



A dynamic analysis of the demand for health insurance and health care

Jonneke Bolhaar^{a,*}, Maarten Lindeboom^{a,b}, Bas van der Klaauw^a

^a VU University Amsterdam and Tinbergen Institute, De Boelelaan, 1105, 1081 HV Amsterdam, The Netherlands

^b Netspar, The Netherlands and HEB, Bergen, Norway

ARTICLE INFO

Article history:

Received 26 May 2010

Accepted 15 March 2012

Available online 1 April 2012

JEL classification:

I11

D82

G22

C33

Keywords:

Supplementary private health insurance

Health care utilization

Asymmetric information

Moral hazard

Panel data

ABSTRACT

We find that asymmetric information is important for the uptake of supplementary private health insurance and health care utilization. We use dynamic panel data models to investigate the sources of asymmetric information and distinguish short-run selection effects into insurance from long-run selection effects. Short-run selection effects (i.e. responses to shocks) are adverse, but small in size. Also long-run effects driven by differences in, for example, preferences and risk aversion, are small. But we find some evidence for multidimensional asymmetric information. For example, mental health causes advantageous selection. Estimates of health care utilization models suggest that moral hazard is not important.

© 2012 Elsevier B.V. All rights reserved.

1. Introduction

This paper empirically tests for the presence of (adverse/advantageous) selection and moral hazard in a market for health insurance. Textbook insurance models predict adverse selection, where those with bad risks and higher expected health care expenditures buy health insurance with more extensive coverage (e.g. Rothschild and Stiglitz, 1976). This type of selection was found by Ettner (1997) and Wolfe and Goddeeris (1991) for the US Medigap market. Outside the US evidence for adverse selection was found in Portugal (Jones et al., 2006), Australia (Cameron et al., 1988; Savage and Wright, 2003) and the UK (Olivella and Vera-Hernández, in press). Some recent literature points, however, to possible advantageous selection (Hemenway, 1990; De Meza and Webb, 2001; Finkelstein and McGarry, 2006; Cutler et al., 2008; Fang et al., 2008; Buchmueller et al., 2008).

The idea of advantageous selection is that risk is negatively related to other factors that positively influence the demand for insurance. This may happen, for instance, if those who are more risk averse buy more insurance and also exert more preventative effort. The empirical literature on advantageous selection is small and mainly from the US and for a specific segment of the health insurance market, namely the elderly.¹ Finkelstein and McGarry (2006) find a negative correlation

* Corresponding author. Tel.: +31 20 5986155.

E-mail addresses: j.a.bolhaar@vu.nl (J. Bolhaar), m.lindeboom@vu.nl (M. Lindeboom), b.vander.klaauw@vu.nl (B. van der Klaauw).

¹ An exception is Buchmueller et al. (2008).

between long-term care coverage and the use of nursing home care for the oldest old in the US. They show that this advantageous selection is caused by differences in wealth and precautionary behavior. Fang et al. (2008) find advantageous selection for US Medigap insurance, which they mainly attribute to cognitive ability. Cutler et al. (2008) show that the observed advantageous selection in the Medigap insurance market cannot be explained by risk aversion, in contrast to the market for long-term care insurance. Both Finkelstein and McGarry (2006) and Fang et al. (2008) find that once they condition on the sources of advantageous selection, there is a positive relation between health risk and insurance coverage.

Elderly are generally subject to more health risks and higher medical expenditures and are likely to have different risk preferences than the non-elderly (working age) population. Therefore, the findings for the US are not straightforwardly translated to the situation in other countries. Quite a few countries have a system of basic health insurance for the entire population with voluntary supplementary private health insurance (e.g. Canada, France, Germany, Switzerland, The Netherlands and Ireland). In this paper we take a closer look at the market for supplementary private health insurance in Ireland, and test whether moral hazard and/or selection (either adverse or advantageous) are present. We distinguish between short-run selection effects (i.e. responses to shocks) and long-run selection effects (driven by differences in, for example, preferences and risk aversion). The choice to study Ireland is motivated by the architecture of the Irish health insurance market, which has an ideal setting for studying selection.

Ireland has a national insurance system that covers all citizens and is characterized by substantial copayments. Supplementary private health insurance can be bought to cover the costs of copayments and to provide additional and better quality care. In the early 1960s only about 5% of the population had supplementary private health insurance, in 2005 this had been increased to about 50%. One of the characteristics that makes the Irish health insurance market ideal for studying adverse/advantageous selection is that providers of supplementary private health insurance are by law not allowed to deny applicants and are obliged to use community rating when setting their premiums. This limits the scope for cream skimming of applicants by insurers. Furthermore, until 1997 there was only a single provider for supplementary private health insurance. Since supplementary private health insurance reduces copayments, health care utilization might increase with insurance purchase if there is moral hazard.

We construct a simple static model where utility is generated from consumption and health, and show how in the context of this model both adverse and advantageous selection can arise. We focus on the decision to take supplementary private health insurance and relate this to individual health, shocks in health and past health care utilization. Two simple empirical tests based on Chiappori and Salanié (2000) and Finkelstein and McGarry (2006) indicate the presence of (multidimensional) asymmetric information. However, disentangling moral hazard from selection into insurance empirically is not straightforward. An individual's health status influences the demand for health care services and might also influence the decision to buy supplementary private health insurance as people will use their current health as a proxy for their future health status. In the presence of moral hazard the insurance decision affects health care utilization, and health care utilization might again improve health status. This shows the interrelation of health, insurance status and health care utilization. However, current health is the result of past behavior and health investments, which are affected by individual preferences and health risk. These individual preferences and health risk also affect insurance decisions and future health investments. The unobserved nature of individual preferences and health risk cause that there are severe endogeneity problems.

To obtain insight in the underlying factors affecting individual decisions, we estimate dynamic panel data models. These models have the advantage that they allow for individual specific effects, which might, for example, be related to heterogeneity in preferences and health risk. Our empirical models differ in this aspect from the static empirical frameworks of Bajari et al. (2006), Fang et al. (2008) and Buchmueller et al. (2008). An advantage of using dynamic models is that we can distinguish between short-run and long-run selection effects in insurance choice. We define short-run selection effects as responses to shocks, while long-run selection effects describe long-term choices resulting from heterogeneity in time-invariant factors, such as rate of risk aversion, (health) preferences and cognition.

In the empirical analyses we use the Living in Ireland Survey, which is panel data from 1994 to 2001. The data contain information on health and socioeconomic characteristics, insurance status and medical consumption. Our empirical results show that the uptake of supplementary private health insurance is mainly explained by a time trend, state dependence and a household fixed effect. Health shocks do not have an effect on insurance status, and recent health care utilization has only a very small impact. Short-run selection effects thus seem not to be very important. We do not find any evidence for moral hazard, i.e. those with supplementary private health insurance do not have a higher level of health care utilization, conditional on health. The fixed effects absorb all time-invariant effects. We investigate the fixed effects to get insight in long-run selection effects. We do not find evidence for a strong correlation between the fixed effects in the insurance decision and health care utilization. However, poor mental health is negatively correlated with supplementary private health insurance coverage and positively correlated with health care utilization. Also, selection effects are found that are correlated with age. We find associations of both education and income with insurance purchase, but not with health care utilization.

This paper is organized as follows. In Section 2 we provide some theory. Section 3 discusses background information of the Irish health care system. Section 4 provides details of the Living in Ireland Survey and in Section 5 we provide the results of a simple empirical test for asymmetric information. Section 6 presents the empirical models. In Section 7 the results of the empirical analyses are discussed. Section 8 concludes.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات