

## **Explanation for Departures from the 2017 Pre-analysis Plan**

Bryan Bollinger, NYU

Kenneth Gillingham, Yale

This short document explains the departures from our preregistered pre-analysis plan.

The original plan in 2017 was to include 36 municipalities in our study (12 in each of the two treatment arms and another 12 in the control). Our implementing partner initially had agreed to this number, but as we were beginning the process of rolling out the intervention, they realized they could not carry this out under the budget. They also realized very early that they would be unable to run the interventions in only low-and-moderate income (LMI) municipalities due to the available towns that could be recruited. Thus, in 2018 we updated our preregistration to reflect the 10 municipalities in each arm, for a total of 30 municipalities, and some of these municipalities were not LMI. This change in the number of municipalities was updated in 2018 in the general information in the AEA Registry but the pre-analysis plan was not updated. This change was made before any analysis occurred. In the actual implementation, we ended with a sample size of 29, as our budget did not permit running the intervention in the final municipality.

The pre-analysis plan laid out two hypotheses that we planned to explore in the field experiment. The original intention was that there would be a paper written about each.

The first hypothesis in the pre-analysis plan was about running a horse race between the community-based intervention and the financial-based messaging intervention. This is indeed what we explored in the analysis. There are multiple competing hypotheses that we discuss in the paper for the effectiveness of the different interventions in LMI communities, including the one mentioned in our pre-analysis plan. The literature can predict that the relative effectiveness of the two types of messaging will be either larger or smaller. We found that there was no significant difference in effectiveness between the two types of interventions for LMI communities.

Our pre-analysis plan did not make any predictions on the relative effectiveness of the two types of interventions for higher-income municipalities, but we ran the same analysis for these municipalities because we wanted to test the moderating role of income on the relative effectiveness, as we described in our original 2017 preregistration. Note that there was a typo in the original 2017 preregistration under Primary Measures which said we will test “mediating” factors that influence adoption instead of “moderating” factors that influence adoption (we have since corrected this). We found that there was a significant difference in effectiveness between the two types of interventions for higher-income communities.

The second hypothesis in the pre-analysis plan was going to be analyzed based on an RDD using individual-level data on incomes and was intended as our second paper. While we anticipated getting access to such data, it turned out we were not able to get access to such data. In addition, one of the three co-PIs on the study when it began in 2017 left academia for the private sector. Thus, we did not end up running this analysis or writing this paper.