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Towards Comparative and Aggregate Vulnerability: Analysis of Welfare Distributions in Rural Areas in Thailand and Viet Nam

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Abstract

The concept of vulnerability to poverty continues to gain attention among researchers and practitioners of development because it captures the dynamics and complexity of poverty better than static FGT-type poverty indicators, which are based on retrospective cross-sectional survey data. So far a multitude of concepts of vulnerability and associated indicators have been developed without, however, reaching a consensus on their relative merits. Applied studies, thus, appear to invite criticism for their choice of specific concepts of vulnerability or poverty lines. Our idea is to utilise the concept of stochastic orderings to compare income distributions. With an application to a large household sample from Thailand and Viet Nam, we study whether and to what extent the vulnerability of different target populations can be compared independently of specific definitions of vulnerability indices and poverty lines. We exploit the fact that dominance relations for stochastic orderings are closely related to the comparability of income distributions for large classes of measures of vulnerability and poverty.

In the context of the DFG research project "Impact of Shocks on the Vulnerability to Poverty: Consequences for Development of Emerging Southeast Asian Economies", in 2007 and 2008, a panel survey of 4400 households was conducted in six rural provinces of Thailand and Viet Nam. The extensive database allows us to establish, for two consecutive waves, distribution functions of income and consumption at provincial levels. We search for stochastic dominance relations between these distributions. Such comparisons allow for initial, but quite robust conclusions on welfare; they provide benchmarks for assessing the vulnerability of the target population.

Results show that for per-capita consumption, measured in purchasing power parity adjusted US$, the sample distribution for Thailand dominates that for the Viet Nam sample according to first degree stochastic dominance (FSD). This suggests that rural households in Viet Nam are more vulnerable than in Thailand according to all commonly used indicators of vulnerability and poverty. Provincial distributions within Thailand and Viet Nam can, up to certain thresholds, be ranked by second (or third) degree stochastic dominance criteria, implying that the dominated distributions exhibit, below the thresholds, higher degrees of vulnerability for all inequality-averse (respectively, downside inequality-averse) measures.

Keywords: Inequality, poverty, Thailand, Viet Nam, vulnerability

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