Households' vulnerability from trade in Vietnam

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A B S T R A C T

This paper assesses vulnerability from trade in Vietnam by presenting an extended version of Ligon and Schechter's (2003) Vulnerability as low Expected Utility (VEU) measure. It uses the Vietnam Household Living Standard Surveys (VHLSS) panel data covering the period 2002–06. The empirical results show that risk-induced vulnerability and heterogeneity in trade exposure matter in determining household overall vulnerability and that this is not linked to the actual manifestation of shocks. Although it does not represent, by any means, an argument against free trade, this work is relevant for policymaking since it contributes to deepen our knowledge on the subtle links between trade openness and vulnerability and informs us about suitable instruments to accompany it.

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1. Introduction

Vietnam is seen as the success story of trade liberalisation. Over the first ten years after the adoption of the "Doi Moi" (renovation), a combination of stabilization, liberalisation and structural reforms, the annual average growth rate of Vietnam's merchandise exports boomed at 25 per cent (1986–1996), and it fell only to 18.5 per cent in the subsequent decade (1996–2006). An extensive empirical literature highlights the importance of this trade surge on the Vietnamese economy, identifying the positive correlations between trade liberalisation, growth and poverty reduction (Irvin, 1997; Fritzen, 2002; Jenkins, 2004; Nadvi et al., 2004; van de Walle & Cratty, 2004; Jensen & Tarp, 2005; Nguyen & Ezaki, 2005; Fujii & Roland-Holst, 2008; Niimi, Dutta, & Winters, 2007; Abbott, Bentzen, & Tarp, 2009; Heo & Doanh, 2009; Coello, Fall, & Suwa-Eisenmann, 2010; Hoang, Pham, & Ulubaşoğlu, 2016).[1]

The growth of average income is obviously hugely important to economic welfare, but even for an individual household it is not the only thing that matters. A key unanswered question is thus: did trade liberalization magnify households' exposure to risk, offsetting some of the benefits of the increase in average income, or even raising vulnerability to poverty? This topic, which essentially entails moving the discussion of trade liberalization beyond

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[1] Critics highlight the relatively high concentration of poor households near the poverty line during the 1990s as a likely explanation for the pro-poor nature of growth in Vietnam. They also highlight the persistence of a high poverty gap in rural areas, in the Northern Mountain and the inland Central Highland regions as well as increased inequality throughout the country, resulting in an extensive urban-rural division, with the richest 20 per cent of the population living in urban areas (Heo and Doanh, 2009). Furthermore, trade openness seems to have promoted a distributional impact within the rice sector too, further penalizing the poorer small net producers (Coello et al., 2010). Last but not least, 80 per cent of the poor are still living (and working) in rural areas.

the first moment of incomes to include the second, is currently hotly debated; it is also at the heart of the global trade negotiations on special safeguard mechanisms to protect farmers from excessive price volatility. Despite the importance of households' vulnerability in a multidisciplinary perspective and the strong policy imperative of targeting people at risk of future poverty, the empirical evidence about vulnerability from trade is mixed, scattered in separate fields of analysis and does not reach a common stance (Montalbano, 2011). This results from both the lack of suitable panel data and the complexity of the task of assessing ex-ante risks (Klasen & Waibel, 2016). A seminal account of risk and trade liberalization is Newbery and Stiglitz (1984), which shows that trade may actually be welfare decreasing in the absence of insurance. More recently, Allen and Atkin (2016) demonstrates how falling trade costs can affect farmers' revenue volatility and thus their crop allocation in a portfolio choice framework where returns are determined in general equilibrium in a many-location, many-good Ricardian trade model with flexible trade costs. In this paper, we focus on Vietnam where notwithstanding the impressive fall of poverty after Doi Moi, some scholars have argued that poor Vietnamese households remain more vulnerable to market risks that come with trade openness (Guha-Khasnobis, Acharya, & Davis, 2007) and to international price shocks (Jensen & Tarp, 2005).

Our aim is to shed light on this issue by looking at the innermost source of vulnerability induced by trade, which is neither directly observable nor linked to the actual manifestation of shocks. We show that trade exposure and its related risks matter in determining household vulnerability even in the absence of actual negative shocks. This because risk averse people react to the existence of risk (e.g., the possibility of the disruption of their livelihoods arising from trade reforms) by modifying their behavior independently of whether they actually experience such shocks or not (e.g., by undertaking precautionary saving and reducing current consumption). To assess vulnerability from trade we use a workable empirical identification strategy which focuses on the presence of heterogeneity in vulnerability scores across clusters of households classified by trade exposure, which, in turn, implies heterogeneity in their risk exposure and/or their mitigating strategies. Specifically, we present two innovations. First, an extended version of Ligon and Schechter's (2003) measure of Vulnerability as low Expected Utility (VEU) which can isolate the component of risk-exposure associated with trade openness (i.e., risks that are not fully shared across trade-related industries) and identify the ex-ante effects of risk from the ex-post effects of shocks. Second, we provide an empirical application of the proposed "extended measure" by exploiting the Vietnam Household Living Standard Surveys (VHLSS) panel data for the period 2002–06.

Obviously our precise results are conditional on the sample we have used, but we believe that our findings offer generalizable insights. Our sample period is not unrepresentative: it comes after Doi Moi but before the WTO accession in January 2007 and the food price spikes of the 2007–08 period,[2] and the price fluctuations it contains were relatively low from a long-run perspective (see Table A.1 in Appendix A). On the other hand, the availability of panel data at the household level provides a golden opportunity to test our hypothesis, because it allows us to control for time invariant con-

founders and additional noise, something that is not possible to replicate in any other period in Vietnam.[3]

Our results show that trade exposure and its related risks matter in determining household overall vulnerability. Notwithstanding that each household is subject to trade risk, by controlling for a full set of household and trade fixed effects, we demonstrate the presence of heterogeneity across households clustered in different industry groups defined by trade exposure. These differences could reflect either or both of differences in the nature of foreign and domestic risks and differences in mitigating strategies. We note that vulnerabilities could spill over from one cluster of households (industries) to another – for example via community effects – but these work against our identification strategy and would serve to reduce observed heterogeneities. Thus the fact that we do observe such heterogeneities suggests strongly that they do actually exist.

The empirical evidence that there may be trade-induced vulnerabilities has strong policy implications. Although it does not represent, by any means, an argument against free trade, it does deepen our knowledge of the welfare effects of trade reform and inform us about suitable instruments to accompany it. In this respect, we believe that governments should invest more on helping vulnerable households to carry out ex-ante progressive choices and take full advantage of the trade reforms through the support of targeted packages such as favoring savings, ensuring that credit markets serve the poor and developing tailor-made insurance schemes, especially for farmers involved in tradable crops. At the same time, we suggest investing fewer resources on ex-post price stabilization policies because these distort market functioning and cannot eliminate the vulnerability that occurs even when fluctuations are relatively weak.

The paper is organized as follows: Section 2 presents the conceptual framework on trade and vulnerability to poverty; Section 3 provides the details on our measure of vulnerability; Section 4 presents the empirical model; Section 5 provides details on data; Section 6 presents the empirical results; Section 7 some robustness checks; Section 8 concludes.

2. Trade and vulnerability to poverty: The conceptual framework

The seminal paper of Newbery and Stiglitz (1984), about the negative welfare impacts of trade in the absence of insurance has been followed by a systematic exploration of the links between macro-economic volatility and trade (see, inter alia, Easterly et al., 2001; di Giovanni & Levchenko, 2009; Karabay & McLaren, 2010; Lee, 2014). However, the above analyses generally overlooked the possible impacts of the liberalization process on households' exposure to risk (Montalbano, 2011). A relevant exception in this respect is Allen and Atkin (2016) who explore – both analytically and quantitatively – the second moment effects of trade on Indian farmers using forty years of agricultural micro-data. They demonstrate that when households are risk averse and financial markets incomplete – as is the often case in developing countries – the interaction between trade and volatility may have important welfare implications.

According to the theory (Kimball, 1990; Caballero, 1990; Deaton, 1992; Carroll, 2001; Carroll & Kimball, 2008), risk-averse

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[2] Völker, Tongruksawattana, Schmidt and Waibel (2016) analyze the impact of the 2008 food price crisis on vulnerability to poverty of rural households in Thailand and Vietnam. The authors find that Vietnamese households in remote locations with poor market access actually increased their vulnerability to poverty in 2008 mainly because of households' need to purchase higher prices rice and their limited ability to adjust their agricultural portfolio. They apply a methodology based on a mathematical risk programming approach applied to two typical agricultural households in Thailand and Vietnam.

[3] The VHLSS collected information of 29,530 households in 2002; 9188 in 2004; 9189 in 2006. These surveys were conducted by the General Statistics Office (GSO) of Viet Nam with technical assistance from the World Bank. VHLSSs are conducted every two years. The latest survey was released in 2014. Unfortunately, no panel data are available between the VHLSS 2006 and the VHLSS 2008. Moreover, the VHLSSs for 2010 and 2012 used a new sample frame (from the 2009 Population and Housing Census).