Tropentag 2012, Göttingen, Germany
September 19-21, 2012

Conference on International Research on Food Security, Natural Resource
Management and Rural Development organised by:
Georg-August Universität Göttingen and University of Kassel-Witzenhausen

Financial vulnerability and Indebtedness of poor households in Thailand and Vietnam

Chichaibelu1[a], Bezawit Beyene and Hermann Waibel[b]

a Leibniz University Hannover, Institute of Development and Agricultural Economics, KönigswortherPlatz 1, 30167
   Hannover, Germany. Email chichaibelu@ifgb.uni-hannover.de
b Leibniz University Hannover, Institute of Development and Agricultural Economics, KönigswortherPlatz 1, 30167
   Hannover, Germany. Email waibel@ifgb.uni-hannover.de

Introduction

The lack of finance is a major reason for poverty. Also a typical feature of the poor, especially the rural poor is that their income highly fluctuates often as a result of shocks. This volatile nature of the poor's cash-flow underlines the need for good financial management which the poor are often not well equipped to do. In emerging market economies the delivery of financial services has advanced, albeit with larges differences in access. Some programs may also have led to over-supply of credit and may be responsible for unproductive investment which may have resulted in levels of indebtedness exceeding the repayment capacity of rural households. In general, excessive debt accumulation coupled with household liquidity constraints could weaken the social and economic well-being of households and result in financial distress. Thus, this study seeks to examine household indebtedness in rural Thailand and Vietnam with a particular focus on the indebted households whose consumption level is near the poverty line. The main objectives of the study are: (1) to evaluate the extent of indebtedness of households, (2) assess the changes in the level of household indebtedness over time, (3) to analyze the factors that make certain households accumulate excessive debt, and (4) to work towards a concept of financial vulnerability. Result will provide policy makers and other stakeholders an insight into the financial situations of the poor suggesting appropriate measures to reduce financial vulnerability.

Conceptual Framework

The theoretical framework that guides this study is the lifecycle model of Modigliani & Brumberg (1954). In general, the model illustrates the demographic transition of a household over time with a smoothing of its consumption through borrowing and saving in a perfectly functioning capital market. Households, therefore, choose to take a loan as a way of anticipated spending, based on expectations of increased future earnings. An observed high level of household debt in recent years has put the hypothesis that household debt is consistent with households' optimizing behavior of inter-temporal consumption into question. For some group of borrowers, indebtedness rather seems to be related to prevailing financial and economic difficulties in response to some local circumstances (Anderloni, et. al., 2011). If so, households could accumulate excessive debt beyond their repayment capacity which may lead to financial vulnerability (Vandone 2009). Therefore, we extend the model by incorporating shocks and market imperfections which can disrupt the stylized cash flow over time and can lead to temporal or permanent indebtedness. Accordingly, the objective indicators of indebtedness and the different socio-demographic and economic explanatory variables suggested by the lifecycle model will be used to empirically analyze the determinants of rural households' indebtedness.

Moreover, following the approach of Anderloni et al. (2011), the paper will design a concept of financial vulnerability in the context of rural households in developing countries. In addition the level of financial vulnerability in Thailand and Vietnam is analyzed using an indicator of financial vulnerability which was generated by nonlinear principal component analysis.

Methodology and Data

To address the research objectives, both descriptive and econometric analysis will be used. First, descriptive analysis will be carried out to assess the extent and pattern of households' indebtedness. Second, the nonlinear principal component analysis method will be used to develop financial vulnerability index. Third, multivariate analysis will be performed to determine factors that influence households' level of indebtedness and make households more financially vulnerable. Finally, longitudinal analysis will be used to examine which factors and characteristics of households influence transition of household indebtedness across time within the two countries.

The data used in this study is a data collected for an interdisciplinary research project on vulnerability to poverty in rural areas in Thailand and Vietnam funded by the German Research Foundation (DFG). It is a three wave panel data of Thai and Vietnamese households providing detailed information on demographic and socio-economic characteristics of the households including their resource endowments, income portfolios and consumption expenditures, borrowing and debt. The panel waves are set over annual intervals, starting with the first wave on 2007. The first wave consisted of around 4400 households in three provinces of Northeast region of Thailand and three provinces across Vietnam which were selected with a three stage clustered sampling design. These six provinces, namely Buri Ram, Ubon Ratchathani and Nakhon Phanom from Thailand, Ha Tinh, Thua Thien Hue and Dac Lac from Vietnam, were purposively selected based on conditions such as low average per capita income, high dependence on agriculture, existence of special risk factors, peripheral location along the country's border and poor infrastructure. In the second stage, around 220 villages were selected using a systematic random sampling based on a probability proportional to the size of the population. Finally in the third stage, the households were sampled again by using a systematic random sample with equal probability from household lists ordered by household size. Over the three periods, the attrition rate was very low; hence 4,205 households were interviewed in 2010.

Results

Table 1 shows that the majority of the households are indebted. Interestingly both the poorest and the richest income quintiles hold more debt on average as compared to the other income quintiles. This may suggest different purposes, i.e. borrowing for coping with shocks by the poor and borrowing for investment opportunities by the wealthier households. The main sources of borrowing were agricultural banks, village funds, traders and suppliers and money lenders, while the three major reasons for borrowing were business and agricultural investments, repayment of old debts and consumption.

Table 1: Average household debt by income quintiles in (in US$ PPP (2005))

Average household debt by income quintiles	Year		
	2007	2008	2010
Poorest quintile	2,364	5,113	4,756
Second quintile	1,505	2,984	3,118
Third quintile	1,561	3,816	3,442
Fourth quintile	2,079	4,765	4,406
Richest quintile	7,751	14,584	10,438

In general, as of 2010, eighty per cent of the households who were surveyed were indebted, though higher in Thailand as compared to Vietnam, both in terms of number of indebted households and average debt per household. The number of indebted households in both countries showed almost no change over the three periods. Furthermore, the average amount of debt the households hold is increasing over the years. For instance in 2008, the households' debt in both countries has increased on average by around twenty per cent in nominal terms as compared to the households' debt in 2007. Moreover, looking at the change in households' income and debt, twenty six per cent of the households had increased their debt while their income was decreasing.

Table 2: Average debt, consumption and income per HH (in US$ PPP (2005)) and the ratio consumption expenditures to income

Year	Average HH debt per HH (Percentage of indebted HH)		Average consumption per HH		Average income per HH		Consumption expenditures to income Ratio	
	Thailand	Vietnam	Thailand	Vietnam	Thailand	Vietnam	Thailand	Vietnam
2007	4,537(85)	2,526(72)	5,414	4,106	7,289	4,641	1.10	1.30
2008	5,498(88)	2,996(74)	6,895	5,151	7,908	6,732	1.32	1.12
2010	4,561(81)	3,591(74)	9,536	4,890	9,645	5,692	1.50	1.13

The ratio of average consumption expenditures to income further shows that households on average consume more than their earnings indicating that servicing debt could be a problem.

Summary and Outlook

The main objective of this study is to examine household indebtedness and financial vulnerability in rural Thailand and Vietnam. The initial results show that most households are indebted, though higher in Thailand as compared to Vietnam. Moreover, consumption expenditure to income ratio of the households also suggests that servicing debt could be a burden for the households. Therefore, the study will further analyze the households' financial situation further by first developing the indicators of the indebtedness and financial vulnerability. Subsequently, using multivariate analysis and the nonlinear principal component analysis, the factors that influence households' level of indebtedness and make them more financially vulnerable will be determined. As a last step longitudinal analysis will be used to examine which factors and characteristics of households influence the transition of households' indebtedness across time in both countries.

References

Anderloni, L., Bacchiocchi, D., and Vandone, E. (2011). HH financial vulnerability: An empirical analysis. Available at SSRN: http://dx.doi.org/10.2139/ssrn.1959801. Accessed: 20.04.2012

Modigliani, F., & Brumberg R. (1954). Utility analysis and the consumption function: an interpretation of cross-section data. In K. Kurihana (Eds.), PostKeynesian economics. New Brunswick: Rutgers University Press.

Vandone, D. (2009). Consumer credit in Europe: Risks and Opportunities of a Dynamic Industry, Springer-Verlag, Berlin, 1-134.