RISK, RISK MANAGEMENT AND VULNERABILITY TO POVERTY AT HOUSEHOLD LEVEL IN MALAWI

ONGOING PhD THESIS

BRIEF SUMMARY

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ABSTRACT

Vulnerability to poverty in Malawi is highly associated with risk. Households face multiple shocks, most of which threaten their livelihoods and impact negatively on their welfare. The main objective of this investigation is to undertake an operational risk and vulnerability assessment at household level. Given the lack of panel data in Malawi for an ideal vulnerability assessment, the methodology of Christiaensen and Subbarao (2004) will be adopted using a two-period cross sectional data coupled with rainfall data. The first set of data comes from the 2004 Malawi Second Integrated Household Survey (IHS2) while the second set is primary data collected through a follow-up of the same households in 2006. This work is expected to come up with a better understanding of the role of risk in influencing vulnerability to poverty among households in Malawi.

1. CONTEXT AND MOTIVATION

Poverty in Malawi is widespread, deep and severe. According to the 2004 Malawi Integrated Household Survey, 52.4 % of the total population is poor, with 22.3 % of the total population living in extreme poverty. The poor in Malawi are subjected to different forms of risks, most of which threaten their livelihoods and their own existence. Risks are important determinants of poverty due to their effect on households’ livelihoods. The fact that the majority of the poor are subsistence farmers, depending on rain-fed agriculture, droughts and floods are among the greatest risks that continue to impact negatively on their welfare due to the substantial losses of income, consumption and wealth when the shocks occur. It is clear that the extent to which these shock affect households’ welfare depend on their ex-ante risk reduction strategies, as well as ex-post coping strategies. It is therefore logical that an assessment of the dynamics of poverty in Malawi should incorporate a thorough understanding of risks and shocks facing households, and the mechanisms used to cope with such shocks, both ex-ante and ex-post.

A deeper understanding of the linkages between risk, vulnerability and poverty would provide an empirical basis for social policy, thereby strengthening both the analytical and operational content of the Malawi poverty reduction programmes. The risk and vulnerability analysis are key to understand the dynamics leading to, and perpetuating, poverty. The current study would therefore provide a dynamic approach on what can be done to help the current poor rise out of poverty and to reduce the likelihood of the vulnerable from falling into poverty in Malawi.
2. **RESEARCH OBJECTIVES**

The general objective of the study is to undertake an operational risk and vulnerability analysis at household level in Malawi. Specifically, the study has the following objectives:

1. To identify the determinants of household vulnerability in rural Malawi;
2. To test for the existence of household consumption smoothing as an insurance mechanism against shocks;
3. To analyze households’ coping mechanisms for different shocks and identify the determinants of these mechanisms;

3. **RESEARCH QUESTIONS**

In line with the above objectives, the central research question is ‘what is the role of risk in influencing households’ vulnerability to poverty in Malawi?’ This would be answered by considering the following sub-questions?

1. *How vulnerable are households in rural Malawi and what are the determinants of household vulnerability?*
2. *How do households cope with risk and vulnerability?*

The study will analyse major *risk prevention strategies* (ex-ante risk management), *risk mitigation strategies* (ex-ante risk management), and *risk coping strategies* (ex-post risk management) employed by households in Malawi. The study will further seek to understand the determinants of these different risk management strategies.

3. *How effective are household coping mechanisms in smoothing household consumption? Is there any evidence of consumption smoothing among the households in rural Malawi?*

4.0 **METHODOLOGY**

The study uses econometric techniques to answer the research questions. Three methodologies presented below will be used to achieve the objectives of the study.

4.1 **Analysis of vulnerability to poverty**

In our study, vulnerability is defined as the probability that a household would find itself consumption poor in the future. As such, vulnerability is analyzed as expected poverty. Using a two-period panel data (2004 and 2006) and taking household consumption as a
measure of welfare, a methodology proposed by Christiaensen and Subbarao (2004) will be employed. The model allows vulnerability to be modeled as a function of household characteristics, community characteristics, idiosyncratic shocks and covariate shocks including rainfall volatility. Using this methodology, we can decompose the variance of household consumption into idiosyncratic and covariate components so that the impact of different shocks are accounted for.

4.2 Evidence of consumption smoothing
Following Skoufias (2003), and Harrower and Hoddinott (2004), a test for consumption smoothing in the face of shocks will be attempted. The following model will be run:

\[
\Delta \ln C_{htv} = \Sigma \theta_{tv} (CD_{tv} + \beta S_{htv} + \lambda X_{htv} + \Delta e_{htv})
\]  

(1)

Where: \(\Delta \ln C_{htv}\) denotes change in the log of per capita consumption from 2004 to 2006, \(CD_{tv}\) is a vector of community dummies to capture shocks at community level; \(S_{htv}\) is a set of dummy variables indicating the occurrence of idiosyncratic shocks and \(X_{htv}\) are household characteristics that are not constant over time; \(\Delta e_{htv}\) is the change in the household-specific error term.

We first test the significance of idiosyncratic shocks to fluctuations in consumption by setting \(\theta_{tv}\) and \(\lambda\) equal to zero. We then gradually relax this assumption by allowing different covariate shocks to appear in the model.

4.3 Determinants of different risk management strategies
Determinants of different coping strategies are analyzed using a fixed effects logit model. Choice of different coping strategies \((Y_{htv})\) will be presented as a binary dependent variable following Harrower and Hoddinott (2004):

\[
\Pr(Y_{htv} = 1) = \frac{\exp(\mu_h + \beta S_{htv} + \gamma X_{htv})}{1 - \exp(\mu_h + \beta S_{htv} + \gamma X_{htv})}
\]  

(2)

Where \(\mu_h\) denote all household-specific and time invariant observed and unobserved characteristics; \(S_{htv}\) is a vector of shocks and \(X_{htv}\) denote household time-varying characteristics.