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Reminders for voluntary payments might backfire—Evidence from a field study



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HIGHLIGHTS

- We investigate the effects of reminders when customers pay on a voluntary basis.
- A neutral reminder significantly increases the probability of payments.
- Extended messages that appeal to social preferences have no further positive effect.
- Some extended reminders are even less effective than the neutral reminder.
- This is potentially due to the moral wiggle room these extended reminders create.

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ABSTRACT

We investigate the effects of reminders for payments in a setting where customers pay on a voluntary basis. A neutral reminder significantly increases customers' payment probability. However, our study indicates the importance of the exact wording of the reminder. Reminders including additional information do not increase the payment probability further and seem even less effective than the neutral reminder in some cases.

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1. Introduction

Recent research shows that reminders may be suited to influence field behavior in the desired direction in many domains such as health care (Altmann and Traxler, 2014; Calzolari and Nardotto, 2017), rule compliance (Apesteguia et al., 2013; Fellner et al., 2013) and tax payments (Hallsworth et al., 2017). At the same time, there is no unambiguous evidence on how the exact content of reminders influences their effectiveness which seems, however, crucial for the design of reminders in practice.

In two field studies, we test the effect of various reminders that emphasize different aspects of the payment decision. ¹ In study 1,

we test whether a neutral reminder increases customers' payment probability relative to no reminder and whether this effect can be amplified by extended messages appealing to social preferences. We observe that a neutral reminder increases the payment probability whereas extended messages have no additional positive effect relative to this neutral reminder. In study 2, we use extended reminders that are also framed in a way that may encourage payments but at the same time may give rise to moral wiggle room. Here, we find that some extended reminders even counteract the positive effect of a neutral reminder on the payment probability which seems to suggest that some decision-makers use the moral wiggle room created by the specific wording of these reminders.

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See e.g., Gneezy et al. (2010, 2012), and Feldhaus et al. for research on voluntary payments. Pruckner and Sausgruber (2013) find that moral appeals raise payments conditional on a payment being given. Krupka and Croson (2016) observe that social norm cues can raise charitable donations.

2. Study design and results

Design

We conducted the two studies on three days each in April and May 2014 in the shopping mall "Neumarkt Galerie" in Cologne, Germany. The shopping mall has a public restroom where customers can freely choose whether to pay for the use. As it is typical for voluntary payment decisions, for example related to pay-what-you-want pricing or charitable giving, customers are likely uncertain concerning the appropriate behavior in the specific setting. Hence, reminders may be effective in triggering payments.

Our treatments were implemented with signs attached to the walls next to the basins and the dryers in the restrooms and also placed on the counter where payments should be made so that the signs were very prominently displayed.² Customers had to pass this counter when entering and leaving the restroom. A study helper, who did not change throughout the two studies, was seated behind the counter to put customer payments into a drawer,³ to collect data on payments, demographic characteristics and situational factors,⁴ and to change signs between treatments.⁵

Results

In sum, we collected 811 observations for study 1 and 1817 observations for study $2.^6$

Table 1 summarizes the treatment variations of study 1 and shows descriptive results and p-values of two sample tests of proportions comparing payment rates (i.e. the percentage shares of customers who pay for the service) in the neutral reminder treatment T10 pairwise to each other treatment. We investigate if a neutral reminder (T10) can increase the payment probability compared to no reminder (T11), and if this effect can be amplified by emphasizing the reciprocal nature of the setting (T12, see e.g., Rabin, 1993; Dufwenberg and Kirchsteiger, 2004) or by decreasing the social distance between the customer and the beneficiary of the payment (T13, see e.g., Charness and Gneezy, 2008).

Indeed, the payment probability is higher in presence of a neutral reminder compared to no reminder which is in line with the literature on charitable giving (Huck and Rasul, 2010; Damgaard and Gravert, 2018). Yet, there is no evidence that this effect can be amplified by an extended message. In fact, descriptively, payment probabilities are even lower in both extended reminder treatments.

In study 2, we therefore test whether extended reminders may even be less effective than a neutral reminder in some cases. Table 2 shows the treatment variations as well as the descriptive results and non-parametric tests. We construct treatment messages that appeal to people's willingness to make a payment but at the same time might provide a subtle excuse not to pay, creating moral wiggle room (Dana et al., 2007): first, we ask customers for feedback and make them think about negative factors they might have encountered while using the service (T21). Second, we provide customers with a specific reason why they might not have been

satisfied by apologizing for construction works in the mall that took place before study 2 (T22). Third, we make another potential beneficiary of altruistic behavior salient by providing information regarding a blood donation center (T23) which might trigger less payments due to moral self-licensing (see e.g., Merritt et al., 2010). Additionally, we conduct the neutral reminder treatment also in the second study (T20).

Both the construction works (T22) and the blood donation (T23) treatment indeed result in a significantly lower payment probability compared to the neutral reminder (T20). No difference is found between the neutral reminder and the request for feedback (T21).⁸

Table 3 uses linear probability models to control for additional factors that might influence the payment probability. Both models include dummy variables for the respective time-block and day (the latter variables capture day-specific effects but also potential differences between the two studies). The reference category is the treatment without any reminder. The dummy variable "Simple Reminder" captures the effect of the neutral reminder in studies 1 and 2, and the other dummy variables estimate the additional treatment effects relative to the simple reminder. Model 1 only takes the treatments into account. Model 2 additionally controls for gender, estimated age and includes a dummy identifying cases where customers arrived as a group. 9

The results are in line with the non-parametric tests. First, the neutral reminder results in a higher payment probability compared to no reminder (the "Simple Reminder"-coefficient is positive and significant). Second, we observe no evidence that the payment probability can be further increased by extended messages. Third, our results suggest that the construction works treatment and the blood donation treatment decrease the payment probability relative to the neutral reminder. ¹⁰

3. Conclusion

Similar to previous studies, we find that a neutral reminder can increase the probability to pay voluntarily. However, our study reveals that extended reminders aimed at further increasing payments might, conditional on the exact wording, sometimes be even less effective than the neutral reminder. A potential explanation why these extended reminders perform worse than a neutral reminder in our setting might be that they implicitly create moral wiggle room (Dana et al., 2007). Hence, our results emphasize the importance of the exact wording of reminders in practice when they are used to trigger voluntary payments.

 $^{^{2}\,}$ Photos of the field setting and the signs are available from the authors on request.

³ This was done so that each customer was confronted with the same amount of money on a plate on the counter on which payments were collected.

⁴ For a description of the dataset see Table A.1 in the Appendix. We could not track payment decisions of 20 persons (less than 1%); these cases have to be dropped from the analysis.

⁵ See Tables A.2 and A.3 in the Appendix for details on the time schedule and the translated and original texts for all treatment variations.

⁶ As a popular store and several others shops were opened between the studies, passenger volume increased substantially in study 2.

 $^{^{7}\,}$ When customers think about potentially donating blood soon, another ethical decision – such as making a voluntary payment for a service used – might become less pressing.

⁸ It is important to note that the messages used in study 2 are considerably longer than those used in study 1. A potential alternative explanation for the negative impact of reminders in study 2 may hence be that fewer people were effectively treated as a consequence of exposing them to lengthy messages which they did not read. However, the observation that the long reminder in T21 causes no difference relative to the neutral reminder speaks against this conjecture.

 $^{^9\,}$ Groups are customers who clearly belonged together. Every person was attributed the total payment divided by the sum of group members as payment.

Table A.4 in the Appendix shows two further models using the amount conditional on making a payment (Model 1) and the overall payment (Model 2) as dependent variables. Model 1 in Table A.4 seems to suggest that it is rather small payments that are crowded-in by the neutral reminder, as the payment conditional on paying at all is significantly lower in this treatment than in the case of no reminder (see also Huck and Rasul, 2010 who find that those who are crowded-in by the reminder give less on average). Moreover, concerning conditional payments we find positive effects of some treatments using extended messages relative to the neutral reminder. Yet, with respect to total payments (Model 2, Table A.4, including all observations), the conclusions concerning potential counterproductive effects of extended reminders are similar to the results of the models reported in Table 3. At the same time, we observe no significant positive effect of the neutral reminder on total payments in this model (similar to Damgaard and Gravert, 2018).

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