Household's coping strategies and recoveries from shocks in Vietnam

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ABSTRACT

There has been a great deal of the literature on the effects of shocks on a household's well-being as well as on the choice of *ex-ante* and *ex-post* strategies in the context of risk exposure. However, researchers have paid little attention to the ability of a household to recover from an adverse event. Additionally, the livelihood of those in the developing world has been increasingly affected by macroeconomic instabilities and extreme weather conditions. This study aims to investigate the forces that shape a household's recovery from misfortune. The analyses are applied to the case of Vietnam by using data collected from household surveys from years 2007 to 2010 and a discrete time proportional hazard model to find the determinants of the shock recovery. The results show that a household's characteristics do not strongly determine the shock recovery but physical assets do. Shocks covariates such as more losses and higher severity make the misfortune harder to recover from. Additionally, coping strategies sometimes help poor households recover better from the losses.

1. Introduction

In the literature on vulnerability, there has been increasing discussion on the effects of shocks on a household's well-being and their responses to such adverse events. A number of methodological studies (Dercon, 1996; Elbers, Gunning, & Kinsey, 2007; Morduch, 1994; Paxson, 1992, 1993) and empirical studies (Dercon & Krishnan, 2003; Hoddinott, 2006; Imai, Gaiha, & Kang, 2011; Kochar, 1995; Thomas, Christiaensen, Do, & Le, 2010) have been conducted using different approaches and country cases. They have identified the effects of shocks on the well-being of different types of household groups, have discovered the coping strategies that households employ when facing these shocks, and have found the *ex-ante* strategies that household apply in an effort to reduce risk. Recently the literature has been focusing on the forces that shape the recovery paths during the aftermath of shocks. It argues that wealthier households might be able to cope with shocks by selling livestock or borrowing from others, thereby allowing them to recover fully and quickly from the bad luck while poorer

households might suffer for a longer period of time (Carter, Little, Mogues, & Negatu, 2007). Despite these findings, there is still a lot of room for further investigation and discussion on this complicated matter.

A full examination of the effects of a household's assets, a shock's covariates, and coping strategies on the post-shock recovery is thus an important contribution to the literature on vulnerability, particularly to the literature that discusses the resilience paths during the aftermath of adverse events. It will also be helpful for the evaluation and assessment of poverty alleviating policies, especially in the context of the increasing uncertainties in the developing world. The main goal of this study is to find which household groups are able to recover quickly from shock, which household groups are able to apply coping strategies, and exactly which coping strategies are helpful for quick and speedy recoveries.

This study finds the answers to these research questions in the context of Vietnam, as it is an appropriate case study for developing countries. Vietnam has been successful in sustaining unprecedented economic growth rates and making a sharply reducing poverty during the last two decades. However, risk remains a central part of the livelihoods since more than two fifths of the population live on less than $2 a day (World Bank, 2013). Additionally, agriculture is still the main income source of more than 70% of the population in rural areas (World Bank, 2013), and

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absorbs 64% of the nation's labor force (GSO, 2011). Obviously, this important sector is increasingly affected by livestock diseases such as Avian Flu and Swine Flu as well as by extreme weather conditions such as storms, floods and droughts. Furthermore, the rapid economic growth and globalisation process bring about more market uncertainties, especially for the poor.

This study employs data from more than 2000 households in Vietnam collected in 2007, 2008 and 2010. These surveys interviewed households about the shocks they experienced, what their responses to each shock were, and how many months the household needed to recover from each shock. The duration of the recovery is estimated via a discrete time proportional hazard model and is based on the hypothesis that wealthier households usually have more access to markets thus they recover better from shocks. Another hypothesis is that coping strategies are helpful in recovering from the adverse events, particularly for poor households.

The remainder of this study is organized as follows: Section 2 discusses the theoretical and empirical studies on post-shock resilience; Section 3 describes the data sets employed in the analysis and specifies the discrete time proportional hazard model. After that, Section 4 discusses the prevalence of shocks of different household groups. Section 5 discusses the determinants of recovery including a household's and a shock's covariates. Lastly, Section 6 concludes the key messages of the study.

2. The literature on post-shock resilience

2.1. Household coping strategies and resilience paths

An adverse event has the possibility of causing a decline in assets and incomes in the short-run and potentially has negative effects on a household's livelihood in the long-run. These effects depend on the type of the shock that occurs, the asset dynamics and on coping strategies ultilised in the aftermath of the shock. When facing shocks, households with access to markets might be able to employ external resources such as insurance (Dercon, 2002) and credit (Clarke & Dercon, 2009) as *ex-post* strategies. However, insurance and financial markets are not accessible by a large share of the population in developing countries (see Zimmerman & Carter, 2003), especially in rural areas. In that case, poor households might get credit from informal markets with a high interest rate, but this could push them into a higher debt burden from which they would find it even harder to recover. Hence, households with limited access to markets may need to rely on public support (Tran, Marincioni, Shaw, Sarti, & Le, 2008) or informal risk-sharing arrangements (Dercon & Krishnan, 2003; Carter & Castillo, 2005). However, the effect of public safety nets might be not so large (Dercon, 2002) due to having limited resources in developing countries, particularly in the context of having an increasing number of risks. In addition, risk-sharing arrangements might not be effective as the poor usually live in a community of poor people and often many households in the same community face the same covariant shock (Dercon, 2002). Alternatively, farm households often have other crops or livestock to compensate for the lost ones. They can also increase their market working hours if they have access to the labor market. Nevertheless, when there is limited access to external resources households need to use their own resources to cope with the shocks.

Shocks can be classified as being either asset shocks or income shocks. An asset shock, such as a storm or a flood, might cause a decline in physical assets or livestock and could reduce income as well. It might have small effects on wealthy households but tends to have long-run effects on poor households. Fig. 1 shows asset accumulation paths of wealthy and poor households. The horizontal
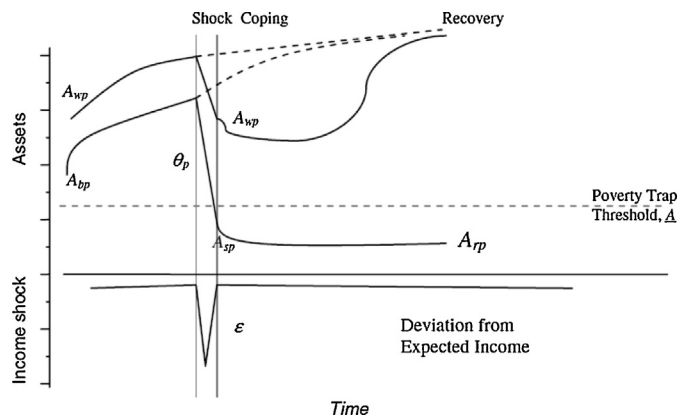

Fig. 1. Asset shocks and resilience paths.
Source: Carter et al. (2007).

axis measures time and the vertical axis measures asset stocks and income level. A wealthier household has the initial asset stock at A_{wp} while a poorer household has a lower initial asset stock at A_{bp}. If there is no shock, the poorer household might be able to follow the dashed asset accumulation path and catch up with the wealthier household. An asset shock is usually in the form of a short, temporary event that causes the asset levels of the wealthy and poor households to fall to A_{wp} and A_{sp} respectively. The shock might also reduce current incomes of both households by an amount ε (see Carter et al., 2007).

The post-shock recovery is influenced by coping strategies applied in the immediate aftermath of the shock and by long-run patterns of asset dynamics (Carter et al., 2007). Market access and social mechanisms shape a household's resilience and the speed of its post-shock asset accumulation trajectory. As discussed above, a household with access to financial markets might use insurance or credit to smooth their consumption without further asset depletion. This household would be expected to recover quickly and return to the convergent long-term trajectory illustrated in Fig. 1. A household with limited access to financial markets might have to sell their assets further to keep consumption smooth. However, unfavorable asset price swings might occur when many households sell assets in order to buy food during a shortage after a covariant shock, which could lead to those households falling into a poverty trap (Carter et al., 2007). A household that fell below the poverty trap would be expected to recover at a slower pace and could even be unable to accumulate assets; the household would thus stay poor, rather than rejoining its convergent pre-shock trajectory (see Carter & Barrett, 2006; Carter et al., 2007).

An income shock, such as a drought or a heavy rain, might affect a household's asset stocks over an extended period of time. This effect is illustrated in Fig. 2 with the assumption that there are no direct asset losses associated with the income shock. An initially wealthier household that begins with a higher asset level (A_{bw}) could be expected to draw on their assets when being faced with income shocks in order to smooth its consumption level. Thus, it could be expected to rebuild its asset stocks, returning toward its initial trajectory. Alternatively, consider an initially poorer household, which begins with a lower asset level (A_{bp}). This household might instead choose to reduce consumption and smooth its assets in order to avoid falling into the poverty trap, denoted by A if it exists (Carter et al., 2007). However, poor households usually have low levels of consumption, hence cutting them further by reducing food consumption or withdrawing children from school might have negative effects on human capital in the long-run.