

Final Report on “Cursed Buyers in the Marketplace”

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In this research project I intended to investigate how boundedly rational reasoning influences market outcomes. Behavioral economics has demonstrated that economic agents often fail to correctly reason about the link between others’ information and their actions, which has been termed “cursedness” (Eyster and Rabin, 2005). I proposed to analyze posted-offer markets with asymmetric information and study the effects of consumers’ limited strategic reasoning on market outcomes, such as consumer welfare.

In this report, I will briefly summarize the experiments which I conducted and give an overview over the results. As outlined in the proposal, I studied markets with and without competition. Throughout the project, I discovered that the best way to present the results would be in two different working papers, one focusing on the monopoly case, and the other analyzing competition as well as presenting a comparison between the two. The first paper (on monopoly) is the most developed in terms of results, so I will devote most of this report to it and highlight important policy implications that can be drawn from the results. This is followed by a more informal discussion of the results for the case where the setting is changed as to allow for seller competition.

For the monopoly case, I analyze an experimental setting which strongly resembles a classic “lemon market” (Akerlof, 1970). In the specific setting I implemented, sellers post take-it-or-leave-it offers to buyers who are uninformed about the quality of the good on offer. This is a common feature of a variety of markets such as markets for cars or household electronics (think of longevity of a fridge as a quality unobservable to a buyer at the point of purchase), but also restaurants and legal services. In the paper, I first derive the theoretical predictions for how we would predict buyers and sellers to behave in this setting. Here, given the focus of the project, I explicitly allow for buyers to be limited in their strategic ability (i.e., “cursed”) to infer the quality level based on the price chosen by sellers. I then show that this model predicts that if buyers are cursed, on the one hand, this reduces the amount of adverse selection in the market and we observe more trade than predicted under full rationality. On the other hand, this should lead buyers’ welfare to decrease in their degree of cursedness.

The experiment confirms these predictions. Empirical trading frequencies are up to 2.5 times larger than full rationality of buyers would predict. This implies that total welfare in the market increases because, by design, trade is efficient (a buyer always values a given good above the seller’s production cost). What one should note, however, is that all of these welfare gains go to sellers, whereas buyers barely earn more than their outside option. To more directly test for the effects of bounded rationality, further experimental treatments exogenously vary the level of strategic thinking of the buyers. As predicted by the theory, when sellers face buyers of low strategic ability, trading frequencies go up and profits of sellers increase, leaving buyers worse off.

There are a number of important policy implications which can be drawn from these results. First the problem of adverse selection, which has been argued to plague a variety of markets, may in practice not be as severe as assumed. As shown theoretically and empirically, limited strategic

thinking of consumers increases trading frequencies. This is important to keep in mind when assessing the severity of adverse selection in non-experimental markets, which is often very hard to do because, for example, one does rarely observe non-concluded trades. Second, the results show that behavioral biases in markets need to be taken seriously because they may often have adverse effects on consumer welfare. I demonstrate that even in a setting where inexperienced student subjects play in the role of sellers, they manage to devise pricing strategies that allow them to extract rents which are larger the more boundedly rational their counterparts are. This suggests that such exploitation may likely be more severe when these consumers face experienced firm in markets outside the laboratory.

The second project carried out used the same setting as described above, but now introduced competition among sellers. The motivation behind this is to investigate whether competitive forces discipline the sellers in the sense that this reduces the profits they make from consumers with limited strategic ability. It should be noted that these results are rather preliminary, but it seems as if the benefits from competition are, if they exist at all, small. Overall, consumer welfare does not increase in a meaningful way and some of the sellers even are able to increase their profits. Compared to the monopoly case, it seems as if there are smaller welfare differences between more and less strategically naive buyers, suggesting the (tentative) conclusion that competition may be beneficial to mitigate heterogeneous effects of bounded rationality.

As discussed above, the work carried out through the generous funding by IFREE, most likely will form the basis of two different working papers. The first is almost completed, I expect to be able to circulate a first version by the end of January 2019. I have presented some of these results at internal workshops within the University of Cologne and will also present the paper at the ESA Asia-Pacific meeting in January 2019. I am very grateful to IFREE for facilitating these endeavors.

References

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