

# Perceived need and actual demand for health insurance among rural Chinese residents

H. Holly WANG \*, Robert ROSENMAN

*School of Economic Sciences, Washington State University, Pullman, WA 99164, USA*

Received 22 November 2005; received in revised form 25 August 2006; accepted 12 November 2006

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## Abstract

One would expect that an individual perceives a need for health insurance before making a purchase. However, simply perceiving a need for insurance is not sufficient for making a purchase. When insurance is “lumpy” individuals perceiving a need may not make a purchase if financial resources are lacking. In this paper we develop a theoretical model which differentiates need from demand for health insurance. We then empirically investigate rural health insurance demand in China. We find that factors like children, education and wealth affect perceived need differently from the way they affect demand.

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*JEL classification:* I19; D12; G22

*Keywords:* Risk; Rural; Logit model; Health insurance

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## 1. Introduction

Insurance is an effective tool to mitigate financial risk. Sporadically incurred health care costs are often very high compared to monthly or even annual personal income and because they are induced by risky occurrence of sickness or accidents, health insurance is a popular tool today in both developed and developing countries.

During the past half century in China, health insurance was mostly available only to enterprise employees in cities (Hu, Ong, Lin, & Li, 1999). For the rural population of 1.1 billion, essentially no health insurance was available. Although small scale rural cooperative medical plans existed in some areas in the past, these plans provided a very low coverage and the number of people able to avail themselves of such plans was insignificant (Liu, Wu, Peng, & Fu, 2003).

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\* Corresponding author. Tel.: +1 509 335 8521; fax: +1 509 335 1173.

E-mail address: [wanghong@wsu.edu](mailto:wanghong@wsu.edu) (H.H. Wang).

More recently, the insurance industry in China has developed rapidly, especially since the 1990s. Improved income and living standard in rural areas, increased health care cost, and reduced family size with fewer children all contributed to the newly emerged need and demand of health insurance in rural China. The increased gap between urban and rural incomes in recent years raises a serious question on whether rural residents have the means and willingness to pay for newly emerging insurance products. Recent data reveal that less than 12% of rural residents are covered under some form of health insurance programs in China (People's Daily Online, 2006). Low coverage exposes rural Chinese residents to health and financial risks, and may have enduring effects on economic development when uninsured individuals cannot receive medical care because of the cost. Latest statistics from the Chinese Health Ministry show that one third of poor rural patients in China choose not to go to hospitals and 45% of the hospitalized farmers ask to be discharged before they have recovered. Rural residents find illness a significant deterrent to moving out of poverty (China Ministry of Health, 1996). Thus, understanding *why* rural residents do not take advantage of available coverage is important.<sup>1</sup> In this paper, we investigate the factors affecting demand of health insurance in rural China.<sup>2</sup>

Qualitative and descriptive studies and discussions about Chinese health insurance issues have been disseminated widely in the popular presses and on the internet as well as in academic journals. These studies have focused on explaining the alternative premium structures, supporting policies from governments, insurance administration, and risk pooling (Chen & Wang, 2004; China Youth Daily, 2004; People's Daily Online, 2006). Rigorous economics studies on the demand of rural insurance products in China, however, are very few. Liu et al. (2003) investigated urbanization impact on health care and health insurance for rural Chinese. One problem with the existing literature on health insurance demand is that it usually does not separate rural from urban demands. In developing countries like China urban and rural demands for health insurance can be quite different (Dushi & Honig, 2003; Vanness, 2003). One of the key differences between urban and rural populations in developing countries is income levels, which impact greatly on the affordability of insurance. Besides the difference in affordability, rural and urban residents may differ in their perceptions of whether there is a need for insurance.

Theoretical research on insurance demand in general is abundant. The methodology of such analysis has been established under the expected utility maximization framework when the wealth level at risk is the only argument of the univariate Von Neumann and Morgenstern utility function (Anderson, Dillon, & Hardaker, 1977). It is well established theoretically that a risk averse agent should buy full coverage if the insurance is actuarially fair (Ahsan, Ali, & Kurian, 1982). The theory was first suggested by Arrow's seminal study of health insurance (Arrow, 1963). Although subsequent work, for example, Pauly's comment (1968), discussed the welfare

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<sup>1</sup> Although we have little information about the supply side of health insurance in rural areas during the period of our data, the fact that at least some rural residence bought health insurance indicates it was available. Liu and Hsiao (2001) reported that total insurance coverage for rural Chinese residents fell from almost 16% in 1993 to 12.6% in 1998. Coverage varied greatly by income group.

<sup>2</sup> In 2003 the government launched the New Cooperative Medical System (NCMS) in rural areas which provides subsidized health insurance. Under current NCMS, each person puts 10 yuan a year into his or her personal medical care account and the government injects another 20 yuan into it. The level of health care coverage is also commensurately low. For families at subsistence levels even this low cost insurance can be a burden, and health care costs remain a significant barrier to care (Carin et al., 1999). However, the NCMS was not in place during the period of our survey, and thus does not enter into our results.

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