Is agriculture a good shock absorber for economic crisis? Empirical evidence from a rural village in Thailand

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Introduction

Rural villages in emerging market economies in Asia have undergone drastic changes in the course of economic development. In the past, livelihoods in rural areas were mainly dependent on land and agriculture. Periods of continued economic growth encouraged rural households (HHs) in Asia to diversify their income portfolio for risk reduction and income growth. As a consequence, Thai villages are now characterised by a high dependency ratio as much of the labour force migrated to urban industrial centres namely Greater Bangkok or to the tourist areas in the South in order to seek employment. Hence, village families transform into multi-location HHs which rely on off-farm income and remittances while dependence on land and agriculture declines (Rigg 2006). Although livelihood strategies have changed, rural HHs remain vulnerable to shocks. Thus, the existing informal social relations and insurance schemes become increasingly important for HH's welfare and constitute one of the main strategies of dealing with risks and shocks (Hoddinott, Dercon, and Krishnan 2005). However, during the economic crises migrants may partly mitigate the effects of macroeconomic shocks through reverse migration to their natal HHs (Bresciani et al. 2002).

Theory and hypotheses

Given the mainly temporarily nature of migration which is persisting in this study case where migration is more likely to be a mean to maximise well-being and minimize risk of the whole HH, we rather follow the view of the New Economics of Migration scholars who claim that migration is a collective decision (Massey et al. 1993). Therefore, it is necessary to define which persons are considered as member of this social unit. In poverty or vulnerability studies the HH is defined according to how many days the person spends in the village. Persons such as person 4 in Figure 1 that are less days in the rural area than a specific threshold, e.g. 180 days, are not considered as HH members. In order to study the impact of migration on well-being of rural HHs, a definition of a migrant concurrent with the definition of a rural HH is needed: which we call a multi-location HH. Thus, all persons who are considered as part of the HH from the HH head are considered as HH members. Furthermore, persons that live in industrial zones or in an urban area for the purpose of employment or other purposes such as schooling or helping other migrant members and are away from the village for at least 1 month such as person 4 are considered as migrant family members.

The following three hypotheses have been formulated for this paper: First, livelihoods are becoming increasingly disconnected from land and agriculture. Second, traditional agricultural information and instrumental support networks loose importance for well-being and are

increasingly replaced by migration networks. Third, migrants rely on their natal HHs in times of shocks such as the recent economic crisis

Figure 1: Multi-location HH
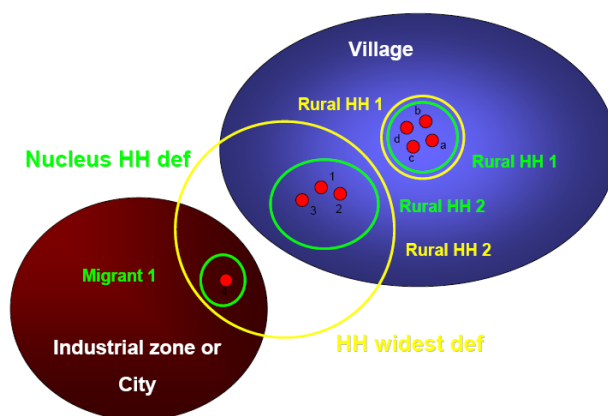
Source: Own illustration

Study area and data collection

The study area is the village Sab Jaroen in the province Phetchabun, some 350 km North of Bangkok. The village is typical for villages in rural Thailand and was selected with the help of officials from the Department of Agricultural Extension. It is located in a mountainous terrain in a heavily deforested area. Agriculture is the mainstay of the village economy. Due to poor irrigation infrastructure, weather shocks like drought are very frequent and cause income from agriculture to vary. Therefore, almost 60 % of the village HHs have at least one migrant.

Primary data were collected in two waves: In May/June 2008 all 73 HHs of the village were interviewed using a questionnaire that comprised sections on income generating activities, consumption, education, health, HH dynamics, risks and shocks, borrowing and lending, public transfers, insurance, assets, housing, information of the HH's institutional linkages and social network information. In addition, semi-structured interviews with the village headman and the village sub-group leaders were performed. In May/June 2009 a second data collection was carried out. This included a panel of the HHs interviewed in 2008. In addition, a much more detailed social network survey of a total of 217 individual HH members including migrants was carried out.

Results

Figure 2 shows that the income distribution is rather uneven. Inequality, is even more pronounced when looking at land ownership. The comparison between the two Lorenz curves for land and income suggests that the importance of land for HH wealth may be declining as stated by Rigg 2006.

Figure 3 shows the network relations between the different village HHs for two different relations: The red arrows demonstrate if HHs are providing or receiving non-paid help (NPH) on the fields to each other. The black dotted arrows stand for information exchange about agriculture (Info) and the red dotted arrows show that the HHs exchange non-paid help and information. Agricultural HHs (agri HH) have the form of a square and the color shows if the HH has migrants (migr HH). In general, we can observe that the network is most dense around the village head (orange circle). Furthermore, we can see that mostly purely agricultural HHs without migrants (blue squares) help each other in agricultural purposes without payment (green circles). Lastly, we can observe that the HHs with the highest income in the village are mostly purely agricultural HHs which are not dependent to receive non-paid help or information from others anymore (yellow circles).

Figure 2: Distribution of income and land
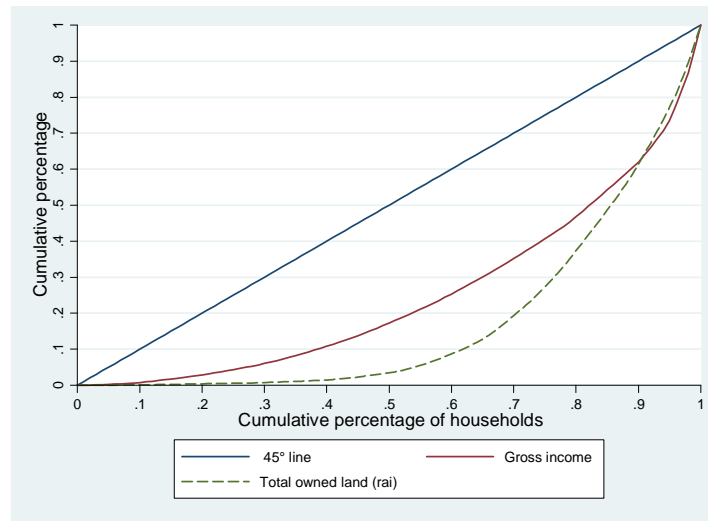
Source: Own calculation based on 2008 village HH survey

Figure 3: Support networks
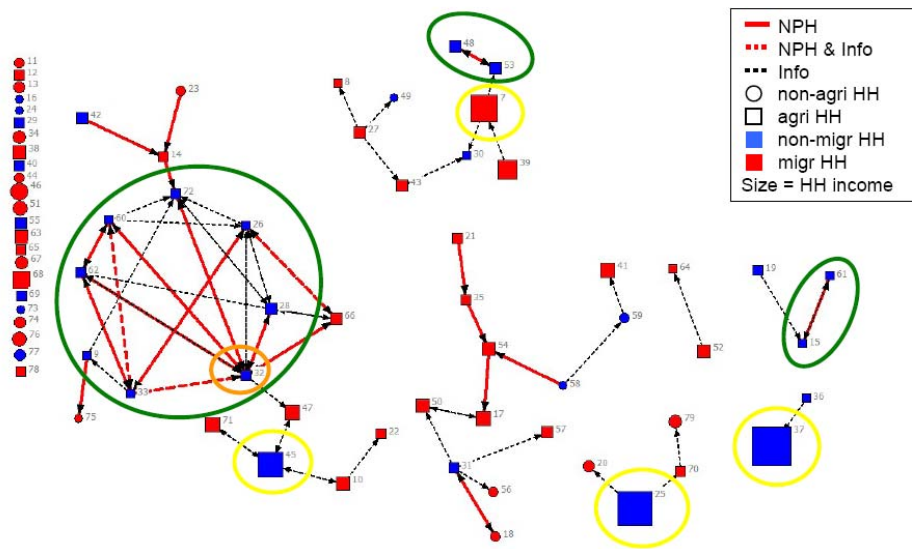
Source: Own calculation based on 2008 village HH survey

Another hypothesis was that migrants rely on their natal HHs in times of shocks (recent economic crisis). Although in Thailand the economic slowdown was rather moderate, we can show some indications how the economic crisis has affected migrant HHs. In the social network survey, we asked migrants where they could get support in case they needed money. While 40 % of migrants reported they will ask only people from their village for support in case of problems, 11% of migrants said they had no one they could ask for help. Overall however this simple social network indicator suggests that most migrants maintain strong social ties with their natal village. A further indicator that shows the connections between migrants and their village HH members is reverse remittances. Before the economic slowdown 7% of the HHs had send money to their migrants in town while after the crisis 22% of village HHs provided support for their migrant HH members. This trend is also reflected in the average amount send, which doubled between the two years.

To test the hypothesis that traditional agricultural information and instrumental support networks loose importance for well-being and are increasingly replaced by migration networks, an OLS regression model with log income per capita as dependent variable was formulated (see Table 1). Results show that households with a high dependency ratio and which suffered from severe shocks tend to have a lower per capita income. Furthermore, the cropping and the transportation variables are positive and significant. Migration measured by migrant month per HH member has the expected positive and significant effect on income while informational support networks are found to play a neglecting role for households that are engaged in agriculture, since the indegree of informational support networks is found to be not significant in the regression. Non-paid help has a significant negative effect on per capita income. One explanation could be that rather poor HHs are dependent on the help of others.

Table 1: Results of income model (N = 71)

Independent Variables	Full model Regression Coefficent (standard error)/t-value[a]		Mean	Standard Deviation
Female headed HH	-0.13 (0.21)	-0.61	0.40	0.49
Dependency Ratio	-0.33 (0.14)	-2.36**	0.53	0.76
Motorcycle	0.51 (0.16)	3.25***	1.05	0.74
Migrantmonth	0.072 (0.03)	2.16**	2.91	3.15
Shock	-0.43 (0.25)	-1.72*	0.66	0.48
Cropland	0.01 (0.01)	2.18**	15.11	20.14
Agri. Information	-0.02 (0.12)	-0.23	0.78	1.18
Agri. Non-paid help	-0.24 (0.12)	-2.02**	0.46	1.04
Constant	9.86 (0.30)	33.97***		
R² adjusted	0.43			

[a] Statistical significance at the 0.01 (***), 0.05 (**) and 0.1 (*) level of probability

Source: Own calculation based on 2008 village HH survey

Conclusions and Outlook

In summary, the household income model suggests that agricultural- as well migration-oriented livelihood strategies can be successful depending on the circumstances. Agricultural activities seem to be reasonable for rather specialized agricultural HHs with a sufficient agricultural resource base (land or livestock). Migration seems to be a good strategy especially in times of economic growth where migrants are able to send back remittances. During a period of economic slowdown, migrants rather turn back to their natal village and ask for financial help. Furthermore, we found that agricultural support networks are relatively infrequent but remain important among poor agricultural households without migrants and that migrants maintain strong social ties to their natal village. In a next step we plan to do an in-depth analysis of the factors that determine migration and its effect on the economic well-being of the households for both waves. In order to control for the selection bias it is planned to use a two-step approach. Furthermore, more sophisticated network indicators will be used in the regressions.

References

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