

Problem Set #2

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Computational Section: Understanding the Advice of Commissions-motivated Agents: Evidence from the Indian Life Insurance Market

In this paper (Santosh Anagol *et al*, 2017), the research question raised by authors could be stated as this: how do the insurance agents provide their advice in response to the features of the customer interaction and the change of the regulatory structure? More specifically, Santosh Anagol *et al* investigated how is the quality of the advice provided by the agents related to the needs and beliefs and other characteristics of the customers, as well as the commissions disclosure reform occurring in India at 2014. Moreover, this paper also intends to interpret the mechanism behind such relationship.

To address the above research questions, the researchers collected data by conducting the audit study. In their experiments at 2010, the researchers trained middle-aged men with at least high school education as auditors and send these auditors, who are randomly assigned with different “treatment”, to the life insurance agents, in order to examine what type of advice the agents can provide according to the various treatments conveyed by the auditors. The field experiments of this paper can be further divided into to two parts. In the first part, the researchers focus on how the insurance agents respond to the customers with different needs and belief and shopping behaviors. The second part is a natural experiment conducted before and after the regulatory change of the insurance industry, in which the insurance agents are mandated to disclose the commissions they would earn when selling a specific type of whole insurance. In addition, the researchers conducted an additional survey in 2014

to measure the belief and preferences of agents themselves, and to investigate whether they actually know that they are giving bad advice. Although all the raw data is not yet available on line, the researcher of this paper offer the replication data on the website (<https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/FROIWP>) of *Review of Economics and Statistics* for the convenience of other researchers.

This research paper relies mainly on two theories. The first one argues that the advice provided by the insurance agents depends on the interaction between the agents and customer, both of whom are treated as the rational individuals seeking the maximized benefits during the bargaining. On one hand, the theory claims that “at least some consumers will receive low-quality advice encouraging a complicated product that has higher commissions but no real benefits to them” (Inderst & Ottaviani, 2012; Gabaix & Laibson, 2006). On the other hand, it suggests that the more sophisticated customers receive better advice. According to this theory, the researchers construct a formal model and test the theoretical predictions by measuring the fraction of agents who give the bad advice in response to the auditors with different levels of self-reported sophistication and varied alleged needs and beliefs. The second theory this paper based on is still raised by Ottaviani. In contrast to the previous scholarship which claims that there is no direct relation between the mandatory disclosure with the consumer decision, Ottaviani argues that “disclosure requirements can improve the quality of advice by essentially converting unaware customers into customers who are aware of how commissions can bias advice”. To test this theory, the researchers construct the second model by using the data collected from the natural experiments mentioned above.

Therefore, in the computational section, this study first offers us the descriptive statistics for both the general and natural experiments (p6, Table 1), and then deploys the logistic

regression for the two models respectively (p8 Table 3, p10 Table 4 and p13 Table 6). Accordingly, this paper incorporates both of the descriptive study and the identification exercise to analyze their data. For the descriptive study, the researchers summarize their results of experiments in Table 1, in which the fraction of recommended term insurance are reported across different experimental settings. For the identification exercise, Table 3 shows the regression results for the relationship between the agent's advice with the customer's beliefs and needs; Table 4 shows the regression results for the relationship between the agent's advice with the alleged previous shopping experiences of the customers; Table 6 shows the regression results for the relationship between the agent's advice with the change of disclosure regulations.

As I have mentioned, this paper deploys the logistic regression to analyze the data. Basically, the dependent variables in both of the two models are binary variables, which represent the exclusive presence of term insurance (in Table 3 and Table 4) in the agent's recommendation, or the presence for different kinds of insurance advice in Table 6. The value of the dependent variable could be 1/0, indicate whether the insurance agents only provide the corresponding advice or not. In the general experiment, whose result is analyzed in Table 3 and 4, the independent variables, also binary variables or dummy variables, include whether the costumers have bias toward the term insurance (Bias), whether they need the term insurance (Need), whether they have expressed they shopped around before consulting the agents (Shopped Around), audit locations (at home, office or other, each variable is dummy variable). In addition, in this regression model, interaction terms, such as interaction between Bias and Needs, Bias with Shopped Around and so on, are also taken into consideration. In the natural experiment, which examines whether the commission disclosure influence the agents' advice, besides the audit location similarly as control variables in the general

experiment, the binary variables, such as Post Disclosure (whether the audit occurred after the commissions disclosure law came into effect) and Disclosure Inquiry (whether the auditor made an explicit commission disclosure inquiry), and their interaction are considered as independent variables.

In this paper, the researcher reasons that in the context of Indian insurance policies, the advice of term insurance should better off the customers, since the term insurance is much cheaper than the whole insurance and it potentially offer more substantial benefits for its customers. Given this background, there are several implications drawn from this research. First, based on the first theoretical model, researcher find stating a need or personal preference for the term insurance causes only 5.3 percentage points increase in the probability that the agent will recommend term insurance. Although this result does support that the agents respond to the biases and needs of customers, they do so primarily by recommending term insurance products as an addition to whole insurance products rather than recommending the purchase of term exclusively. The researchers conclude that “these results suggest that agents are primarily targeting premiums (and therefore commissions) instead of targeting how much insurance a customer needs.” Second, according to Table 4, the researchers find that “having received advice from another agent does not seem to have an important effect on whether agents recommend term insurance as part of their package recommendation.” Third, the result also indicates that the customers with higher level of self-reported sophistication has higher possibility to gain the advice of term insurance from the agents. Fourth, based on the natural experiment, the researchers compare the agents’ advice before and after the policy change of the commission disclosure, and find that after this reform, there is an immediate and discrete drop in the fraction recommending ULIPs, to between 40% and 65% of audits. This result indicate that the regulations do change the agents’ advice.

Taken together, this research provides empirical evidence to the previous two theories about the agent behavior, which claim that the insurance agents are more likely to encourage a complicated product that has higher commissions but no real benefits to the customers, and argue that commission disclosure may diminish such possibility. However, this phenomenon can be interpreted in many ways: the “bad” advice from the agents could be driven by their intention for higher commissions, or caused by the market selection mechanism, in which only those agents who suggest the whole insurance can survive, or the agent indeed think they provide the good advice to their customers rather than “bad” ones. In order to investigate the mechanism behind this empirical finding, the authors conducted additional survey and found that on one hand there are more agents who own whole insurance policies than those who own term insurance policies, yet on the other hand, at least some of the agents do recognize that the term insurance offers significant values. Therefore, the exact mechanism behind this paper’s finding remains unclear, and need to be studied in future research.

I have several suggestions for this research. First, this research might be flawed by the representativeness of the target population. Since there are over 3 million insurance agents in India, 200 to 300 agents in each wave of experiment perhaps cannot represent the whole population. Also, for the general and natural experiments are only conducted in the first and second largest cities in India, how general the implication drawn from this study is questionable. We can imagine that the agents in rural India may have their own strategies to persuade their customers to purchase the insurance, and thus provide the advice different from their colleagues in big cities. Therefore, I suggest that specifically for the experiment one, the researcher can involve more insurance agents (perhaps 500 to 1000) who are working in both rural and urban India to their study. In this way, the result may reflect more accurately the agent behavior in the whole insurance industry in India. Second, this paper

relies on the premise that the behaviors of the auditors are highly standardized and normalized. However, although the auditors are trained to present the same scripts to the insurance agents, the interaction between the customers and agents depend not only on the oral expression but also on the body language and many other factors. It is highly possible that one agent may have different impressions based on the same claims made by different auditors, and thus give totally different advice to those auditors. One easy solution to this problem is to conduct the computation-based audit study, in which the customers and agents communicate with each other through internet. Accordingly, it can help minimize most of the uncontrolled communication that may influence the judgment of the agents. In addition, it appears that the researchers arbitrarily identify the advice form the agents are in favor for the term insurance or for the whole insurance. However, in the face-to-face communication, what the agent express cannot only be interpreted based on what they are saying, but also on how they are “performing” by using their gestures and other body languages. Therefore, the computation-based experiment can also contribute to enhancing the accuracy of the interpretation of the advice from the agents by merely analyzing the text messages. However, there will be certain disadvantages for this methodology, since it cannot reflect most of the real communications between the customers and agents in insurance industry. Another suggestion would be this: still in the face-to-face setting, more customers (3 or 4) with same “treatment” are assigned to each agent, in order to see whether the agent can response similarly to those auditors claiming the same belief, needs and shopping experiences. If the agent can response in a similar way, then we assume the data collected from this agent is reliable, otherwise, we may reconsider whether it is necessary to include this agent in our pool of agents.

Reference

Anagol, Santosh, Shawn Cole, and Shayak Sarkar. "Understanding the advice of commissions-motivated agents: Evidence from the Indian life insurance market." *Review of Economics and Statistics* 99, no. 1 (2017): 1-15.