

Does access to internet matter for insurance uptake? – Evidence from India

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India

Using the nationally representative Indian Human Development Survey- 2011-12 data, we find that access to internet is related to better risk management practices of Indian households given by higher insurance uptake. Internet access potentially generates twin benefits of improving awareness related to benefits of insurance products and helps in reducing transaction costs for the insurers. The study highlights the role of access to internet in improving development outcomes in India. Further, we find that access to internet increase the insurance uptake of urban households more than rural households and education remains a critical barrier for leveraging the development benefits of internet access. Finally, we find that access to internet is also positively associated with the extent of insurance purchased by the household, highlighting that digital inclusion in the form of internet access could be an instrument that can partially mitigate the common investment mistakes made by households in India.

Keywords: Insurance, technology, household behaviour, internet, India

JEL classification codes: G52, O16, O53, R22

1. Introduction

Insurance is a risk management product that reduces the vulnerability of households from health, weather and income shocks, especially in developing economies. In low-income households, life-insurance can act as an instrument that shields households from falling back to poverty in case of the untimely death of the main earner. On the other hand, the availability of health insurance improves the accessibility of quality healthcare for households. Additionally, insurance can also be viewed as a long-term savings instrument by the households for retirement or other major life events. Insurance penetration in low and middle-income countries is still low. One plausible reason contributing to low insurance penetration is the complex nature of insurance instruments. The consumers shy

away from insurance products due to a poor understanding of associated benefits. Higher education and access to reliable information can help to improve the understanding of the benefits related to insurance products and in turn, increase uptake. Several empirical studies have found that more years of schooling are related to higher consumption of insurance (Arun et al., 2012; Shi et al., 2015). Higher education is related to a better understanding of complex products, and education is also related to improved financial awareness regarding the need to insure uncertain life events. Other papers have found a positive relationship between the source of reliable information and insurance uptake. Cai et al. (2015) find that people who have friends who attend financial training are more likely to purchase insurance. The peer effect is positive and significant for the diffusion of knowledge. Further, another study by Shi et. al. (2015) find that households with large informal social networks are more likely to have insurance. Platteau & Ugarte (2016) also find that members of the same self-help group are more likely to have insurance.

In the digital era, the adoption of information and communication technology (ICT) can act as a channel of information dissemination. Several papers have analysed the role of ICT for improving welfare outcomes of households such as income diversification (Leng et al., 2020), agricultural outcomes (Fu and Akter, 2016; Kaila and Tarp, 2019; Campenhout et al., 2020), access to credit (Pellegrina et al., 2017); women empowerment (Pei & Chib, 2020) and nutrition (Sekabira & Qaim, 2017). In this study, we examine whether the access to internet is related to insurance uptake in India. To the best of our knowledge, no study in India has analysed whether access to internet is related to insurance demand using nationally representative household data.

In 2018, the penetration of insurance in India was less than 4%, which is below the average of 8.9% for the OECD countries¹. The Pradhan Mantri Jan Dhan Yojana (PMJDY) launched in 2014 focused on various facets of financial inclusion of Indian households, including access to insurance, pension credit, basic banking account, and financial literacy. Since the launch of the PMJDY, the ownership of accounts among households has increased manifold, but insurance penetration did not exhibit any significant improvement². Despite supply-side interventions, insurance penetration is well below desirable levels.

The access to internet can facilitate information dissemination regarding various government schemes like PMJDY. Internet access can also help in reducing search costs; improve product related awareness among consumers through internet marketing initiatives of the insurance companies and circulation of awareness videos by regulators. Further, access to the internet can reduce the shoe-leather costs associated with visiting the nearest office for paying regular premiums.

This study contributes to two specific strands of literature. First, we contribute to the literature on the role of information and communication technology (ICT) for development. There is a growing body of literature that documents that the adoption of technology, especially smartphone ownership and access to internet can affect development outcomes. Second, there is a large body of literature that has examined the macro factors that affect insurance penetration focused like per capita income, financial development, institutional quality, inflation, life expectancy and dependency ratio (Outreville, 1996; Beck & Webb; 2003). Even though the theoretical literature of micro

¹ Source: OECD statistics: <https://stats.oecd.org/Index.aspx?DataSetCode=INSIND>

² The awareness video on Pradhan Mantri Jeevan Jyoti Beema Yojana (accident insurance scheme under PMJDY) features famous Indian actor. <https://pmjdy.gov.in/home>

factors is well-developed, the empirical evidence for developing economies like India is still scant. This study contributes to the emerging field of studies analysing the micro determinants of insurance in the context of developing economies.

Using the nationally representative data from the second wave of Indian Human Development Survey (IHDS-2) - 2011-12, we find that access to the internet has a positive effect on insurance uptake of households. Having an internet connection is crucial for accessing digital awareness campaigns that can potentially improve the understanding of benefits related to complex financial products like insurance. Furthermore, access to the internet also reduces the costs of buying insurance as the regular premium payments can be paid digitally. The effect of internet access is higher for urban households and for households where at least one adult had completed primary schooling. The differential effects highlight that not all sub-groups are able to leverage the benefits of internet access equally. Further, we also find that access to internet increases the quantity of insurance purchased by the household suggesting that digital inclusion can be an instrument to address the issue of vulnerable household's under-insurance in developing economies.

The findings of the study have several policy implications. First, it provides insights to policymakers as to what interventions can increase insurance uptake in India. Second, given the positive spillover effects of ICT adoption, the study highlights that further investment by the governments to improve the internet accessibility in developing economies is desirable.

The remaining of the paper is organized as follows: section 2 provides the conceptual framework, section 3 discusses the data and variables of the study, section 4 elaborates the estimation strategy, section 5 presents summary statistics. Section 6

elaborates the findings of the study and section 7 highlights the implications of the study and concludes.

2. Conceptual framework

The access to internet can affect insurance uptake in multiple ways. A simple framework linking internet access and insurance uptake is given in Figure 1. The first channel is the availability of information provided by the insurance companies such as benefits of buying insurance, factual information regarding the policy, and payment reminders through e-mails and messages which may affect both uptake and renewals. The second pathway shows access to internet increases the household's access to user reviews of various insurance products, and this in turn can also influence uptake. The third channel shows that having an internet connection introduces households to alternate modern insurance distributors. Currently, the distribution of insurance products is dominated by bancassurance or financial agents/ brokers in developing economies. However, with the emergence of insurance tech companies, consumers can compare and buy insurance products online. An example of such a company is BIMA launched in 2010, serving several countries in Africa and Asia. BIMA is an insurance intermediary using mobile technology to sell insurance products in markets with low penetration. Finally, the availability of internet connection may also reduce the cost of buying insurance with access to digital payment options.

<<Insert figure 1 here>>

3. Data

The data for the study is obtained from the second round of household survey conducted by IHDS-2. It is a nationally representative survey of 42,152 households (14,572 urban households and 27,580 rural households) covering 34 states and union territories in India.

This survey is conducted by the National Council of Applied Economic Research (NCAER) and in collaboration with the University of Maryland. IHDS-2 provides data regarding the socioeconomic characteristics of the households.

The dependent variable in our analysis is the *Insurance* dummy that takes the value of one for households owning any insurance product i.e. either life, health or crop insurance and zero otherwise. The interest variable is *Internet* access which is a binary variable that takes the value one for the household having an internet connection and zero otherwise. The *Internet* variable will be one if any member of the household uses internet either through mobile or computer.

Moreover, we control the socioeconomic and demographic characteristics of the households including the educational status, ownership of farmland, asset quintile, age, dependency ratio, sex of the household head, occupation of household head, social network, caste, religion, area of residence, major life events and income shock. The variables and their definitions are provided in Table 1.

<<Insert Table 1 here>>

4. Empirical strategy

A standard approach to estimate the uptake of insurance at the household level will be to employ a probit model where the likelihood of insurance uptake is given as a function of internet access after controlling for other household confounders given by the equation below:

$$L_i = \beta_0 + \beta_1 D_i + \gamma X_i + \varepsilon_i \quad (1)$$

Where the L_i is the log-likelihood of the probability of the event when $Y_i=1$. Y_i is the binary variable *Insurance* that takes the value one, if the household owns insurance, zero otherwise, D_i is the binary internet access variable and β_1 gives the relation between internet access and the log-likelihood function. X_i is the matrix representing the

socioeconomic and demographic characteristics of the households and ε_i is the error term representing random shock.

However, the *Internet* access variable in the above specification may not be exogenous. There may be factors like innate ability or motivation of the household that can affect use of internet as well as the decision to purchase insurance. The households having members with a higher innate ability or motivation are more likely to adopt ICT measures like internet and may be better placed to understand the benefits related to insurance. If access to internet is endogenous, then the probit estimates will be biased and inconsistent (Angrist & Pischke, 2009).

To deal with the endogeneity, we employ instrument variable regression and a bivariate probit model. We assume that each household is risk-averse and maximizes their utility. The household evaluates the utility derived from using internet and the utility in the absence of internet usage, given other observable and unobservable characteristics. If the utility derived from using internet is greater than the utility from not using internet, we observe that the household will end up using internet (outcome variable in first stage). The equations below present the household decision-making process:

$$U_i = U_i^{Internet} - U_i^{No\ Internet} = \beta W_i + u_i \quad (2)$$

Where W is the matrix of observable and unobservable household characteristics.

$$\begin{aligned} Internet_i &= 1 \text{ if } U_i > 0 \\ &= 0 \text{ if } U_i \leq 0 \end{aligned} \quad (3)$$

The instrument variable employed in the first stage should be a variable that is highly correlated with the *Internet* variable, but uncorrelated to the *Insurance* variable. We consider the share of households using internet in the neighborhood of the household as an instrument for the first stage regression. Studies have suggested that social interactions in the neighbourhood affects the adoption of new technology (Conley &

Udry, 2010) and social spillover positively affects adoption of clean fuel (Srinivasan & Carattini, 2020). The primary sampling unit (PSU) is the village or the neighborhood of a household, and the households within a PSU are generally similar in terms of culture, caste, religion and other observable characteristics. We expect that the PSU level share of households having internet connections will positively affect the household's decision to use internet through peer effect. On the other hand, insurance purchase is a household-level decision and should not be directly related to the share of households having internet connection in the neighbourhood. Hence, we consider the PSU level internet access (*share_internet*) and as the identification variable for *Internet*³. The Pearson correlation coefficients indicate that there is a positive and significant correlation between the identification variable and the endogenous *Internet* variable and the correlation between the instrument and *Insurance* is low⁴.

Currently, there are no available methodology to model binary outcome variable with an endogenous binary variable (Angrist et al., 2010), hence, we assume a linear structure in the first-stage and estimate an instrumental variable probit model (IV-probit). Equations (4) and (5) gives the corresponding second-stage probit model and first-stage linear probability models respectively:

$$L_i = \delta_0 + \delta_1 D_i + \gamma X_i + \varepsilon_{2i} \quad (4)$$

$$D_i = \beta_0 + \beta_1 Z_i + \varphi X_i + \varepsilon_{1i} \quad (5)$$

The variable D_i is the binary *Internet* variable and Z_i is the instrument i.e. share of internet users at the PSU level (*share_internet*). A positive and significant β_1 will indicate that the instrument is relevant. If access to internet is indeed exogenous then $\text{Cov}(D_i, \varepsilon_{2i})$ should

³ For calculating the share of household in the neighbourhood having access to internet we exclude the household i from our calculation.

⁴ Sample correlation between the internet use at the household level and share of internet users at the PSU level is 0.42 and the correlation between share of internet users at the PSU level and household owning an insurance is 0.2.

be zero and we can use the simple probit relation given in (1) for interpretation. However, in cases where internet is correlated with the errors of the second-stage regression, probit will yield biased estimates.

Additionally, we estimate a bivariate probit model where in the first-stage the decision to use internet is estimated as a function of the instrument and other covariates and in the second-stage the insurance and internet use are jointly estimated using a log-likelihood function. The bivariate probit model gives us whether the correlation in error terms of the two stages are zero using Wald test. If we fail to reject the null of zero correlation between the errors of the two stages, then we may infer that our *Internet* variable is not endogenous and probit model is sufficient.

Finally, we also estimate tobit and instrumental variable tobit model (IV-tobit) models to examine the association between internet access and amount of insurance purchased by the households. In the absence of any statistical tool to estimate a tobit model with binary endogenous variable we employ IV-tobit where we assume a linear relation between the endogenous variable and instrument in the first-stage.

5. Summary statistics

In our sample, only 36 percent of the households have insurance (Table 2) and 19 percent households have an internet connection. More than half of the households have experienced major life events in the past few years, and nearly a quarter of the households have faced income shock. The average household head is close to 50 years which initially seems high for an otherwise young nation but can be explained by the prevalence of joint family structure in the Indian society. In joint families, more than one married couple co-reside and social norms dictate that the older adult (often male) becomes the head of the household. Further, nearly 55 percent of the households are in debt, indicating that the

majority of the households have borrowed and have at least one adult member has completed eight years of schooling.

<<Insert Table 2 here>>

Columns 2-3 of Table 2 present the means based on access to internet. We find that 60 percent of the households who have access to internet also have insurance. The positive correlation between internet access and insurance penetration point towards the possibility of a positive relationship between internet access and insurance uptake in India. However, the internet users are socially more connected, have more educated adult members and have lower chances of being indebted. Further, for each asset quintile, occupation category, caste and religious groups we find that higher proportion of internet users have insurance compared to non-internet users (Figure 2). The univariate analysis suggests that the socioeconomic and demographic characteristics differ between internet users and non-users that needs to be addressed in the regression framework.

<<Insert Figure 2 here>>

6. Results

6.1 Main results

Column 1 of Table 3 presents the coefficients obtained from the probit regression of *Insurance* on internet access and other characteristics of the household. The result suggests that internet access have a positive and significant association with insurance uptake. However, as discussed earlier in Section 4, there could be omitted variables like higher innate ability or household's motivation that can affect both internet usage as well as the insurance participation of the household leading to endogeneity in the model. In the presence of such endogeneity, the probit estimator will be biased and inconsistent. Columns 2 and 3 report the coefficients obtained from IV-probit model. The share of

internet users at the PSU level is positively related to the probability of household's internet usage at 1% level of significance indicating the relevance of the instrument (column 3). We find that households residing in a neighbourhood where a higher share of households use the internet is likely to influence the household's decision to use the internet, suggesting the presence of spillovers in the adoption of new technology. The second-stage coefficient (column 2) suggests that there is indeed a positive relation between access to internet and insurance uptake at 1% level of significance. The IV-probit coefficient is in fact, larger than the simple probit coefficients in Column 1 suggesting a possibility of downward bias in probit estimates. The bivariate probit estimation yield similar results (column 4 and 5) and reinforces that internet access can improve the insurance uptake of households. Moreover, the Wald test indicates that there exists a significant correlation between the error terms of the two stages at 1% level of significance, invalidating the results obtained from probit model. Our main results suggest that access to internet at the household level might expose the households to audiovisual awareness videos circulated by regulators or insurance agencies. For example, the Government of India initiated awareness campaigns regarding terms and benefits of the Pradhan Mantri Jivan Jyoti Bima Yojana scheme (2015) through several YouTube videos. Secondly, the digital payment facility can reduce the transaction cost of purchasing insurance by reducing the visits to financial intermediary's or the insurance provider's office for payment of premium, which can further increase uptake.

<<Insert Table 3 here>>

In addition to the internet variable, we find that similar to the findings in literature households with higher asset endowments, higher kids ratio, higher adult educational attainment have a higher probability of buying insurance (Arun et al., 2012). We observe that households with a higher ratio of elderly members to household size are less likely

to have insurance, which is contrary to the findings of Beck & Webb (2003). We also find that the primary occupation of the household head, ownership of farmland matter for insurance purchase decision in India. Male-headed households are more likely to have insurance not providing any evidence in favour of higher risk aversion of females compared to males. Households belonging to the SC and ST social groups have a lower likelihood of having insurance and so does Muslim and Christian households, highlighting the higher vulnerability of disadvantaged religious and caste groups in India. The households with prior experience of income shock are more likely to purchase insurance, suggesting that adverse income shocks can revise the household's risk assessment and behavior. In contrast, past life events is negatively related to insurance uptake contrary to the finding of Cai et al. (2013). Finally, we also find a positive association between social connections of the household and decision to purchase insurance (Gao & Fok, 2015).

6.2 Robustness analysis

In this section we present additional robustness checks to ensure that our results are not driven by other important omitted variable in the system. For this we present the results for alternate definitions of our ICT variable given by smartphone ownership of households and owning a handset without internet connection. We also present the result for placebo dependent variable given by consumption of non-vegetarian food by household members. Further, we also randomly allocate internet access to households and re-estimate the models.

6.2.1 Smartphone and handset ownership and insurance uptake

We re-estimate our results using an alternate definition of ICT adoption by considering whether any household member owns a smartphone or not. This would essentially

consider the sample of households who use mobile for accessing the internet. The results of re-estimating the probit, IV-probit and bivariate probit models are given in columns 1-3 of Table 4⁵. The coefficients obtained in all three specifications suggest that ownership of smartphone is related to higher insurance uptake. Further, our conceptual framework suggests that ownership of mobile phone without an internet connection should not be related to insurance uptake at the household level. We define a dummy *handset* that takes the value one if any member in the household owns a mobile phone without internet connection and zero otherwise. The results of re-estimating the models using *handset* variable instead of the internet variable are given in columns 4-6. The coefficient of handset turns out to be insignificant in simple probit, IV-probit and bivariate probit model suggesting that having access to internet is crucial for reaping the benefits of ICT in the digital era.

<<Insert Table 4 here>>

6.2.2 *Internet access and consumption of non-vegetarian food*

Next, we consider a placebo dependent variable to check the robustness of our empirical finding. For this we consider whether any household member consumes non-vegetarian food or not as an outcome variable. Consumption of meat is related to religious beliefs of households in India and having access to internet is theoretically unrelated to food consumption choices. We define a variable *non-veg* that takes the value one if any member in the household consumes meat, egg or fish and zero otherwise. We estimate the models using this alternate outcome variable and find that the coefficient of *internet* variable is insignificant at 5% level of significance (Panel A of Table 4). The insignificant

⁵ First stage regression results are given in Appendix Table A1.

result indicates the possibility that our internet variable is not capturing other omitted variables in the system.

<<Insert Table 5 here>>

6.2.3 Randomly allocating internet access to sample households

We also randomly assign internet access to 19% of households in the sample in our sample and re-estimate the relation between the assigned internet access and insurance uptake using a bivariate probit model. Our results of 10 such random samples suggest that random assignment of internet access to the households generate insignificant result at usual levels of significance (Panel B of Table 5). The insignificant results increase our confidence that our empirical strategy captures the effect of internet access on insurance uptake.

6.3 Heterogeneous effects

The regression coefficients give the average effect for the sample households; however, the result can vary for a subset of households based on other observable characteristics. We specifically examine the heterogeneous effect based on the area of residence, adult educational attainment and social network.

6.3.1 Rural and urban households

Among the urban households in our sample, around 37 percent have *Internet* connection compared to only 13 for rural households. Further, several studies have found that the area of residence matters for household outcomes. Gu et al. (2020) find that ICT adoption does not have a significant impact on the empowerment of rural women. On the other hand, Sekabira & Qaim (2017) find that mobile phone adoption by rural women improves their nutritional outcomes. We consider the heterogeneous effect across rural and urban

households by estimating the relation separately for the two sub-samples. Our bivariate probit result suggests that access to the internet increases the likelihood of having insurance for urban households at 1% level of significance (column 1 of Table 6). On the other hand, the coefficient of internet access is only significant at 10% level for rural households (column 2 of Table 6), suggesting that the benefits of internet access are largely concentrated in urban areas. This heterogeneity can be attributed to two plausible reasons. First, urban households could be early technology adopters. Their understanding of the benefits of internet access and trust associated with making digital payments is likely to be higher than internet users in the rural region. Second, the financial intermediaries are active in urban areas and they may encourage the households to use digital mediums for making insurance purchase. Offline demonstration of how to use online mediums specifically for buying insurance products may explain the higher effect for urban households. This result highlights the need to increase awareness and confidence among rural households to adopt and use internet in day-to-day activities.

<<Insert Table 6 here>>

6.3.2 Role of education

Studies have suggested that a higher level of education is related to the early adoption of newer technology (Wozniak, 1987; Lin 1991; Huffman, 2020) indicating that human capital endowment can potentially place the households at an advantageous position to reap the benefits of internet access. To analyse whether the relation between internet access and insurance uptake is related to the educational attainment of the household we separately estimate the relation for sub-sample of households where the highest adult education is at five years and those with less than less than five years of schooling. The results of this analysis are presented in columns 3 and 4 of Table 6. We find that effect of internet access on insurance uptake is significant at 1% level of significance where at

least one adult of the household has completed primary schooling and is insignificant at 5% level of significance for households where none of the adult members have completed primary education. These findings are in line with the extant literature that suggests that education is an important determinant of adoption of newer technology. Our result suggests that large complementary investments in human capital remain important to improve the effect of information technology on development outcomes in low and middle-income countries and low levels of education remain a critical barrier to the positive spillover effects of ICT on household outcomes.

6.3.3 Role of social connections

Next, we consider whether the effect of internet access on insurance varies with the social network of the household. Studies have suggested that having a larger social network increases the trust and facilitates the diffusion of newer technology (Munshi, 2004; Srinivasan & Cattarini, 2020). In our context, a larger social network can improve the trust in using digital gateways for paying premium implying stronger effect for connected households. We define a household as well-connected if the z-score of household connections is positive, otherwise the household is considered to be less connected and examine the relation separately for the sub-samples of well-connected and less connected households. Columns 5 and 6 of Table 6 suggests that in our sample the effect of internet access on insurance uptake does not differ based on the social connections of the households. Our results do not find any evidence that more connected households are more likely to use internet for buying insurance relative to less connected households.

6.4 Internet access and insurance premium

The extant literature suggests that investors commit investment mistakes (Campbell, 2006) and tend to hold sub-optimal portfolios. Less than optimal insurance consumption

is an example of an investment mistake as it fails to cover the risk exposure of households. Using prospect theory, Schmidt (2015) finds that insurance uptake increases with an increase in loss probability and not necessarily with the extent of loss. The behavioral explanation suggests that households attaching low probability to large catastrophic events are less likely to buy insurance. Next, we examine if access to internet can improve the financial awareness of households and in turn influence the consumption of insurance by households. The premium paid by the household is considered as a measure of insurance consumption in the literature (Arun et al., 2012; World Bank, 2008). The premium paid is a left-censored variable having zero values for households having no insurance products. Hence, we estimate a tobit and IV-tobit model (IV-Tobit) where the dependent variable is *Premium* defined as the logarithm of insurance premium paid by the household is considered as a proxy for quantity of insurance. The tobit coefficient is positive and significant at 1% level of significance (column 1) suggesting that households having access to internet are likely to pay 11.8% premium more than households without internet connection. Columns 2 and 3 present the first and second stage results of IV-tobit model. The coefficient of internet is positive and significant at 1% level of significance and the marginal effect is greater than the tobit model. The result suggests that access to internet can introduce the households to online awareness material which in turn can partially reduce their tendency to commit investment mistakes like under-insuring against future uncertainties. Increasing internet penetration can be a complementary policy intervention along with other financial literacy programs to address the issue of lower insurance coverage of Indian households.

<<Insert Table 7 here>>

7. Discussion and conclusion

The low penetration of insurance is a concern for policymakers in emerging economies like India. Low insurance uptake suggests that households especially uninsured risk-averse households are exposed to large income shocks in case of illness or death of the primary earning member of the household. Our study considers whether access to internet can improve insurance uptake in India by improving the financial awareness of the households. Using a probit with endogenous regressor model and bivariate probit model, we find that households having an internet connection are more likely to participate in the insurance market. The results provide evidence in favour of the positive spillover effects of technology on development outcomes. The PMJJY, the flagship financial inclusion program in India, also focuses on the importance of mobile ownership as a tool for bringing more households under the ambit of formal finance. The findings also provide evidence in favour of expanding the Digital India Initiative launched by the Government of India on July 1, 2015, which mentions universal access to mobile connectivity and public internet access as the two of the pillars⁶. The insurance companies and financial intermediaries should also fully embrace ICT to reach out to the end consumers in remote areas and create awareness regarding the need for insuring against future uncertain outcomes.

The study finds that the effect of internet access on insurance uptake is higher for urban households compared to rural households. We feel that the early adoption of technology by the urban households drives wider use of technology owing to learning effects and higher trust regarding the quality of information accessed on the internet and security issues surrounding digital payment gateways. Regulators should invest heavily

⁶ <https://digitalindia.gov.in/content/programme-pillars>

in rural areas to reduce the regional digital divide in India, which in turn may act as a tool that reduces rural-urban inequality in development outcomes over time. Further, we find that years of schooling also affect the relationship between internet access and insurance uptake. This suggests that complementary human capital investments are necessary to for reaping the benefits of ICT. Policymakers should focus on having mobile apps and videos in vernacular language that can also facilitate higher use of technology, especially in households with lower education and in rural areas.

Finally, we find that internet access is also related to higher insurance premium payments by the households suggesting that access to internet may improve the awareness of households and reduce their tendency to under-insure by purchasing lower coverage. In India, financial robo-advisory is still in nascent stages, and further investments in this domain can leverage the initial gains of ICT in affecting the demand for risk management products of Indian households. Our study suggests that ICT can complement other interventions that intend to improve the financial literacy of households and reduce the tendency to commit investment mistakes.

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Code availability: STATA codes are available on request for replicating the tables and figures.

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Figure 1: Conceptual framework linking in access to internet and insurance uptake

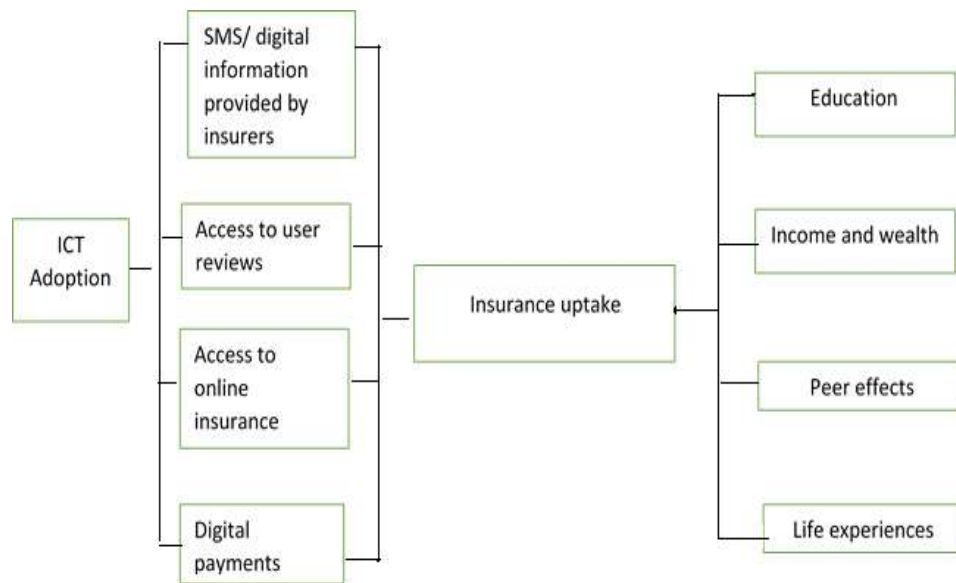


Table 1: Definition of Variables

Variable	Description
<i>Insurance</i>	Dummy variable, 1 if the household has at least one of the following insurances i.e. life insurance, health insurance, crop insurance, 0 otherwise
<i>Premium</i>	Logarithm of insurance premium
<i>Internet</i>	Dummy variable, 1 if household has access to internet, 0 otherwise
<i>Debt</i>	Dummy variable, 1 if the household has borrowed in the last 5 years, 0 otherwise.
<i>Asset Quintiles</i>	Five asset index quintiles, 1 st quintile represent the poorest quintile and 5 th quintile for the richest.
<i>Age head</i>	Logarithm of age of household head in years.
<i>Education</i>	Logarithm of number of years of schooling of the adult member in the household with highest educational attainment.
<i>Kids Ratio</i>	Ratio of number of children upto 14 years to the number of members in the household.
<i>Old Ratio</i>	Ratio of number of adults above 60 years to the number of members in the household.
<i>Head Work</i>	Categorical variable for primary occupation of the head of the household, 1 for agriculture, 2 for non-farm business, 3 for professional and 4 otherwise.
<i>Farmland</i>	Dummy variable, 1 if the household owns any farmland and 0 otherwise.
<i>Head Sex</i>	Dummy variable, 1 for female-headed households and 0 for male-headed households.
<i>Persons</i>	Total number of members in a household.
<i>Religion</i>	Categorical variable, 1 for Hindu, 2 for Muslim, 3 for Christian, 4 for others.
<i>Caste</i>	Categorical variable, 1 for General, 2 for SC, 3 for ST, 4 for Others.
<i>Urban</i>	Dummy variable, 1 for household residing in urban area and 0 for rural area.
<i>Income Shock</i>	Dummy variable, 1 if the household experiences income shock due to drought/flood/ job loss/ crop failure during the last six or seven years and zero otherwise.
<i>Life Event</i>	Dummy variable, 1 if household experiences marriage/death/illness during the last six or seven year and 0 otherwise.
<i>Z-Score SN</i>	Standardized value of social-network which is the sum of the following variables: Health workers: 1 if households have personal acquaintance with doctors or any health workers, 0 otherwise.

Education: 1 if households have personal acquaintance with teachers or any school workers, 0 otherwise.

Government service: 1 if households have personal acquaintance with Govt. officer doctor or any government employee, 0 otherwise.

Politicians: 1 if households have personal acquaintance with elected members or any political party officials, 0 otherwise.

Police/Military: 1 if households have personal acquaintance with a police inspector or other in police or military, 0 otherwise.

Smartphone Dummy variable, 1 if any member of the household owns smartphone, 0 otherwise.

Handset Dummy variable, 1 if at least any member of the household owns mobile phone but without internet connection, 0 otherwise.

Nuclear Family Dummy variable, 1 if household has only one married couple with or without offspring, 0 otherwise.

Non-veg Dummy variable, 1 if any member of the household eats non-vegetarian food, 0 otherwise.

Share of Internet Share of households having internet in the neighbourhood

Share of Smartphone Share of households owning smartphones in the neighbourhood

Share of Handset Share of households owning mobile phone but without internet connection in the neighbourhood

Table 2: Summary statistics

The table below presents the mean and standard deviation of the insurance, internet and other household factors for the full-sample and based on internet access. For binary variables, the table present the proportion of household for which the variable takes the value one. *** p<0.01, ** p<0.05, * p<0.1

Variables	Full Sample	No internet	Have internet
<i>Insurance(dummy)</i>	0.364 (0.481)	0.309 (0.462)	0.600*** (0.489)
<i>Premium (logarithm of premium amount)</i>	2.084 (3.685)	1.588 (3.287)	4.211*** (4.459)
<i>Internet(dummy)</i>	0.189 (0.392)	-	-
<i>Debt(dummy)</i>	0.548 (0.498)	0.560*** (0.496)	0.494 (0.499)
<i>Age head (in years)</i>	49.576 (13.589)	49.051 (13.589)	51.824*** (11.553)
<i>Education (in years)</i>	7.957 (5.196)	6.804 (4.831)	12.891*** (3.550)
<i>Kids ratio</i>	0.240 (0.223)	0.261*** (0.228)	0.152 (0.175)
<i>Old ratio</i>	0.118 (0.229)	0.125*** (0.243)	0.087 (0.146)
<i>Farmland(dummy)</i>	0.445 (0.497)	0.478*** (0.499)	0.307 (0.306)
<i>Head sex(dummy)</i>	0.148 (0.355)	0.152*** (0.359)	0.131 (0.337)
<i>Urban(dummy)</i>	0.318 (0.466)	0.249 (0.433)	0.613*** (0.487)
<i>Income shock(dummy)</i>	0.236 (0.425)	0.249*** (0.432)	0.181 (0.385)
<i>Life event(dummy)</i>	0.563 (0.496)	0.569*** (0.495)	0.536 (0.499)
<i>SN (number of connections)</i>	3.976 (4.282)	3.395 (3.845)	6.462*** (5.074)
<i>N</i>	42152	33292	8860

Figure 2: Access to internet and insurance uptake by asset quintile, occupation, caste and religious affiliation

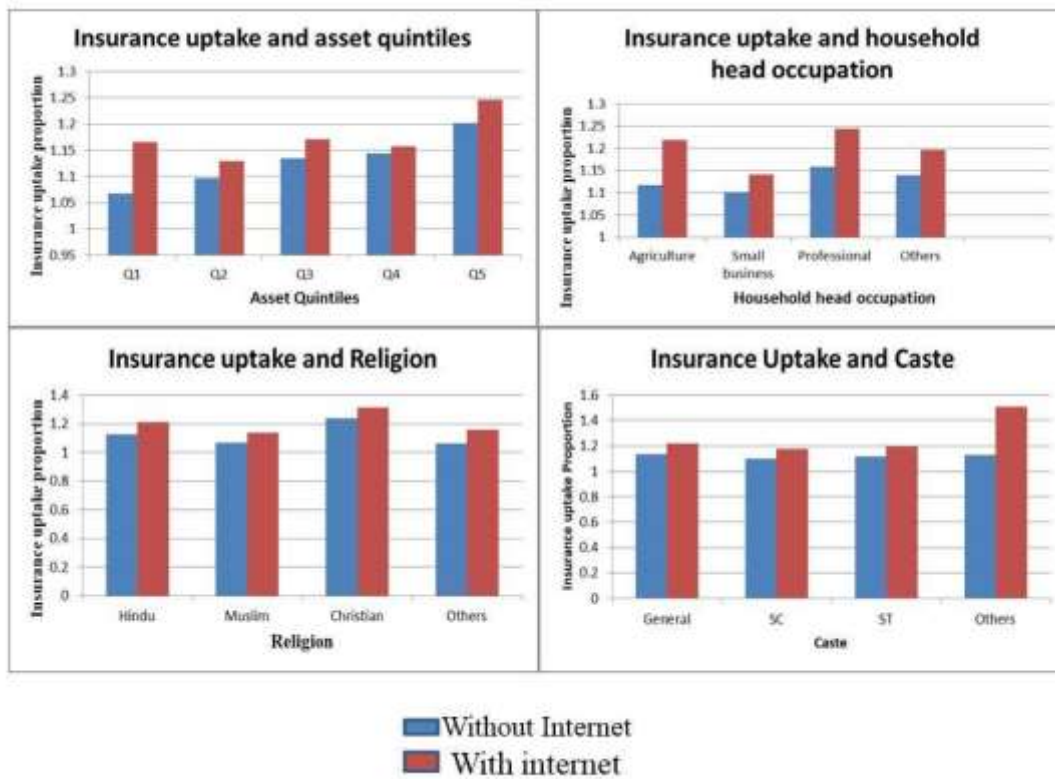


Table 3: Access to internet and likelihood of having an insurance

The table below presents the coefficients of probit model, IV-Probit model and bivariate probit model of insurance on internet and other household factors. Weak identification test results are obtained using ivreg2 command in STATA. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	Dependent Variable: <i>Insurance</i>				
	(1) Simple Probit	(2) IV-probit- stage2	(3) IV-probit- stage1	(4) Bivariate probit- stage 2	(5) Bivariate probit- stage 1
<i>Internet</i>	0.184*** (0.019)	0.364** (0.142)		0.435*** (0.071)	
<i>Share_internet</i>			0.318*** (0.011)		1.117*** (0.051)
<i>Debt</i>	0.167*** (0.015)	0.166*** (0.015)	0.005 (0.004)	0.165*** (0.015)	0.038** (0.019)
<i>Asset quintiles: Base: Q1</i>					
<i>Q2</i>	0.313*** (0.023)	0.315*** (0.023)	-0.015*** (0.005)	0.317*** (0.023)	0.325*** (0.045)
<i>Q3</i>	0.590*** (0.025)	0.585*** (0.026)	0.017*** (0.006)	0.585*** (0.025)	0.562*** (0.044)
<i>Q4</i>	0.874*** (0.028)	0.851*** (0.034)	0.102*** (0.007)	0.844*** (0.029)	0.810*** (0.045)
<i>Q5</i>	1.294*** (0.033)	1.225*** (0.066)	0.332*** (0.008)	1.198*** (0.043)	1.363*** (0.048)
<i>Age Head</i>	0.117*** (0.032)	0.111*** (0.033)	0.033*** (0.008)	0.107*** (0.032)	0.162*** (0.041)
<i>Education</i>	0.063*** (0.009)	0.055*** (0.012)	0.042*** (0.002)	0.051*** (0.010)	0.515*** (0.028)
<i>Kids Ratio</i>	0.172*** (0.036)	0.217*** (0.051)	-0.249*** (0.009)	0.239*** (0.040)	-1.382*** (0.047)
<i>Old Ratio</i>	-0.387*** (0.041)	-0.355*** (0.048)	-0.180*** (0.009)	-0.335*** (0.043)	-1.104*** (0.055)
<i>Head Work: Base: Agriculture</i>					
<i>Small Business</i>	0.037* (0.020)	0.038* (0.020)	-0.008 (0.005)	0.039* (0.020)	-0.049* (0.029)
<i>Professional</i>	0.361*** (0.024)	0.348*** (0.027)	0.059*** (0.006)	0.342*** (0.025)	0.158*** (0.030)
<i>Others</i>	0.001 (0.025)	-0.003 (0.025)	0.016*** (0.006)	-0.004 (0.025)	0.052 (0.032)
<i>Farmland</i>	0.101*** (0.019)	0.104*** (0.019)	-0.003 (0.005)	0.105*** (0.019)	0.008 (0.025)
<i>Head Sex: Female</i>	-0.048** (0.023)	-0.050** (0.023)	0.013** (0.005)	-0.051** (0.023)	0.069** (0.029)
<i>Religion: Hindu</i>					
<i>Muslim</i>	-0.440*** (0.025)	-0.436*** (0.024)	0.000 (0.006)	-0.434*** (0.025)	0.009 (0.031)
<i>Christian</i>	-0.171*** (0.050)	-0.165*** (0.049)	-0.026** (0.012)	-0.162*** (0.050)	-0.094* (0.054)
<i>Others</i>	0.053 (0.041)	0.053 (0.042)	0.002 (0.010)	0.052 (0.041)	0.042 (0.048)
<i>Cast : Base: General</i>					
<i>SC</i>	-0.058*** (0.021)	-0.055** (0.021)	-0.007 (0.005)	-0.053** (0.021)	0.003 (0.027)
<i>ST</i>	-0.128*** (0.031)	-0.122*** (0.032)	-0.014** (0.007)	-0.119*** (0.031)	-0.137*** (0.046)
<i>Others</i>	0.033* (0.018)	0.036** (0.018)	-0.010** (0.004)	0.038** (0.018)	-0.021 (0.021)
<i>Urban</i>	-0.042** (0.020)	-0.049** (0.020)	-0.006 (0.005)	-0.052*** (0.020)	-0.012 (0.025)

Dependent Variable: <i>Insurance</i>					
VARIABLES	(1)	(2)	(3)	(4)	(5)
	Simple Probit	IV-probit- stage2	IV-probit- stage1	Bivariate probit- stage 2	Bivariate probit- stage 1
<i>Income Shock</i>	0.070*** (0.018)	0.067*** (0.018)	0.016*** (0.004)	0.066*** (0.018)	0.098*** (0.024)
<i>Life Events</i>	-0.031** (0.014)	-0.029** (0.014)	-0.011*** (0.003)	-0.028** (0.014)	-0.054*** (0.018)
<i>Z-Score-SN</i>	0.135*** (0.008)	0.128*** (0.010)	0.038*** (0.002)	0.125*** (0.008)	0.138*** (0.009)
<i>Constant</i>	-2.115*** (0.139)	-2.112*** (0.142)	-0.065* (0.034)	-2.108*** (0.139)	-3.228*** (0.186)
<i>State fixed effects</i>	Yes	Yes	Yes	Yes	Yes
<i>Rho</i>			-0.061 (0.048)		-0.154*** (0.043)
<i>Wald chi-square</i>		1.620		12.865***	
<i>Observations</i>	41,711	41,707	41,707	41,707	41,707
Underidentification test (Kleibergen-Paap rk LM statistic):552.174***					
Weak identification test (Cragg-Donald Wald F statistic): 805.706					
Stock-Yogo weak ID test critical values:					
	10% maximal IV size	16.38			
	15% maximal IV size	8.96			
	20% maximal IV size	6.66			
	25% maximal IV size	5.53			

Table 4: Smartphone and handset ownership and likelihood of having insurance

The table below represents the coefficients of bivariate probit, IV-probit and simple probit model of insurance on smartphone and handset ownership. The stage-1 regression output is given in Appendix Table A1 and full table with the controls is given in Appendix Table A2. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Probit	(2) IV-probit- stage2	(3) Bivariate probit- stage2	(4) Probit	(5) IV-probit- stage2	(6) Bivariate probit- stage2
<i>Smartphone</i>	0.178*** (0.021)	0.282** (0.134)	0.428*** (0.074)			
<i>Handset</i>				0.008 (0.016)	-0.113 (0.110)	-0.098 (0.096)
Control	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
<i>Wald test stat</i>		0.620	11.908***		1.230	1.248
<i>Observations</i>	41,707	41,703	41,703	41,480	41,703	41,476

Table 5: Placebo results

Panel A presents the coefficient of probit, IV-probit and bivariate probit model of placebo dependent variable food choice on internet access and panel B represents the results obtained from randomly providing access to internet to sample households. The first stage regression output and the full tables are given in Appendix Table A3. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

<i>Dependent variable: Non-veg</i>										
VARIABLES	(1)			(2)			(3)			
	Probit			IV-probit stage 2			Bivariate probit- stage2			
<i>Internet</i>	0.001			-0.019			-0.033			
	(0.025)			(0.184)			(0.103)			
<i>Controls</i>	Yes			Yes			Yes			
<i>State fixed effects</i>	Yes			Yes			Yes			
<i>Observations</i>	41,005			41,051			41,558			
<i>Panel B: Dependent variable: Insurance</i>										
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9	Sample 10
<i>Internet</i>	-.070	-.085	.047	-0.049	-.061	-.087	.015	-.021	.011	-.037
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.08)	(0.08)	(0.07)	(0.07)
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>State fixed effects</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs</i>	41,484	41,484	41,484	41,484	41,484	41,484	41,484	41,484	41,484	41,484

Table 6: Internet access and likelihood of having insurance- Sub-sample analyses

The table below presents the coefficients obtained from bivariate probit model of insurance on internet access based on area of residence, adult education, social connection and family structure. The first stage regression output is given in Appendix Table A4 and the full table is given in Appendix Table A5. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

	(1)	(2)	(3)	(4)	(5)	(6)
	Urban	Rural	At least one adult who completed primary schooling	No adult with completed primary schooling	More connected households	Less connected households
<i>Internet</i>	0.631*** (0.108)	0.199* (0.109)	0.271*** (0.080)	0.670* (0.403)	0.393*** (0.115)	0.420*** (0.093)
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>State fixed effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Wald test stat</i>	13.61***	0.424	2.685	1.237	4.364**	6.039**
<i>Observations</i>	14,347	27,364	32,105	9,512	14,482	27,223

Table 7: Effect of internet on insurance premium

The table below presents the coefficients obtained from the instrumental variable tobit model and tobit model of premium on access to the internet and other socio-economic factors. The full table is given in Appendix Table A6. Robust Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

<i>Dependent variable: Premium</i>			
VARIABLES	(1) Tobit	(2) IV-tobit- stage 1	(3) IV-tobit- stage 2
<i>Internet</i>	0.118*** (0.022)		0.588*** (0.159)
<i>Share_internet</i>		0.346*** (0.023)	
<i>Controls</i>	Yes	Yes	Yes
<i>State fixed effects</i>	Yes	Yes	Yes
<i>Wald test stat</i>			8.96***
<i>Observations (uncensored)</i>	10,913	10,913	10,913

Appendix

Table A1: First stage regression output for the regression of insurance on ownership of smartphone and handset

The table below presents the first stage coefficient of bivariate probit and IV-Probit model of insurance on smartphone (columns 1 and 2) and handset (columns 3 and 4) and other household factors. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Dependent Variable: <i>Insurance</i>				
	(1)	(2)	(3)	(4)
	IV-probit	Bivariate Probit	IV-probit	Bivariate Probit
<i>Share of Smartphone</i>	0.376*** (0.012)	1.358*** (0.058)		
<i>Share of Handset</i>			0.370*** (0.013)	1.117*** (0.040)
<i>Debt</i>	0.007** (0.003)	0.050** (0.020)	0.030*** (0.005)	0.090*** (0.015)
<i>Asset quintiles: Base: Q1</i>				
<i>Q2</i>	-0.013*** (0.005)	0.319*** (0.050)	0.314*** (0.007)	0.901*** (0.022)
<i>Q3</i>	0.010* (0.006)	0.562*** (0.049)	0.388*** (0.008)	1.160*** (0.025)
<i>Q4</i>	0.073*** (0.006)	0.791*** (0.050)	0.350*** (0.009)	1.012*** (0.027)
<i>Q5</i>	0.254*** (0.007)	1.229*** (0.053)	0.169*** (0.010)	0.501*** (0.031)
<i>Age Head</i>	0.030*** (0.007)	0.176*** (0.045)	-0.022** (0.010)	-0.081** (0.032)
<i>Education</i>	0.031*** (0.002)	0.516*** (0.032)	0.033*** (0.003)	0.096*** (0.009)
<i>Kids Ratio</i>	-0.201*** (0.008)	-1.294*** (0.050)	0.236*** (0.011)	0.759*** (0.036)
<i>Old Ratio</i>	-0.137***	-0.951***	-0.136***	-0.394***

Dependent Variable: <i>Insurance</i>				
	(1)	(2)	(3)	(4)
	IV-probit	Bivariate Probit	IV-probit	Bivariate Probit
	(0.008)	(0.057)	(0.012)	(0.036)
<i>Head Work: Base: Agriculture</i>				
<i>Small Business</i>	-0.011**	-0.069**	0.010	0.022
	(0.005)	(0.031)	(0.006)	(0.020)
<i>Professional</i>	0.039***	0.101***	-0.040***	-0.132***
	(0.006)	(0.032)	(0.008)	(0.025)
<i>Others</i>	0.010*	0.034	0.001	-0.003
	(0.006)	(0.033)	(0.008)	(0.024)
<i>Farmland</i>	-0.002	0.017	0.043***	0.132***
	(0.004)	(0.026)	(0.006)	(0.019)
<i>Head Sex: Female</i>	0.006	0.036	-0.048***	-0.154***
	(0.005)	(0.031)	(0.007)	(0.022)
<i>Religion: Base: Hindu</i>				
<i>Muslim</i>	0.001	0.021	0.021***	0.062***
	(0.005)	(0.033)	(0.007)	(0.024)
<i>Christian</i>	-0.027**	-0.116**	0.024	0.071
	(0.011)	(0.056)	(0.015)	(0.049)
<i>Others</i>	0.009	0.070	-0.005	-0.024
	(0.009)	(0.049)	(0.013)	(0.041)
<i>Cast: Base: General</i>				
<i>SC</i>	-0.006	0.012	0.006	0.013
	(0.005)	(0.028)	(0.007)	(0.021)
<i>ST</i>	-0.009	-0.090*	0.008	0.027
	(0.007)	(0.050)	(0.009)	(0.030)
<i>Others</i>	-0.009**	-0.021	0.018***	0.058***
	(0.004)	(0.023)	(0.006)	(0.018)
<i>Urban</i>	-0.015***	-0.053**	-0.025***	-0.068***

Dependent Variable: <i>Insurance</i>				
	(1)	(2)	(3)	(4)
	IV-probit	Bivariate Probit	IV-probit	Bivariate Probit
	(0.005)	(0.026)	(0.006)	(0.020)
<i>Income Shock</i>	0.010**	0.065***	0.001	0.001
	(0.004)	(0.025)	(0.006)	(0.018)
<i>Life Events</i>	-0.006*	-0.030	0.017***	0.052***
	(0.003)	(0.019)	(0.004)	(0.014)
<i>Z-Score-SN</i>	0.030***	0.115***	-0.022***	-0.069***
	(0.002)	(0.009)	(0.003)	(0.008)
<i>Constant</i>	-0.052	-3.441***	0.076*	-1.226***
	(0.032)	(0.200)	(0.044)	(0.140)
<i>Rho</i>	-0.033	-0.152***	0.053	0.076
	(0.043)	(0.044)	(0.048)	(0.058)
<i>State fixed effects</i>	Yes	yes	yes	yes
<i>Observations</i>	41,703	41,703	41,703	41,476

Table A2: Ownership of smartphone and handset and insurance uptake – Full table

The table below represents the coefficients of bivariate probit, IV-probit and simple probit model of insurance on smartphone and handset ownership. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	Dependent Variable: <i>Insurance</i>					
	(3)	(2)	(3)	(4)	(5)	(4)
	Probit model	IV-probit	Bivariate model	Probit model	IV-Probit	Bivariate model
<i>Smartphone</i>	0.178*** (0.021)	0.282** (0.134)	0.428*** (0.074)			
<i>Handset</i>				0.008 (0.016)	-0.113 (0.110)	-0.122 (0.097)
<i>Debt</i>	0.166*** (0.015)	0.166*** (0.015)	0.164*** (0.015)	0.167*** (0.015)	0.170*** (0.015)	0.170*** (0.015)
<i>Asset quintiles: Base Q1</i>						
<i>Q2</i>	0.312*** (0.023)	0.313*** (0.023)	0.316*** (0.023)	0.307*** (0.024)	0.348*** (0.043)	0.343*** (0.040)
<i>Q3</i>	0.591*** (0.025)	0.589*** (0.025)	0.588*** (0.025)	0.590*** (0.026)	0.640*** (0.051)	0.633*** (0.047)
<i>Q4</i>	0.879*** (0.028)	0.870*** (0.031)	0.857*** (0.029)	0.891*** (0.028)	0.936*** (0.048)	0.930*** (0.045)
<i>Q5</i>	1.310*** (0.033)	1.279*** (0.052)	1.235*** (0.040)	1.357*** (0.033)	1.377*** (0.036)	1.374*** (0.036)
<i>Age Head</i>	0.118*** (0.032)	0.115*** (0.033)	0.109*** (0.032)	0.125*** (0.032)	0.123*** (0.032)	0.123*** (0.032)
<i>Education</i>	0.066*** (0.009)	0.062*** (0.010)	0.057*** (0.010)	0.073*** (0.009)	0.077*** (0.010)	0.076*** (0.010)
<i>Kids Ratio</i>	0.160*** (0.036)	0.181*** (0.045)	0.214*** (0.039)	0.117*** (0.036)	0.146*** (0.044)	0.142*** (0.042)
<i>Old Ratio</i>	-0.397*** (0.041)	-0.383*** (0.044)	-0.358*** (0.042)	-0.424*** (0.041)	-0.440*** (0.043)	-0.438*** (0.043)
<i>Head Work: Base: Agriculture</i>						
<i>Small Business</i>	0.038* (0.020)	0.039* (0.020)	0.041** (0.020)	0.035* (0.020)	0.037* (0.020)	0.037* (0.020)
<i>Professional</i>	0.365*** (0.024)	0.360*** (0.026)	0.352*** (0.025)	0.373*** (0.024)	0.367*** (0.025)	0.368*** (0.025)
<i>Others</i>	0.003 (0.025)	0.001 (0.025)	-0.001 (0.025)	0.005 (0.025)	0.005 (0.025)	0.005 (0.025)
<i>Farmland</i>	0.101*** (0.019)	0.102*** (0.019)	0.104*** (0.019)	0.098*** (0.019)	0.104*** (0.019)	0.103*** (0.019)
<i>Head Sex: Female</i>	-0.046** (0.023)	-0.047** (0.022)	-0.048** (0.023)	-0.045** (0.023)	-0.050** (0.023)	-0.050** (0.023)
<i>Muslim</i>	-0.441*** (0.025)	-0.438*** (0.024)	-0.435*** (0.025)	-0.443*** (0.025)	-0.439*** (0.024)	-0.439*** (0.025)
<i>Christian</i>	-0.170*** (0.050)	-0.167*** (0.049)	-0.161*** (0.050)	-0.177*** (0.050)	-0.173*** (0.049)	-0.173*** (0.050)
<i>Others</i>	0.052 (0.042)	0.051 (0.042)	0.049 (0.041)	0.053 (0.041)	0.052 (0.042)	0.052 (0.041)
<i>SC</i>	-0.059*** (0.021)	-0.057*** (0.021)	-0.055*** (0.021)	-0.061*** (0.021)	-0.060*** (0.021)	-0.060*** (0.021)
<i>ST</i>	-0.129*** (0.031)	-0.126*** (0.031)	-0.122*** (0.031)	-0.134*** (0.031)	-0.135*** (0.031)	-0.135*** (0.031)
<i>Others</i>	0.032* (0.018)	0.034* (0.018)	0.036** (0.018)	0.029 (0.018)	0.032* (0.018)	0.031* (0.018)
<i>Urban</i>	-0.039** (0.020)	-0.042** (0.020)	-0.045** (0.020)	-0.034* (0.020)	-0.038* (0.020)	-0.037* (0.020)

Dependent Variable: <i>Insurance</i>						
VARIABLES	(3) Probit model	(2) IV-probit	(3) Bivariate model	(4) Probit model	(5) IV-Probit	(4) Bivariate model
<i>Income Shock</i>	0.071*** (0.018)	0.070*** (0.018)	0.069*** (0.018)	0.073*** (0.018)	0.073*** (0.018)	0.073*** (0.018)
<i>Life Events</i>	-0.032** (0.014)	-0.032** (0.014)	-0.030** (0.014)	-0.034** (0.014)	-0.031** (0.014)	-0.032** (0.014)
<i>Z-Score-SN</i>	0.137*** (0.008)	0.133*** (0.009)	0.129*** (0.008)	0.142*** (0.008)	0.139*** (0.008)	0.139*** (0.008)
<i>Constant</i>	-2.119*** (0.139)	-2.122*** (0.142)	-2.121*** (0.139)	-2.114*** (0.139)	-2.080*** (0.146)	-2.085*** (0.142)
<i>State effect</i>	yes	yes	yes	yes	yes	yes
<i>Wald test stat</i>		0.62	11.908***		1.230	1.712
<i>Observations</i>	41,707	41,703	41,703	41,707	41,703	41,703

Table A3: Access to internet and food choice of households

The table below gives the coefficient of probit, IV-probit and bivariate probit models of food choice on internet and other household characteristics. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

VARIABLES	<i>Dependent Variable: Non-veg</i>				
	(1)	(2)	(3)	(4)	(5)
	Probit	IV-probit- Stage 2	IV-probit- Stage 1	Bivariate probit- Stage 2	Bivariate probit- Stage 1
<i>Internet</i>	0.001 (0.025)	-0.019 (0.184)		-0.033 (0.103)	
<i>Share_internet</i>			0.314*** (0.013)		1.126*** (0.051)
<i>Debt</i>	0.001 (0.018)	0.001 (0.018)	0.006* (0.004)	0.001 (0.018)	0.040** (0.019)
<i>Q2</i>	-0.057** (0.027)	-0.057** (0.027)	-0.015*** (0.003)	-0.057** (0.027)	0.328*** (0.045)
<i>Q3</i>	-0.086*** (0.030)	-0.086*** (0.031)	0.018*** (0.005)	-0.085*** (0.030)	0.569*** (0.044)
<i>Q4</i>	-0.110*** (0.034)	-0.108*** (0.040)	0.102*** (0.006)	-0.106*** (0.036)	0.815*** (0.045)
<i>Q5</i>	-0.146*** (0.040)	-0.139* (0.080)	0.336*** (0.009)	-0.134** (0.055)	1.370*** (0.049)
<i>Age Head</i>	0.057 (0.039)	0.059 (0.039)	0.034*** (0.007)	0.059 (0.039)	0.163*** (0.042)
<i>Education</i>	-0.083*** (0.011)	-0.082*** (0.014)	0.042*** (0.002)	-0.081*** (0.012)	0.512*** (0.028)
<i>Kids Ratio</i>	0.198*** (0.045)	0.193*** (0.065)	-0.251*** (0.008)	0.190*** (0.052)	-1.392*** (0.047)
<i>Old Ratio</i>	-0.455*** (0.047)	-0.458*** (0.057)	-0.181*** (0.008)	-0.461*** (0.050)	-1.104*** (0.055)
<i>Head work: Base: Agriculture</i>					
<i>Small Business</i>	0.054** (0.025)	0.054** (0.025)	-0.008* (0.004)	0.054** (0.025)	-0.053* (0.029)
<i>Professional</i>	0.033 (0.031)	0.034 (0.033)	0.059*** (0.007)	0.035 (0.031)	0.152*** (0.030)
<i>Others</i>	0.051* (0.030)	0.051* (0.030)	0.015*** (0.006)	0.051* (0.030)	0.048 (0.032)
<i>Farmland</i>	-0.038* (0.023)	-0.038 (0.023)	-0.004 (0.004)	-0.038 (0.023)	0.009 (0.025)
<i>Head Sex: Female</i>	-0.158*** (0.027)	-0.158*** (0.027)	0.012** (0.005)	-0.157*** (0.027)	0.067** (0.029)
<i>Religion: Base: Hindu</i>					
<i>Muslim</i>	2.311*** (0.063)	2.310*** (0.063)	0.000 (0.006)	2.310*** (0.063)	0.012 (0.031)
<i>Christian</i>	1.390*** (0.156)	1.390*** (0.156)	-0.027* (0.015)	1.390*** (0.156)	-0.093* (0.054)
<i>Others</i>	-0.005 (0.049)	-0.005 (0.049)	0.004 (0.011)	-0.005 (0.049)	0.043 (0.048)
<i>Caste: Base: General</i>					
<i>SC</i>	0.902*** (0.027)	0.902*** (0.027)	-0.007 (0.005)	0.901*** (0.027)	0.004 (0.027)
<i>ST</i>	1.183*** (0.043)	1.184*** (0.044)	-0.015** (0.006)	1.184*** (0.043)	-0.133*** (0.047)
<i>Others</i>	0.171*** (0.022)	0.170*** (0.022)	-0.010** (0.005)	0.170*** (0.022)	-0.020 (0.022)
<i>Urban</i>	0.106*** (0.026)	0.107*** (0.027)	-0.007 (0.005)	0.108*** (0.026)	-0.008 (0.025)
<i>Income Shock</i>	0.036* (0.022)	0.036 (0.022)	0.016*** (0.004)	0.037* (0.022)	0.099*** (0.024)

<i>Dependent Variable: Non-veg</i>					
VARIABLES	(1)	(2)	(3)	(4)	(5)
	Probit	IV-probit- Stage 2	IV-probit- Stage 1	Bivariate probit- Stage 2	Bivariate probit- Stage 1
<i>Life Events</i>	0.007 (0.017)	0.007 (0.018)	-0.013*** (0.003)	0.007 (0.018)	-0.053*** (0.018)
<i>Z-Score-SN</i>	-0.044*** (0.010)	-0.043*** (0.012)	0.038*** (0.002)	-0.042*** (0.011)	0.138*** (0.009)
<i>Constant</i>	-0.337** (0.171)	-0.339** (0.171)	-0.060* (0.033)	-0.339** (0.171)	-3.230*** (0.187)
<i>Rho</i>			0.007 (0.062)	0.020 (0.060)	
<i>State effect</i>	yes	yes	yes	yes	yes
<i>Wald test stat</i>		0.01		0.115	
<i>Observations</i>	41,055	41,501	41,051	41,558	41,558

Table A4: First stage regression output for the sub-sample analysis

The table below presents the first stage coefficient of bivariate probit regression of insurance on internet for the various sub-samples. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Dependent Variable: <i>Insurance</i>						
Variables	(1) Urban	(2) Rural	(3) Primary education	(4) No Primary education	(5) More connected	(6) Less connected
<i>Share_internet</i>	0.881*** (0.064)	1.286*** (0.097)	0.168 (0.144)	-5.406*** (0.301)	0.713*** (0.265)	1.193*** (0.069)
<i>Debt</i>	0.022 (0.027)	0.063** (0.026)	0.057*** (0.020)	0.001 (0.072)	0.008 (0.027)	0.068*** (0.025)
<i>Asset Quintiles: Base: Q1</i>						
<i>Q2</i>	0.100 (0.134)	0.372*** (0.047)	0.249*** (0.051)	0.552*** (0.093)	0.173** (0.085)	0.401*** (0.052)
<i>Q3</i>	0.406*** (0.125)	0.615*** (0.049)	0.479*** (0.050)	0.763*** (0.103)	0.383*** (0.082)	0.661*** (0.051)
<i>Q4</i>	0.683*** (0.124)	0.841*** (0.052)	0.668*** (0.051)	1.093*** (0.125)	0.599*** (0.082)	0.924*** (0.053)
<i>Q5</i>	1.246*** (0.126)	1.326*** (0.059)	1.120*** (0.054)	1.767*** (0.193)	1.145*** (0.085)	1.469*** (0.059)
<i>Age Head</i>	0.163** (0.066)	0.142*** (0.054)	0.077* (0.045)	-0.179 (0.132)	0.163*** (0.063)	0.139** (0.055)
<i>Education</i>	0.738*** (0.060)	0.425*** (0.029)	1.616*** (0.045)	0.111** (0.047)	0.748*** (0.064)	0.414*** (0.029)
<i>Kids Ratio</i>	-1.422*** (0.071)	-1.345*** (0.063)	-1.352*** (0.051)	-1.218*** (0.152)	-1.338*** (0.070)	-1.441*** (0.064)
<i>Old Ratio</i>	-1.255*** (0.079)	-0.956*** (0.074)	-1.066*** (0.060)	-1.143*** (0.153)	-1.170*** (0.080)	-1.034*** (0.074)
<i>Head Work: Base: Agriculture</i>						
<i>Small Business</i>	-0.126* (0.066)	-0.022 (0.066)	-0.007 (0.066)	-0.092 (0.066)	-0.030 (0.066)	-0.070* (0.066)

Dependent Variable: <i>Insurance</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Urban	Rural	Primary education	No Primary education	More connected	Less connected
	(0.074)	(0.034)	(0.031)	(0.089)	(0.045)	(0.037)
<i>Professional</i>	0.069	0.188***	0.139***	0.049	0.165***	0.133***
	(0.075)	(0.039)	(0.032)	(0.130)	(0.043)	(0.042)
<i>Others</i>	0.010	0.031	0.037	0.075	0.106**	-0.009
	(0.077)	(0.039)	(0.034)	(0.114)	(0.047)	(0.043)
<i>Farmland</i>	-0.001	0.036	-0.000	0.054	0.003	-0.007
	(0.045)	(0.031)	(0.027)	(0.081)	(0.036)	(0.033)
<i>Head Sex: Female</i>	0.062	0.092**	0.071**	-0.013	0.081*	0.060
	(0.043)	(0.040)	(0.031)	(0.082)	(0.045)	(0.038)
<i>Religion: Base: Hindu</i>						
<i>Muslim</i>	-0.023	0.061	0.088***	-0.173	0.043	-0.022
	(0.041)	(0.048)	(0.033)	(0.112)	(0.045)	(0.041)
<i>Christian</i>	-0.011	-0.218***	-0.075	-0.537	-0.131*	0.006
	(0.073)	(0.084)	(0.056)	(0.384)	(0.068)	(0.083)
<i>Others</i>	-0.035	0.066	0.068	0.149	0.121*	-0.089
	(0.070)	(0.068)	(0.051)	(0.179)	(0.069)	(0.058)
<i>Cast: Base: General</i>						
<i>SC</i>	-0.056	0.046	0.024	0.066	0.101**	-0.064*
	(0.039)	(0.037)	(0.029)	(0.104)	(0.040)	(0.036)
<i>ST</i>	-0.151*	-0.134**	-0.113**	-0.162	-0.112	-0.152**
	(0.083)	(0.058)	(0.050)	(0.138)	(0.069)	(0.060)
<i>Others</i>	-0.007	-0.024	0.015	0.008	0.040	-0.060**
	(0.032)	(0.030)	(0.023)	(0.098)	(0.031)	(0.028)
<i>Urban</i>	-	-	-0.003	-0.089	-0.003	-0.014
			(0.027)	(0.095)	(0.036)	(0.033)
<i>Income Shock</i>	0.127***	0.084***	0.099***	0.083	0.118***	0.082***

Dependent Variable: <i>Insurance</i>						
	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Urban	Rural	Primary education	No Primary education	More connected	Less connected
	(0.045)	(0.028)	(0.025)	(0.079)	(0.034)	(0.032)
<i>Life Events</i>	-0.072***	-0.037	-0.059***	0.019	-0.080***	-0.039
	(0.026)	(0.025)	(0.019)	(0.064)	(0.026)	(0.024)
<i>Z-Score-SN</i>	0.124***	0.153***	0.103***	0.157***	0.096***	0.167***
	(0.013)	(0.012)	(0.009)	(0.045)	(0.015)	(0.034)
<i>Constant</i>	-3.364***	-3.168***	-5.595***	-1.077*	-3.639***	-2.970***
	(0.339)	(0.238)	(0.212)	(0.576)	(0.301)	(0.227)
<i>Rho</i>	-0.259***	-0.040	-0.077	-0.223	-0.148**	-0.133**
	(0.070)	(0.062)	(0.047)	(0.200)	(0.071)	(0.054)
<i>State fixed effects</i>	Yes	yes	yes	Yes	yes	Yes
Observations	14,345	27,362	32,102	9,605	14,481	27,226

Table A5: Sub-sample analysis- Full table

The table below presents the probit coefficient of second stage bivariate probit coefficient of the regression of insurance on internet for the sub-samples. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Dependent Variable: <i>Insurance</i>												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Probit		Bivariate Probit		Probit		Bivariate Probit		Probit		Bivariate Probit	
	Urban	Rural	Urban	Rural	Primary education	No Primary education	Primary education	No Primary education	More connected	Less connected	More connected	Less connected
<i>Internet</i>	0.225*** (0.028)	0.130*** (0.027)	0.631*** (0.108)	0.199* (0.109)	0.144*** (0.020)	0.228*** (0.086)	0.271*** (0.080)	0.670* (0.403)	0.155*** (0.028)	0.198*** (0.027)	0.393*** (0.115)	0.420*** (0.093)
<i>Debt</i>	0.133*** (0.025)	0.188*** (0.019)	0.131*** (0.025)	0.187*** (0.019)	0.157*** (0.017)	0.209*** (0.035)	0.155*** (0.017)	0.208*** (0.035)	0.182*** (0.025)	0.161*** (0.019)	0.182*** (0.025)	0.158*** (0.019)
<i>Asset quintiles: Base: Q1</i>												
<i>Q2</i>	0.311*** (0.073)	0.308*** (0.025)	0.337*** (0.073)	0.308*** (0.025)	0.301*** (0.029)	0.360*** (0.039)	0.303*** (0.029)	0.353*** (0.039)	0.175*** (0.050)	0.353*** (0.026)	0.183*** (0.050)	0.353*** (0.026)
<i>Q3</i>	0.489*** (0.069)	0.615*** (0.029)	0.503*** (0.069)	0.612*** (0.029)	0.595*** (0.030)	0.532*** (0.053)	0.594*** (0.030)	0.514*** (0.055)	0.512*** (0.050)	0.603*** (0.030)	0.510*** (0.050)	0.594*** (0.030)
<i>Q4</i>	0.803*** (0.070)	0.893*** (0.034)	0.773*** (0.070)	0.884*** (0.037)	0.869*** (0.032)	0.669*** (0.081)	0.860*** (0.033)	0.626*** (0.089)	0.809*** (0.052)	0.870*** (0.034)	0.785*** (0.054)	0.840*** (0.037)
<i>Q5</i>	1.228*** (0.074)	1.292*** (0.045)	1.090*** (0.084)	1.269*** (0.058)	1.269*** (0.038)	1.345*** (0.165)	1.233*** (0.044)	1.196*** (0.212)	1.211*** (0.058)	1.290*** (0.044)	1.128*** (0.071)	1.202*** (0.057)
<i>Age Head</i>	0.128** (0.059)	0.098*** (0.038)	0.104* (0.059)	0.097** (0.038)	0.139*** (0.036)	-0.102 (0.073)	0.136*** (0.036)	-0.095 (0.073)	0.160*** (0.056)	0.090** (0.039)	0.144** (0.056)	0.085** (0.039)
<i>Education</i>	0.064*** (0.021)	0.068*** (0.011)	0.021 (0.023)	0.065*** (0.011)	0.262*** (0.031)	0.069*** (0.025)	0.216*** (0.041)	0.066*** (0.026)	0.108*** (0.021)	0.046*** (0.011)	0.083*** (0.023)	0.038*** (0.011)
<i>Kids Ratio</i>	0.243*** (0.064)	0.152*** (0.044)	0.398*** (0.074)	0.167*** (0.049)	0.221*** (0.041)	0.009 (0.076)	0.259*** (0.047)	0.039 (0.079)	0.145** (0.062)	0.179*** (0.044)	0.228*** (0.073)	0.230*** (0.049)
<i>Old Ratio</i>	-0.503*** (0.072)	-0.349*** (0.050)	-0.370*** (0.079)	-0.339*** (0.052)	-0.439*** (0.051)	-0.263*** (0.072)	-0.408*** (0.054)	-0.242*** (0.073)	-0.455*** (0.070)	-0.357*** (0.050)	-0.382*** (0.078)	- (0.052)
<i>Head Work: Base: Agriculture</i>												
<i>Small Business</i>	0.010 (0.062)	0.033 (0.023)	0.018 (0.062)	0.033 (0.023)	0.026 (0.024)	0.076* (0.041)	0.026 (0.024)	0.079* (0.041)	0.086** (0.037)	0.016 (0.025)	0.089** (0.037)	0.018 (0.025)
<i>Professional</i>	0.316***	0.362***	0.289***	0.358***	0.350***	0.269***	0.343***	0.262***	0.452***	0.292***	0.433***	0.277***

Dependent Variable: <i>Insurance</i>												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Probit		Bivariate Probit		Probit		Bivariate Probit		Probit		Bivariate Probit	
	Urban	Rural	Urban	Rural	Primary education	No Primary education	Primary education	No Primary education	More connected	Less connected	More connected	Less connected
<i>Others</i>	(0.063)	(0.033)	(0.064)	(0.033)	(0.027)	(0.077)	(0.027)	(0.078)	(0.039)	(0.033)	(0.040)	(0.033)
	-0.017	0.004	-0.027	0.003	-0.007	-0.028	-0.009	-0.030	0.073*	-0.041	0.064	-0.043
	(0.066)	(0.030)	(0.066)	(0.030)	(0.028)	(0.056)	(0.028)	(0.055)	(0.042)	(0.032)	(0.042)	(0.031)
<i>Farmland</i>	0.129***	0.110***	0.133***	0.110***	0.087***	0.148***	0.089***	0.148***	0.130***	0.084***	0.134***	0.088***
	(0.041)	(0.022)	(0.041)	(0.022)	(0.022)	(0.039)	(0.022)	(0.039)	(0.032)	(0.023)	(0.032)	(0.023)
<i>Head Sex: Femc</i>	-0.141***	-0.001	-0.144***	-0.002	-0.051*	-0.039	-0.052**	-0.040	-0.067*	-0.040	-0.072*	-0.042
	(0.037)	(0.028)	(0.037)	(0.028)	(0.026)	(0.044)	(0.027)	(0.044)	(0.039)	(0.028)	(0.039)	(0.028)
<i>Religion: Hindu</i>												
<i>Muslim</i>	-0.488***	-0.335***	-0.471***	-0.335***	-0.477***	-0.228***	-0.476***	-0.222***	-0.461***	-0.426***	-0.455***	-0.420***
	(0.036)	(0.035)	(0.037)	(0.035)	(0.028)	(0.053)	(0.028)	(0.053)	(0.041)	(0.031)	(0.041)	(0.031)
<i>Christian</i>	-0.215***	-0.058	-0.210***	-0.052	-0.197***	0.277	-0.193***	0.287	-0.201***	-0.102	-0.188***	-0.103
	(0.070)	(0.074)	(0.070)	(0.074)	(0.051)	(0.199)	(0.051)	(0.199)	(0.066)	(0.076)	(0.066)	(0.076)
<i>Others</i>	0.041	0.098*	0.046	0.097*	0.086*	-0.058	0.085*	-0.063	0.086	0.022	0.079	0.028
	(0.067)	(0.056)	(0.067)	(0.056)	(0.045)	(0.126)	(0.045)	(0.125)	(0.064)	(0.055)	(0.064)	(0.055)
<i>Cast : Base: General</i>												
<i>SC</i>	-0.119***	0.006	-0.100***	0.007	-0.056**	0.020	-0.055**	0.021	-0.031	-0.078***	-0.032	-0.071***
	(0.035)	(0.027)	(0.035)	(0.027)	(0.023)	(0.056)	(0.023)	(0.056)	(0.036)	(0.027)	(0.036)	(0.027)
<i>ST</i>	-0.071	-0.072**	-0.045	-0.071*	-0.150***	-0.028	-0.145***	-0.022	-0.112**	-0.139***	-0.101*	-0.131***
	(0.071)	(0.036)	(0.071)	(0.036)	(0.037)	(0.067)	(0.037)	(0.067)	(0.055)	(0.038)	(0.055)	(0.038)
<i>Others</i>	0.029	0.074***	0.038	0.075***	0.038*	0.085*	0.039**	0.088*	0.032	0.023	0.033	0.028
	(0.029)	(0.023)	(0.029)	(0.023)	(0.019)	(0.051)	(0.019)	(0.051)	(0.028)	(0.023)	(0.028)	(0.024)
<i>Urban</i>			-		-0.066***	0.006	-0.071***	0.005	-0.024	-0.053**	-0.038	-0.060**
					(0.022)	(0.049)	(0.022)	(0.049)	(0.031)	(0.025)	(0.032)	(0.025)
<i>Income Shock</i>	-0.004	0.094***	-0.017	0.093***	0.062***	0.087**	0.060***	0.086**	0.044	0.078***	0.038	0.075***
	(0.042)	(0.020)	(0.042)	(0.020)	(0.020)	(0.038)	(0.020)	(0.038)	(0.030)	(0.022)	(0.030)	(0.022)
<i>Life Events</i>	-0.041*	-0.026	-0.031	-0.025	-0.038**	-0.004	-0.036**	-0.004	-0.046*	-0.025	-0.040*	-0.023
	(0.024)	(0.018)	(0.024)	(0.018)	(0.016)	(0.032)	(0.016)	(0.032)	(0.023)	(0.018)	(0.024)	(0.018)

Dependent Variable: <i>Insurance</i>												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Probit		Bivariate Probit		Probit		Bivariate Probit		Probit		Bivariate Probit	
	Urban	Rural	Urban	Rural	Primary education	No Primary education	Primary education	No Primary education	More connected	Less connected	More connected	Less connected
<i>Z-Score-SN</i>	0.143*** (0.012)	0.131*** (0.010)	0.124*** (0.013)	0.128*** (0.011)	0.133*** (0.008)	0.093*** (0.024)	0.129*** (0.009)	0.087*** (0.024)	0.095*** (0.014)	0.254*** (0.026)	0.087*** (0.015)	0.246*** (0.026)
<i>Constant</i>	-2.108*** (0.268)	-2.130*** (0.168)	-2.085*** (0.265)	-2.131*** (0.168)	-2.632*** (0.164)	-1.350*** (0.350)	-2.547*** (0.172)	-1.421*** (0.350)	-2.259*** (0.238)	-1.993*** (0.185)	-2.204*** (0.239)	-2.001*** (0.185)
<i>State fixed effects</i>	yes	Yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
<i>Wald test stat</i>			13.61**	0.424			2.685	1.237			4.364**	6.039**
<i>Observations</i>	14,347	27,364	14,345	27,362	32,105	9,512	32,102	9,605	14,482	27,223	14,481	27,226

Table A6: Access to internet and insurance premium paid – Full table

The table below presents the coefficients obtained from the instrumental variable tobit model and tobit model of premium on access to the internet and other socio-economic factors. Robust Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

VARIABLES	Dependent Variable: <i>Premium</i>		
	(1) Tobit	(2) IV-tobit- stage 2	(3) IV-tobit- stage 1
<i>Internet</i>	0.118*** (0.022)	0.588*** (0.159)	
<i>Share_internet</i>			0.346*** (0.023)
<i>Persons</i>	0.001 (0.005)	-0.007 (0.006)	0.021*** (0.002)
<i>Debt</i>	-0.019 (0.020)	-0.016 (0.020)	-0.005 (0.008)
<i>Asset quintiles: Base: Q1</i>			
<i>Q2</i>	0.247*** (0.049)	0.271*** (0.050)	-0.049** (0.020)
<i>Q3</i>	0.361*** (0.048)	0.392*** (0.050)	-0.063*** (0.020)
<i>Q4</i>	0.572*** (0.050)	0.560*** (0.051)	0.019 (0.021)
<i>Q5</i>	1.023*** (0.054)	0.897*** (0.069)	0.237*** (0.022)
<i>Age Head</i>	0.116** (0.050)	0.129** (0.051)	-0.043** (0.021)
<i>Education</i>	0.050*** (0.017)	0.005 (0.023)	0.088*** (0.007)
<i>Kids Ratio</i>	0.278*** (0.056)	0.499*** (0.093)	-0.472*** (0.023)
<i>Old Ratio</i>	0.101 (0.070)	0.191** (0.078)	-0.202*** (0.030)
<i>Small Business</i>	-0.020 (0.031)	-0.021 (0.032)	0.003 (0.013)
<i>Professional</i>	0.160*** (0.032)	0.118*** (0.036)	0.080*** (0.013)
<i>Others</i>	0.060* (0.036)	0.041 (0.037)	0.038** (0.015)
<i>Farmland</i>	0.119*** (0.026)	0.134*** (0.027)	-0.014 (0.011)
<i>Head Sex: Female</i>	-0.036 (0.033)	-0.058* (0.034)	0.044*** (0.014)
<i>Muslim</i>	-0.132*** (0.037)	-0.125*** (0.038)	0.002 (0.016)
<i>Christian</i>	-0.013 (0.061)	-0.008 (0.062)	-0.009 (0.026)
<i>Others</i>	0.031 (0.055)	0.044 (0.056)	-0.029 (0.023)
<i>Cast : Base: General</i>			
<i>SC</i>	-0.169*** (0.029)	-0.151*** (0.030)	-0.026** (0.012)
<i>ST</i>	-0.042 (0.049)	-0.020 (0.050)	-0.030 (0.021)
<i>Others</i>	-0.029 (0.049)	-0.014 (0.050)	-0.017* (0.021)

Dependent Variable: <i>Premium</i>			
VARIABLES	(1)	(2)	(3)
	Tobit	IV-tobit- stage 2	IV-tobit- stage 1
	(0.023)	(0.024)	(0.010)
<i>Urban</i>	0.027	-0.007	0.014
	(0.026)	(0.029)	(0.012)
<i>Income Shock</i>	0.029	0.014	0.033***
	(0.025)	(0.026)	(0.010)
<i>Life Events</i>	-0.045**	-0.029	-0.033***
	(0.019)	(0.020)	(0.008)
<i>Z-Score-SN</i>	0.121***	0.102***	0.039***
	(0.009)	(0.011)	(0.004)
<i>Constant</i>	7.201***	7.074***	0.219**
	(0.214)	(0.222)	(0.090)
State fixed effects	yes	yes	yes
Wald test stat		8.96***	
Observations (uncensored)	10,913	10,913	10,913