



Tropentag, September 14-16, 2010, Zurich

“World Food System —
A Contribution from Europe”

The Impact of Rice and Maize Price Volatility on Farm Households’ Income and Consumption in Northern Viet Nam

SUSANNE UFER, ALWIN KEIL, MANFRED ZELLER

University of Hohenheim, Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Germany

Abstract

World food prices were characterized by massive fluctuations during the past three years. Rapidly increasing food crop price levels in 2007 and in the beginning of 2008 were followed by a sharp decline later on in the same year. Rural households in low income countries are affected by price volatility of agricultural commodities both through its impact on consumption expenditures and income. Food price hikes in 2008 also caused major public concern about food security in low income countries, but also created hopes of higher agricultural incomes for rural households. Therefore, the objective of this study is to investigate both the extent of net income shocks related to volatile food crop prices as well as households’ response to income and consumption risk through a household level study covering the period from 2006 to 2008.

The research was conducted in the mountainous Yen Chau district in northwestern Viet Nam, which is among the poorest districts in the country. Agricultural production is dominated by two major crops, paddy cultivation for subsistence needs in the lowlands and intensive production of maize as the primary cash crop in the uplands, which constitute, on the average, approximately 8.5 % of total consumption expenditures and 65% of total household cash income, respectively.

In a first step the static impact of rising rice and maize prices on household net income was analyzed using the Net Benefit Ratio, a method widely applied in literature. Rising rice prices had a moderate impact on net income, but the effect was widespread since 45 % of the households are rice net buyers. Households’ maize income fluctuated significantly between 2006 and 2008, whereby the massive decline in maize income in 2008 of 25 % relative to 2007 was mainly attributable to considerably higher input costs rather than to the decrease of output prices.

In a second step households’ resilience to the maize income decline in 2008 was analyzed using an OLS regression model which employs an asset based approach linking households’ capital endowment with the stability of their consumption expenditures. The regression results show that the maize income decline of 2008 did not translate into decreased consumption expenditures compared to the year before. Only few households applied specific measures to cope with the income depression, the most widespread one being the postponement of the purchase of valuable consumption durables. Nevertheless, farmers did respond to differences in maize prices by adjusting the timing of maize sales.

Although households were found to be resilient to the maize income depression in this instance, the high degree of specialization on maize production has to be viewed as a

relatively risky strategy, given the high levels of input requirements and severe soil erosion observed, coupled with fluctuating input and output prices. Therefore, policies should focus on improving the economic and ecological sustainability of maize cultivation in the short run, but also foster income diversification in the longer run.

Keywords: Consumption risk, coping and adaptation strategies, income volatility