ESSAYS ON SOCIAL HEALTH INSURANCE IN DEVELOPING COUNTRIES:EVIDENCE FROM INDONESIA

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Abstract

The economic consequence of health shocks on households, particularly, in economies where insurance and access to credit is limited can be quite severe. Due to the absence of formal insurance mechanisms in these economies, the existing literature has largely focused on informal risk sharing mechanisms used by households to cope with these health shocks. However, recent evidence suggests that families relying solely on informal or self-insurance mechanisms are constrained in their ability to insure against ill health (Gertler et al., 2009; Wag staff, 2007).This has led to a growing interest in the efficacy of national social health insurance schemes in protecting poor households against health shocks. The overarching theme of this thesis is to examine the impact of insurance programs on economic as well as health outcomes in the context of Indonesia. The study pursues two broad lines of inquiry. First, I examine the efficacy of social insurance programs in mitigating the impact of adverse health shocks on consumption. Next, I examine the impact of employer-based insurance on health utilization and health outcomes of dependent children. There are several factors behind choosing Indonesia for this study. Firstly, in an economy where the formal insurance market is largely underdeveloped and health care payments are largely out-of-pocket, Indonesia provides an ideal setting to investigate the effectiveness of social insurance programs. Secondly, Indonesia is one of the very few developing countries where researchers have access to large scale longitudinal data from the Indonesia Family Life Survey (IFLS), which tracks over 20,000 respondents for five years between 1993 and 2014.The rich data enables me to employ a variety of panel data estimation models. Thirdly, one of the key empirical challenges in evaluating the effectiveness of insurance programs in coping with 'health shocks' is the problem of adequately measuring it. Existing literature has typically resorted to using self-reported illness symptoms which may not be capturing large unexpected major illnesses that are difficult to insure (Gertler and Gruber, 2002). The IFLS provides a unique measure of functional health status that is better able to capture serious exogenous health problems, by using activities of daily living (ADL) score as a measure of health status. I begin by providing an overview of the literature on the role of formal and informal insurance in mitigating the impact of adverse economic shocks, with a specific emphasis on health shocks. The salience of unanticipated health shocks for developing country households is discussed. Next, I examine the impact of Askeskin program, a subsidized social health insurance for the poor and the informal sector instituted in 2005 by the Indonesian government. The objective is to investigate the efficacy of this program in mitigating the impact of health shocks on household consumption. Social insurance programs are also usually superimposed on existing informal private support networks. So, to infer the efficacy of social insurance, this study also investigates whether these programs simply displace or 'crowd out' informal mechanisms of private support. This study addresses two methodological issues identified in literature. Since accurate assessment of consumption insurance against illness, requires the 'health shock' to be exogenous, I use ADLs, described above as a measure of health. In addition, as a robustness check, I construct a health shock, which cannot be explained by socio-economic characteristics

of the household and prevailing community health care infrastructure and is thus plausibly more exogenous. The study avoids bias from self-selection into insurance due to unobserved traits. Traditionally, studies have employed instrumental variable techniques to deal with endogeneity of insurance cover. In contrast, I exploit the rich IFLS longitudinal dataset by using the within household variation in insurance coverage over time. In an improvement to existing studies, the model also accounts for supply-side conditions and is thus more stringent. The primary identification strategy compares the outcomes for the same household faced with a health shock, in periods when they had health insurance versus outcomes in periods when they did not have insurance. The results are subject to a battery of rigorous robustness and specification checks to confirm the assumptions of the empirical model. The results indicate that households without Askeskin insurance facing a debilitating health shock to its head, lose about 13% of non-medical, non-food per capita consumption and 9.5%of food consumption. The impact for a household at the mean-level of health shock is 3.9% and2.9% for non-medical and food consumption respectively. Importantly, the results show that in the presence of the Askeskin insurance, the impact of health shocks is significantly mitigated. The study also investigates if Askeskin 'crowds out' participation in two main channels of informal risk sharing- (1) Arisans (rotating credit unions) and (2) Voluntary community activity. Results suggest there is no evidence of the crowding out of participation. On the contrary, households increase their overall involvement in Arisans by about 10 percent, compared to sample average and more than 20 percent increase in the overall involvement in community activities. In summary, this study finds that the introduction of the Askeskin program significantly helped mitigate the impact of health shocks on consumption and further, resulted in an increase in informal risk-sharing activities. In the subsequent chapter, I look at the impact of health insurance on health care utilization and improvements in health outcomes, particularly on children in Indonesia. This research question is interesting in two aspects. Firstly, poor health in early life is known to have long- term adverse impact on health and socioeconomic status of individuals. Despite its considerable importance to social policy, this topic has remained under-explored in developing countries. Secondly, existing studies on Indonesia have so far focused on direct coverage of beneficiaries and have ignored sizable number of 'dependents' who get coverage due to their relationship with the main beneficiary. For instance, within the IFLS sample, the ratio of individuals with indirect to direct coverage in Indonesia was almost 2.15. This study, therefore accounts for the previously un-assessed groups to get a realistic estimate of the role of social insurance in ensuring healthcare access and in improving health outcomes for children. The impact of insurance cover for dependent children, is studied using the Askes program, an employer provided insurance coverage for the employee, his/her spouse and two oldest children. Using dependent coverage eligibility for children in conjunction with panel data helps me address two methodological challenges. Automatic gain or loss of insurance cover gives an opportunity to quasi-randomize insurance; independent of a parent's decision to insure a child. Additionally, the bias from misreporting can be addressed by employing government prescribed dependent eligibility criteria as the instrumental variable (IV) instead of 'reported coverage'. I employ two separate empirical techniques to account for endogenous insurance status; a bivariate probit model for health service utilization at the extensive margin and a traditional two-stage linear household fixed effects model for healthcare use at the intensive margin. The results suggest that due to insurance cover, a dependent child is 11 percent more likely to visit any outpatient health facility in a year at a private physician. Insurance increased the probability of at least one hospital visit by 30 percent, mostly at public

health facilities. Finally, this study finds that insurance cover did not result in repeat visits to health facilities, both for preventive and curative reasons. The results also suggest that insurance did not significantly improve child health outcomes, except for a marginal decrease in iron deficiency. In the concluding chapter, I discuss the contingent factors in Indonesia, which enabled appositive role for social insurance. I then briefly discuss similar social health insurance programs, in other developing countries and give an overview of evaluation studies on them. The objective of this exercise is to identify a common set of conditions which can lead to successful implementation of social insurance in other developing countries. In particular, I compare the Askeskin program with the RSBY program implemented in India and draw policy recommendations for the Indian context.