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The expansion of public health insurance and the demand for private health insurance in rural China

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ABSTRACT

This paper examines the impact of the New Cooperative Medical Scheme (NCMS) on private health insurance purchasing decisions in rural China, using longitudinal data from the China Health and Nutrition Survey (CHNS, 2000–2006). A Difference-in-difference (DID) approach is employed to estimate NCMS effects. The overall effects of NCMS were modest, but differed for adults and children. We find that adults were 2.1% more likely to purchase private health insurance when NCMS became available. NCMS had a larger positive effect on adult private coverage in higher income groups and in communities with a preexisting health care financing system, known as the Cooperative Medical Scheme (CMS). We also find evidence suggesting that NCMS crowded out child private health insurance, especially in lower income groups. However, this finding is not robust to controlling for other covariates including household characteristics and availability of private insurance in the community. For both adults and children, risk preferences and socio-economic status, including income and education, are important predictors of private insurance take-up. We find no evidence for adverse selection in the demand for private health insurance.

1. Introduction

Since the initiation of market reforms in the 1980s, China's growing economy has resulted in an extraordinary reduction in poverty, lifting approximately 500 million of people out of poverty (World Bank, 2002). The sharp decline in the rural poor accounted for 75 to 80% of the drop in the national poverty rate during the period 1981–2001 (Ravallion & Chen, 2007). Nevertheless, the development of China's health care system lagged far behind its economic growth (World Bank, 1997; Eggleston, Ling, Meng, Lindelow, & Wagstaff, 2008). Inadequate government investment in the health care sector, combined with rapidly escalating medical costs, increased the burden of individual out-of-pocket health expenditures from 23.2% of total medical expenditures to 49.3% by 2006 (China Statistical Yearbook, 2008). Moreover, over 90% of the 0.9 billion rural population were uninsured in 1998 (Liu, 2004a). Soaring out-of-pocket medical expenses have not only become a direct financial threat to low-income rural residents, but also created a financial barrier to health care access, thus contributing to the cycle of poverty associated with poor health (Liu, Rao, & Hsiao, 2003; Hennock, 2007; Yip & Hsiao, 2009).

To address this problem, in 2003 the Chinese government began to re-establish the health care system in rural China, implementing a nationwide project known as the New Cooperative Medical Scheme (NCMS). The NCMS replaced the old village-based rural health financing system, known as the Cooperative Medical Scheme (CMS). The NCMS was first implemented in 304 pilot rural counties from 31 provinces, then expanded to 620 counties (about 22% of all rural counties) in 2005 (Liu, 2004b; World Bank, 2005), and aims at covering all rural counties by the end of 2010.

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The NCMS seeks to provide low-cost basic health care services, including inpatient, catastrophic, and some types of outpatient care, but it cannot finance full health protection for the entire rural population (Central Committee of CPC, 2009). Additional diversified supplemental medical insurance, such as private health insurance programs, are required to satisfy different medical care needs beyond those covered by the NCMS (Bhattacharjya & Sapra, 2008).

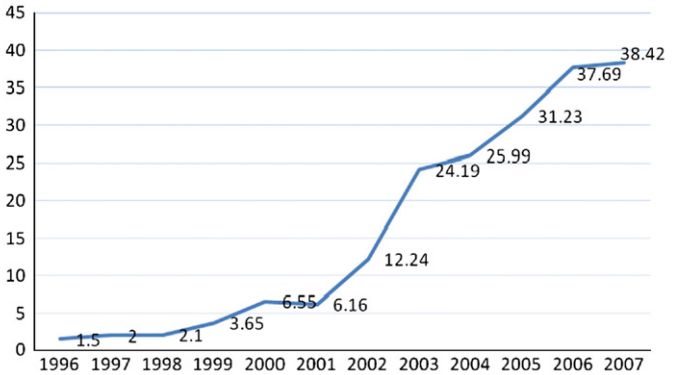
Since its launch in the 1980s, the private health insurance industry has remained relatively small. As shown in Fig. 1, private health insurance premiums experienced rapid growth beginning around 2003. Although private health insurance premiums amounted to 24.2 billion RMB in 2003, it only accounted for 3.6% of national health care expenditures (Guo & Duan, 2007). There are nearly 100 private insurers of different sizes and complexities, offering over 700 health insurance products in the market (Guo & Duan, 2007; Bhattacharjya & Sapra, 2008). However, these private health insurance products mainly focus on inpatient care and catastrophic coverage, and typically do not include long-term care coverage and disability income insurance (Wang, 2009). In 2003, only 6% of urban and 8% of rural residents were covered by private health insurance (Swiss Re, 2007).

The expansion and development of the rural public health insurance system pose a tremendous challenge as well as an opportunity for private health insurance, which the government has identified as an important component of China's "multi-level health insurance system" (Central Committee of CPC, 2009; Blomqvist, 2009). As part of this initiative, public health insurance is being developed as the main health insurance system, with private health insurance serving an important supplementary role to satisfy diverse health care needs.

However, research has shown that the role and function of private health insurance differ depending on a country's specific economic, social and institutional development (Liu & Chen, 2002; Savedoff & Sekhri, 2005; Drechsler & Jütting, 2007), and its potential overlap with public insurance may significantly impact the entire system's effectiveness (Swiss, 2007). Unfortunately, very few studies have empirically investigated the relationship between public and private health insurance in the evolving Chinese rural health care protection system. Moreover, there is no evidence about the impacts on the private health insurance market brought about by the rapid expansion of NCMS.

How might NCMS affect private health insurance purchases in China? The answer depends, at least in part, on whether the benefits packages offered by NCMS and private health insurance are substitutes or complements. If they were highly substitutable in terms of coverage, one would expect that the introduction of NCMS might "crowd" out private health insurance purchases, if it is available at lower cost. In fact, however, the NCMS and private health insurance in China are differentiated in terms of what is covered. For example, NCMS does not cover very high medical costs, while many private plans do offer coverage for catastrophic medical costs. The method of reimbursement differs as well. For example, NCMS payment is cost-based, e.g., patients are paid a percentage of their actual medical expenditures. In contrast, only some private health insurance plans reimburse on a cost basis; others pay patients pre-determined amounts based on the procedures they receive or their severity of illness. In recent years, NCMS has expanded its coverage for outpatient services (Lei & Lin, 2009), while private health insurance has remained almost exclusively coverage for inpatient care. To the extent that NCMS and private plans are complements, the implementation of NCMS may not fully crowd out private purchases.

Moreover, institutional features surrounding the implementation of NCMS may even serve to *increase* purchases of private insurance. There may be two reasons for a positive effect of NCMS on adult private health insurance coverage. First, on the demand side, the implementation of the NCMS in rural areas may raise residents' awareness of the availability of health insurance coverage and their knowledge about the importance of having such coverage. Since the NCMS only offers a limited degree of protection against high medical care costs, patients using NCMS may have come to realize the importance of obtaining private health insurance to protect themselves against catastrophic medical expenses. Additionally, the heavily-subsidized NCMS is available to patients at very low cost, so that many rural patients could also afford to purchase private health insurance if they desired to do so. And in fact this is the pattern that we observe.



Data source: Insurance Association of China & China Academy of Social Science (Eds.), 2010, *China Health Insurance Development Report.*

Fig. 1. Annual private health insurance premium income 1996–2007 (in billions RMB).