An Empirical Analysis of Rural Finance and Its Impacts on Household Vulnerability in Thailand

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Deutsche Kurzfassung

Wie aktuelle Daten zeigen, ist das Einkommen von Haushalten in Entwicklungsländern gering und unbeständig, Zudem fehlt diesen Haushalten auch ausreichender Zugang zu Finanzierungsmöglichkeiten. Theoretische und empirische Studien deuten auf die kritische Rolle hin, die verbesserte Finanzierungsmöglichkeiten auf Wachstum ausüben. Dennoch gab es bisher nur wenig Forschung auf Haushaltsebene, die zeigt, wie finanzieller Fortschritt zu mehr Wachstum und weniger Armutsanfälligkeit führt. Der Effekt von finanzieller Entwicklung auf schnelleres Wachstum, muss sich nicht zwangsläufig auf eine verringerte Armutsanfälligkeit replizieren. Der Grund dafür ist, dass es unklar ist, ob von finanzieller Entwicklung die gesamte Bevölkerung, die Reichen oder die Armen profitieren. Wenn die Armen nicht von finanzieller Entwicklung profitieren, wird finanzielle Entwicklung nicht zu einer Reduzierung von Armut und Armutsanfälligkeit beitragen.

Der Untersuchungsgegenstand dieser Dissertation ist zum einen die Rolle von ländlichen Finanzmärkten in der Absorption von Schocks sowie der Reduktion der Armutsanfälligkeit und zum anderen die Analyse anderer Aspekte der ländlichen Finanzmärkte. Es handelt sich um eine Sammlung von fünf einzelnen Artikeln, die unabhängig voneinander gelesen werden können. Die fünf Kapitel untersuchen verschiedene Aspekte von ländlichen Finanzmärkten und wenden verschiedene Methoden an.

Kapitel 1 untersucht die Effekte von lokalen Finanzinstitutionen und anderer Unterschiede zwischen Dörfern auf die Fähigkeit der Haushalte, ihren Konsum nach Einkommensschocks zu glätten. Kapitel 2 betrachtet näher den Mechanismus, den die Haushalte nutzen, um Konsum zu glätten und mit Schocks zu Recht zu kommen. Kapitel 3 analysiert den Effekt der Fortentwicklung lokaler Finanzmärkte auf die Verringerung der Armutsanfälligkeit und deren Wirkungskanäle. Kapitel 4 beurteilt inwiefern das village funds Programm, ein kürzlich eingeführtes Programm für Mikrokredite und eines der größten Mikrokreditprogramme überhaupt, den Zugang zu Krediten und Finanzmärkten in ländlichen Gegenden verbessert hat. Kapitel 5 untersucht die

Auswirkungen und Typen von Kreditsicherheiten, die in ländlichen Finanzmärkten benützt werden.

Die Ergebnisse deuten darauf hin, dass ländliche Finanzmärkte eine wichtige Rolle in der Absorption von Schocks und Armutsanfälligkeit von Haushalten spielen.

Schlüsselwörter: Ländliche Finanzmärkte, Armutsanfälligkeit, Strategien zur Risikobewältigung

Abstract

Recent data show that many households in developing countries have low and volatile incomes. These households also lack adequate access to finance. Theory and empirical evidence point to the critical role that improved access to finance has in promoting growth. There has been little empirical investigation at the household level, however, of the impact of finance on vulnerability reduction. The evidence that financial development leads to faster economic growth does not necessarily translate into positive impact on vulnerability reduction. The reason is that it is unclear whether financial development benefits the whole population, whether it primarily favors the rich, or whether it benefits the poor. If the poor do not benefit from financial development, then financial development may not lead to poverty and vulnerability reduction.

The goals of this dissertation are to investigate the role of rural finance in absorbing shocks and reducing vulnerability on the one hand, and explore other specific aspects of the rural financial markets on the other. It is a collection of five individual articles which can be read independently. The five chapters investigate different aspects of the rural financial markets and apply different methodologies.

Chapter 1 examines the effects of local financial institutions and other cross village differences in the ability of households to smooth consumption after income shocks. Chapter 2 looks closer at the mechanisms used by rural households to smooth consumption and cope with shocks. Chapter 3 examines the effect of local financial development on vulnerability reduction and the channels through which it reduces vulnerability. Chapter 4 evaluates whether the Village Funds, a recently introduced microfinance program in Thailand and one of the largest microfinance programs ever implemented, improve access to finance in rural areas. Chapter 5 examines the incidence and the types of collateral used in the rural credit markets.

The results suggest that rural finance play a significant role in absorbing shocks and reducing household vulnerability.

Keywords: rural finance, vulnerability to poverty, risk coping strategies

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Introduction and Summary of Main Results

Rural households in developing countries like Thailand and Vietnam have low and volatile incomes. In many developing countries the majority of the population does not have access to formal financial services. Lack of access to financial markets is considered one of the main reasons why the poor in developing countries remain poor and vulnerable. Hence improving access to the financial markets remains an important challenge across the world.

There has been a longstanding interest among development economists and policy makers in the contribution that finance makes to development and economic growth. A number of empirical studies have shown evidence of positive impact of financial development on economic growth. While many studies have examined the effect of finance on economic growth, the question of whether finance helps reduce vulnerability has not been the subject of much empirical work. The evidence that financial development leads to faster economic growth does not necessarily translate into positive impact on vulnerability reduction. The reason is that it is unclear whether financial development benefits the whole population, whether it primarily favors the rich, or whether it benefits the poor. If the poor segment of the population do not benefit from financial development, then financial development may not lead to poverty and vulnerability reduction.

Financial development can directly lower vulnerability of households through two main channels. First, improving the access of the poor to financial services, particularly to savings and credit markets, allows the poor to take advantage of profitable investment opportunities. These investments tend to be lumpy and may be difficult to finance out of current household income but could provide higher income in the future. Thus access to financial services enables the poor to invest in productive assets which in turn enhance their productivity and increase the potential for achieving sustainable livelihoods. Second, an access to financial markets also provides the poor more opportunities to manage risks and smooth consumption in the face of negative shocks. Households can smooth out fluctuations in incomes by borrowing and lending through the financial

markets. In the absence of credit to households, income shocks may get reflected into consumption shocks. Thus an access to financial services can reduce households' vulnerability to shocks and minimize the adverse impacts of shocks that can sometimes have long-run impacts.

The overall objectives of this dissertation are to investigate the role of financial development and financial institutions in reducing vulnerability of rural households on the one hand, and explore several specific aspects of the rural financial markets on the other.

In order to analyze the contribution of finance on household vulnerability, this dissertation relies on two surveys. The first survey was conducted by the Thai Ministry of Finance (MOF) in 2005. The field survey was carried out in six provinces from four regions in Thailand, namely Phrae from the North region, Sisaket and Buriram from the Northeast region, Chacherngsao and Lopburi from the Central region and Satoon from the South region. Within each province, four districts were randomly selected, and within each district, four villages were chosen at random. Then within each village, fifteen households were randomly selected. The survey constitutes a cross-sectional data with a total of 1,440 households from 96 villages.

The second survey was collected as part of the project "Impact of shocks on the vulnerability to poverty: consequences for development of emerging Southeast Asian economies" (DFGFOR756), funded by the German Research Foundation (DFG). An initial cross sectional survey took place in Thailand and Vietnam between April and June 2007. Within each country, three provinces were deliberately chosen. The six provinces are namely Buri Ram, Ubon Ratchatani and Nakhon Phanom from the Northeast region of Thailand and Dak Lak from the Central Highlands of Vietnam and Thua Thien-Hue and Ha Tinh from the North Central Coast of Vietnam. In total, 2,186 households from 220 villages in Thailand and 2,195 households from 220 villages in Vietnam were interviewed in this initial cross sectional survey. Further secondary data are obtained from Thailand National Statistical Office.

The dissertation is organized in five main chapters based on five individual articles which can be read independently of each other. Each chapter focuses on different aspects of the rural financial markets and applies different methodologies.

Chapter 1 examines the effects of local financial institutions and other cross-village differences on consumption insurance – the ability of households to maintain their consumption after specific shocks and fluctuations in their income. While recent evidence indicates that different degrees of consumption insurance are reached by different villages, very little is known about the source of heterogeneity across villages. Unlike previous work, this chapter focuses on the effects of cross-village differences and attempts to pinpoint which local institutions help facilitate consumption insurance. The analysis is based on the survey collected by Thailand's Ministry of Finance. Empirical results suggest that local financial institutions within villages matter. In particular, the results show that the number of institutions providing loans and savings services, the level of community social capital, and the extent to which shocks are idiosyncratic significantly increase the ability of households to insure consumption.

Chapter 2 looks closer at the mechanisms or tools used by rural households to smooth consumption and cope with shocks. It documents the nature of risks facing rural households in Thailand and Vietnam and the mechanisms that are used by these households to mitigate the adverse effects of shocks. It also attempts to explain why households chose one smoothing mechanism over the other. The data used in the analysis come from the project "Impact of shocks on the vulnerability to poverty: consequences for development of emerging Southeast Asian economies" (DFGFOR756). An empirical model is developed to explain why households chose one smoothing mechanism over the other. Two levels of decision making are distinguished. The first of which includes the choice of financial (asset depletion, borrowing) versus non-financial smoothing mechanisms (mutual insurance, increase labor supply and asset smoothing). The second level focuses on the choice of financial smoothing mechanisms (use of monetary savings, selling livestock, formal borrowing and informal borrowing). Based on data from Thailand and Vietnam, the primary coping strategy used by households in both countries is borrowing, with informal borrowing playing a more important role than formal borrowing. Other important responses are assets depletion and increasing labor supply. Interestingly, receiving public assistance is quite important in Thailand. However the estimation results do not provide much pattern in the smoothing mechanisms used by Thai households as few variables explain the choice of coping strategy. Interestingly, the

Vietnamese data show a much more diversified picture as numerous variables explain the choice of coping strategy. The differences between Thailand and Vietnam may be rooted in country-specific institutional settings.

Using DFGFOR756 data on Thailand, Chapter 3 examines the impact of local financial development not only on absorbing shocks but on reducing the overall vulnerability of households. To identify the effects, an indicator of local financial development based on the procedure of Guiso et al. (2004) is estimated as well as the measure of household vulnerability. The results show that financial development robustly decreases household vulnerability and it does so through fostering both investment and consumption.

Using the same data set, Chapter 4 looks at the role of a specific microfinance institution in Thailand, namely "village funds". The village funds program is one of the largest microfinance programs ever implemented and is currently one of the main providers of household loans in rural Thailand. In particular, Chapter 4 assesses the poverty outreach of the village funds and examines whether the introduction of the village funds improves access to finance in the rural areas. This chapter has two parts. The first part aims to identify what kind of households and loans are served by the village funds relative to other existing institutions, which would then allows inferences about the village funds' outreach as well as the degree of competition, substitutability and overlap among these financial institutions. Estimation results from a multinomial logit regression show that the village funds indeed provide loans to borrowers who are more typical customers of informal than formal financial institutions, indicating that the village funds provide services towards substituting informal institutions. The second part examines whether the village funds help in easing credit constraints faced by rural households. Evidence indicates that the village funds significantly contribute to overcoming credit constraints.

Chapter 5 explores another specific aspect of the rural financial markets – the use of collateral in the rural credit markets. Collateral is an important element in the lending business. In general, collateral serves two functions. First it minimizes the expected losses for the lenders which may be incurred in the case of loan defaults. Second it provides additional incentives for borrowers to repay. Due to informational opaqueness

and weak legal enforcement, the need for collateral is expected to be even higher in developing countries. Yet the rural households typically do not have adequate assets to pledge as collateral. How do lenders and borrowers in the rural areas deal with this problem? This chapter aims to answer this question. Preliminary analysis shows that land and asset substitutes are rarely used as collateral in the rural credit markets and that a large and significant quantity of credit in rural areas is provided without any collateral. The lenders in the rural areas can enforce collateral-free loans mainly through third party guarantees and borrower-lender relationship.

Putting all results together, this dissertation serves to provide empirical evidence of the positive role that financial development and financial institutions play in absorbing shocks and reducing vulnerability.

Several implications for further research clearly emerge. First, in contrast to the enormous emphasis on credit outreach, savings receive little attention. The data reveal that formal savings are rarely used by rural households. This low use of savings may be due to lack of appropriate savings services available to rural households. Future research on household savings is needed in order to provide appropriate savings services and mobilize savings.

Second and more importantly, given the current emphasis on financial development and vulnerability reduction on policy agendas of many developing countries, results reported in this dissertation provide a justification to undertake more detailed investigations of how specific financial development measures can be set up as effective instruments for achieving vulnerability reduction. Further research addressing efficiency and sustainability of financial institutions is clearly warranted in order to recommend future directions for policy on rural finance in Thailand.