Informal trust building factors and the demand for microinsurance.

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Summary: Demand for micro insurance in developing countries is low in comparison to demand for insurance in developed countries. Common explanations are lower levels of wealth or financial literacy of the targeted clients. However, recently it is being realized that these explanations often don’t account for the experienced variance between the demand in developed and developing countries. In our view lower levels of demand in developing countries may be caused by weaker formal trust-building institutions governing insurance transactions in developing countries. We suggest that microinsurance clients rely on informal trust building mechanisms as substitutions for formal trust-building institutions for reducing the risk of opportunistic behaviour in the insurance transaction. Therefore we hypothesize that informal trust-building factors are equally or more important in explaining demand for microinsurance than commonly acknowledged factors like financial literacy, household characteristics but also risk perception and previous experiences with risk.

Data on the uptake of typhoon re-housing microinsurance were collected through a combination of key-informant interviews, focus groups in local communities, participatory risk mapping and interviews with female heads of households. To test our hypothesis a sample of 171 households from 11 rural communities in typhoon-prone regions of the Philippines was taken. All insured households and a disproportionally stratified random sample of non-insured households were included.

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The logistic regression shows that our comprehensive model explains 35 per cent of variance in demand. Knowing peers with claims, an informal trust-building factor, is the most important significant factor explaining demand. Other significant factors are the perception of risk and the wealth ranking of the households. Other factors such as previous experiences of risk, experiences with insurance and insurance claims are not found to be significant. Effects of location variables, which are commonly found to be significant in demand studies, can be partly explained by the effect of knowing peers with claims. We show that informal trust-building factors are most important in explaining the uptake of microinsurance. For microinsurance demand this may imply that increases in demand take a longer time to arise than would be expected in developing countries. However, involving peers with claims in marketing of microinsurance will increase the speed of take up.
Poor people in developing countries are vulnerable to risks and they use a diversity of strategies to cope with them. Often, the strategies that are accessible to them are insufficient to cover the consequences of risks they face. Large scale environmental variability is predicted to further challenge the vulnerability of the poor in developing countries. The correlated nature of natural disasters such as floods, typhoons and droughts, implies that risk management through traditional social security mechanisms and local risk pooling is often insufficient. This is further exacerbated by low capacity of the state to provide widespread protection. This inability to deal with risks reduces a society’s capacity to accumulate, innovate and develop (Fafchamps, 2003). Structural failure in adequately managing risks may have enormous impacts which on the long term may lead to structural poverty, which persists over generations. Microinsurance has the potential to reduce the vulnerability of the poor to natural hazards in developing countries by offering an additional risk transfer mechanism, in the form of insurance, which is accessible to the poor (Linnerooth-Bayern and Mechler, 2006, Barnett, Baret and Skees, 2007, Warner, Ranger, Surminski, Arnold, Linnerooth-Bayer, Michel, Kerjan, Kovacs and Herweijer, 2007 and Suarez and Linnerooth-Bayer, 2010). We define microinsurance as the protection of low income people against risks in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved. The difference between insurance and microinsurance refers merely to the targeted clients and the context in which they are embedded and does not refer to the (i) size of the risk-carrier; (ii) scope of the risk or the (iii) delivery channel (Churchill, 2006).

Despite the realization that microinsurance has the potential to offer improved risk management to the poor, the demand for micro insurance in developing countries is low and increasing slowly in comparison to demand for insurance in developed countries (Gine et. al., 2007a, Basaza, Criel and Van der Stuyft, 2008, Cole et al., 2009, Ito and Kono, 2010). Common explanations are lower levels of wealth of the targeted clients in developing countries and their financial literacy. However, recently it is being realized that these explanations often don’t account for the experienced variance between the demand in developed and developing countries. Several other suggested factors that are increasingly being study are the risk management needs of the poor. It is even being suggested that the ‘low’ levels of demand for some microinsurance products actually fit with expected demand for these products based on their actuarial value (Clarke and Kalani, 2011). In the light of a clear need for additional risk management options for the poor it is therefore necessary to understand which factors influence demand. Ultimately with the objective to understand if and how policy and business can contribute to increasing the uptake of microinsurance as an additional risk transfer mechanism.
To understand the demand for microinsurance and also any other innovation for that matter both an understanding of the supply of and access to the innovation and the decision making process about adopting, taking up or purchasing the innovation are relevant approaches (Rogers, 2003). However, even though microinsurance is still in its initial stages and there is a large scope for increases in supply and access the lack of understanding about the (low) demand in the field of microinsurance is derived from programs in which there is sufficient supply of and access to microinsurance but microinsurance is not adopted, taken up or purchased.

For understanding the decision to purchase microinsurance we will start by discussing the micro economic theories that are commonly used for understanding the decision making about microinsurance: Standard Expected Utility (SEU) theory and Prospect Theory. In economics, game theory, and decision theory demand for insurance is understood by considering preferences with regard to uncertain outcomes as a resultant of payouts, probabilities of occurrence, risk aversion, and different utility of the same payout to people with different assets or personal preferences. Traditionally, under expected utility, it is assumed that demand for insurance is higher for risk averse individuals who use insurance to avoid the risk of loss (e.g., Neumann and Morgenstern, 1944; Arrow, 1965; Schlesinger and Doherty, 1985; Cook and Graham, 1977; Arrow, 1963; Feldstein, 1973; Feldstein and Friedman, 1977; Feldman and Dowd, 1991; Manning and Marquis, 1996). Expected utility theory explains demand by referring to insurance product characteristics (premium and payouts), socioeconomic characteristics and assumes that individuals are capable of objectively assessing the probability of risk.

Prospect theory, an alternative to expected utility theory, describes the demand for insurance by referring to the decision to purchase insurance in relation to its alternatives. It assumes the importance of social, situational and cognitive factors in understanding economic decisions (Slovic, Fischhoff and Lichtenstein, 1977). Prospect theory recognizes that individuals make imperfect assessments of information (Slovic, Fischhoff and Lichtenstein, 1977, Slovic, 1987). In addition, in prospect theory individuals evaluate losses differently from the manner in which they evaluate gains and different individuals may evaluate a specific gain as a loss and vice versa (Kahneman and Tversky, 1979: 288). The value function for losses is steeper than the value function for gains. In addition, the proposed value function is steepest at the reference point, indicating that especially at the reference point small changes in alternatives can imply large changes in experience of value (loss versus gain) (Kahneman and Tversky, 1979). Finally, the perception of gain and loss
depends on a predetermined reference point, which depends on the actual asset position of the individual (Kahneman and Tversky, 1979). This is of special interest in our study because it can be assumed that the asset position of individuals in developing and developed countries is different. Through this understanding of the importance of variance in reference points, first of all, the prospect theory suggests that not objective probability of risk but perceptions of risk influence the decision to take up insurance. Secondly, it has contributed to an understanding of how small changes in the design of insurance products and the way they are marketed (i.e. framing) can influence the decision to purchase insurance (Mullainathan and Shafir, 2009, Dalal and Morduch, 2010). Therefore prospect theory allows for studying the influence of different alternatives, product attributes and marketing on demand for insurance. In addition, not the objective risk but perceptions of risk explain insurance demand. However, even though it is assumed that context influences and individual’s reference point, prospect theory still does not help in explaining what different circumstances or contextual factors influence an individual’s reference point with which he or she evaluates different insurance alternatives.

Results of previous microinsurance demand studies

In the following section we will separately present quantitative and qualitative studies on microinsurance demand, focusing specifically on hypothesized factors and factors that have been included in previous studies. After these two presentations the outcomes will be discussed.

Factors influencing the demand for micro insurance are only reported in a few peer-reviewed\(^2\) quantitative empirical studies. Like the above-mentioned micro-economic theories for understanding the decision to purchase insurance, these studies often focus on product and marketing characteristics, socioeconomic household characteristics and the degree of risk aversion as potential explanatory factors for demand (Schneider and Diop, 2004, Basaza et al., 2008; Chankova, Sulzbach and Diop, 2008; Ito and Kono, 2010; Giesbert, Steiner and Bendig, 2011). Schneider and Diop (2004) find that location dummies, education, gender, household size, radio ownership and distance to the health facility are significant factors explaining community health insurance uptake in a model that explains 22% of variance. They estimated a model based on a household survey (N=2474) which also included age,

financial status, cattle, having small children and recent pregnancy. Ito and Kono (2010) through a household survey complemented with experiments (N=209) find that age, household size, gender, value of land assets, credit constraints, barn ownership, sickness, hyperbolic risk preference, risk loving and location dummies are factors significantly explaining health insurance uptake. In their model education, financial status, non-land asset value, piped water, sewerage, toilet, having small children, periodic instalment for the insurance and risk aversion were included but not found to be significant. They don't report the degree of variance that their model explains. In a model that explains 44% of variance Giné, Townsend, and Vickery (2008) find that risk aversion, cultivated land, credit constraints, membership and loan from provider, knowing peers with insurance, having a progressive nature, and age are factors significantly explaining the uptake of rainfall insurance. They conducted a household survey (N=752). Financial status, education, gender, household size, land asset value, ambiguity aversion, patience, pessimism about insurance return and having another insurance were found not to be significant in their model. Giesbert, Steiner and Bendig (2011) find that risk aversion, vaccination, risk perception, age, non-land assets, remittances, education, and the location dummy are significant factors explaining the uptake of voluntary life insurance. Their model, based on a household survey (N=350) also included gender, sickness, land asset value, dependents, marital status, employer/employee, risk loving and risk experience but these were found not to be significant. Chankova, Sulzbach and Diop (2008) combine comparable household surveys conducted in Ghana, Mali and Senegal (N= 6712, 9226, 10526 respectively). In a model trying to predict enrolment in a mutual health organization they find that handicap and sickness, risk perception, age, gender, education, occupation, financial status and the location dummy are significant explanatory factors. They don't report they degree of variance that their model explains. Factors which were not found to be significant are household size and the distance to the health facility. Clarke and Kalani (2011) find that livestock ownership, credit constraints, financial status, cattle and membership of a community network are significant in explaining index insurance take up in a model explaining 21% of variance. Their model is based on experimental evidence collected from a framed microinsurance lab experiment (N=378). Age, education, gender, household size, occupation, understanding, financial literacy and membership of community insurance were not found to be significant. Finally, Thornton, Hatt, Field, Islam, Solis Diaz, Azucena Gonzalez (2010) find that the marketing strategy, membership of MFI, number of (young) children, and chronic diseases are significant in a model explaining 23 percent of variance. They performed an experimental evaluation (N=2215) in which education, gender, marital status, any visit to health care
provider, number of visits to health care provider, smoking, costs of health care, financial status and having savings are included but found not to be significant.

The above presentation of empirical models estimating demand for microinsurance is presented in Table 1. We categorized the factors which are included in the above mentioned studies into household characteristics (general, health indicators, insurance indicators, financial status and assets), risk attitude and context. We excluded product and marketing characteristics because in this study the effect of product and marketing characteristics on demand is not our focus. In none of the empirical studies which are included the product or marketing characteristics are varied.

The findings suggest that especially age, education, sickness, membership of loan from the insurance provider, financial status and credit constraints, risk aversion and location dummies are important explanatory factors for demand. It should be noted that especially the location dummies appear to be important. In all six studies in which they were included they were found to be significant at the 0.01 level and have strong marginal coefficients. These studies have also provided evidence that the decision to take up insurance itself is considered as risky by individuals because the insurance purchase implies a risk of loss if the claim is not paid (Giné, Townsend and Vickery, 2008, Clarke and Kalani, 2011), which is especially important in developing countries. Under this assumption, risk averse individuals have lower demand for insurance as opposed to the commonly expected higher demand based on SEU.
### Table 1: Factors explaining insurance take up organized by household characteristics, risk attitude and context

<table>
<thead>
<tr>
<th>Household characteristics</th>
<th>Household characteristics ctd.</th>
<th>Risk attitude</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age A, B**, C***, D***, E***, F</td>
<td>Insurance status</td>
<td>Risk averse B, C*, D***</td>
<td>Location dummies A(2)<em><strong>, B(2)</strong></em>, C(?)<em><strong>, D(1)</strong></em>, E(1)**</td>
</tr>
<tr>
<td>Education A***, B, C, D**, E***, F, G</td>
<td>Loan from insurance supplier C*** G**</td>
<td>Risk perception D***, E*</td>
<td>Member community network C***, F**</td>
</tr>
<tr>
<td>Gender A*, C, D, E***, F, G</td>
<td>Member of insurance supplier C***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household size A***, B**, C, E, F</td>
<td>Has other insurance C</td>
<td>Hyperbolic B**</td>
<td></td>
</tr>
<tr>
<td>Dependents D</td>
<td>Understanding F</td>
<td>Risk loving B*, D</td>
<td>Distance health facility A***, E</td>
</tr>
<tr>
<td>Marital status D G</td>
<td>Financial literacy F</td>
<td>Risk experience D</td>
<td>Knows peers with insurance C***</td>
</tr>
<tr>
<td>Health indicators</td>
<td>Financial status and assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sick members B***, D, E*** G**</td>
<td>Financial status A, B, C, E***, F** G</td>
<td>Ambiguity aversion C</td>
<td>Member of community insurance F</td>
</tr>
<tr>
<td>Handicapped E***</td>
<td>Credit constrained B***, C***, F***</td>
<td>Patience C</td>
<td></td>
</tr>
<tr>
<td>Vaccination D***</td>
<td>Non-land asset value B, D***</td>
<td>Pessimism about insurance return C</td>
<td></td>
</tr>
<tr>
<td>No. of visits to health care provider G</td>
<td>Occupation E***, F</td>
<td>Progressive household C**</td>
<td></td>
</tr>
<tr>
<td>Any visit to health care provider G</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recent pregnancy A</td>
<td>Land asset value B*, C, D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smokes G</td>
<td>Cultivated land***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs of health care G</td>
<td>Cattle A, F***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small children A, B, G*</td>
<td>Remittances D**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piped water B</td>
<td>Barn B**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sewerage B</td>
<td>Radio A***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toilet B</td>
<td>Employee/Employer D</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Has savings G</td>
<td></td>
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</tbody>
</table>

A= Schneider and Diop, 2004, community-based health insurance
B= Ito and Kono, 2010, community-based health insurance and general health insurance
C= Giné, Townsend and Vickery, 2008, rainfall insurance
D=Giesbert, Steiner and Bendig, 2011, voluntary life insurance
E= Chankova, Sulzbach and Diop, 2008, enrolment in Mutual Health Organizations
F= Clarke and Kalani, 2011 index and indemnity insurance
*** significant at the 0.01 level
** significant at the 0.05 level
* Significant at the 0.1 level
(n) = n location dummies

We separately consider qualitative studies because they propose, next to the common factors mentioned in quantitative studies, promising factors that may influence demand (McCord, 2001, Cohen and Sebstad, 2005, Schneider, 2005, De Allegri, Sanon and Sauerborn, 2006, De Allegri, Sanon, Bridges and Sauerborn, 2006, Basaza, Criel, Van der Stuyft, 2007, Patt, Peterson, Carter, Velez, Hess and Suarez, 2009). Through discussing experiences of researchers with conducting games, workshops and surveys in India, Africa
and South America Patt et al. (2009) suggest that trust of people in the insurance product
and the organizations involved in selling and managing it is important for understanding their
decision to participate in index insurance. They suggest that these factors may be more
important than the socioeconomic ones in influencing demand. Basaza et al. (2007)
performed a comparative case study evaluation of two community health insurances. They
point to a series of not mutually exclusive explanations for low take up of these insurances
both with respect to demand and supply issues. They find that potential explanations for low
demand may be the insurance scheme’s design and operation and insurance principles,
community involvement and lack of trust in the management of the scheme. Schneider
(2005) conducted a series of 24 focus groups including micro-health insurance (MHI)
members, non-members, MHI managers and health care providers as participants.
Discussion points focused on design and organisation, information campaigns and
participation in MHI. She finds that trust in the management of the insurance scheme, trust in
the professional competence of health care providers and trust in legal and control
mechanisms influence enrolment. De Allegri et al. (2006) find, through in-depth interviews
and focus groups that scepticism about the insurance, lack of adequate knowledge and
understanding of the insurance product and previous bad experiences with similar collective
arrangements are explanatory factors for demand.

In the studies presented above different microinsurance products were studied. The type of
risks they covered, the price of the product, the possibility of flexible payments and many
other attributes have caused differences in the level of demand for these products. In the
statistical models these product and marketing characteristics were included as explanatory
factors for demand. It is however difficult to compare them because the products were
different but also the clients, the context and the provider. Two studies used experimental
designs in which characteristics of the clients, context and providers were a constant and
product and marketing attributes were varied to understand their influence on demand. A
general conclusion about socioeconomic household characteristics is also complicated
because the products and marketing characteristics vary. Recurring factors influencing
microinsurance demand appear to be age and gender. Location and membership of local
networks are important in explaining demand. In the quantitative studies, if included, these
variables are found to be significant and in most studies their effect is high in comparison to
those of the other variables included in the models. Even though this suggests that location
or context variables or membership of networks may be of importance in explaining demand,
these quantitative studies do not provide an interpretation of what particular characteristics of
the location, context or networks are of importance in explaining demand. Especially from
policy and business perspectives this interpretation is important because it could help identify how location, context or networks can be used to improve demand. The qualitative studies already provided a suggestion for an interpretation of the importance of these location dummies through suggesting that different trust mechanisms, effective at the level of locations or local social networks may play a role.

It should also be noted that, with the exception of Giné, Townsend and Vickery (2008), the studies reporting statistical power (four out of seven), explain approximately 20 per cent of variance. Given the reported parameters the location dummies most likely play a dominant role in explaining demand.

Contrary to developed countries, experiences with insurance in developing countries either are lacking or are characterized by opportunistic behaviour of insurers, either because of lack of solvability or because of bad intentions. We also know that the decision to take up insurance itself is considered as risky by individuals because the insurance purchase implies a risk of loss if the claim is not paid. To take this understanding a step further we follow Gambetta (1988) by viewing the purchase of insurance as an economic transaction between two individuals or entities. In principle this economic transaction is uncertain because of fear of opportunistic behaviour on both sides. However, because the insurance premium is paid in advance to potential claims the risk of opportunistic behaviour is balanced towards the side of the client who pays the premium to the insurer. This makes an insurance transaction different from for example a credit transaction where the risk of opportunistic behaviour is more balanced toward the entity supplying a loan.

The risk of opportunistic behaviour can be reduced by entering trust into the transaction. In this case the insurance transaction is more likely to take place. So our definition of trust, following Gambetta’s (1988:217) is: “The probability that actor A will perform an action that is beneficial or at least not detrimental to actor B is high enough for actor B to consider engaging in some form of cooperation with him” (Gambetta 1988: 217). Trust is a type of expectation that alleviates the fear that one’s exchange partner will act opportunistically. In terms of a microinsurance purchase it would be: The probability that the insurer will pay the claim if the low income household experiences the insured loss is high enough for the low income household to engage in the insurance contract and pay the insurance premium.

Zucker (1986) proposes three different ways of trust-building relating to transactions between actors. Process-based trust emerges from recurrent transactions; characteristic-based trust is based on social similarity and institutional trust is tied to formal social structures. Zucker (1986) also explains that process-based trust and characteristic-based trust are disrupted in
more modern societies and substituted by formal institutions such as professions, bureaucracies and financial intermediaries. Guiso, Sapienza and Zingales (2007) and Okonkwo and Paulson (2004) also confirm the importance of these formal institutions in explaining participation in financial transactions by studying financial transactions of immigrants in the United States. They find that individuals are more reluctant to participate in financial transactions if they have emigrated from countries where formal institutions are weaker. They measure the strength of formal institutions by indicators such as quality of the bureaucracy, rule of law, ethnic harmony and ‘protection from expropriation’ which measures the extent to which individual property rights are protected. Especially for poor households in rural areas in developing countries, which have often been exposed to bankruptcy of insurance companies in the past, these formal trust-building institutions are not accessible, reliable or existent.

However, since varying levels of demand for microinsurance do exist in developing countries it can be assumed that other mechanisms are in place which provide enough trust for convincing a certain group of people to enter an insurance transaction. In Zucker’s (1986) line of reasoning, if we assume that formal trust-building institutions are weak, this would mean that informal trust-building mechanisms such as process-based trust (previous experiences) and characteristic-based trust (social networks) play a more important role. This is in line with Granovetter (1974), Zucker (1986), Shapiro (1987) and Coleman (1990) who all find that different systems of trust can substitute each other.

These informal trust-building factors, such as the experience with the insurance by significant others and the level of trust in the specific insurer or its local agents compensate for this.

We therefore hypothesize:

Informal trust-building factors are equally or more important in explaining demand for microinsurance than commonly acknowledged factors like financial literacy, household characteristics but also risk perception and previous experiences with risk.

We believe that, especially because formal trust-building institutions are less accessible, reliable or existent in developing countries, informal trust-building institutions play a more important role in developing countries than in developed countries.

Because formal trust-building institutions are often effective at the macro or national level and informal trust-building mechanisms are more localized, this may also explain the high relative importance of location dummies and local networks in comparison to other variables in the statistical models explaining demand.
To scrutinize the role of these trust-building institutions in explaining demand we test a model in which informal trust-building factors are the key variables and in which previous experiences of risk, perceptions of risk and socioeconomic household characteristics are also included.

**DOMAIN, RESEARCH DESIGN, AND MEASUREMENT**

**Domain**

This paper is part of a broader study on demand and impact of natural calamity insurance in the Philippines. The product under study is PAID plan (Packaged Assistance in case Of Disasters) which has a natural calamity re-housing insurance as a component of the product. The product is promoted as an insurance for low income households against the financial consequences of damage to residential houses because of typhoons. PAID plan is offered to low income households by the Centre for Agriculture and Rural Development Mutually Reinforcing Institutions (CARD MRI). CARD MRI consists of a variety of institutions such as an MFI, NGO and a training institute which all serve the purpose of financial inclusion of the Filipino population. They have 175 branches throughout the country and provincial offices in 44 out of 80 provinces. As of June 2011 they are providing microcredit to almost 1,5 million clients and insurance to more than 6,5 million people. This illustrates their outreach in a country of almost 100 million people. Their product PAID plan which is a 3-in-1 non-life micro insurance product that provides natural calamity house reconstruction start-up capital, personal accident and funeral benefits to policy holders. PAID Plan costs Php 250 (USD 5.70 based on exchange rate of 1 Php = 0.0228 USD, 7 January 2011) per year. The product was introduced in 2007 and was developed bottom-up, based on an expressed need from CARD’s clients for natural disaster insurance in the aftermath of the eruption of Mayon volcano and the simultaneous occurrence of typhoon Durian in November 2006. At the time of data collection in October 2009 PAID plan was the only natural calamity re-housing insurance that was supplied in the Philippines. By October 2009 there were around 58,000 who had bought the insurance, and approximately 1500 claims had been paid out. By mid-2010 this had risen to some 130,000 households and approximately 3000 households had received a PAID plan pay-out.

PAID plan qualifies as a micro insurance product because it targets the poorest sections of the Philippine society (Category D, average family income 2979 USD per year and E, average family income 814 USD per year according to the Philippine National Statistics
Office 2009). The yearly premium for PAID plan is less than 1% of the average yearly family income of the poorest section of the Philippine society.

Research design

In order to study demand it is necessary to have a sufficient number of insured households in the sample. Because of the rare occurrence of insured households at the time of data collection, June to October 2009, the following procedure has been executed. First, 3 typhoon-prone provinces in 3 culturally different regions were selected: Pangasinan, Bicol and Samar/Leyte. These different regions were chosen because key-informants supposed the influence of sociocultural factors on the uptake of the insurance. In practice, no differences of cultural factors were observed. Second, 11 villages were selected where the insurance had been introduced more than six months ago to make sure that households had had sufficient time in which they could have heard about the insurance and could have taken a decision to purchase the insurance. In addition to that, villages were selected with high and low typhoon risk (sea-shore versus in-land locations) to understand the influence of previous experiences of risk and risk perceptions on the uptake of the insurance. In the third step, in each village, the selection of households was done through a disproportionally stratified random sample. All insured households (n=69) and a random selection of non-insured households (n=146) were personally interviewed. The manner of selecting cases on the dependent variable, the so-called case-control design, is common in epidemiology where the occurrence of certain viruses is rare. In our sample all reachable insured households (approximately 30% of the sample) and a random selection of uninsured households (approximately 70% of the sample) are represented. In the population the ratio is 5:95. We however do not weigh the sample to represent the population ratio’s because of three reasons. First, the purpose of our study is to explain which factors influence demand and not to describe or predict demand in the population. This would be less relevant in the case of microinsurance since it is still in the initial stages of the product growth cycle. Second, we are interested in the population of uninsured with the purpose of understanding which factors can contribute to them taking up the insurance. Finally, weighing leads to less power of the model and only leads to better results if the ratio of treated (insured) versus untreated (uninsured) in the population is very rare (1:400) (Scott and Wild, 2001). The only implication this has for our analysis is that location dummies cannot be included in the regression analysis. Because we hypothesize that informal trust building factors account for (part of) the observed effect of location dummies in other studies we can check though if the location dummies have an effect on the informal trust building factors.
In advance to the personal interviews focus groups were organized in the villages. Focus groups are group discussions to explore a specific set of issues in which the group interaction is central (Merton, 1956, 1987, Morgan, 1988, Kitzinger, 1994). The focus groups consisted of 6-20 participants and were held with the aim of making an event history of important community events such as floods, typhoons, pests, and major social trends such as housing, use of coping strategies, wealth and outmigration. Participants were selected to represent a sample of younger, older, wealthier and poorer households of the village. To assess the relative wealth of the households in the community a wealth ranking was conducted. Wealth ranking provides an empirically valid technique to stratify households by socioeconomic status (Scoones, 1995 and Adams, Evansl, Mohammed and Farnsworth, 1997). The wealth ranking technique was chosen because income and expenditure, as periodic income flows, do not adequately reflect vulnerability or poverty (Carter and May, Sahn and Stifel, 2000 and Barett and McPeak, 2006). To test the robustness of the wealth ranking technique an alternative focusing on assets, as suggested by Barett and McPeak (2006) is also tested.

**Measurement**

In this section we describe the operationalization of the variables which we include in the model. The dependent variable in our study, having microinsurance, was measured by asking households if they were insured through PAID plan and if they could demonstrate the part of the slip which indicates this.

The informal trust building mechanisms are the dependent variables. Earlier we made a distinction between formal trust building institutions and informal trust building mechanisms. Informal trust building mechanisms can be either process-based or characteristics based. In practice these two mechanisms were found to be intertwined. In our study we use experiences of peers with pay outs as an indicator for both characteristic-based trust and process-trust. To explain this we have to refer back to the insurance contract as an economic transaction in which the household tries to reduce the risk of opportunistic behaviour of the insurer through trust as was mentioned above. In developing countries both trust in the institution offering the insurance and in insurance as such are necessary for building enough trust to create the insurance purchases. In the case of insurance the fear of opportunistic behaviour has two sides. On the one hand there needs to be security that the insurer will be solvable at the time of pay out. On the other hand there needs to be sufficient trust in the intentions of the insurer and not the feeling that the insurer, even if there is enough
solvability, is not going to pay because of bad intentions. Both situations are common. In the case of this insurer there was a general trust in the institution as such as expressed in the focus groups and in the interviews. Therefore, in our study this last trust-building factor is a constant. Pure process-based trust (i.e. trust developed by previous completed insurance transactions, premium and no claim and premium and claim, between the household and the particular insurer) is not common since only a minority in our sample (5 per cent) has experienced a claim pay-out. To reduce the risk of opportunistic behaviour claim experiences by trusted peers can function as a substitute for the personal experience of the claim. However, also knowing of claim experiences of trusted peers is rare (27 per cent in our sample). Having knowledge of claim experiences by peers is actually a combination of characteristics-based and process-based trust because it relies on the network of peers (characteristics-based) and previous experiences with insurance transaction (process-based). Next to the experiences of peers, other process-based trust factors included here are previous experiences with any other current or past insurance or experiences with any pay-out from another insurance product.

Since we hypothesize that informal trust-building mechanisms may be even more important than financial literacy, household characteristics but also risk perception and previous experiences with risk we also include these variables, as controls, in our model.

Perceptions of risks were measured largely according to the participatory risk mapping method applied by Smith, Barrett and Box (2000) in East Africa. Their method is a two-stage system of ordinal rankings where respondents first identify risks and then rank the risks they identified. For the first step they rely on an open-ended question: “…so as not to influence the cited risks, how many risks were mentioned or in what order of importance.”

In the pilot phase of our study it was discovered that this actually had the opposite effect as some people were not willing to talk about certain risks and had no problem talking about others. However, this did not mean that the risks they didn’t want to talk about were not worrying to them. This was especially found to be the case with risks relating to death or burial. In addition it was found that respondents were not, on the spot, able to recall all their worries. Therefore we took the following approach: In the focus groups participants (see previous paragraph) were asked about risks that households in the community are exposed to. These risks were written on cards in the local language. In the total sample a variety of 21 risks was identified. The number and kind of risks per village varied. In the second step individual respondents of the community samples, not overlapping with the focus group participants, participated in a risk ranking exercise in the course of the interview. This risk ranking exercise consisted of three steps. In the first step respondents were asked to look at
all the cards with risks that applied to their community and were asked if they had any other worry’s, concerns or anxieties. This was never the case. In a second step they were asked to select all the cards with the risks that they felt were applicable to their situation. The number of risks that respondents selected varied from 1 to 14 (mean = 10, sd = 2.5). In only one occasion it was necessary to complement the written words with icons depicting the risk because of the respondent’s insufficient command of reading. In the third step they were first asked to select the card with the risk that they worried about most. This card was put aside. Then they were asked to select, out of the remaining cards, the risk that they worried about most. This was repeated until a complete rank order was reached. Following the procedure of Smith et al. (2000) the relative position of each risk was calculated by dividing the rank number of that risk +1 by the total number of risks that the respondent had selected thus ending up with a ratio between 1 and 2. For our purpose we only include the perception of risk of typhoons and the perception of risk of accidents. The accident risk is added here because the typhoon re-housing insurance also included an accident cover.

Previous experiences with typhoon risk and accident risk were therefore also included in our model. This was measured by asking respondents, for all risks applicable to their community, if they personally or within their close social proximity had experienced the risk. To test the robustness of this variable the amount of years since they had experienced this risk was also asked and tested in our model as an alternative measurement of previous experience of risk.

The following other control variables were also included in our model: wealth rank, house structure, receives remittance, number of children, education and age in years.

The wealth ranking was conducted in focus groups in which participants were asked to picture poor households in their community and discuss the assets that they typically have and don’t have. This was also done for medium and wealthier households. After this they were asked to divide the households in their community in poor, medium and wealthy households. In the sampled communities hardly any differences were found between the assets owned by households in the different categories. As was mentioned above, the resulting wealth ranking variable is tested for robustness by including a variable constructed based on the assets of the household in the sample.

During the focus groups three types of house structures were distinguished: bad, medium and good house structures. Bad house structures are houses that are completely built from natural materials such as bamboo and wood. These houses require a relatively low investment but are easily damaged. Medium house structures are house structures of which at least part of the house is built from concrete. Good house structures are house structures
which are predominantly built from concrete which thus require a much larger investment but are less easily damaged.

Receiving remittance was measured by asking households if they had family members living abroad or in urban centres of the Philippines (Manila, Cebu) from which they received regular payments or relied on in case of large expenditures such as hospital visits, funerals or natural disasters.

Education was measured by asking respondents if they had received education and up to what level. If secondary was indicated it was always verified if they had started secondary and dropped out or if they had completed the secondary level.

To measure the uptake of PAID plan we estimate the following regression equation:

\[
\text{Insurance}_i = \alpha + \beta_1 \text{Knows peers with claims}_i + \beta_2 \text{Perception of typhoon risk}_i + \beta_3 \text{Perception of accident risk}_i + \beta_4 \text{Experienced typhoon in the past}_i + \beta_5 \text{Experienced accident in the past}_i + \beta_6 \text{Experienced insurance claim}_i + \beta_7 \text{Currently has other insurance}_i + \beta_8 \text{Had insurance in the past}_i + X'_i \mu + \varepsilon_i
\]  

(1)

where ‘Insurance’ is an indicator if respondent ‘i’ has taken up PAID plan. ‘Knows peers with claims’ is an indicator if respondent ‘i’ indicates that they knew a peer with a claim before the purchase of the insurance. ‘Perception of typhoon risk’ and ‘perception of accident risk’ present the risk ranks that the respondent ‘i’ has experienced. ‘Experienced accident in the past’ and ‘experienced typhoon in the past’ is an indicator if the respondent ‘i’ has experienced the risk in the past. ‘Experienced insurance claim’ is an indicator if respondent ‘i’ has experienced an insurance claim from an insurance in the past. ‘Currently has other insurance’ is an indicator if respondent ‘i’ currently has another insurance next to PAID plan. ‘Had insurance in the past’ is an indicator if respondent ‘i’ has had insurance in the past but does not have insurance anymore. The vector of control variables, \(X\), includes wealth rank, wealth rank squared, bad house structure and medium house structure, receives remittances, number of children, education and age in years.

Sample characteristics

Table 2 presents the key characteristics, mean values and standard deviations for the complete sample and for households with and without PAID plan. The average respondent was 41 years old and had started or completed secondary education. In the total sample 54
households (32%) were ranked as very poor, 82 (48%) as poor and 35 (21%) as medium relative to the other households in the communities. Among the insured households these percentages were 43-22-35% and among non-insured households 28-55-16% respectively. In the total sample 77 households had a medium house structure and 62 households had a bad house structure. The other 32 households had a house built out of concrete. In our total sample the average amount of children is three. The average is a bit higher for households with PAID plan. 55 per cent of households receive some kind of remittance. For households with PAID plan 65 per cent receives this while for households without PAID plan this is 52 per cent.

In the total sample 74 per cent of households had experienced a typhoon while only 20 per cent had experienced an accident in their household. More than 99 per cent of the households in the sample expresses that they are to some extent worried about typhoons. 34% of the households in the sample ranks typhoons as the most worrying risk to which they are exposed while 75% places this risk among the top three of worries. 93 per cent of households worries about accidents and 36 per cent places accidents among their top three worries. With respect to the perception of typhoon risk the average in the total sample is 1.2418. For households with PAID Plan this is 1.3126 and for households without PAID plan it is 1.2222. Based on an average of 10 risks reported per households this means that typhoon risk is ranked on average at 2.2. There is a significant difference, at the 0.1 level, between the perception of typhoon risk amongst households with and without PAID plan. Households with PAID plan perceive the risk of typhoons as lower. This distinction is even stronger for the perception of accident risk where the average is 1.4212. For households with PAID Plan this is 1.5344 and for households without PAID plan this is 1.3900. Households with PAID plan perceive the risk of accidents as significantly less, at the 0.001 level, in comparison to households without PAID plan.
Table 2: Proportions, means and standard deviations of determinants of PAID plan insurance uptake (N=171)

<table>
<thead>
<tr>
<th></th>
<th>All households (N=171)</th>
<th>Households with PAID plan (N=37)</th>
<th>Households without PAID plan (n=134)</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP (1=yes)</td>
<td>.22 (.413)</td>
<td>.21 (.549)</td>
<td>.18 (.442)</td>
<td></td>
</tr>
<tr>
<td>Wealth rank***</td>
<td>1.89 (.715)</td>
<td>1.92 (.894)</td>
<td>1.88 (.661)</td>
<td>.288</td>
</tr>
<tr>
<td>Wealth rank squared</td>
<td>3.99 (2.832)</td>
<td>4.46 (3.579)</td>
<td>3.87 (2.589)</td>
<td>1.130</td>
</tr>
<tr>
<td>Bad house structure (1=yes)</td>
<td>.36 (.482)</td>
<td>.46 (.505)</td>
<td>.34 (474)</td>
<td>1.384</td>
</tr>
<tr>
<td>Medium house structure (1=yes)</td>
<td>.45 (.499)</td>
<td>.35 (.484)</td>
<td>.48 (.501)</td>
<td>-1.366</td>
</tr>
<tr>
<td>Receives remittance (1=yes)</td>
<td>.55 (.499)</td>
<td>.65 (.484)</td>
<td>.52 (.501)</td>
<td>1.366</td>
</tr>
<tr>
<td>Number of children</td>
<td>2.93 (1.665)</td>
<td>3.14 (2.030)</td>
<td>2.87 (1.553)</td>
<td>.728</td>
</tr>
<tr>
<td>Education#</td>
<td>2.64 (1.537)</td>
<td>2.62 (1.277)</td>
<td>2.64 (1.605)</td>
<td>.070</td>
</tr>
<tr>
<td>Age in years</td>
<td>41.42 (10.567)</td>
<td>41.59 (10.062)</td>
<td>41.37 (10.739)</td>
<td>.121</td>
</tr>
<tr>
<td>Knows peers with claim (1=yes)</td>
<td>.27 (.448)</td>
<td>.54 (.505)</td>
<td>.20 (.403)</td>
<td>4.280***</td>
</tr>
<tr>
<td>Perception of typhoon risk##</td>
<td>1.2418 (.285)</td>
<td>1.3126 (.38488)</td>
<td>1.2222 (.24933)</td>
<td>1.715*</td>
</tr>
<tr>
<td>Perception of accident risk##</td>
<td>1.4212 (.313)</td>
<td>1.5344 (.36317)</td>
<td>1.3900 (.29095)</td>
<td>2.527**</td>
</tr>
<tr>
<td>Experienced accident in past (1 = yes)</td>
<td>.20 (.405)</td>
<td>.19 (.397)</td>
<td>.21 (.408)</td>
<td>-2.26</td>
</tr>
<tr>
<td>Experienced typhoon in past (1 = yes)</td>
<td>.74 (.442)</td>
<td>.73 (.450)</td>
<td>.74 (.441)</td>
<td>-1.09</td>
</tr>
<tr>
<td>Experienced insurance claim (1=yes)</td>
<td>.23 (.421)</td>
<td>.24 (.435)</td>
<td>.22 (.418)</td>
<td>.242</td>
</tr>
<tr>
<td>Currently has other insurance (1=yes)</td>
<td>.63 (.484)</td>
<td>.65 (.484)</td>
<td>.63 (.485)</td>
<td>.242</td>
</tr>
<tr>
<td>Had insurance in the past (1=yes)</td>
<td>.64 (.480)</td>
<td>.68 (.475)</td>
<td>.63 (.483)</td>
<td>.467</td>
</tr>
</tbody>
</table>

* 0 = primary level, 1 = primary finished, 2 = secondary level, 3 = secondary finished, 4 = bachelor level, 5 = higher
** 1 = highest possible rank and 2 = lowest possible rank
### 1 = Ranked as poor household, 2 = ranked as medium household , 3 = ranked as rich household
*** significant at the 0.01 level
** significant at the 0.05 level
* Significant at the 0.1 level

With respect to insurance experiences in the past and with other insurances there is no significant difference between insured and uninsured. 63 per cent of the households in our sample had, at the time of data collection, some type of other insurance while 64 percent had some type of insurance in the past. Most commonly this was found to be Philhealth, a subsidized government health insurance which is free for households Below the Poverty Line. Households with previous or current formal jobs often participated in some other kind of social insurance program. 23 per cent of the households had experienced a claim from an insurance in the past.

27 per cent of the total sample knew a peer which had received a claim from PAID plan. From table 1 it can be concluded that there is a significant difference, at the 0.001 level, between households with and without PAID plan and their knowledge of peers with claim experiences. Out of the households with PAID plan 54 per cent knew a peer which had experienced a claim versus only 20 per cent of the households without PAID plan.
Take up of PAID plan

In our sample 22 per cent of households have taken up the insurance. The first model shows that the household characteristics explain about 17 per cent of variance whereas wealth rank and wealth rank squared are the only significant predictors. It should be noted that education has a non-significant but small negative effect. This may be caused by the targeting of this particular insurance to the poorest sections of the population. Model 2 shows that knowing peers with claims adds more than 10 per cent to the explained variance. In model 3 the perception of typhoon risk and accident risk add another 6 per cent to the explained variance. However, model 4 shows that past experienced with typhoons and accident are not significant and add less than 1 per cent. Here it should be noted that they have a negative effect. Previous experiences with other insurance and with insurance claims are also not significant and add hardly anything to the explained variance. To conclude, our final model explains 35 per cent of variance. Table 3 shows that the parameters predicting take up are robust given their stability over the different models. For the effect of location variables on knowing peers with claims we performed an ANOVA. The ANOVA shows that there is a strong and significant effect of the location variables.
Table 3: A logistic regression analysis of the determinants of PAID plan insurance uptake (N=171)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.052</td>
<td>1.879</td>
<td>-2.838</td>
<td>-2.442</td>
<td>-2.376</td>
</tr>
<tr>
<td></td>
<td>(.368)</td>
<td>(.431)</td>
<td>(.342)</td>
<td>(.424)</td>
<td>(.450)</td>
</tr>
<tr>
<td>Wealth rank</td>
<td>-5.787</td>
<td>-5.945</td>
<td>-4.763</td>
<td>-4.872</td>
<td>-5.027</td>
</tr>
<tr>
<td></td>
<td>(.005)**</td>
<td>(.006)**</td>
<td>(.035)**</td>
<td>(.033)**</td>
<td>(.031)**</td>
</tr>
<tr>
<td>Wealth rank squared</td>
<td>1.593</td>
<td>1.609</td>
<td>1.332</td>
<td>1.379</td>
<td>1.408</td>
</tr>
<tr>
<td></td>
<td>(.002)**</td>
<td>(.003)**</td>
<td>(.018)**</td>
<td>(.015)**</td>
<td>(.015)**</td>
</tr>
<tr>
<td>Bad house structure</td>
<td>1.038</td>
<td>1.040</td>
<td>1.348</td>
<td>1.368</td>
<td>1.341</td>
</tr>
<tr>
<td></td>
<td>(.180)</td>
<td>(.203)</td>
<td>(.115)</td>
<td>(.118)</td>
<td>(.127)</td>
</tr>
<tr>
<td>Medium house structure</td>
<td>.649</td>
<td>.772</td>
<td>.830</td>
<td>.921</td>
<td>.861</td>
</tr>
<tr>
<td></td>
<td>(.308)</td>
<td>(.257)</td>
<td>(.245)</td>
<td>(.202)</td>
<td>(.234)</td>
</tr>
<tr>
<td>Receives remittance</td>
<td>.500</td>
<td>.360</td>
<td>.463</td>
<td>.478</td>
<td>.468</td>
</tr>
<tr>
<td></td>
<td>(.253)</td>
<td>(.438)</td>
<td>(.341)</td>
<td>(.332)</td>
<td>(.353)</td>
</tr>
<tr>
<td>Number of children</td>
<td>.100</td>
<td>.066</td>
<td>.033</td>
<td>.045</td>
<td>.040</td>
</tr>
<tr>
<td></td>
<td>(.396)</td>
<td>(.590)</td>
<td>(.794)</td>
<td>(.726)</td>
<td>(.757)</td>
</tr>
<tr>
<td>Education</td>
<td>-.169</td>
<td>-.152</td>
<td>-.157</td>
<td>-.184</td>
<td>-.224</td>
</tr>
<tr>
<td></td>
<td>(.299)</td>
<td>(.379)</td>
<td>(.382)</td>
<td>(.317)</td>
<td>(.255)</td>
</tr>
<tr>
<td>Age in years</td>
<td>.003</td>
<td>.002</td>
<td>-.010</td>
<td>-.010</td>
<td>-.011</td>
</tr>
<tr>
<td></td>
<td>(.892)</td>
<td>(.943)</td>
<td>(.678)</td>
<td>(.699)</td>
<td>(.653)</td>
</tr>
<tr>
<td>Knows peers with claim</td>
<td>1.573</td>
<td>1.792</td>
<td>1.950</td>
<td>1.939</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.000)**</td>
<td>(.000)**</td>
<td>(.000)**</td>
<td>(.000)**</td>
<td></td>
</tr>
<tr>
<td>Perception of typhoon risk</td>
<td>1.309</td>
<td>1.187</td>
<td>1.210</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.063)**</td>
<td>(.121)**</td>
<td>(.129)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of accident risk</td>
<td>1.557</td>
<td>1.536</td>
<td>1.577</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.033)**</td>
<td>(.035)**</td>
<td>(.035)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced accident in past</td>
<td>-.608</td>
<td>-.556</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.339)</td>
<td>(.383)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced typhoon in past</td>
<td>-.241</td>
<td>-.199</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.681)</td>
<td>(.738)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced insurance claim</td>
<td>.071</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently has other insurance</td>
<td>.186</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had insurance in the past</td>
<td>.219</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nagelkerke R square</td>
<td>.173</td>
<td>.278</td>
<td>.338</td>
<td>.346</td>
<td>.350</td>
</tr>
<tr>
<td>-2 Log likelihood</td>
<td>158.259</td>
<td>144.680</td>
<td>136.373</td>
<td>135.131</td>
<td>134.640</td>
</tr>
</tbody>
</table>

The significance levels presented in the table are based on 2-tailed testing. The asterisks for control variables are based on 2-tailed testing while for the hypothesized variables they are based on one-sided tests.

*** significant at the 0.01 level
** significant at the 0.05 level
* significant at the 0.10 level

# 0 = primary level, 1 = primary finished, 2 = secondary level, 3 = secondary finished, 4 = bachelor level, 5 = higher
## 1 = highest possible rank and 2 = lowest possible rank
### 1= Ranked as poor household, 2 = ranked as medium household, 3 = ranked as rich household

21
Conclusion and discussion

Knowing peers with claims is the most important factor explaining the uptake of microinsurance in our study. This supports our hypothesis that informal trust-building factors are equally or more important in explaining demand for microinsurance than commonly acknowledged factors like financial literacy, household characteristics but also risk perception and previous experiences with risk. Based on this we can hypothesize that microinsurance clients rely on informal trust building factors as substitutions for formal trust-building institutions for reducing the risk of opportunistic behaviour in the insurance transaction. The problem for scaling up microinsurance is that formal trust-building institutions create trust ex-ante while in the case of knowing peers with claims the trust building occurs after the risk and claim payments. This thus implies that the demand for microinsurance is likely to increase at a slower rate in developing countries than would be expected in developed countries. Especially in the context of a need for scaling up microinsurance, this study can teach us that involvement of peers with claims in marketing strategies of the product may be the best and most effective way of increasing demand. On the longer term the creation of formal trust building institutions which govern insurance transactions such as legal and regulatory frameworks and standard setting bodies are important in increasing demand.

It should be realized that the importance of knowing peers with claims may be specific to the stage of the product cycle of this product which is still in its initial stages. It can be hypothesized that over time the percentage of households which knows peers with claims will increase and therefore general trust in the insurance product will increase. If this is the case, other factors than trust, such as risk aversion, risk perceptions and household characteristics may become more important in later stages.

According to Basaza et al. (2007) trust in the insurance can relate to trust in the general concept of insurance, trust in the insurer or trust in the specific insurance product. Our study can’t test the role of trust in the insurer because only one institution is included and from focus groups it can be concluded that this institution is generally trusted. However, from our study it can be concluded that trust in the specific insurance product and not the general concept of insurance is most important in explaining demand. This can be concluded because evidence of PAID plan claim payments to peers is significant in explaining demand but experience with other insurances and even claim payments by other insurances are non-significant.

Another contribution of our study is that it contributes to an understanding of the mechanisms underlying the strong and significant effect of location dummies which are confirmed in many demand studies. Understanding the mechanisms underlying these location effects allows for
adjustment of policies and business strategies with respect to microinsurance that fit with these mechanisms.

A weakness of our study is clearly that the sample size of our study (N=171) is not large and even more so that only 11 villages have been included. This may imply that variables which are currently not significant in our model may be significant if the sample size would be larger. Another limitation is that it is difficult to draw conclusions about the role of trust in CARD because the general level of trust, as expressed in focus groups, in CARD is high. As was mentioned above, the findings of our study may be specific to the stage of the product cycle and it would be interesting to study the same factors over time at different stages of the product cycle. In addition, the context of the Philippines is a specific context which is likely to influence especially the role of different types of trust. It would be interesting to repeat this study in different contexts.
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