

Extended Abstract

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Paper/Poster Title	Network resilience, risk aversion, procrastination and gender roles: Evidence from Vietnamese Vegetable Farming
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Abstract prepared for presentation at the 97th Annual Conference of the Agricultural Economics Society, The University of Warwick, United Kingdom

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Abstract	<i>200 words max</i>
<p>We explore the relationship between risk aversion, loss aversion procrastination and gender, and the resilience of trading networks in small scale rural farming in Vietnam. Rural farmers are highly dependent on intermediary traders to bring products to market. We survey farming households in three villages to obtain data on the trading network. We find that each village has a very distinctive trading network but none of them are resilient, with the typical farmer relying on one or two traders with whom they have traded for many years. In one village, with the most resilient network, we find evidence that risk aversion is associated with a household engaging with fewer traders. In a separate village, the one with the least diversified crop, we find an effect of gender, where households with a male in charge of trading decisions have more trading links.</p>	
Keywords	Network resilience; Risk preferences; Risk aversion; Procrastination; Gender; Trading network; Intermediary traders; Vegetable farming
JEL Code	D13, D85, D90, O13, Q12, Q13 see: www.aeaweb.org/jel/guide/jel.php?class=Q)
Introduction	<i>100 – 250 words</i>
<p>In this paper we have analysed the trading network of small scale vegetables farmers in Vietnam. Small scale farmers are highly reliant on intermediary traders to bring their product to market and earn income. The trading network, therefore, has far reaching implications, ranging from poverty alleviation and redistribution in rural communities, to food security of global supply chains. A network is not resilient if the inability of a node (i.e. trader) or link (i.e. interaction between farmer and trader) to function would have significant negative implications for farmers and traders. To a rough approximation, networks with more links and more nodes (particularly traders) are more resilient. We conjectured that risk preferences, procrastination, decision making in the household and social norms/ties could impact the trading network. For instance, procrastination may cause inertia in new link formation, and result in a less resilient trading network.</p>	
Methodology	<i>100 – 250 words</i>

In our study we surveyed farmers at three distinct villages in northern Vietnam ($n > 400$). The survey elicited the households trading strategy and trading links, as well as measures of risk aversion, loss aversion and procrastination.

We first provide the distributions of traders across households in the three villages. These distributions provide the first evidence of the resilience of the trading networks in these areas. We then design the empirical specifications to investigate the roles of risk aversion, loss aversion and procrastination on the number of traders.

Results

100 – 250 words

We find significant differences in network structure across the three villages. At one site (Pham Tran) the trading network is dominated by only 3 traders, while at the other two sites trading is more dispersed. Of these two sites, one (Van Hoi) has many more trading links than the other (Van Duc). One key finding of our study, therefore, is considerable heterogeneity in trading networks, even across three similar villages within a relatively narrowly defined geographical area. Moreover, at all three sites the network can be characterised as non-resilient with the typical household reliant on only one or two traders to bring their product to market. These findings clearly demonstrate the need for a better understanding of trading networks in small scale farming and the behavioural factors that influence link formation. In our study we explore the role of gender, risk aversion, loss aversion and procrastination, and find a significant relationship between gender, risk aversion and link formation. Specifically, we find evidence, depending on the context, that risk averse households and households where the wife takes responsibility for decision making have a tendency for fewer trading links.

Discussion and Conclusion

100 – 250 words

Given that the trading network at all three villages we studied was not resilient, it is a pressing policy challenge as to how resilience can be strengthened. This would require more trading links in the network, and not necessarily more traders. We conjecture that link formation is held back by a range of factors including risk aversion against breaking contracts, and the social and time costs of maintaining a link between household and trader. One way to potentially alleviate these barriers to link formation is through real time, crop quality monitoring. This would reduce contract uncertainty and reduce the time needed for traders to spend in the field. Insurance would also facilitate farmers to engage with new traders. We believe, therefore, that policy makers should consider a package of measures to support the use of monitoring technology in the field, potentially accompanied by some form of insurance against loss.

