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"Towards shifting paradigms in agriculture for a healthy and sustainable future"

## Health Shock, Household Consumption, and Over–indebtedness: Does Having Access to Financial Market Matter?

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## Abstract

Dealing with health shocks is not only dealing with health risk but also with financial risk. In low and middle income countries, households may use costly coping strategies such as selling productive assets, lowering education expense, borrowing from moneylender in response to health shocks due to the non-existing or incomplete financial market. In turn, these coping strategies may have negative consequences on household economy in the future. Estimating the impact of health shocks is thus important for designing and promoting proper mitigating instruments. However, this is not trivial task. Health shocks can have very different implications depending on their length and severity. Additionally, the reverse causality between health situation and economic outcomes is also a challenge to address.

This paper examines the economic impact of severe ill health events which were reported as a major income shocks on rural households, and explores the mechanism that health shocks push households into over-indebtedness. Base on that, we investigates the role of credit and health insurance in mitigating the negative effects of health shocks. We employ the heteroscedasticity-based estimator to a four-wave balanced panel data in Vietnam to overcome the endogeneity issue. The results show that health shocks lead to a significant decline in off-farm income and a substantial increase in healthcare expenditure. These losses are then transmitted into consumption and make rural household unable to fully insure non-health consumption. In response to health shocks, households have to increase informal borrowings to smooth consumption, and thus resulting in over-indebtedness. Getting access to formal credit and health insurance helps households lower the decrease of non-health consumption. Moreover, health insurance can reduce the probability of being over-indebted.

As agricultural transformation is a growing process in developing countries, our study suggests that severe illnesses are an important income shock among rural households. Therefore, it is essential to eliminate barriers in access to formal credit to improve household self-insurance capacity. Meanwhile, promotion of healthcare and enhancement of healthcare services provision at local level should go together in order to bring more benefit to insured households and prevent them to fall into financial hardship

**Keywords:** Consumption insurance, credit access, health insurance, health shocks, heteroscedasticitybased identification, over-indebtedness

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