Background Risk of Food Insecurity and Insurance Behaviour: Evidence from the West Bank

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ABSTRACT

This paper explores behavioural changes resulting from the presence of an uninsurable background risk. Due to markets incompleteness, not all risks are insurable. The theoretical literature suggests that, according to the structure of preferences, agents bearing an uninsurable background risk are less willing to bear other insurable risks and increase their demand for insurance. The empirical evidence of this effect is limited and focused on evidence from developed countries (Guiso & Jappelli, 1998). Despite the relevance of this question for developing countries, where missing markets are common, to our knowledge, this paper is the first to test empirically this behaviour in a developing country.

It draws from the theoretical literature on attitudes toward risk in presence of uninsurable risks (Pratt & Zeckhauser, 1987; Eeckhoudt & Kimball, 1992; Eeckhoudt et al., 1996) and it contributes to the limited number of empirical studies on this topic (Guiso & Paiella, 2008). The paper develops work on background risk and demand for insurance by Guiso & Jappelli (1998) bringing empirical evidence from a developing country. The paper relates to the literature on complementarities between multiple risks to life as in Dow et al. (1999). The paper also relates to the literature on the value of life such as in Viscusi & Evans (1990) and Evans & Viscusi (1993), but it differs from it by differentiating between an insurable and an uninsurable risk. Lastly, this paper relates to the literature in development economics that studies risk and insurance in developing countries (see Dercon (2004) and references therein). This literature generally focuses on one risk and the demand for insurance against that specific risk. Our aim is different because we focus on the spillover effect across risks.

We use data from the Socio-Economic and Food Security Surveys conducted in the West Bank region of the Palestinian Territories. We analyse the role of food insecurity risk, an uninsurable background risk, on the decision to buy health insurance. The Palestinian health insurance market, which has no universal public coverage, allows to test this hypothesis.
We use a bivariate probit model to account for food insecurity and the decision to insure being determined by similar observable factors, such as socio-economic characteristics and geographical factors. The unobservable change in the desirability of insurance manifests in the residuals being correlated and we test this parameter. We find robust empirical evidence that people more vulnerable to the uninsurable risk of food insecurity are more likely to buy health insurance.

The predicted conditional probabilities of buying health insurance are higher in presence of the background risk of food insecurity. Comparing various types of households, we find evidence that rural households tend to insure more than urban households in presence of background risk. While the opposite occurs without background risk. Extending these results, we consider the possibility that the propensity to insure changes with the intensity of the background risk experienced. Our evidence suggests that there is a higher propensity to buy health insurance when the background risk is more intense. The results prove robust to alternative estimation techniques. We discuss concerns of potential endogeneity bias and we test the robustness of our findings via a feasible instrumentation strategy, given the data.

Our results are consistent with preferences being 'standard' risk averse (Kimball, 1993): risk-averse individuals facing uninsurable background risks limit their exposure to avoidable risks. Thus, this paper supports the argument that uninsurable and insurable risks are substitutes: increases in an unavoidable background risk alter individual attitudes toward insurable risks, increasing the desirability of coverage against them. Due to data limitations, we cannot test the 'standardness' of preferences directly in this article. We are aware that food insecurity is only one of many possible uninsurable background risks, such as unemployment risk and personal security due to conflict violence. Due to lack of data, we are unable to test the implications of the theory for these other types of background risks. This is left for further research. Overall, this analysis suggests that there is a cross-risk effect in various domains of life under risk. These findings have implications for the development of health insurance programmes. Despite reducing food insecurity is certainly welcomed, policies changing the exposure to this background risk may reduce the propensity to buy health insurance. This may have negative consequences on the health insurance system, such as a reduced participation in health insurance plans. This type of myopic behavior may in turn create problems for the financial viability of the health-care system and thus impairs equity of access and quality of care. Welfare improving policies targeted to erase household vulnerability to food insecurity should include elements aimed to counter-balance the negative incentive on health insurance demand outlined in this analysis.
REFERENCES


