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Self-selection and moral hazard in Chilean health insurance

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Abstract

We study the existence of self-selection and moral hazard in the Chilean health insurance industry. Dependent workers must purchase health insurance either from one public or several private insurance providers. For them, we analyze the relationship between health care services utilization and the choice of either private or public insurance. In the case of independent workers, where there is no mandate, we analyze the relationship between utilization and the decision to voluntarily purchase health insurance. The results show self-selection against insurance companies for independent workers, and against public insurance for dependent workers. Moral hazard is negligible in the case of hospitalization, but for medical visits, it is quantitatively important.

JEL classification: I11; C35; G22

Keywords: Health insurance; Moral hazard; Adverse selection; Self-selection; Count data models

1. Introduction

We study the interaction between the purchase (and design) of health insurance and health care service utilization in the Chilean health system. The relationship arises from the effect of the purchase/design of insurance policies on utilization through moral hazard and consumer self-selection. Significant effects of insurance on the demand for health services (moral hazard) have been found in the literature (see Newhouse (1993) for the US; Cameron et al. (1988) for Australia; and Bertranou (1998) for Argentina).[1] Regarding

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[1] In the paper we use the concepts of over-utilization and moral hazard. Over-utilization refers to more utilization by a group in a certain health plan in comparison with what that same group would consume in an alternative plan (or lack thereof). This is only moral hazard if the over-utilization is at a lower price than marginal cost, which is not always the case in this paper as is further discussed later on.

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adverse selection, Cutler and Zeckhauser (1998), Cutler and Reber (1998), Cameron et al. (1988), and Bertranou (1998), find significant adverse selection among consumers of the various health insurance plans they analyze.

Our study of the behavior of *independent* workers, with and without insurance, replicates what is traditionally done in the literature. The usual finding is that those who voluntarily purchase health insurance have a higher health risk than an average individual in the population, and consume more health care services than if they were not insured.

Dependent workers[2] must spend 7% of their taxable income on health insurance, and must choose between purchasing public insurance (from the National Health Fund or *Fondo Nacional de Salud* (FONASA)); or private insurance (from one of several *Instituciones de Salud Previsional* (ISAPREs)).[3] Among this group of workers, we look for self-selection and over-utilization associated with the purchase of one kind of insurance, as opposed to the other. To measure self-selection, we analyze the relation between the probability of affiliation to one kind of insurance, and the *observable* and *non-observable* characteristics of the beneficiaries. To estimate over-utilization, we compare the utilization of health care services with public and private insurance.

Two characteristics of the Chilean health insurance system allow us to presume the existence of self-selection. In both cases, self-selection is expected to operate against public insurance. The first consists of the difference in premiums in public and private insurance policies (see Aedo and Sapelli, 1999). Public insurance sets its premiums as a percentage of income, while private insurance uses risk rating. Private insurance institutions are allowed, by law, to adjust premiums according to age, sex, and number of dependents. Thus, public insurance is relatively more attractive for those with higher risk factors, since the effective price of public insurance is lower. Thus, those who purchase public insurance, on average, are expected to exhibit higher *observable* risk than those who purchase private insurance.

The second characteristic that leads to self-selection against public insurance is the free implicit insurance offered by public insurance. First, until recently, public insurance was not able to determine whether or not a patient was affiliated to a private insurance health plan. This provided an incentive for private insurance beneficiaries to make (unauthorized) sequential use of both types of insurance, according to their relative price and quality. Second, private insurance beneficiaries are permitted to switch back to public insurance; thus, public insurance operates explicitly as a last-resort insurer.[4] This implies that public insurance beneficiaries, on average, should exhibit greater *non-observable* risk than private insurance beneficiaries.

[2] A dependent worker is any person that works in a relation of subordination, with a contract. Independent workers are all active persons not included in the previous definition.

[3] The poor are covered by public health insurance, although with more restrictions on provider selection than those faced by paying members of the system.

[4] Cutler (1994) studies a similar issue, the effect of public policies on the design of private insurance plans. He considers the existence of public policies that provide insurance against becoming uninsured as one possible explanation of the prevalence of “experience rating” in private health insurance.