated with people’s propensity to seek formal-sector employment in that city. The symbol “ $ins_i$ ” is a binary variable indicating an individual’s URBMI participation in 2007, where 1 means insured in URBMI in 2007 and 0 means not, while “ $work_i$ ” is a binary variable indicating an individual’s labor market status in 2008, where 1 means he has got a full-time job in 2008 (has entered formal employment) and 0 means not. Thus the “Unemployment Lock” effect is identified by the difference in job search behavior between insured people and the uninsured ones within the population without formal employment. If “Unemployment Lock” does exist, then the coefficient  $\beta$  should be negative.

### 3.2 Endogeneity problem

To look for a relation between URBMI participation and the subsequent labor market entry decision, we use the individual URBMI participation in 2007 as the independent variable, and his employment status in 2008 as the dependent variable. However, this approach gives rise to an obvious endogeneity problem. A person who recognizes that he does not have very good prospects in the formal labor market would find enrollment in the subsidized URBMI an attractive option since he does not expect to acquire insurance coverage through formal employment. On the other hand, a person who expects to enter formal employment within a year or less is less likely to find it worthwhile to pay the cost of enrolling in URBMI. So an unobserved omitted variable –future prospect for formal employment - which is in the error term in the employment equation is also correlated with the independent insurance variable, implying an endogeneity problem. To address this problem, we use the URBMI insurance rate in each community as an instrument variable for the individual’s URBMI participation, because the insurance rate is not correlated with individual employment prospects, but is correlated with whether people tend to buy insurance. We also run a regression of individual URBMI participation on the insurance rate in the community to test their correlation; the result is presented in the appendix.

Because we are running a probit model using an instrumental variable where both the dependent variable and the endogenous regressor are binary, the estimation method we use is the recursive bivariate probit model. Our first equation is:

$$\Pr(work_{2008}) = \Phi(\alpha + \beta \times ins_{2007} + \theta \times X_i + \mu_i)$$

Our second equation is:

$$\Pr(ins_{2007}) = \Phi(\alpha + \beta \times commuins_{2007} + \theta \times X_i + \mu_i)$$

As noted above, “*work<sub>2008</sub>*” is a binary variable indicating an individual’s labor market status in 2008, while “*ins<sub>2007</sub>*” is a binary variable indicating an individual’s URBMI participation in 2007. The symbol “*commuins<sub>2007</sub>*” is a continuous instrumental variable indicating the URBMI participation rate of the community in which the subject resided in 2007.

### 3.3 Data source

Our primary data source for modeling “Unemployment Lock” is from the China Urban Resident Basic Medical Insurance (URBMI) Survey conducted by the Peking University Guanghua School of Management, commissioned by the Chinese government. Starting with the baseline survey in November 2007, the data collection was scheduled for three waves for 2008, 2009, and 2010, respectively. In this study, we use data from the 2007 and 2008 samples, as they provide information about labor force status in both 2007 and 2008, as required.

The URBMI Survey includes information on the population demographics, health status, health expenditures, health insurance coverage, job status, economic status, the financial burden of medical care, and utilization of health services. There are nine cities included in the final URBMI Survey: Baotou City, Inner-Mongolia SAR; Changde City, Hunan Province; Chengdu City, Sichuan Province; Jilin City, Jilin Province; Shaoxing City, Zhejiang Province; Xiamen City, Fujian Province; Xining City, Qinghai Province; Urumqi City, Xinjiang SAR; and Zibo City, Shandong Province.

As a panel data set, the URBMI records not only current job status, but also the employment status in the previous year, including some questions about vocation and job title. We can therefore observe a transition from unemployment to formal employment over a one year interval.

As for some summary statistics for our URBMI sample, the whole sample size for two years is 62165, 48.37% are men, 83.92% are natives of the respective cities, and 92.57% are urban residents. The following figures present some descriptive statistics for our URBMI sample.

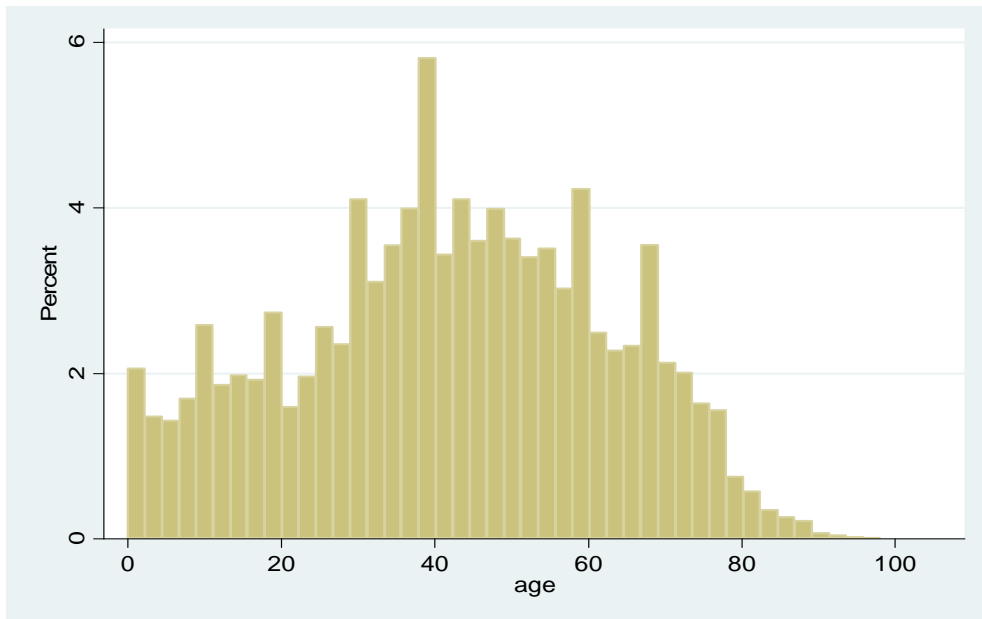


Figure 1 Age distribution of URBMI enrollees

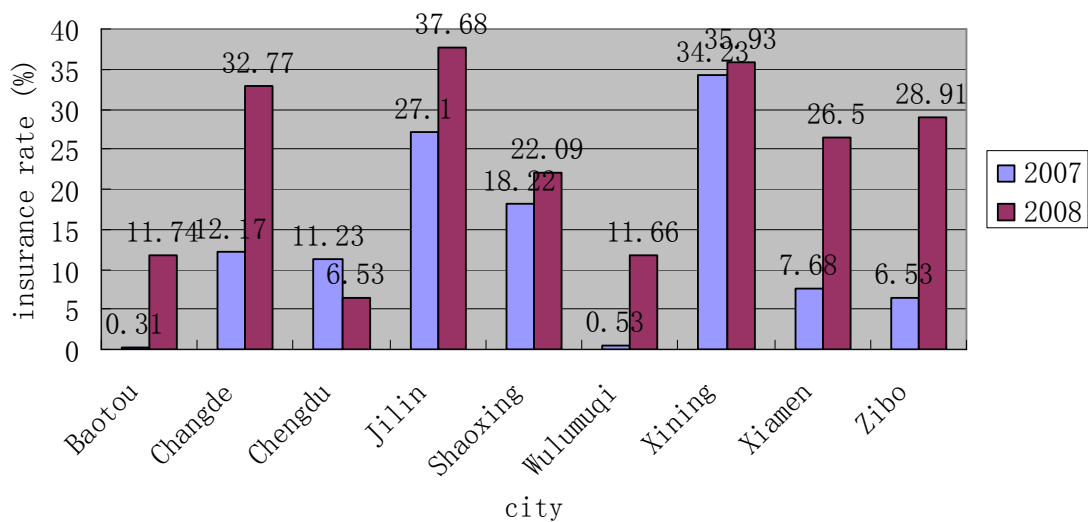


Figure 2 Proportions enrolled in URBMI

Figure 2 shows that all cities except Chengdu have a large increase in their enrollment rates between 2007 and 2008. In 2008, three cities, namely Changde, Jilin, Xining have more than 30% people participating in URBMI, and Shaoxing, Xiamen and Zibo have more than 20% people that have signed up for URBMI.

Of all insured people, the unemployed group constitutes the largest share, 34.88% in 2008. Other groups represented are students, the temporarily employed, self-employed and children.



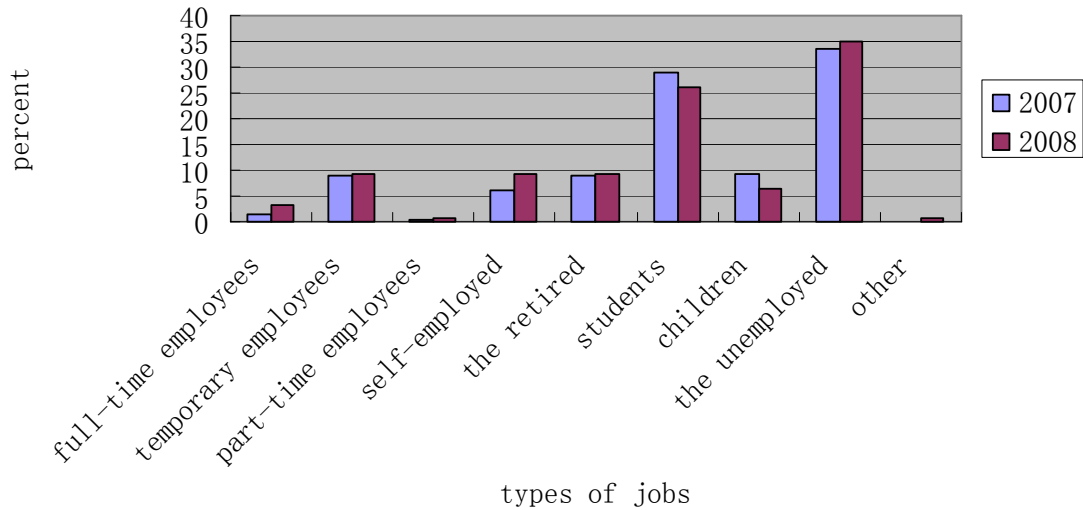


Figure 3 Proportion of different types of jobs in insured population

Note that when running regressions, we exclude observations with missing values and outliers. These included some people who failed to respond to questions like marital status and education level, so that their answers would be coded as negative numbers. They also included some subjects who gave incredible answers, for example, claiming that they were more than 200 years old. As already noted, we also excluded observations on children, students, and the retired and other elderly (defined as over 65 years old). In addition, we excluded the disabled population as well, because their job search decision might be made based on different considerations than those of others.

## 4. Regression Results

### 4.1 Descriptive analysis

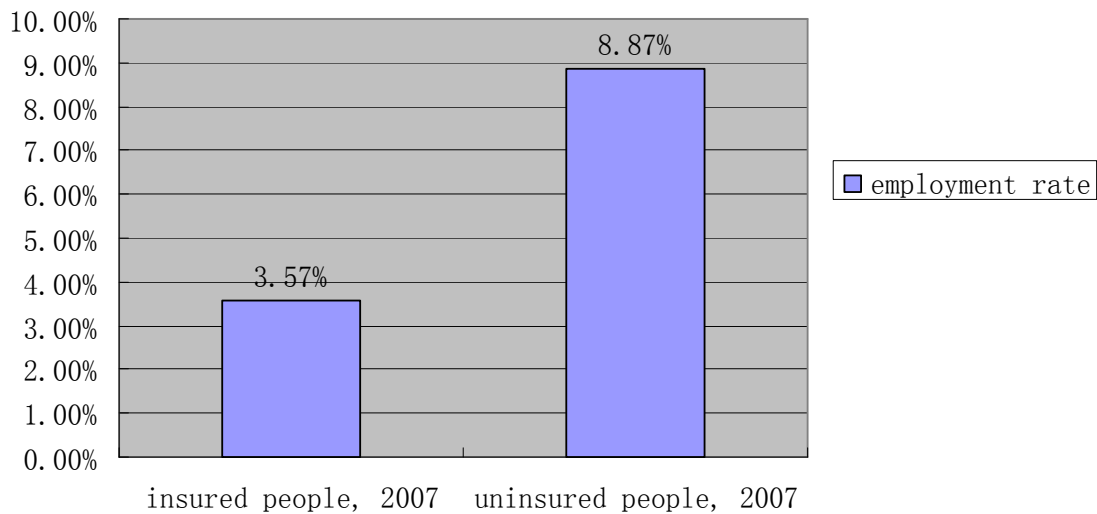


Figure 4 Employment rates

Among people in our sample who were not in formal employment in 2007, 3.57% of those insured in 2007 have got jobs in 2008, much smaller than 8.87% of the uninsured people, which is consistent with our hypothesis that insured people are less likely to search for formal employment.

## 4.2 Basic results

The results from the probit regression are presented in the first two columns in table 1. We present both the probit coefficients and marginal coefficients.<sup>6</sup> Among all people without formal employment, the insured people have a 6.1% lower probability of participation in formal employment in the next year than uninsured people. The coefficient is significantly negative, consistent with our hypothesis that URBMI has reduced people's probability to seek jobs. A person is also more likely to search for a formal-sector job if he or she has a higher education or has participated in other types of health insurance, while marital status and age do not have significant influence.

The positive and significant coefficient for the variable "insured by other insurance" is somewhat unexpected. Persons answering "yes" to this question may either be covered by commercial private insurance, or have had coverage through previous employment in 2007 (even though, at the time they were interviewed in 2008, they were no longer employed). In the former case, a positive coefficient may reflect the fact that private individual commercial coverage is likely to be quite expensive, increasing the incentive for individuals with such coverage to become employed so that they can substitute less expensive UEBMI coverage instead. In the latter case, the positive coefficient may reflect a tendency for individuals who were employed in the formal sector sometime in 2007 to have a higher propensity to return to formal sector employment than those who were not employed at any time during 2007. In order to avoid confounding the effect of URBMI coverage on the propensity to obtain formal-sector employment with the effects of other forms of insurance, we also ran a regression on the subsample of individuals who did not have coverage through other forms of insurance in 2007. The results remained similar to those for the larger sample: Those with URBMI coverage in 2007 were 4.8% less likely to be employed in the formal sector in 2008, as shown in the last 2 columns in Table 1.

In sum, the results of the above two regressions support our contention that URBMI will lead to some "Unemployment Lock" effect.

## 4.3 Results of separate analysis

We did a robustness check to further investigate the "Unemployment Lock" effect. Since URBMI provides health insurance coverage to people not in formal employment, it may reduce their expected medical expenditures if they fall sick in the future, thus

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<sup>6</sup> The marginal coefficients were obtained using the "mfx" command in STATA.

reducing their opportunity cost of choosing not to seek formal employment. Since people in poor health may expect to spend more in their medical treatment than those in good health, the “Unemployment Lock” might be more significant for the unhealthier people.

To investigate this possibility, we divided the whole sample into two groups - the healthier group whose self reported health is above 80 (the median score of self reported health of the whole sample) and unhealthier group whose self reported health is below 80. We then ran separate regressions for the two groups. The results are presented in table 2.

For the unhealthier group, people insured under URBMI have a significantly lower possibility (of about 4.3%) of entering labor market than uninsured people. However, the effect for the healthy group is not statistically significant. This finding is intuitively reasonable, in that access to health insurance clearly is a more important issue for people with more significant potential health problems than for others. Since insurance availability is less of a concern for those without such problems, it is not surprising that their decision whether or not to look for formal-sector employment is not significantly influenced by whether or not they have URBMI coverage. The notion that insurance coverage is more important for those with worse self-reported health is also supported by the positive and statistically significant coefficient for this variable in the equation for URBMI enrollment in Table 3, which suggests that some degree of adverse selection may be present in this plan.

## 5. Conclusion

Introduction of subsidized government health insurance plans have potentially important implications for labor mobility. In China, it is especially important at this time to understand the interaction between health insurance and labor force participation because of the rapid increase in health care costs and of patient charges as a source of financing health care. Recognition of the latter problems has led to introduction of new types of government-sponsored plans, as well as a growing role for private insurance, and the relation between health insurance availability and labor mobility is only going to become even more significant in the future. In this paper, we have tried to take a first step toward a better understanding of these issues. Our strategy has been to examine the effect of Urban Resident Basic Medical Insurance on people’s job search behavior, and our primary finding is that URBMI leads to a significant 4.8% reduction in probability of entering formal employment the following year, which we term an “Unemployment Lock”. This result emerges from an instrumented biprobit model and is robust to a separate check.

Taken at face value, our study has important implications for public policies. Policies that provide health insurance to all citizens including people who are not in

formal employment aim to ensure equality in access to medical services and the welfare of all people, but might also lead to a reduction in labor market participation. This factor should be accounted for when considering the potential financing of such policies. Therefore, more attention should be paid to cost-benefit analysis in the policy-making process. We hope this study will, indirectly, contribute to this objective.

## **Acknowledgement**

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# Appendix

Table 1 Basic estimates of effects of URBMI participation on labor market entry probability

		People not in formal employment		Unemployed people without other types of health insurance	
		Coefficients of Probit model	Marginal coefficients	Coefficients of Probit model	Marginal coefficients
Personal information (controlled=outsider) (control=rural) (control=female) (control=minority)	Insured by URBMI in 2007	-0.510**	-0.061**	-0.607*	-0.048*
	Insured by other insurance	0.183***	0.028***		
	Native	-0.00584	-0.001	0.156	0.013
	Urban	0.326***	0.041***	0.194	0.016
	Male	0.0848**	0.013**	0.130*	0.013*
	Han	0.173*	0.024*	0.290*	0.023*
	Age (square)	-6.99e-05	-0.000	-0.000	-0.000
	Age	0.00496	0.001	0.0180	0.002
	Primary school	0.0841	0.013	0.020	0.002
	Middle school	0.562***	0.095***	0.325	0.033
Education background (control=no education)	High school	0.800***	0.146***	0.556**	0.063**
	College	1.238***	0.333***	1.166***	0.235***
	Bachelor	1.398***	0.412***	1.372***	0.322***
	Master	1.035**	0.280**	-3.708***	-0.046***
Marital status (control=single)	Married	-0.110	-0.0176	-0.162	-0.017
	Separated	-0.133	-0.019	-0.096	-0.009
	Divorced	-0.136	-0.0190	-0.315	-0.024
	Widowed	-0.405*	-0.047*	-0.385	-0.027
Health information (control=no) (control=no) (control=no)	Chronic disease	-0.169**	-0.024**	-0.070	-0.006
	Illness last two weeks	0.0450	0.007	-0.213*	-0.018*
	Having been in hospital, 2007	-0.0397	-0.006	0.171	0.019
Economic situation	Monthly family income, 2007	2.27e-05***	3.46e-06***	7.17e-05***	6.90e-06***
	Family expenditure, 2008	1.25e-07	1.90e-08	-1.07e-06	-1.03e-07
	Debt due to illness	3.88e-06	5.92e-07	3.68e-06	3.54e-07
other	City fixed effect	controlled	controlled	controlled	controlled
	Constant	-2.467***		-2.947***	
	Sample size	7925	7925	4261	4261

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

Table 2 Results of separate analysis on healthier people and unhealthier ones

		Healthier people		Unhealthier people	
		Coefficients of Probit model	Marginal coefficients	Coefficients of Probit model	Marginal coefficients
Personal information (controlled=outsider) (control=rural) (control=female) (control=minor)	Insured by URBMI in 2007	-0.030	-0.003	-1.107***	-.043***
	Native	0.091	0.0086	0.182	0.008
	Urban	0.162	0.0145	0.204	0.008
	Male	0.171**	0.0174**	0.101	0.005
	Han	0.210	0.018	0.458*	0.016*
	Age (square)	-0.000	-0.000	0.000	0.000
	Age	0.048	0.004	-0.039	-0.002
Education background (control=no education)	Primary school	0.426	0.0557	-0.238	-0.010
	Middle school	0.753*	0.089*	0.0328	0.002
	High school	0.897**	0.115**	0.489	0.030
	College	1.493***	0.352***	1.096***	0.136***
	Bachelor	1.767***	0.481***	1.103***	0.147***
	Master	-3.472***	-0.048***	-3.568***	-0.020***
Marital status (control=single)	Married	-0.281**	-0.032**	0.166	0.007
	Separated	-0.160	-0.014	0.374	0.026
	Divorced	-0.461*	-0.032*	0.0599	0.003
	Widow	-0.249	-0.020	-6.597***	-0.040***
Health information (control=no) (control=no) (control=no)	Chronic disease	-0.135	-0.013	0.068	0.003
	Illness last two weeks	-0.279*	-0.024*	-0.186	-0.008
	Having been in hospital, 2007	0.072	0.008	0.311	0.020
Economic situation	Monthly family income, 2007	7.52e-05***	7.54e-06***	6.20e-05**	2.99e-06**
	Family expenditure, 2008	-9.81e-07	-9.84e-08	-1.56e-06	-7.54e-08
	Debt due to illness	5.86e-06	5.87e-07	1.60e-07	7.71e-09
other	City fixed effect	controlled	controlled	controlled	controlled
	coefficient	-3.770***		-1.609*	
	Sample size	2899	2899	1362	1362

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

Table 3 Correlation between individual URBMI enrollment and the insurance rate in each community

		URBMI participation in 2007
Dependent variable		
	Insurance rate in each community in 2007	0.825***
	Other health insurance participation	-0.207***
Primary information		
(controlled=outsider)	Native	0.071***
(control=rural)	Urban	0.043***
(control=female)	Male	-0.028***
(control=minor)	Han	0.003
	Age (square)	9.27e-05***
	Age	-0.005*
Education information		
(control=no education)	Primary school	0.015
	Middle school	0.033
	High school	0.029
	College	0.050**
	Bachelor	0.021
	Master	0.164**
Marital status		
(control=single)	Married	0.016
	Separated	-0.027
	Divorced	0.031
	Widow	0.097***
	Other	0.045**
Health information		
(control=no)	Chronic disease	0.030**
(control=no)	Illness last two weeks	0.016
(control=no)	Having been in hospital, 2007	0.004
Economic situation		
	Monthly family income, 2007	4.07e-07
	Family expenditure, 2008	-6.27e-08
	Debt due to illness	1.42e-06*
Other		
	City fixed effect	controlled
	Constant	0.002
	Sample size	7925
	R-square	0.350

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



## References

Anderson, Patricia M. 1997. "The Effect of Employer-Provided Health Insurance on Job Mobility: Job-Lock or Job-Push?" unpublished paper (Dartmouth University).

Blau D. M. and D. B. Gilleskie. 1997. "Retiree Health Insurance and the Labor Force Behavior of Older Men in the 1990s", NBER Working Paper No. w5948, National Bureau of Economic Research, Inc.

Diamond, Peter A. and Jerry A. Hausman. 1984. "The Retirement and Unemployment Behavior of Older Men," in Henry Aaron and Gary Burtless, eds., *Retirement and Economic Behavior* (Brookings Institution: Washington DC), 97-134.

Ellwood, David and Kathleen Adams. 1990. "Medicaid Mysteries: Transitional Benefits, Medicaid Coverage, and Welfare Exits," *Health Care Financing Review*, 1990 Annual Supplement, 119-131.

Douglas Holtz-Eakin, 1993. "Health Insurance Provision and Labor Market Efficiency in the United States," NBER Working Paper No. w4388, National Bureau of Economic Research, Inc.

Holtz-Eakin, Douglas, John R. Penrod, and Harvey S. Rosen. 1996. "Health Insurance and the Supply of Entrepreneurs," *Journal of Public Economics* 62(1-2): 209-235.

Jonathan Gruber. 1998. "Health Insurance and the Labor Market", NBER Working Paper No. w6762, National Bureau of Economic Research, Inc.

Jonathan Gruber and Brigitte C. Madrian. 1993. "Health Insurance Availability and the Retirement Decision", NBER Working Paper No. w4469, National Bureau of Economic Research, Inc.

Jonathan Gruber and Brigitte C. Madrian. 2002. "Health Insurance, Labor Supply and Job Mobility, a Critical Review of the Literature", NBER Working Paper No. w8817, National Bureau of Economic Research, Inc.

Krueger, Alan B. and Meyer, Bruce D. 2002. "Labor Supply Effects of Social Insurance", NBER Working Paper No. w9014, National Bureau of Economic Research, Inc.

Bridgitte C. Madrian, 1994. "The Effect of Health Insurance on Retirement," *Brookings Papers on Economic Activity*, Economic Studies Program, The Brookings Institution, vol. 25, 181-152.

Meyer, Bruce D. 1990. "Unemployment Insurance and Unemployment Spells," *Econometrica*. Vol. 58, No. 4, 757-782

Mitchell, Olivia S. 1982. "Fringe Benefits and Labor Mobility," *Journal of Human Resources* 17(2), 286-298.

Moffitt, Robert, 1985. "Unemployment insurance and the distribution of unemployment spells," *Journal of Econometrics*, vol. 28(1), 85-101.

Moffitt, Robert and Barbara L. Wolfe. 1992. "The Effect of the Medicaid Program on Welfare Participation and Labor Supply," *Review of Economics and Statistics* 74(4): 615-626.

Montgomery, Edward and John C. Navin. 2000. "Cross-State Variation in Medicaid Program and Female Labor Supply," *Economic Inquiry* 38(3): 402-18.

Orley Ashenfelter, David Ashmore and Olivier Deschenes. 2005. "Do unemployment insurance recipients actively seek work? Evidence from randomized trials in four U.S. States", *Journal of Econometrics*, Volume 125, Issues 1-2, 53-75

Rosen, S. 1986. "The Theory of Equalizing Differences", *Handbook of Labor Economics*, Volume 1, 641-692.

Rust, J. and C. Phelan. 1997. "How Social Security and Medicare Affect Retirement Behavior in a World of Incomplete Markets", *Econometrica*, 65(4): 781-831.

Wanchuan Lin, Gordon G. Liu and Gang Chen. 2009. "The Urban Resident Basic Medical Insurance: a landmark reform towards universal coverage in China," *Health Economics*, vol. 18(S2): S83-S96.

Winkler. 1991. "The Incentive Effects of Medicaid on Women's Labor Supply", *Journal of Human Resources*, 26(2): 308-337.