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Trust in insurance: The importance of experiences

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Abstract: This paper investigates the predictors of trust in insurance and the importance of experiences in a cross-country setting using a recent insurance industry survey conducted in seven industrialized countries. Preliminary data analysis reveals a very high prevalence of bad experiences with insurance whereby more than 50% of respondents acknowledge having had a bad experience with insurance. Our main findings show that experiences with insurance are one of the most important factors influencing trust in insurance, with the negative effect of a bad experience being more pronounced than the positive effect of a good experience. We also find that trust in insurance is higher among females, younger and less educated individuals, while being lower among individuals with higher insurance literacy. Additionally, access to insurance information through the internet is associated with lower trust in insurance, while higher trust is observed among individuals using newspapers and magazines.

JEL Classification: D12, G22

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1. Introduction

The insurance industry, more than any other financial industry, is based on trust. Insurers, in exchange of a premium, promise to pay an indemnity if an adverse event occurs in the future. Without trust in insurance, it is very unlikely that individuals would decide to buy insurance (Guiso, 2008). Understanding trust in insurance is therefore crucial as, not only it shows how insurers are perceived, but most importantly it helps explain why people are willing or not to buy insurance.

Trust has for long been considered as an important driver of any economic activity (Arrow, 1972) and a rich literature exists on the role of trust in financial and economic development (see e.g. Bjornskov 2012; Gennaioli et al., 2015). Other studies focus on the drivers of trust in financial institutions, but this literature is less developed and mainly includes studies on trust in banks (see e.g. Sapienza and Zingales, 2012; Fungácová et al., 2019).

While the importance of trust in insurance is well recognised (Schanz, 2009; Guiso, 2012; The Geneva Association, 2019), surprisingly, very little has been documented on what exactly drives trust in insurance. Guiso (2012) studies trust in insurance among small Italian entrepreneurs using a limited set of explanatory variables and finds a significant role played by the degree of satisfaction with insurance policies. Van Dalen and Henkens (2018) investigate trust in pension institutions, including insurance companies in Netherlands. This paper finds that the perceived integrity, competence, stability and benevolence of insurance companies matter in assessing their trustworthiness. More recently, Booth and Tranter (2019) study trust in insurance in Australia and find that that women and more educated people have higher trust in insurance.

Despite the contribution of the above literature, we still know little about what drives trust in insurance around the world. More importantly, we observe dramatic cross-country and within-country heterogeneity in individuals' trust levels in insurance. We make use of a novel insurance industry survey to study the association between individual characteristics and trust in insurance in a cross-country setting. We also focus on experiences with insurance which is a novel aspect that has received relatively little attention in the literature. In fact, our preliminary data analysis shows a very high prevalence of bad experiences with insurance. In particular, over 50% of individuals report to have had or known someone who has had a bad experience with insurance. Moreover, point estimates suggests that a mere elimination of bad experiences could increase trust in insurance by high as 32%.

Our work thus aims to contribute to existing literature in the following ways. First, we do not focus on specific business lines such as pension providers, but on the insurance industry as a whole. Second, we take single country studies a step further by using a sample of seven high-income countries in Europe, North America and Asia. This provides additional geographic and cultural heterogeneity in our empirical analysis. Third, we use a large set of variables which might influence trust in insurance; from socioeconomic characteristics, behavioural traits, insurance literacy, means of access to information, to past good and bad experiences with insurers. Fourth, we focus in our analysis on the role of experiences, being good and bad, in defining trust in insurance, especially that this area has been highly overlooked by existing literature. Fifth, we address different dimensions of trust in insurance, being trust in the industry in general, and trust in specific operations of the insurance industry. Finally, we make use of a novel comprehensive survey, which includes questions specific to the insurance industry, which makes our study unique and based on original data.

More specifically, our empirical analysis in this paper is based on an exclusive recent survey carried out by The Geneva Association which includes a comprehensive questionnaire on the insurance industry conducted in the following high-income countries: the United States, United Kingdom, Germany, France, Italy, Switzerland, and Japan. To estimate our data, we run an

ordered logit model using individual trust in insurance companies as a dependent variable on a large set of explanatory variables. We find that trust in insurance is higher among females, younger individuals, and less educated people. On the contrary, people who are more insurance literate have higher trust in insurance. We also find that experiences with insurance are one of the most important drivers of trust in insurance, with the negative effect of a bad experience being more pronounced than the positive effect of a good experience. Moreover, while access to insurance information through the internet is associated with lower trust in insurance, higher trust is observed among individuals using newspapers and magazines. Finally, we find that French and Germans have relatively lower trust in insurance.

Given the importance of trust in the willingness to buy insurance, the implications of our findings are of high relevance for policymakers and the insurance industry. By making individuals more knowledgeable of insurance and limiting bad experiences, trust in insurance is boosted; consequently, the demand for insurance products is expected to rise.

This article is organised as follow. Section 2 briefly reviews the related literature on the predictorsof trust. Section 3 is devoted to the presentation of the database and the variables used. Section 4 presents the econometric methodology and discusses the main results. Section 5 provides further investigations and robustness checks. Finally, section 6 offers some concluding remarks and policy recommendations.

2. Literature Review

Over the last two decades, trust has evolved to become a prominent concern in various fields. Perhaps the most comprehensive definition of trust is the one which appears in Gambetta (1988): "trust is a particular level of the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action, both before he can monitor such action and in a context in which it affects his own action". It follows that trust is dependent on both the propensity of trust of the individual who has to trust and the perceived trustworthiness of the subject trusted (Mayer et al., 1995).

According to Arrow (1972), an element of trust is certainly found in every commercial transaction executed. Economic and social well-being are found to prosper in societies with high levels of trust (Arrow 1972, Fukumaya 1975). Thus, trust is widely considered as an essential lubricant to any economic activity. In that respect, a wide strand of literature exists on the role of trust in the success of different economic phenomena. The focus of this literature has been mainly on general trust and its contribution to financial development, economic growth and prosperity (Knack and Keefer, 1997; Guiso 2004, 2008, 2010; Bjornskov 2012; Gennaioli et al., 2015).

An important strand of literature focuses on analyzing the role of socio demographic factors in determining general trust. Glaeser et al. (2000) show that trust is higher among high social status individuals. Likewise, Taylor-Gooby (2005) finds that trust in state and non-state pensions in the U.K. is higher among more privileged groups. Ennew and Sekhon (2007) provide evidence that trust is lower among older individuals. Helliwell and Putnam (2007) show that education boosts trust levels. This is confirmed by Charron and Rothstein (2016) who also find that that the positive effect of education on trust is conditional to a well-developed institutional and legal environment[1].

Some other studies analyse the predictors of trust in the financial sector, mainly focusing on single country studies and banks. Lachance and Tang (2012) show that age and risk aversion decrease trust levels in financial professionals in the U.S. They also show that financial literacy boosts trust in financial professionals, but this positive effect turns negative for high levels of

[1] For further studies on education and trust, see Huang et al. (2011), Putnam (2000), Helliwell and Putnam (2007,) and Borgonovi (2012)

financial literacy. Knell and Stix (2015) and Jansen et al. (2015) explore trust in banks, respectively in Austria and in The Netherlands. However, these studies provide contradictory results whereby the former finds significant effect of socio demographic characteristics of individuals on trust levels while the latter does not find any significant effect. Jansen et al. (2015) attribute the shift of trust in banks to events such as negative news and non-transparent product information. Shim et al. (2013) studying young adults' trust in U.S. banks find that self-reported well-being and financial status are significant drivers of trust. More recently, Fungacova et al. (2019) perform a more comprehensive cross-country study of trust in banks. They document that trust in banks is higher among younger people, women, religious individuals and individuals with lower levels of income.

Surprisingly, despite the importance of the insurance industry in the financial sector, the literature on trust in insurance remains scarce. Guiso (2012) mainly discusses and provides evidence using Italian data on a significant effect of trust on insurance demand. The study also briefly discusses a limited number of factors driving trust in insurance among a selection of Italian entrepreneurs and confirms a significant role played by the degree of satisfaction with insurance policies. This paper also finds significantly lower trust in insurance among male respondents. Dalen and Henken (2018) explore trust in pension institutions including insurance companies offering pension products in the Netherlands. They show that integrity, stability as well as benevolence of insurance companies are significant predictors of their trustworthiness. The paper also provides evidence that trust in insurance is higher among more educated and younger individuals. Another paper on Dutch insurers is by Maarse and Jeurissen (2019) who attempt to explain theoretically, why institutional trust (trust in the general behaviour of insurers) is low in Dutch insurers. They attribute this to several non-exclusive factors such as the lack of information on insurers and the belief that insurers are mainly profit-driven. The authors also affirm that low trust originates more from perceptions than from the objective purchasing behaviour of insurers. Finally, Booth and Tranter (2019) study trust in insurance in Australia. They find that trust is insurance is the lowest among all Australian institutions. Their results also highlight that women and more educated people have higher trust in insurance.

3. Data and variables

3.1. Sample and data sources

In this paper, we make use of a recent Geneva Association survey conducted by Edelman Intelligence in March 2018. The survey includes a comprehensive questionnaire on the insurance industry conducted in seven high-income countries: The United States, United Kingdom, Germany, France, Italy, Switzerland, and Japan. It contains questions related to various types of trust in insurance as well as individual characteristics and preferences. The survey is based on an average of 1000 respondents per country with a good age, region, gender as well as income spread. Our total sample consists of 7434 cross-country individual observations. Table A1 of Supplementary material Appendix A represents detailed explanation of all variables employed in this study.

3.2. Dependent variable: trust in insurance

The main dependent variable in our investigation is the individual self-reported trust in insurance companies (*Trust insurance*). This variable codes the answers to the following question:

When thinking about insurance companies, how much do you agree or disagree with the following statements: insurance companies are trustworthy?

Answers are reversed and coded as follows: 1 for strongly disagree, 2 for somewhat disagree, 3 for neither agree nor disagree, 4 for somewhat agree, and 5 for strongly agree. The variable is thus an ordinal variable scaled from one to five with higher values indicating higher trust in insurance.

3.3. Independent variables

3.3.1. Socioeconomic factors

Concerning explanatory variables, we start by including a set of socioeconomic indicators. We aim to determine whether socio-demographic/economic factors are significant predictors of trust in insurance. For this purpose, we include the vector *Socio-eco-factors* that contains a various set of indicators that we detailed here below.

First, we proxy for gender, the dummy variable *Gender* takes the value of 1 if the subject is a male and zero otherwise. Next, we use the variable *Age*, which is the age of the subject in years. Age in our sample ranges from 18 to 93. We control for education following Helliwell and Putnam (2007). We wish to investigate whether education boosts or hinders trust in insurance especially that results in the literature on general education and trust have been controversial. The variable *Education* is an ordinal variable taking the following values: 1 for graduate school or less, 2 for some secondary school or equivalent, 3 for finishing secondary school or equivalent, 4 for vocational/technical school, 5 for some university/higher education, 6 university/honors degree, 7 post-graduate degree. *Income* is the household annual income in 2017. It takes the value of 1 for low income, 2 for middle income, and 3 for high income[2].

We also use a dummy variable (*Chief earner*) to control for whether the subject interviewed is the chief-income-earner in the household or not. Being the chief-income-earner in a household could be linked to being the one responsible for contracting insurance which might make the subject more trusting in insurance. To study whether trust in insurance is different according to the living area characteristics, we use the variable *Living area* which takes the values of 1 if the subject lives in the heart of a large city, 2 for an urban area, 3 for a suburban area, 4 for a semi-rural area, and 5 for a rural area. Individuals who live in rural areas might be less informed and thus less trusting than those who live closer to large city center. Additionally, we add a dummy variable *House-ownership* that takes the value of one if the respondent owns his house and zero otherwise[3]. We also include the dummy variable *Children* which accounts for the presence (1) or not (0) of children in the household. Finally, to account for unemployment as in Charron and Rothstein (2016), we add a dummy variable *Unemployment* which takes the value of 1 if the subject is unemployed and zero otherwise.

3.3.2. Insurance literacy

We are interested in studying the effect of specific knowledge of the insurance industry on trust in insurance. We dub knowledge of the insurance industry, *Insurance literacy*. This variable is recorded as the answer to the following question:

[2] Income is split into the three categories (low, middle, and high) depending on the perceived salary spread in each country.

[3] An endogeneity issue due to inverse causality might arise should the decision to purchase a house depend on the level of trust in national house insurance. However, it is very unlikely for a household to base such an important choice (which depends on many factors) on its level of trust in insurance.

How would you qualify your level of understanding/knowledge of the insurance industry?

The answers are scaled from 1 to 5 as follows: 1 for very poor, 2 for poor, 3 for fair, 4 for good, and 5 for very good. This variable is of particular interest in our study as we are interested in finding whether individuals' trust in insurance is higher among those who are more familiar with the industry specifically. We expect a positive effect of this variable on trust as we suspect that individuals with higher knowledge of the insurance industry might be able to grasp much easier how insurance functions and thus might have higher levels of trust in insurance.

3.3.3. Experiences with insurance

Next, we hypothesize that experiences from the past could have an effect on current trust levels. Alesina and Ferrara (2002) show that traumatic history is one of the most significant drivers of individual trust. In his study on Italian insurance companies, Guiso (2012) finds that the degrees of satisfaction with insurance policies are one of the most important predictor of trust in insurance. To test the importance of previous experiences with insurance on trust, we add to our model the vector *Past-experiences*, which includes two dummy variables: the presence of good experience and the presence of a bad experience. More specifically the variable *Good experience* records the answer to the following question:

Have you ever had, or know someone who has had, a good experience with insurance? [4]

Likewise, the variable *Bad experience* records the answer to the following question:

Have you ever had, or know someone who has had, a bad experience with insurance?

These dummy variables take the value of 1 if the answer is "yes" and zero if the answer is "no". Obviously, we expect a positive sign on the good experience variable and a negative sign on the bad experience. We also wish to assess which of the two variables has a more important impact on trust in insurance.

Additionally, our dataset allows us to take a closer look at bad experiences. Individuals who have responded that they have had a bad experience or known someone who has had a bad experience are subsequently asked to select what exact type was their bad experience among the following: a delayed payment, a difficulty to claim, a denied claim, and a complicated purchase process. We construct dummy variables based on the above answers taking the value of one if individuals select the corresponding answer and zero otherwise.

3.3.4 Traits of character

We include a set of personal characteristics (*Traits*) which we suspect might influence trust levels.

First, we include a dummy variable, *Optimism*, which takes the value of 1 if the individual considers himself/herself optimistic and zero otherwise. Optimism is expected to have a positive influence on trust since more optimistic individuals tend to be happier and happiness has been shown to promote trust (Mislin et al., 2015).

[4] Formulated as such, selection bias should be reduced since the response does not only include personal experiences but experiences of others as well. To avoid redundancy and in order to be more concise when analyzing the results, references is only made to "individuals who had an experience with insurance" although the context is "individuals who had or known someone who had an experience with insurance".

Second, we wish to study the effect of the importance of the future with respect to the present on trust in insurance. For this purpose, we include the variable *Future-orientation* which reports answers to the following: *I tend to focus on the present more than the future*. Answers available are coded as follows: 1 strongly agree, 2 somewhat agree, 3 neither agree nor disagree, 4 somewhat disagree, and 5 strongly disagree. Hence, higher levels of this variable indicates that the individual is more future oriented.

Third, we add to our model a dummy variable, *Altruism*, which represents the answer to the following: *I feel responsible for taking care of my family*. Likewise, answers available are coded as follows: 1 strongly agree, 2 somewhat agree, 3 neither agree nor disagree, 4 somewhat disagree, and 5 strongly disagree. Hence, higher values indicate lower levels of altruism.

3.3.5. Information source

Finally, access to information regarding insurance can influence the level of trust in insurance. Following Fungacova et al. (2019), we add to our regression analysis the vector *Info-source* which includes two variables coding for the source of access to information on insurance. The variable *Info-newspaper* codes the answer to the following question:

Do you search for information regarding insurance products using newspapers?

As for the variable *Info-internet*, it codes answers to the following question:

Do you search for information regarding insurance products using an internet search engine?

Variables are set equal to one if the answer of the respondent is yes and zero otherwise.

3.4. Descriptive statistics

Table 1 presents the descriptive statistics of the full sample while table 2 shows means values of variables by country. Trust in insurance shows a sample average of 2.72 and ranges (on a scale of 1 to 5) from 2.619 in France to 2.799 in the U.K. Insurance literacy averages at 2.825 on a scale of 1 to 5 and records a maximum in Germany (2.966) and a minimum in Japan (2.436). Gathering information concerning insurance seems to originate much more from internet sources (0.378) than newspaper and magazines (0.074) which also applies at the every country level. A culture gradient is palpable when we look closer at the variables denoting traits of character (optimism, future orientation, and altruism) whereby Japan records maximum levels for all three variables among all countries. Finally, experiences with insurance show high divergence among countries. Having a bad experience with insurance is at its record low in Japan (0.26) while being the highest in Switzerland (0.65). Likewise, a good experience is at its minimum in Japan as well (0.301) while showing also a maximum in Switzerland (0.648). In this scope, we dedicate section 4 to analyse further in details the determinants of experiences and how they correlate with trust.

Table A2 of Supplementary material Appendix A displays the correlation matrix. No major correlation exists between independent variables, which implies that our regression analysis does not suffer from any multicollinearity issues. We also perform the variance inflation factor (VIF) for further confirmation. We obtain a VIF lower than 10 which again alleviates multicollinearity issues.

[INSERT table 1 here]

[INSERT table 2 here]

Since all variables are ordinal, the more intuitive analysis of first order descriptive statistics is provided in Table 3, which displays the mean and standard deviation levels of trust in insurance by country and by different criteria. This allows us a preliminary overview of how individual characteristics correlate with trust. In our analysis, we consider four categories of socio-economic/demographic criteria. First, we use gender to distinguish between male versus female behavior. Second, we take 40 as a threshold age for which we compare individuals aged more or less than 40 years. Third, educated respondents are those who have answered that they have attended at least some/university/college level education. Finally, respondents having high income are those whose income belongs to the highest category of the three categories of income in each country.

The analysis in Table 3 shows that for the full sample, females (2.75) are more trusting than men (2.69). Younger individuals have higher trust in insurance on average (2.81) compared to older individuals (2.68). This is also observed at the country level (with the exception of Switzerland). Education, on the contrary, does not display notable differences in this univariate analysis. Trust in insurance seems to increase with income on the sample level. Also, with the exception of the United States, individuals earning the highest salaries seems to be the most trusting in each country considered.

[INSERT table 3 here]

4. Experiences and trust in insurance

In the literature, we do not find any work focusing on good and bad experiences when analysing trust in insurance. This is especially important given the fact that insurance is widely considered as an experience-based service. Consequently, we focus on exploring in details what determines who has a good or a bad experience. We do so by analysing experiences with insurance by country and by socio-demographic factors. Subsequently, we show how good and bad experiences correlate with the level of trust in insurance.

4.1. Experiences with insurance by country for different criteria

To analyse what determines experiences, we display the occurrence (in percentage of all respondents) of a bad and a good experience by country and by each socio demographic criterion. Results are presented in Table 4. For the full sample, 53% of respondents have had (or known someone who have had) a bad experience with insurance while 51% of respondents have had a good experience. Among the seven countries of the sample, a culture gradient is evident whereby Japan is the only country where more people reported having a good experience (30%) than a bad experience with insurance (26%).

[INSERT table 4 here]

4.2. Elements of a bad experience for different criteria

We also focus on the occurrence of different types of bad experiences. For this purpose, we display the distribution of these bad experiences by country and by socio-demographic/economic criteria. Table 5 displays the percentage of respondents for each category. A first glance at the data shows that a denied claim has the highest occurrence among all respondents followed by a delayed payment. Denied claims seem the highest in the United States (44%) and the lowest in Japan (18%). Germany followed by France records the lowest rate in terms of a complicated insurance purchase. France also exhibits the lowest percentage of difficulty to claim experiences (12%). The predominant bad experience also highly varies by country except for, a complicated purchase process, which records the lowest occurrence among all experiences in each country. Concerning socio-economic criteria, all types of bad experiences seem higher among male respondents compared to females. Likewise, older individuals (above 40), highly educated individuals, and those having higher incomes seem to have a higher rate of all categories of bad experiences. For example, all four categories of bad experiences are almost twice more probable among individuals with lower levels of income (68%) compared to those with high income (32%). Since we have seen that bad experiences show a high negative correlation with trust in table 4, we hence expect males, more educated individuals, and those having lower incomes to have lower trust in insurance.

[INSERT table 5 here]

4.3. Experiences and the level of trust in insurance

We start by displaying the simple distribution of respondents' trust level (all possible outcomes) according to the type of experience with insurance (Table 6). As one would expect, the higher the trust level, the higher the percentage of respondents with a good experience. Among the respondents at the lowest trust level, only 29% have declared a good experience while for the highest trust level, 82% declare a good experience. The opposite is true for bad experiences with the exception of the highest category. It is also worth noting that, contrary to what we expect, that is, a much higher occurrence of bad experiences since individuals tend to report negative events more than positive ones, the percentage of bad versus good experiences is quite close for the full sample (53% versus 51% respectively). All in all, the analysis provided in the below table does confirm that experiences highly correlate with trust.

[INSERT table 6 here]

To go further in our analysis, we focus on how experiences correlate with trust and how socio-economic/demographic factors also influence trust in insurance. For this purpose, Table 7 reports mean trust levels by different criteria and by experiences simultaneously. Trust in insurance seems to be at its highest among young individuals having had a good experience (3.029) as well as among high income individuals having had a good experience (3.017). There is a clear gender and age gradient whereby females and young individuals do trust insurance more regardless of previous experiences. We also find evidence that women having had a bad experience have higher trust than men having had a bad experience. This is in line with Haselhuhn et al. (2015) who show that women's trust is less affected following a bad experience. The impact of education however is not clear-cut in this bi-variate analysis.

[INSERT table 7 here]

5. Econometric analysis

5.1. Empirical model and methodology

We start by employing the following model to estimate our data:

$$[1]\ Trust\ insurance = \gamma_0 + \sum_{f=1}^{F} \gamma_f\ Socio-eco-factors_f + \beta\ Insurance\ literacy + \varepsilon$$

We then incorporate additional covariates as follows:

$$[2]\ Trust\ insurance = \gamma_0 + \sum_{f=1}^{F} \gamma_f\ Socio-eco-factors_f + \beta\ Insurance\ literacy + \sum_{k=1}^{K} \mu_k\ Past-experiences_k + \sum_{l=1}^{L} \omega_l\ Traits_l + \sum_{m=1}^{M} \phi_m\ Info-source_m + \varepsilon$$

Alternatively, we control for country specific effects by adding to our model country dummies:

$$[3]\ Trust\ insurance = \gamma_0 + \sum_{f=1}^{F} \gamma_f\ Soci-eco-factors_f + \beta\ Insurance\ literacy + \sum_{n=1}^{7} \eta_n\ CD_n + \varepsilon$$

$$[4]\ Trust\ insurance = \gamma_0 + \sum_{f=1}^{F} \gamma_f\ Socio-eco-factors_f + \beta\ Insurance\ literacy + \sum_{k=1}^{K} \mu_k\ Past-experiences_k + \sum_{l=1}^{L} \omega_l\ Traits_l + \sum_{m=1}^{M} \phi_m\ Info-source_m + \sum_{n=1}^{7} \eta_n\ CD_n + \varepsilon$$

We use an ordered logit model to estimate the above models since our dependent variable *Trust insurance* is an ordinal variable which takes discrete values. We use four different specification in our main analysis to assess the importance of different variables. First, we estimate our model [1] using only socio-economic characteristics and measures of insurance literacy. Next, we estimate the full model by adding the remaining covariates as in model [2]. Finally, we run the first two specifications with country dummies in specifications [3] and [4]. In addition, we complement our analysis by analysing marginal effects in the further investigations section.

5.2. Main regression results

In this section, we present the estimation results of the main regression models [1] to [4] displayed in (Table 8).

Starting with socio-economic factors, we find a strong gender gradient whereby women trust insurance much more than men. This is in line with previous literature on trust in banks and insurance (see e.g. Guiso, 2012; Knell and Stix, 2015; Fungacova et al., 2019). Hence, women might be more likely than men to purchase insurance if they had to decide on such a purchase. According to Haselhuhn et al. (2015), men after a bad experience loose trust more quickly than women do, which might eventually explain the tendency of women to be more trusting in general.

Trust in insurance is found to decrease with age. As people age, they might become more sceptical of insurance and have less trust in it. Hence, all other things being equalled, young people might be more willing to buy insurance than older people. This result is in accordance with Van Dalen and Henkens (2018) for Dutch insurers.

As for education, a higher level of education tends to deteriorate trust in insurance. This is in accordance with Booth and Tranter (2019) concerning trust in insurance among Australians but in contrast with Van Dalen and Henkens (2018) who show that more educated people trust more insurance companies offering pension products in The Netherlands. A possible explanation is that more educated people are more likely to become sceptical of insurance.

According to our results, income, unemployment, and being the chief-income-earner in a household are not significant in explaining the level of trust. On the contrary, the living area as well as house ownership strongly influence the level of trust. In line with Booth and Tranter (2019), individuals living in big cities tend to have more trust in insurance than those living in rural areas. Again, knowledge about insurance and insurance products (due to higher exposure to advertisements and interaction with others) which is usually higher among large city inhabitants might explain why trust is higher among these individuals compared to people living in rural areas. Likewise, individuals who are house owners tend to have more trust in insurance.

Insurance literacy, i.e. the level of understanding and knowledge of the insurance industry, is shown to strongly influence positively the level of trust in insurance. This result may be related to the degree of complexity of the insurance industry. Those with low financial literacy in the insurance industry may find highly complex the mechanisms of insurance and do not really grasp how insurance functions, lowering their trust in insurance. On the contrary, individuals understanding how insurance works and aware of its potential benefits are less sceptical about insurance and trust it more. These results are once again in line with Booth and Tranter (2019) who highlight the importance of insurance knowledge in driving trust in insurance and eventually in boosting insurance purchase.

Past experience with insurance, being good or bad, also strongly influences the level of trust in insurance. Those who had a good experience with insurance tend to have more trust in insurance. Individuals with bad experience with insurance tend to have less trust in insurance than individuals with no history of bad experience. In the following section, we further investigate the elements defining a bad experience in insurance. These results are in line with Guiso (2012) who shows that the level of satisfaction with insurance policies, i.e. how the insurance adhered to the contractual obligations and respected the client's interests, raises substantially the level of trust. Also, these results are in accordance with Alesina and Ferrara (2002) who show that traumatic history is one of the most significant drivers of individual's trust in one another.

Regarding individual character traits, optimistic individuals, altruistic individuals and future oriented individuals, tend to have higher trust in insurance. Indeed, optimistic individuals tend to overweigh good outcomes and underweight bad ones, which makes them less sceptical about insurance. Altruistic individuals, who are more caring about other, might be more sensitive to the importance of helping people in need, and thus might be more aware of the benefits of insurance, the fact which might make them more trusting in insurance.

Concerning information sources, we find that the type of access to information related to insurance is also a significant determinant of insurance trust. Access to information related to insurance through newspapers and magazine enhances trust in insurance. Access to the internet, in contrast, has the opposite effect. Hence, our results show that the means of access to information can be beneficial or detrimental to trust in insurance, depending on the source of this information. This confirm earlier results on the influence of the type of access to information on trust in banks (Fungacova et al., 2019). An explanation to this is that the internet can be seen as a platform for spreading negative news, rumours or even fake news, while newspapers and magazines might be offering more objective and solid information and thus do increase the confidence of their audience in insurance products.

Finally, we display results for country dummies. France is the country dropped for collinearity among the seven country dummies in the regression. Results show that individuals

from countries in France and Germany have lower trust in insurance compared to remaining countries. On the contrary, individuals from Switzerland and the U.K. show the highest trust levels in insurance. As mentioned previously, trust may be highly dependent on culture and on insurance specificities in each country. In other words, trust in insurance divergence between countries might be driven by two different aspects. First, the general level of trust, that is how trusting are the citizens in general in each country. Second, the perceived quality of insurance services, which is a major factor driving levels of trust. These two factors combined could thus be driving the heterogeneity observed among the sample countries.

[INSERT table 8 here]

5.3. Marginal effects

To further analyse the magnitude of the effect of our explanatory variables in determining trust in insurance, we conduct marginal effects analysis. We present in Table 9 marginal effects of the five different outcomes of trust using model [4][5]. Hence, we are interested in complementing our analysis in the previous section which outlined the sense of the significance of the variables by quantifying the impact of these variable in order to point their relative importance in determining the drivers of trust in insurance as well as the elements that highly deter it.

For simplicity in the interpretation, we focus on commenting on the higher trust outcomes, i.e., outcomes 4 and 5 knowing that the opposite interpretation also applies. As in the main regression, we find no significance of income, children, and unemployment on trust. All other variables show significant marginal effects on different trust outcomes. In terms of magnitude, results in Table 5 show that a bad experience shows the highest negative marginal effect on outcome 5 (having had a bad experience with insurance) decreases the probability of a response in the highest category of trust by 2.6 percentage points. As for drivers of a high trust level, we find that having a good experience with insurance as well as being insurance literate (an increase by a one standard deviation) increases the probability of a response in category 5 by 2.3 percentage points and 1.1 percentage points respectively. This effect is actually much more pronounced on a response in category 4 whereby having a good experience with insurance as well as being insurance literate (an increase by a one standard deviation) increases the probability of a response in this category by 12.4 percentage points and 5.9 percentage points respectively. Moreover, a bad experience highly deters trust in insurance among respondents in category 4, with a 13.6 percentage points decrease in a response in this category following a bad experience with insurance. As such, results show that the intensity of the effect of experience with insurance is higher if the experience is bad than if it is good. Hence, bad experience with insurance is more detrimental to trust than good experience is beneficial to trust.

Concerning socio-economic factors, we find a negative impact of 2.5 percentage points of gender and a positive impact of 3 percentage points of being a house owner on the probability of a response in category 4. In other words, if the respondent is a male, there is 1.1 percentage points less chance to answer neither agree nor disagree, 2.5 percentage points less chance to answer somewhat agree, and 0.4 percentage points less chance to answer strongly agree with the trustworthiness of insurance. Being old and educated also significantly decreases the probability of a response in higher trust categories but with a lower magnitude compared to gender.

Concerning traits of character, being optimistic increases the chance of a response (4) by 1.8 percentage points while being future oriented decreases it by 1.1 percentage points. Finally,

[5] For simplicity reasons and to gain space. Results using the three other models are available upon request.

concerning information sources, results show that using the newspaper increases the probability of a response in category 4 by 2 percentage points (0.3 for category 5) while using the internet decreases the probability of a response in category 4 by 2.3 percentage points (0.45 for category 5).

[INSERT table 9 here]

6. Further investigations and robustness checks

In this section, we start by regressing the purchase of insurance on trust in insurance. In other words, we aim to empirically examine whether trust influences the decision to purchase insurance. Additionally, we look further at the elements of bad experience in insurance by replacing the bad experience dummy in the main regression with dummies on specific bad experiences. We also run regressions by countries, consider an alternative measure of trust in insurance, and use replace ordinal variables with binary variables. Finally, we perform several robustness checks.

6.1. Insurance purchase and the importance of trust

We run a regression with the dependant variable being the response to the question of whether an individual has purchased a minimum of one type of insurance (excluding mandatory insurance). The dependant variable, *Insurance purchase*, is thus a dummy variable taking the value of 1 if an individual has any of the following: term-life insurance, private health insurance, pay out/retirement insurance, residential/property insurance, automobile/motorcycle insurance, disability insurance/income protection, cyber insurance, liability insurance, fire/flood insurance, whole life insurance, endowment /unit-linked savings, long-term care insurance, and/or critical illness insurance. The main independent variables are the dummy variables for every level of trust in insurance with the lowest level being strongly distrusting insurance companies, which is dropped and serves as reference. Remaining control variables are the same variables used in the main regression analysis. The first column presents the results for the reduced model while the second column adds remaining covariates. We estimate the above models adding country dummies in the last two columns.

We use a logit model to estimate our models since the dependant variable is a binary variable. Results presented in Table 10 show that trust positively affects the decision to buy insurance. Specifically, somewhat or strongly trusting insurance significantly influences the decision to purchase insurance. However, having low levels of trust does not seem to influence the purchase of insurance compared to having no trust at all. This allows us to conclude that high trust in insurance strongly drives demand of insurance thereby confirming the importance of promoting trust to boost insurance purchase.

[INSERT table 10 here]

6.2. Insurance literacy and education

In our main regression analysis, education and insurance literacy show opposing effects on trust in insurance: while higher education seems to be associated with lower trust in insurance, a higher level of insurance literacy boosts trust in insurance. We are hence interested in exploring further the effect of insurance literacy on trust for different levels of education. For this purpose,

we conduct conditional marginal effect analysis and present the results in Table 11. To render results simple to interpret and concise, we only report the marginal analysis of the highest category being the response "strongly trust insurance". We observe that for each and every level of education, any additional knowledge of insurance increases trust in insurance. However, this increase decreases in magnitude as we pass from low education levels to higher ones. Concretely, if an individual has a level 1 education (some level of secondary school education only), the probability of responding "strongly trust insurance" is about 13% while it is as low as 8% for an individual with a post-graduate degree. Hence, we can infer that insurance literacy boosts trust in insurance more among less educated individuals compared to those who have higher education levels. A plausible explanation to this observation is that a more educated person who has more knowledge of insurance might still be more sceptical than someone who is less educated and probably less analytical.

[INSERT table 11 here]

6.3. The importance of a bad experience

Given the importance of the negative effect exerted by bad experiences on individuals' trust in insurance, we run predictions to assess to what extent can trust in insurance be boosted should negative experiences be eliminated. We thus run conditional forecasting using the full model by setting bad experiences to zero. Estimates obtained show that a mere elimination of bad experiences results in an increase in the probability of a response in the highest two categories of trust by 32%, confirming the strong negative effect of bad experience on trust.

Additionally, the survey provides various elements that define the kind of past bad experiences that individuals had with insurance, ranging from claim payment to usefulness and complexity of the products. We thus replace the bad experiences dummy variables with the specific type of bad experience in the full model.

Results for the different types of bad experiences are presented in Table 12. The first elements concern claim management, specifically delayed claim payments, difficulty to make a claim, and denied claim payment. These three elements have all a negative impact on trust in insurance. This is expected as trust in insurance is strongly linked to the promise and ability of insurers to pay an indemnity if an adverse event occurs. Hence, having a bad experience with claim management questions the main function of insurance and casts doubt on the ability of insurers to fulfil their promise. It is worth noting that a denied claim is the factor that decreases trust the most as we observe the highest coefficient on this variable.

The other element of past bad experience in insurance relates to having experienced a complicated and lengthy process to purchase insurance. Having had difficulty in buying insurance decreases the level of trust in insurance. This could occur as difficulty in buying insurance could be seen as signal that all the other insurance function processes could experience the same difficulty and especially reimbursement of losses. Hence individuals experiencing difficulty in buying insurance would trust less insurers in general and in particular their ability to fulfil their promise, decreasing then trust in insurance. The effect of this variable is however lower compared to the above elements which relate to claim management

From the above analysis, one could infer that all aspects related to bad experiences with insurance claims are the most important variables influencing the level of trust in insurance, with claim denial having the highest negative influence on trust.

[INSERT table 12 here]

6.4. Results by country

To go further in our analysis, we run model [4] separately for each of the seven countries of our sample. Although we include country dummies in our main regression, we also perform country-by-country regressions since we are specifically interested in studying whether experiences with insurance and insurance literacy are also significant when we consider one country at a time. Results are displayed in Table 13. Results show that past experience with insurance, being good or bad, and financial literacy influence trust in insurance in all the countries under study. This further confirms our findings that past experiences with insurance as well as financial literacy are by far the variables which correlate the most with the level of trust in insurance as they also persist in all country sub-samples.

[INSERT table 13 here]

6.5. Alternative measure of trust in insurance

We replace our main dependant variable, general trust in insurance companies, by the following variable: *Trust reimbursement*, which is the trust in insurance reimbursement. This variable is also scaled from 1 to 5 coding answers (1 strongly disagree, 2 somewhat disagree, 3 neither agree nor disagree, 4 somewhat agree, 5 strongly agree) to the following statement:

Insurance products pay out/reimburse the insured person when they are supposed to.

We wish to study whether our main results for general trust in insurance also hold for specific trust in reimbursement. For this purpose, we run the same regressions as in our main regression analysis with *Trust reimbursement* as dependent variable in the four specifications. Results are displayed in Table 14. We observe that our results persist and are mostly similar to the main regression results.

[INSERT table 14 here]

6.6. Using binary variables for all explanatory variables

In our main regression analysis, some of the explanatory variables are ordinal variables. In this section, we replace all ordinal explanatory variables with dummy variables in order to alleviate linearity concerns. Additionally, this will allow us to observe more closely the effect of explanatory variables on the dependant variable for every level of the former[6]. Results are presented in Table B1 of Supplementary material Appendix B.

Results concerning income remain non-significant for moderate and high income compared to low categories of income. Concerning education, all levels are negatively significant in explaining trust. Individuals having moderate and high levels of education tend to trust insurance less than poorly educated ones. Findings for insurance literacy show that the positive effect of insurance literacy on trust rises substantially when passing to a higher level of literacy. An exponential effect on trust is even observed for the higher categories of insurance literacy, e.g., a coefficient of 2.48 for very good level of insurance literacy is recorded versus 0.47 for poor literacy, taking very poor insurance literacy as a benchmark. This result is in contrast with what Lachance and Tang (2012) document on the non-linear effect of financial literacy on trust in financial advisory whereby very high levels of financial literacy reduce trust levels. Once

[6] The lowest outcome of each variable is dropped for collinearity and serves as benchmark.

again, our findings confirm the importance of promoting insurance literacy and achieving high levels of knowledge of insurance products among individuals by showing that even highest levels of insurance literacy do promote trust in insurance and to a higher extent compared to moderate levels of literacy. Finally, variables measuring altruism and future orientation show high significance on trust for the highest categories only.

6.7. Other robustness checks

We perform several robustness checks to confirm the validity of our findings. First, we estimate our model with linear estimation techniques using Ordinary Least Square and obtain similar results (see Table B2, Supplementary material Appendix B). Second, we transform our dependent variable *Trust insurance* which is an ordinal variable into a dummy variable equal to 0 for no trust in insurance and 1 for having trust in insurance. We do so by setting answers to the main question on trust in insurance companies as follows: answers 1 (strongly disagree) and 2 (somewhat disagree) are set to zero. Likewise, we set outcomes 4 (somewhat agree) and 5 (strongly agree) to 1[7]. We re-run our main regressions using this dummy variable as dependant variable and use a logit model to estimate all models 1 to 4. Despite losing about one third of the observations with this transformation, results obtained are very similar to the results obtained with the main ordinal variable (see Table B3, Supplementary material Appendix B). Third, we run our main regression removing one country at a time to make sure our results are not driven by a specific country. Results are presented in Table B4 of Supplementary material Appendix B. Removing a country from the sample does not alter our findings which implies that our results are not driven by a specific country. Fourth, we run our regression using only observations of respondents having an income higher than the sample median (income category 2), that is high income individuals. By doing so, we attempt to alleviate any concerns that our results could be driven by the fact that individuals with higher income might purchase more insurance and thus might have more experiences with insurance. The results are displayed in table B5 of the Supplementary material Appendix B. Results obtained with this sample are very similar to the main regression results thus alleviating any selection bias.

7. Conclusion

This paper investigates the drivers of trust in insurance in seven industrialised countries in Europe, North America and Asia using data from a novel insurance industry survey.

Our results show that socioeconomics factors, individual character traits, insurance literacy, the type of access to information related to insurance and more importantly, past experience with insurance drive the level of trust in insurance. Women trust insurance much more than men. Trust in insurance tends to decrease with age and education, but increases with insurance literacy. The positive effect of trust is even more pronounced for very high levels of insurance literacy. Optimistic individuals, altruistic individuals and individuals with high preferences for the present tend to have higher trust in insurance. Access to information related to insurance through newspapers and magazine enhances trust in insurance, while access to information through the internet has the opposite effect.

Past experiences with insurance, both good and bad strongly influence the level of trust in insurance. Interestingly, bad experience with insurance seems more detrimental to trust than good experience is beneficial to trust. When we further analyse the elements of bad experiences

[7] We disregards outcomes 3, the neutral response (neither agree nor disagree).

in insurance, bad experiences with claim management have the strongest negative impact on trust in insurance. Having experienced a complicated and lengthy process to purchase insurance is another element of bad experience strongly and negatively affecting trust in insurance.

We acknowledge some limitations related to our work. First, this study lacks a time dimension given that the survey used was only administered once. Still, trust is a component of social capital and is expected to vary slightly over time. Second, an important limitation to our work, which is the case in many survey-based studies, is that it is observational in nature. While we have done our best to control for most variables, we are unable to completely rule out the possibility that estimates of the relationship between trust and insurance decisions are driven by omitted variables. Third, the analysis in this paper is limited to only seven developed countries. It might be interesting to expand the scope of analysis to include more countries around the world in future research in this field. Moreover, it might be interesting to explore whether notable differences exist between developed versus underdeveloped countries. Finally, despite having comprehensive survey data, we do lack some socio-demographic factors that might also influence trust such as religion and ethnicity for example.

All in all, our findings offer some interesting new insights on what drives trust and the willingness to buy insurance. Understanding what shapes trust in insurance is essential to developing policies to enhance insurance coverage since our results have indicated that trust is a strong driver of insurance purchase. It follows that our findings could be of specific interest to insurance professionals and policy makers who might make use of main trust drivers in order to promote trust in insurance. Specifically, our analysis shows that bad experience with insurance is more detrimental to trust than good experience is beneficial to trust. It follows that insurers might benefit if they allocate more resources to avoid bad experiences than to offer good experiences to their customers. In that respect, they might want to avoid delaying claim payments or making claim reimbursement and the process to buy insurance as simple and straightforward as possible. In addition, given that trust increases significantly with insurance literacy, insurers should be more active in communicating and diffusing knowledge on the mechanisms and specificities of insurance to a larger audience. Likewise, targeting women, younger people, and less educated individuals might also boost insurance demand since our findings provide solid evidence of higher trust levels in insurance among women, young and less educated respondents.

Our work constitutes a first step towards a better understanding of trust in insurance and may provide a prelude for further research in the field.

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Table 1. Descriptive Statistics

	N	Mean	St.Dev	Min	Max	Median
Trust insurance	7434	2.72	0.97	1	5	3
Gender	7412	0.52	0.5	0	1	1
Age	7434	51.14	16.47	18	93	54
Education	7406	4.44	1.44	1	7	4
Income	7434	2.00	0.78	1	3	2
Chief earner	7434	0.69	0.46	0	1	1
Living area	7434	2.79	1.19	1	5	3
Children	7434	0.59	0.49	0	1	1
House-ownership	7434	0.56	0.45	0	1	1
Unemployment	7434	0.15	0.35	0	1	0
Insurance literacy	7434	2.83	0.93	1	5	3
Good experience	7434	0.51	0.5	0	1	1
Bad experience	7434	0.53	0.45	0	1	1
Optimism	7434	0.19	0.39	0	1	0
Future-orientation	7434	2.62	0.96	1	5	3
Altruism	7434	2.03	1.04	1	5	2
Info-newspaper	7434	0.07	0.26	0	1	0
Info-internet	7434	0.38	0.49	0	1	0
Insurance Purchase	7434	0.94	0.23	0	1	1

This table displays the descriptive statistics of the whole sample. . Detailed definition of all variables is provided in Table A1, Appendix A.

Table 2. Descriptive Statistics by Country

	FRANCE	U.K.	GERMANY	ITALY	JAPAN	SWITZERLAND	USA	Sample
Trust insurance	2.62	2.8	2.62	2.74	2.7	2.8	2.78	2.72
Gender	0.47	0.49	0.53	0.54	0.67	0.51	0.46	0.52
Age	49.98	51.32	52.16	50.76	53.84	49.23	50.85	51.14
Education	4.55	4.36	4.26	4.38	4.44	4.21	4.84	4.44
Income	2.18	2.07	2.02	1.99	2.00	1.93	1.83	2.00
Chief earner	0.78	0.69	0.74	0.64	0.67	0.66	0.65	0.69
Living area	2.91	2.94	2.58	2.52	2.36	3.18	3.04	2.79
Children	2.21	2.24	2.05	2.22	2.08	2.07	2.27	2.17
House-ownership	0.54	0.62	0.39	0.73	0.69	0.23	0.62	0.56
Unemployment	0.14	0.10	0.09	0.16	0.21	0.13	0.20	0.15
Optimism	0.18	0.14	0.2	0.2	0.23	0.23	0.13	0.19
Future-orientation	2.64	2.6	2.67	2.6	2.66	2.65	2.56	2.62
Altruism	1.99	2.1	1.93	1.88	2.31	2.02	1.99	2.03
Good experience	0.47	0.41	0.56	0.56	0.30	0.65	0.63	0.51
Bad experience	0.57	0.43	0.58	0.59	0.26	0.65	0.63	0.53
Insurance literacy	2.84	2.8	2.97	2.87	2.44	2.93	2.91	2.83
Info-newspaper	0.06	0.08	0.1	0.06	0.09	0.08	0.05	0.07
Info-internet	0.31	0.48	0.43	0.30	0.37	0.32	0.42	0.38
Insurance Purchase	0.99	0.89	0.95	0.95	0.938	0.984	0.93	0.95
Number of Observations	***1050***	***1151***	***1016***	***1052***	***1000***	***1031***	***1134***	***7434***

This Table displays country-level means of all variables. Detailed definition of all variables is provided in Table A1, Appendix A.

Table 3. Trust in Insurance by country and by individual characteristics

	Gender			Age			Education			Income		
Country/Criteria	Female	Male	P-Val	<40	>40	P-Val	Low	High	P-Val	Low	High	P-Val
FRANCE	2.66	2.574	0.17	2.72	2.57	0.05	2.57	2.63	0.40	2.573	2.637	0.19
	0.97	1.00		1.06	0.94		0.93	1		0.933	0.996	
U.K.	2.79	2.81	0.65	2.98	2.72	0.03	2.77	2.81	0.44	2.771	2.81	0.01
	0.89	1.09		1.08	0.95		0.94	1.02		0.943	1.02	
GERMANY	2.72	2.53	0.004	2.76	2.56	0.43	2.68	2.59	0.20	2.68	2.597	0.23
	1.00	1.01		1.01	1.00		1.02	1.00		1.028	1.004	
ITALY	2.78	2.71	0.20	2.87	2.69	0.28	2.78	2.71	0.14	2.87	2.71	0.09
	0.87	0.90		0.93	0.87		0.86	0.90		0.86	0.98	
JAPAN	2.78	2.66	0.04	2.79	2.67	0.09	2.65	2.72	0.24	2.64	2.71	0.18
	0.83	0.89		0.94	0.86		0.79	0.91		0.79	0.90	
SWITZERLAND	2.84	2.76	0.15	2.70	2.84	0.27	2.88	2.78	0.17	2.884	2.783	0.01
	0.93	1		0.99	0.95		0.99	0.96		0.99	0.96	
USA	2.75	2.81	0.36	2.83	2.76	0.37	2.82	2.76	0.39	2.821	2.771	0.57
	1	1.05		1.13	0.96		1.02	1.02		1.01	1.0	
All sample	2.76	2.69	0.004	2.81	2.69	0.00	2.74	2.72	0.36	2.74	2.719	0.00
	0.94	0.99		1.03	0.94		0.94	0.98		0.94	0.98	

Table 4. Experiences by country and by individual characteristics

Experience	Country	FRANCE	U.K.	GERMANY	ITALY	JAPAN	SWITZERLAND	USA
Bad	Male	56.58	43.37	60.78*	60.35	28.07**	67.05	63.72
	40+	55.26	41.85	58.92	61.08	28.83**	63.43*	63.66
	Educated	57.61	47.3***	61.84***	59.77	28.01**	65.74	67.8***
	High-income	61.54***	45.04	62.66**	64.89*	25.81	65.75	65.98
	Full Sample	**56.57**	**43.09**	**58.37**	**59.41**	**26.1**	**65.28**	**63.32**
Good	Male	43.83	40.14	57.62	58.41	31.58	63.98	64.49
	40+	44.6	39.57	56.08	53.51**	32.3***	67.29	64.32
	Educated	47.97	43.51	57.24	57.18	33.66***	66.59*	67.68***
	High-income	54.75***	48.6	63.31***	62.77*	32.84	68.84*	68.04**
	Full Sample	46.57	41.27	55.91	56.27	30.1	64.79	63.4

*This table displays the occurrence of bad and good experiences with insurance according to different socio demographic criteria. All figures are in percentage. *, ** and *** indicate statistical significance of mean differences at the 10%, 5% and 1% levels*

Table 5. Elements of a bad experience for different criteria

Country	Any Bad Experience	Delayed payment	Difficulty to claim	Denied claim	Complicated purchase process
FRANCE	56.57	35.35	12.12	27.78	7.58
U.K.	43.09	38.31	41.53	32.66	17.54
GERMANY	58.37	15.35	35.58	42.83	6.24
ITALY	59.41	40.48	24	36.48	10.72
JAPAN	26.1	21.46	29.5	17.62	11.11
SWITZERLAND	65.28	21.99	20.21	34.77	8.62
USA	63.32	43.73	36.35	44.15	16.99
Gender					
male	52.14	55.08	54.14	52.64	52.14
female	47.86	44.92	45.86	47.36	47.86
Age					
age<40	30.15	29	34.32	30.01	43.6
age>40	69.85	71	65.68	69.99	56.4
Education					
highly education	75.41	75.16	76.24	78.73	76.52
low education	24.59	24.84	23.76	21.27	23.48
Income					
low to moderate income	68.79	68.46	68.46	68.56	67.19
high income	31.21	31.54	31.54	31.44	32.81
Full Sample	53.27	31.87	28.11	35.51	11.24

This table displays the occurrence of different types of bad experiences with insurance by country and by socio demographic criteria. All figures are in percentage.

Table 6. Experiences and the Level of Trust in Insurance

Trust	Bad experience	Good experience
Strongly distrust	74.07	29.4
Somewhat distrust	62.59	44.43
Neither trust nor distrust	45.71	51.77
Somewhat trust	42.4	69.82
Strongly trust	51.63	82.07
Full Sample	53.27	51.28

This table displays the occurrence of bad and good experiences according to the level of trust in insurance. All figures are in percentage.

Table 7. Experiences and the Level of Trust in Insurance by different criteria

	Gender		Age		Education		Income		
	female	male	<40	>40	low	high	low	middle	high
No bad experience	2.96	2.88	2.98	2.90	2.90	2.93	2.87	2.92	2.98
Bad experience	2.57	2.52	2.66	2.49	2.54	2.54	2.47	2.54	2.62
No good experience	2.54	2.43	2.56	2.44	2.53	2.46	2.50	2.45	2.49
Good experience	2.95	2.95	3.02	2.91	2.99	2.93	2.88	2.94	3.01
Full Sample	2.75	2.69	2.81	2.68	2.74	2.71	2.67	2.71	2.78

This table displays the level of trust in insurance according two dimensions: socio-demographic criteria and the occurrence of experiences.

Table 8. Determinants of Trust in Insurance - Main regression

	(1)	(2)	(3)	(4)
Gender	-0.194***	-0.191***	-0.220***	-0.197***
	(-4.17)	(-4.05)	(-4.64)	(-4.12)
Age	-0.006***	-0.007***	-0.006***	-0.007***
	(-4.31)	(-4.91)	(-4.38)	(-4.83)
Education	-0.036**	-0.026*	-0.034**	-0.030*
	(-2.31)	(-1.65)	(-2.51)	(-1.90)
Income	-0.017	-0.037	0.0049	-0.022
	(-0.54)	(-1.18)	(0.16)	(-0.70)
Chief earner	-0.053	-0.034	-0.012	-0.0079
	(-1.01)	(-0.65)	(-0.23)	(-0.15)
Living area	-0.058***	-0.049***	-0.063***	-0.063***
	(-3.16)	(-2.69)	(-3.35)	(-3.29)
Children	0.051	0.019	0.059	0.021
	(1.10)	(0.40)	(1.28)	(0.44)
House-ownership	0.267***	0.250***	0.242***	0.235***
	(5.63)	(5.21)	(4.85)	(4.65)
Unemployment	-0.042	0.0064	-0.047	0.0078
	(-0.63)	(0.10)	(-0.72)	(0.12)
Insurance literacy	0.511***	0.459***	0.526***	0.465***
	(20.31)	(17.55)	(20.45)	(17.58)
Good experience		0.994***		0.992***
		(21.21)		(20.83)
Bad experience		-1.113***		-1.102***
		(-24.08)		(-23.34)
Optimism		0.149***		0.156***
		(2.66)		(2.79)
Future-orientation		-0.091***		-0.088***
		(-3.95)		(-3.79)
Altruism		-0.07***		-0.075***
		(-3.13)		(-3.37)
Info-newspaper		0.163*		0.163*
		(1.94)		(1.94)
Info-internet		-0.184***		-0.195***
		(-4.12)		(-4.32)
U.K.			0.416***	0.357***
			(5.23)	(4.41)
GERMANY			-0.005	-0.085
			(-0.06)	(-1.01)
ITALY			0.221***	0.139*
			(2.70)	(1.68)
JAPAN			0.395***	0.209**
			(4.70)	(2.42)
SWITZERLAND			0.421***	0.329***
			(5.06)	(3.89)
USA			0.331***	0.251***

			(4.05)	(3.03)
N	7384	7384	7384	7384
R^2	0.025	0.071	0.028	0.073

*This table displays the main regression results of the ordered logit model. The dependent variable in all regressions is trust in insurance. Detailed definition of all variables is provided in Table A1, Appendix A. The country dummy for France is dropped for collinearity. Reported beneath each coefficient estimate in parenthesis is the t-statistic. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. R^2 reported is the pseudo R-squared.*

Table 9. Determinants of Trust in Insurance - Marginal Effects

	Response (1)	Response (2)	Response (3)	Response (4)	Response (5)
Gender	0.0183***	0.0236***	-0.0117***	-0.0253***	-0.00483***
Age	0.000639***	0.000820***	-0.000409***	-0.000882***	-0.000168***
Education	0.00281*	0.00360*	-0.00180*	-0.00387*	-0.000738*
Income	0.00076	0.000977	-0.000487	-0.00105	-0.0002
Chief earner	0.000941	0.00121	-0.000603	-0.0013	-0.000248
Living area	0.00560***	0.00719***	-0.00358***	-0.00773***	-0.00147***
Children	-0.000941	-0.00121	0.000603	0.0013	0.000248
House-ownership	-0.0220***	-0.0282***	0.0141***	0.0304***	0.00578***
Unemployment	-0.000968	-0.00124	0.00062	0.00134	0.000255
Good experience	-0.0900***	-0.116***	0.0577***	0.124***	0.0237***
Bad experience	0.0985***	0.127***	-0.0631***	-0.136***	-0.0259***
Insurance literacy	-0.0428***	-0.0550***	0.0274***	0.0592***	0.0113***
Optimism	-0.0136***	-0.0175***	0.00873***	0.0188***	0.00359***
Future-orientation	0.00797***	0.0102***	-0.00511***	-0.0110***	-0.00210***
Info-newspaper	-0.0145*	-0.0187*	0.00931*	0.0201*	0.00382*
Info-internet	0.0172***	0.0221***	-0.0110***	-0.0238***	-0.00453***

*This table displays the results of the marginal effects of the full model in the main regression (model 4, Table 8). The dependent variable in all regressions is trust in insurance. Every response corresponds to the different values of the dependent variable running from 1 to 5. Detailed definition of the responses and all variables is available in Table A1, Appendix A. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.*

Table 10. Insurance Purchase and Trust

	(5)	(6)	(7)	(8)
Somewhat distrust	0.284	0.249	0.249	0.195
	(1.62)	(1.37)	(1.33)	(1.01)
Neither trust nor distrust	0.078	0.105	0.194	0.183
	(0.47)	(0.59)	(1.08)	(0.96)
Somewhat trust	0.625***	0.509**	0.633***	0.494*
	(2.75)	(2.12)	(2.64)	(1.95)
Strongly trust	1.148*	0.909	1.386**	1.242*
	(1.82)	(1.42)	(2.16)	(1.86)
Controls	YES (1)	YES (1)	YES (2)	YES (2)
Country Dummies	NO	NO	YES	YES
N	3271	3271	3271	3271
R^2	0.137	0.176	0.239	0.265

This table displays the main regression results of the logit model using insurance purchase as a dependent variable. This variable takes the value of one for an individual having purchased at least one type of (non-compulsory) insurance and zero otherwise. The main explanatory variables are the level of trust in insurance with the lowest level (strongly distrust) serving as a benchmark.

Table 11. Insurance Literacy and Education

Education Level	Insurance Literacy	Margin	Std. Err.	z	P>z	[95% Conf.	Interval]
1	Very Poor	0.015	0.003	5.120	0.000	0.009	0.021
	Poor	0.023	0.004	5.550	0.000	0.015	0.032
	Fair	0.035	0.006	5.690	0.000	0.023	0.048
	Good	0.051	0.009	5.740	0.000	0.034	0.069
	Very Good	0.128	0.024	5.380	0.000	0.081	0.174
2	Very Poor	0.009	0.001	7.180	0.000	0.007	0.012
	Poor	0.014	0.002	8.370	0.000	0.011	0.018
	Fair	0.022	0.003	8.760	0.000	0.017	0.027
	Good	0.032	0.004	8.490	0.000	0.025	0.040
	Very Good	0.084	0.013	6.530	0.000	0.059	0.109
3	Very Poor	0.011	0.001	8.410	0.000	0.008	0.013
	Poor	0.017	0.002	10.620	0.000	0.014	0.020
	Fair	0.025	0.002	11.370	0.000	0.021	0.030
	Good	0.037	0.003	10.820	0.000	0.030	0.044
	Very Good	0.095	0.013	7.310	0.000	0.070	0.120
4	Very Poor	0.010	0.001	8.480	0.000	0.008	0.012
	Poor	0.015	0.001	10.720	0.000	0.013	0.018
	Fair	0.023	0.002	11.460	0.000	0.019	0.027

	Good	0.034	0.003	10.890	0.000	0.028	0.040
	Very Good	0.088	0.012	7.210	0.000	0.064	0.112
5	Very Poor	0.009	0.001	8.260	0.000	0.007	0.011
	Poor	0.014	0.001	10.390	0.000	0.011	0.016
	Fair	0.021	0.002	11.020	0.000	0.017	0.024
	Good	0.030	0.003	10.540	0.000	0.025	0.036
	Very Good	0.079	0.011	7.040	0.000	0.057	0.101
6	Very Poor	0.010	0.001	8.340	0.000	0.008	0.012
	Poor	0.016	0.001	10.490	0.000	0.013	0.019
	Fair	0.024	0.002	11.190	0.000	0.020	0.028
	Good	0.035	0.003	10.790	0.000	0.029	0.041
	Very Good	0.090	0.012	7.260	0.000	0.066	0.115
7	Very Poor	0.009	0.001	7.350	0.000	0.007	0.012
	Poor	0.014	0.002	8.710	0.000	0.011	0.017
	Fair	0.022	0.002	9.150	0.000	0.017	0.026
	Good	0.032	0.004	9.000	0.000	0.025	0.039
	Very Good	0.083	0.012	6.690	0.000	0.059	0.107

This table displays the effect of insurance literacy on trust for different levels of education using marginal effects. For simplicity and gain of space, we only report the marginal analysis of the highest category being the response "strongly trust insurance".

Table 12. Determinants of Trust in Insurance - Elements of a bad experience

	(1)	(2)	(3)	(4)
Delayed payment	-0.321***	-0.259***	-0.353***	-0.283***
	(-5.08)	(-4.05)	(-5.42)	(-4.30)
Difficulty to claim	-0.256***	-0.192***	-0.291***	-0.229***
	(-3.84)	(-2.84)	(-4.27)	(-3.31)
Denied claim	-0.359***	-0.329***	-0.379***	-0.327***
	(-5.83)	(-5.28)	(-6.07)	(-5.18)
Complicated Purchase	-0.184*	-0.189**	-0.256***	-0.261***
	(-1.96)	(-1.99)	(-2.70)	(-2.73)
Controls	YES	YES	YES	YES
Country Dummies	NO	NO	YES	YES
N	3933	3933	3933	3933
R^2	0.036	0.068	0.042	0.073

*This table displays the regression results of the ordered logit model using different elements of a bad experience. All variables employed in the main regression are included in each model but not displayed in this table to gain space. The dependent variable in all regressions is trust in insurance. Detailed definition of all variables is provided in Table A1, Appendix A. Reported beneath each coefficient estimate in parenthesis is the t-statistic. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. R^2 reported is the pseudo R-squared.*

Table 13. Determinants of Trust in Insurance - Country-Level Analysis

	(1) FRANCE	(2) U.K.	(3) GERMANY	(4) ITALY	(5) JAPAN	(6) SWITZERLAND	(7) USA
Good experience	1.026***	1.001***	0.818***	1.040***	0.775***	1.088***	1.238***
	(8.09)	(8.14)	(6.52)	(8.09)	(5.54)	(8.46)	(9.91)
Bad experience	-1.267***	-1.110***	-1.174***	-1.238***	-0.750***	-0.974***	-1.169***
	(-10.04)	(-9.22)	(-9.45)	(-9.63)	(-5.24)	(-7.70)	(-9.53)
Insurance literacy	0.506***	0.611***	0.538***	0.627***	0.458***	0.186***	0.350***
	(6.78)	(8.49)	(7.36)	(8.19)	(6.98)	(2.59)	(5.24)
Controls	YES	YES	YES	YES	YES	YES	YES
N	1041	1141	1013	1046	996	1017	1130
R^2	0.079	0.092	0.089	0.099	0.053	0.062	0.082

*This table displays the regression results of the ordered logit model in each country. The dependent variable in all regressions is trust in insurance. Detailed definition of all variables is provided in Table A1, Appendix A. Reported beneath each coefficient estimate in parenthesis is the t-statistic. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. R^2 reported is the pseudo R-squared.*

Table 14. Determinants of Trust in Insurance Reimbursement

	(1)	(2)	(3)	(4)
Gender	-0.097**	-0.082*	-0.153***	-0.133***
	(-2.07)	(-1.74)	(-3.21)	(-2.77)
Age	-0.003*	-0.002	-0.005***	-0.004***
	(-1.75)	(-1.45)	(-3.07)	(-2.79)
Education	-0.021	-0.022	0.0014	0.003
	(-1.34)	(-1.41)	(0.09)	(0.21)
Income	0.022	0.0047	0.044	0.025
	(0.72)	(0.15)	(1.40)	(0.79)
Chief earner	-0.0501	-0.0459	0.0353	0.0356
	(-0.95)	(-0.87)	(0.66)	(0.66)
Living area	-0.085***	-0.086***	-0.046**	-0.045**
	(-4.63)	(-4.66)	(-2.39)	(-2.34)
Children	0.059	-0.018	0.085*	0.02
	(1.26)	(-0.38)	(1.83)	(0.40)
House-ownership	-0.002	-0.014	0.092*	0.078
	(-0.05)	(-0.28)	(1.83)	(1.55)
Unemployment	-0.139**	-0.093	-0.067	-0.021
	(-2.11)	(-1.40)	(-1.01)	(-0.31)
Insurance literacy	0.367***	0.286***	0.345***	0.274***
	(14.82)	(11.20)	(13.52)	(10.52)
Good experience		0.819***		0.792***
		(17.57)		(16.65)
Bad experience		-0.576***		-0.594***
		(-12.76)		(-12.79)
Optimism		0.119**		0.081
		(2.14)		(1.43)
Future-orientation		-0.092***		-0.112***
		(-3.97)		(-4.81)
Altruism		-0.105***		-0.0863***
		(-4.72)		(-3.85)
Info-newspaper		0.210**		0.143*
		(2.52)		(1.70)
Info-internet		0.0130		-0.0271
		(0.29)		(-0.60)
Country Dummies	NO	NO	YES	YES
N	7384	7384	7384	7384
R^2	0.014	0.036	0.038	0.06

*This table displays the regression results of an ordered logit model. The dependent variable in all regressions is trust in insurance reimbursement. Detailed definition of all variables is provided in Table A1, Appendix A1. Reported beneath each coefficient estimate in parenthesis is the t-statistic. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. R^2 reported is the pseudo R-squared.*