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# **Ethnic Risk Sharing among the Rural Population in Vietnam -- An Experimental Approach**

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We investigate the impact of mutual support in case of financial losses within a multi-ethnic society in Vietnam by using an experimental approach. We test for the effects of ethnic discrimination with regards to risk sharing by conducting the Solidarity Game based on Selten & Ockenfels (1998). We find no evidence for ethnic discrimination between the groups. But, we can show remarkable differences in behavior when it comes to mutual support in times of idiosyncratic shocks where the richer group showed a rather altruistic behavior of mutual support towards the poorer and the poorer group based their decisions in the experimental lab on past real life experiences.

In an environment of weak or absent formal institutions, the vulnerable part of the population (the old, the poor and the weak) rely on the mutual support of their social network, consisting of family, friends, neighbors and colleagues, providing resources in times of need (Fafchamps & Lund 2003). Through the organization in social networks, peers share the risk of suffering from catastrophic events such as severe illnesses or crop failure.

We investigate the impact of mutual support in case of financial losses within a multi-ethnic society by using an experimental approach. The setting of our experiments is Dak Lak Province in the central highlands of Vietnam. Due to the resettlement policy of the Vietnamese government in 1975 many people belonging to the Vietnamese ethnic majority (Kinh) moved to the central highlands that were mainly populated by the indigenous ethnic group of the Ede. Until today Kinh and Ede live in the same villages even though the two ethnic groups maintain a separate organizational structure, each of them having their own formal leader. People in Dak Lak Province mainly live from agriculture, namely from the cultivation of coffee and pepper. Even though both ethnic groups own land of similar average size, Kinh tend to have a more diversified income portfolio where parts of their income is generated through other sources than agriculture.

There exists a vast literature suggesting that people prefer sharing resources with people who are similar to them (Ghatak 2000), Lin 2000). Consequently, we should observe mutual support and risk sharing to be more developed within homogeneous groups of participants. Here, homogeneity can be related to their ethnic origin but also to their economic status or profession. Further, anecdotal evidence suggests some severe stereotyping against the Ede. They are often stigmatized poor because of laziness and alcoholism. In contrast, both, Kinh and Ede see the former as hard working and therefore richer and more successful. In this paper, we investigate mutual support between and within the two heterogeneous groups and put special emphasize on the impact of persisting stereotypes and discrimination.

We test for the effects of ethnic discrimination with regards to risk sharing by following an experimental approach. We run lab experiments (Solidarity Game based on Selten & Ockenfels 1998) and draw conclusions from a random sample of 571 male household heads from both ethnic groups (55% of Ede and 45% of Kinh participants).

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In the Solidarity Game, participants were randomly assigned into the control or the treatment group. Each participant was randomly paired with two others and formed a “risk-sharing group”. Given the two ethnicities, participants could either be grouped with one or two participants from the other ethnicity. All participants received a fixed endowment of 300,000 VND that corresponded to an average daily allowance for a field worker in that region. In the groups of three, in each round one participant got “hit by a shock” translating into a 75% reduction of the endowment. Hence, the participants’ payoffs were determined by a random draw where each faced a chance of 1/3 to be hit. After the payoffs were revealed, participants could transfer money to the peers with lower payoffs. All decisions were kept private. After all decisions were made group members were privately asked to state their motivation for their behavior and their expectations regarding their peers’ behavior.

In the treatment group, participants had the possibility to insure against the shock. The insurance giving full protection against the loss cost 50% of the endowment and needed to be purchased before the occurrence of the shock. All participants could still transfer money to those who were hit by the shock without having purchased the insurance.

In both groups, participants played the game for seven rounds. A post-experimental questionnaire asked for demographic data and information on social and economic status as well as social network ties to other participants, previous shocks with coping strategies, and real life solidarity towards group members. At the end, participants were paid the amount equivalent to the outcome of one randomly drawn round.

In our experiment, we cannot find evidence for ethnical discrimination among the participants. On average participants transferred 20 percent of their endowment to the losing peer. Kinh participants transferred slightly less (18%) than Ede (22%) but this difference is statistically not significant. Comparing differences between the two ethnic groups, we find that Kinh transferred as much to Ede as they transferred to other Kinh (MW  $p=0.708$ ). The same is true for Ede participants. At first glance, it seems as if there was no structural difference between the two ethnic groups. Lucky participants shared on average as much with unlucky peers independently of their ethnicity.

However, decomposing the sample by ethnicity we find an interesting difference in mutual support. On average, Kinh transferred lower amounts to Ede than Ede transferred to Kinh (MW  $p=0.107$ ). This observation becomes interesting with respect to perceived wealth of the distinct groups. From the survey questions we know, that 41% of the Kinh perceived Ede as poorer compared to themselves. Only 16% of the Ede perceived Kinh as poorer. Hence, Kinh sent the Ede significantly higher amounts if they believed them to be poorer (MW  $p=0.091$ ). Also, Kinh expected on average lower amounts from peers of the other ethnicity (MW  $p=0.00$ ). This speaks in favor of an altruistic behavior of the Kinh where they show responsibility to support those who were unlucky in the game but also worse off in real life. We cannot find similar evidence for the Ede who transferred similar amounts to unlucky peers independently of their ethnic belonging.

Ede seem to be driven by different motivations. Through the survey we know which participants supported others through monetary or non-monetary resources in the past. We find that transfers from Ede were significantly higher towards peers who helped them in the past (MW  $p=0.013$ ). This is especially true when this person was a Kinh (transfers increased by 30% towards Kinh who helped them during times of need). In return, Ede also expected peers who received their help to transfer more in the game (MW  $p=0.004$ ).

The observations we make in the treatment group where participants had the option to buy insurance for a price of 50% of their endowment also reveal differences between the ethnic groups. On average the take-up rate for insurance was 40%. Consistently with the data on risk aversion and wealth, participants who show higher risk aversion were more likely to purchase insurance. And, so were the Ede, generally perceived to be poorer (MW  $p=0.00$ ). Also consistent with previous observations, Ede were less likely to purchase insurance if they were grouped with peers that helped them in the past through monetary or non-monetary resources.

Through our experimental setup we can show that there is no evidence for ethnic discrimination among the rural population in Dak Lak Province, Vietnam. But, we can show remarkable

differences in behavior when it comes to mutual support in times of idiosyncratic shocks. Whereas the Kinh who are perceived richer are more likely to support the poorer group of Ede if they are unlucky in the experiment, the Ede rather base their mutual support on past experiences from outside the experimental lab. They support those who supported them in the past but equally expect higher shares from those they supported in real life. We further find that the poorer Ede were more likely to purchase insurance protecting them against an unforeseen shock. However, if they found themselves in a risk-sharing group with people who supported them in the past they would on average decrease the demand for insurance.