

## **Comparative Study of Health Shocks, Formal Health Insurance, and Informal Coping Mechanism**

Principal Investigator:  
Samuel Amponsah, Ph.D.

In recent years, both theoretical and empirical research has been accumulated in development economics, regarding the household behavior in response to shocks in developing countries. Especially the impact of weather-related shocks such as droughts/floods and the efficiency of informal mechanisms to cope with these shocks are explored in depth in the literature. In sharp contrast, our knowledge on the economics of health shocks in low-income developing countries is rather limited. Therefore, this health and development economics project intends to incorporate health insurance into the existing models on coping mechanisms and model household behavior so as to quantify the welfare impact of health insurance.

Using Ghana as the reference, this project will apply similar methodology to other developing countries with public and formal health insurance such as Thailand and to pre-war Japan (e.g., 1920s when public and formal insurance was introduced for the first time). Concerning data for the empirical analysis, the study will employ micro data collected at the household level. In the case of Ghana, the study will use the last four rounds of the Ghana Living Standard Survey (i.e., GLSSIII to GLSSVI). For the comparative analysis of pre-war Japan, the study will search for micro datasets such as the MAF Survey of Farm Household Economy in Prewar Japan being compiled at Hitotsubashi University. For other developing countries, comparable micro datasets will be utilized.

On empirical analyses, the study will first investigate targeting of health insurance using a tobit specification – we look at how health insurance coverage affect the poor and those households that are expected to require a relatively high expected health spending budget share in order to meet their health care needs. Next, to identify the short-run impact of health insurance, the study will examine whether there exists difference in health spending including catastrophic payments between insured and uninsured households. In this investigation, trade-off between formal health insurance and informal coping mechanism will be quantified as well.

Given the (limited) coverage against health shocks from both formal health insurance and informal coping mechanism, what is the long-run impact of these shocks on household dynamics? The study will examine this issue mainly through the microeconomic analysis of household panel data (or quasi-panel data). As long-term panel data at the micro level are not available from low-income developing countries, we will combine the reduced-form microeconomic analysis with structural modeling focusing on dynamic decision making of households under risk and incomplete market structure. Numerical simulations based on such structural models will be utilized to make inference on long-run impact of health shocks.

Project Beginning Year: 2014