

論文の内容の要旨

論文の題目 : Disasters and Credit Constraints: The Role of Poverty Reduction Programs in South Asia

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This thesis examines household behavior and the impact of poverty reduction programs during community-wide covariate shocks. Impacts on individuals' livelihoods could be different between community-wide covariate shocks and household-level idiosyncratic shocks, implying needs for different policy interventions between them. Despite a large number of studies regarding the transient poverty and negative shocks, few studies investigate the impact of covariate shocks. Some studies use evidence from a financial crisis to examine household behavior during covariate shocks, but this approach causes a potential problem of endogeneity. To address the issue this thesis uses evidence from natural disasters, which are considered a type of natural experiments.

This thesis attempts to achieve this goal by examining four closely related studies. Chapter 2 of this thesis uses evidence from a nation-wide flood in Bangladesh occurred in 1998 to investigate how the poor ensure their livelihoods during covariate shocks and how it differs from the strategies for household-level idiosyncratic shocks. This chapter has two further contributions to the literature. First, it examines the choice of risk coping strategies relative to the characteristics of shocks. People in the third world combine multiple strategies depending on the characteristics of households and

shocks, but few researchers conduct studies from this perspective. Second, it employs the approach by Campbell et al. (2001) in decomposing the covariate and idiosyncratic components of income shocks. It shows that the main coping strategy for idiosyncratic shocks – the mutual assistance among community members – is unavailable to cope with the severe covariate shocks. Instead, people must resort to a more burdensome strategy such as borrowing with high interest from moneylenders.

Chapter 3 and Chapter 4 evaluate the poverty reduction impacts of Microfinance Institutions (MFIs) during another flood of Bangladesh occurred in 2004. MFIs are a type of poverty reduction programs that provides the poor with investment loans. The standard system in MFIs imposes the frequent repayments to borrowers, but MFIs in Bangladesh introduced a new repayment system beginning in 2002 that allows rescheduling of installments during natural disasters. This thesis is the first attempt that employs a uniquely collected dataset to evaluate the rescheduling impacts on MFI members. Overall, both chapters show coherent results that rescheduling during the 2004 flood played the role of a safety net and reduced the possibility that the victims suffer from further poverty caused by the repayment burden.

Chapter 3 uses the difference-in-differences propensity score matching method to show that rescheduling mitigated the possibility that households faced the credit constraints and borrowed from moneylenders who charge high interest rates. However, the analysis based on the propensity score matching method with multiple treatments reveals that at least two weeks of rescheduling was required to mitigate the credit constraint significantly. A distinction of this study is the use of a direct indicator of credit constraints which addresses concerns regarding approximated measures used in previous studies.

Chapter 4 employs the instrumental variables to find that rescheduling helped flood victims ensure food consumption: it decreased the probability that people skipped meals by 5.1%. Furthermore, the impact is different across and within households: it is even higher on the disadvantaged population such as the landless and females. This chapter contributes to the literature of measuring the poverty reduction effect of MFIs. Also, this finding regarding the heterogeneous rescheduling effect between males and females particularly contributes to the literature of intra-household resource allocation.

Finally, Chapter 5 evaluates the impact of irrigation in Sri Lanka on reducing chronic and transient poverty. Access to irrigation system potentially contributes to poverty reduction in various ways: it alleviates the risk to face droughts, improves the creditworthiness of farmers, and raises the yield. Although it is known that access to physical infrastructure enhances household welfare, there are hardly any micro-econometric studies that analyze the role in mitigating chronic and transient poverty.

We extend the seasonal consumption smoothing model of Paxson (1993) by introducing endogenous credit constraints. In using a unique monthly panel dataset over a period of two years, it shows that access to irrigation decreases the probability of facing the credit constraints in dry seasons and increases the average income and consumption levels over time by improving productivity and access to credit market. These empirical results suggest that irrigation infrastructure reduces both chronic and transient poverty.

Overall, this thesis claims the following points. Natural disasters affect households as a covariate shock and this characteristic makes the risk sharing arrangements among the community members inactive. Therefore, the victims must deteriorate their

livelihoods and resort to burdensome risk coping strategies such as dependency on moneylenders. It raises the needs for policymakers to implement further safety nets during covariate shocks. This thesis evaluates the performance of some poverty reduction programs in South Asian countries to show that access to the programs significantly reduces the possibility that the victims suffer from further poverty during disasters.