The effect of social norms on bribe offers

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Abstract: We report a sequential bribery game to disentangle the effect of descriptive social norms and sanctions on bribe offers. Participants who knew that they were interacting with a partner from a group with a majority of corrupt (as opposed to honest) partners offered twice as many bribes. This effect of norms occurred independently of strategic considerations and the possibility of being sanctioned. Indeed, the effect of sanctions was not significant. These findings highlight a causal connection from perceptions of bribery to actual behavior.

Keywords: experiment, social norms, sanctions, corruption.

JEL Classification: C91, D73, K42.

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1. Introduction

Certain types of corruption, such as bribery, are considered a legal offence across the world. Nonetheless, there are large cross-country differences in the apparent incidence of corrupt activities, as the map in figure 1 shows. The map illustrates the individual countries’ scores on the Transparency International Corruption Perception Index (CPI), a measure that is based on surveys of the perception of corruption in the respective country (Transparency International, 2014). Two facts spring to the eye from just a cursory inspection. First, there is a general tendency that less developed countries tend to be more corrupt than more developed ones. But second, perhaps more interestingly, even among countries with similar levels of development, like across Western Europe or Latin America, there are still substantial differences in their level of corruption.

![Figure 1. Corruption across the globe. Source: Transparency International](image)

An obvious candidate to explain the differences in corruption between economically and politically similar countries is a difference in culture, or, more specifically, social norms that prevail towards corruption. Perhaps in a society in which corruption is pervasive it is also more acceptable. Testing this in the field is hard, as there would always be a chicken-and-egg problem: Does pervasiveness
lead to acceptability or the other way round? Laboratory experiments have been conducted that can overcome this problem, since the environment is controlled and induced changes in treatments must be the cause, not the effect of observed changes in behavior. So far, attempts have been made to identify the influence of culture more broadly, either by conducting a bribery game in different countries (Cameron et al., 2009; Banuri and Eckel, 2015, 2012a, 2012b) or with international students from different countries of origin (Barr and Serra, 2010). Note that this technique allows to keep the institutional environment constant, as it is controlled by the experimenter by setting the rules of the game. While some of the studies do find a link between coming from a higher-corruption background and engaging in corruption in the experiment, the differences are nowhere near big enough to explain the differences in corruption we see between different countries. It seems that just being from or living in a corrupt society is not enough to make people corrupt, and the existing studies are inconclusive about the effect of social norms on bribery.

In this study we use a different path by creating the social norms in the laboratory. We design a simple bribery game between a firm and an official and make officials play the game twice with different firms. The first stage is just a mechanism to identify honest and corrupt officials. The officials are then re-grouped such that one sub-population contains predominantly corrupt and the other mainly honest officials. The officials are then paired and matched with completely new firms. These firms are told, truthfully, that they are paired with an official from a corrupt or honest pool. This novel approach allows us to control what participants believe about the pervasiveness of bribery in their population – because they actually know it. Further, we can apply this approach to subjects from the same pool. Thus, we can randomize subjects into treatments properly. This is not possible if cultural origin is the treatment, as in the cross-cultural studies mentioned above.

In this study, we address the question of whether a descriptive social norm, affects bribe offers. A descriptive social norm is based on what people actually do, i.e., one’s perception of common behaviors in society (Bicchieri, 2006), as opposed
to an injunctive social norm that describes what people ought to do. Social information has been crucial in the evolution of humans, and researchers argue that we have developed adaptive mechanisms to best deal with social information (e.g., see Morgan and Laland, 2012). One such mechanism involves a conformity bias through which people tend to follow the majority (Henrich and Boyd, 1998).

In the context of corruption, observing others in their group or society being corrupt may provide information about the profitability of that course of action. Therefore, if corruption is seen as common, people may become more prone to corruption.

Societal norms can drive bribery through (at least) two channels. First, there is a direct effect – in a society in which bribes are not common, citizens may feel disinclined to offer them because this would violate the norm. Second, there is an indirect channel. In non-corrupt societies, citizens may feel discouraged to offer bribes because they fear that a bribe offer would upset the official and he or she would impose sanctions on the briber. This punishment could be informal, like causing embarrassment, or formal if the official reports the bribery attempt and prosecutes the citizen. In the real world, both channels are intricately interwoven, and it is hard to say which is the factor that actually discourages people from offering bribes in societies that have little corruption. This study attempts to disentangle the two channels. We add treatments in which we give the official the opportunity to punish the citizen for offering a bribe. Applying this treatment to the groups with the honest and corrupt officials, we can examine whether fear of punishment deters bribe offers, and if so whether it has a stronger effect when the majority of officials are honest.

Our results confirm a causal connection between the descriptive social norm and participants’ behavior: the probability of a participant offering a bribe more than doubled when paired with a probably corrupt partner than when paired with a probably honest partner. This effect was observed in treatments both with and without sanctions. This means that the effect of the social norm occurred even when strategic considerations against offering a bribe were not at stake. Lastly, we did not find a significant effect of the sanctioning possibility. In our setting, the
effect of descriptive social norms dominated the effect of punishment expectations.

2. **Culture, social norms, and corruption**

The connection between culture and corruption has long been noticed, but it was not until CPIs were constructed in the 1990’s that this relationship was investigated more systematically (Treisman, 2007). Empirical research on culture and corruption has traditionally focused on finding reliable associations between cultural variables, such as religion, generalized trust and inequity, measured through polls and surveys, and different levels of perceived corruption across societies (e.g., Treisman, 2000; Pakdaman, 2001; Lambsdorff, 2007; Seleim and Bontis, 2009). Besides these empirical studies, other authors have approached the analysis of culture and corruption from a purely theoretical perspective (e.g., Tirole, 1996; Bisin and Verdier, 2001; Hauk and Saez-Marti, 2002). For instance, Hauk and Saez-Marti (2002) postulate a model in which they combined the economic incentives present in corrupt versus non-corrupt environments with a mechanism for the transmission of norms between generations. In their model, they contemplate the endogenous divergence of values, and suggest that such effect could be triggered by an acute intervention of increased monitoring and sanctioning. Their results support the notion that countries with similar anti-corruption laws might, nonetheless, reach contrasting equilibria and thus very different states of corruption, through the dynamic interaction between norms and incentives.

More recently, experiments have been used as a complementary source of empirical information to study corruption (see Abbink, 2006, and Banuri and Eckel, 2012a for reviews). In particular, authors working with bribery experiments have relied on two broad strategies to address the study of culture and social norms. On the one hand, framing variations have been used in an attempt to affect which norms become salient in a game (Abbink and Hennig-Schmidt, 2006; Barr and Serra, 2009; Banerjee, 2015, 2016). For example, Banerjee (2015) went beyond the comparison of abstract versus loaded wording in the instructions of the game, and attempted to generate different expectation by framing a Harassment Bribery
Game (Abbink et. el. 2014) as an Ultimatum Game (Güth et. al. 1982). Banerjee showed that the contrasting frames (harassment vs. ultimatum) elicited different social norms as evaluated by an independent group of participants (e.g., bribe solicitation was considered less appropriate than the equivalent behavior in the ultimatum frame), and that participants’ actual monetary decisions systematically varied as a function of those norms. It is important to note that this strategy of varying the framing of a game to induce different norms, despite being effective and interesting, is only indirect and may introduce confounds, thus producing results that may need to be interpreted with caution. More specifically, differences in the framing of games can affect decisions not only through changes in the perception of norms, but also through effects on other beliefs (e.g., see Dufwenberg et.al. 2011), preferences, or affective responses (e.g., see Sarlo et. al 2013).

On the other hand, researchers have studied social norms in bribery experiments by recruiting participants from countries with divergent CPIs. This approach assumes that people bring their internalized norms into the lab (Alatas et. al., 2009; Cameron et. al., 2009; Barr and Serra, 2010; Banuri and Eckel, 2015, 2012b, 2012c; Li et al. 2015). Barr and Serra (2010) did two experiments using a one-shot sequential bribery game with participants from different nationalities who were studying in the UK. In both experiments, the CPI of participants’ country of origin turned out to be a good predictor of undergraduates’ propensity to engage in bribery. Additionally, in the second experiment, the authors tested and confirmed that the number of years spent in the UK modulated the effect, suggesting that decisions in the bribery game could be affected by a secondary socialization and the acquisition of UK social norms (Barr and Serra, 2010). Cameron et. al, (2009) took a similar approach but instead went to countries with divergent CPIs to conduct the experiments. This strategy of sampling participants with different nationalities has produced several interesting insights; however, it can also present certain drawbacks. For instance, when participants’ nationality is

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1 The same was not true for graduate students, whose behavior the authors proposed to explain by a presumed selection bias (Barr and Serra, 2010).
varied, other factors may simultaneously and systematically diverge beyond the norms prevalent in each country. Hence, relying only on cross-national samples may not allow us to discriminate between the efficacy of specific norms, their content, how pervasive they are, or some other cultural difference between nations (Ali and Isse, 2003).

3. The present study

In this study, we evaluate the relative effects of social norms and sanctions in a laboratory bribery game. We circumvent the issues prevalent in most cultural investigations as summarized above by inducing the inception of social norms in the laboratory. We approach the study of social norms in a bribery experiment by using a new technique to manipulate descriptive social norms about the typical behavior of officials (see Bicchieri and Xiao, 2009 for a similar approach applied to fairness norms in a Dictator Game).

Figure 2 shows the decision tree for the bribery game implemented in our study. We used a game in which a participant in the role of a firm could offer a (pre-determined) private payment to a participant in the role of a public official who could accept or reject the offer. Officials had to make their decision as if they had been offered the private payment, though they did not know their partners’ decision at that time of choice. Collusion between firm and official (i.e., offer and acceptance) earned both parties some extra money at the expense of a nongovernmental conservationist organization called Tellus. If the firm did not offer the payment or if the official rejected the offer, the firm, the official, and Tellus, each, received AR$30. In contrast, if the corrupt deal was consummated, the firm and the official received AR$40 each, whereas Tellus received nothing. This represents the inefficient negative externality of bribery, such that a corrupt

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2 The procedural fact that the bribe offer entailed no cost to the firm was a simplification chosen to avoid risk preferences playing any role in the treatments without sanctions.

3 Participants were informed that Tellus is a conservationist organization concerned with the protection of the natural environment. This non-profit civil organization was created in 1982 at the Universidad Nacional del Sur (Bahía Blanca) and is a well-known and respected environmental charity on campus.
act leads to a decrease in social welfare. Due to the actions of the firm and the official, the conservationist charity misses out on donations and a damage or negative externality is imposed on society (see also Lambsdorff and Frank, 2010, for a bribery game in which the negative externality involves a non-profit organization). Last, the treatment with the sanction possibility implied that, in the case a private payment was offered, officials could reject it and apply a AR$10 sanction to the firm by incurring a cost themselves (i.e., by paying AR$2).

**Figure 2.** Full decision tree of the bribery game used in the experiment. The “reject & report” option was not available in all treatments (see more details in this section).

The experiment had a 2x2 design in which we systematically varied the descriptive social norm and the possibility of firms getting sanctioned by the official for offering a private payment. Our protocol consisted of two stages. In the preliminary stage, firms and officials played the sanction-free game (see Figure 2) with the goal of classifying officials as either honest or corrupt according to their decisions. In the main stage, new firms were matched with either a “probably corrupt” or a “probably honest” official from the preliminary stage. The social

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4 In this version of the game a selfish rational agent had no strategic reasons for not offering or not accepting the private payment.

5 Sanctions were costly so as to minimize errors or random responses.
norms in the two treatments were hence varied as firms would anticipate officials to be more corrupt in one group than the other. To vary the possibility of sanctions, we had independent sanction-free treatments (with the exact same game used in the preliminary stage) and treatments in which the official could not only accept or reject the payment from the firm, but also reject the payment and apply a monetary sanction to the firm by incurring a cost herself.

3.1. Recruitment of Participants

The experiment was conducted at the Universidad Nacional del Sur, Bahía Blanca, Argentina. Corruption is rampant in Argentina; the country is ranked 107 out of 175 in the 2014 Corruption Perception Index. Hence we expected participants to be familiar with the issue. We ran 11 sessions with 426 participants in total. Two hundred and eighty six subjects participated in the preliminary stage of the experiment, 143 played in the role of firms and 143 played in the role of officials. In the main stage, we had 140 new participants in the role of firms, who formed pairs with 140 of the officials who played in the preliminary stage.\(^6\)

Participants were recruited from a subject pool which included undergraduate and graduate students from the Universidad Nacional del Sur and other university-level institutions from Bahía Blanca. No participant had taken part in similar experiments before. Subjects participated only once, in one of three possible roles: 1) firms for the preliminary stage; 2) public officials for the preliminary and the main stages; or 3) firms for the main stage. Participants in the role of firms played in a single round of the game, whereas participants in the role of officials played in two rounds (one corresponding to the preliminary stage and the other to the main stage), though they did not receive any feedback in between rounds. Separate recruitment emails were sent for the three roles. In the email invitation, we did not mention their role, we only informed them about the

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\(^6\) We had to leave three officials out of their respective sessions because the number of firms in the main stage did not match up with the number of available partners from the preliminary stage. This happened in the fifth session (two officials discarded) and in the tenth session (one official discarded). Excluded officials were paid according to their and their partner's decisions in the preliminary stage plus a bonus of AR$10 for not being able to participate in the main stage.
duration of the session (1 hour for firms and 2 hours for public officials) and the range of possible earnings (AR$30-40 for firms in the preliminary stage, AR$58-80 for officials, and AR$20-40 for firms in the main stage). 

3.2. Protocol for Sessions

The experiment was run using paper and pencil. On arrival, participants’ identities were checked and each participant was randomly allocated a seat. Each session was divided into two parts, namely the first and the second hour corresponding to the preliminary stage and the main stage (or rounds 1 and 2), respectively. Each part began with a brief introduction in which we, first, emphasized that no deception was involved in the experiment. Second, we told participants that there were two roles and that each participant had a fixed role which had been randomly determined. We also mentioned that everyone was paired with a person of the other role, though no one would know whom she/he was interacting with either during or after the session (there were alphanumerical codes in experimental booklets through which participants of different roles were associated according to a pre-determined list). They were also told that, with their decisions in the session, each of them could affect their own and their partner’s monetary earnings. Last, we mentioned that the decisions of each pair of participants affected how much money we would donate to a non-profit conservationist organization called Tellus. After that, we handled the booklets for that round, which included detailed instructions, control questions, and a sheet where they could make their choices. We checked participants’ responses to control questions before they could make their decisions to ensure that they understood the instructions, and once a participant made his or her decision, the booklet was collected. Firms then completed a socio-demographic questionnaire, whereas officials only completed the questionnaire after making their decisions in the second round.

\[ \text{The conversion rate at the time of the experiment (2013-2014) was around US}\$1 = \text{AR}\$ 7. The money earned for 1-h participation was approximately equivalent to the price of a lunch combo at the university cafeteria.} \]
At the end of the session, firms and officials were matched according to the alphanumerical codes in their experimental booklets to determine their payoffs in the game. Importantly, only firms were paid at the end of round 1, and they left the classroom 15 min before the firms for round 2 came in. Officials were paid for rounds 1 and 2 after the end of round 2. For payment purposes, each participant was given a closed envelope with the details of the decisions affecting his/her earnings (own and partner’s decisions) and the corresponding cash inside. Sessions took approximately 45 min for firms and 105 min for officials. After the session, we made an online bank transfer to Tellus, and then emailed the transfer receipt to the participants of the corresponding session as we had promised.

3.3. Experimental design

In the preliminary stage, all participants played the game without the sanctioning option (see Figure 2). Firms could either offer or not offer the private payment, and officials could either accept it or reject it. Officials were classified as either honest (n = 98) or corrupt (n = 45) depending on whether they rejected or accepted the offer by the firm, respectively.

New firms entered the experiment for the main stage, and were paired with either an honest or a corrupt official from the preliminary stage. These firms, however, did not know their partner’s decision from the previous stage with certainty. Instead, firms were informed that they had been paired with an official randomly drawn from a group of officials comprising more than 80 percent of participants who had accepted (rejected) the private payment in a previous round of a similar game played with other firms. This systematic intervention allowed us to have independent treatments in which the descriptive social norm was varied using a deception-free protocol. In addition, half the subjects played the game without the sanctioning option, while the other half played the game with the sanction possibility (see Figure 2). As in the preliminary stage, officials had to make their decision as if they had been offered a private payment, though they did not know their partners’ decision at that time of choice.
In sum, we had four independent treatments to assess whether a firm’s decision to offer a private payment to the official could be affected by variations in the descriptive social norm and/or the possibility of being sanctioned. Treatments were as follows: Playing the game knowing that 1) most officials were honest and they could punish bribe offers (hereafter referred to as Honest Officials With Punishment, n=45); 2) most officials were honest but they could not punish bribe offers (hereafter referred to as Honest Officials Without Punishment, n=45); 3) most officials were corrupt but they could punish bribe offers (hereafter referred to as Corrupt Officials With Punishment, n=25); and 4) most officials were corrupt and they could not punish bribe offers (hereafter referred to as Corrupt Officials Without Punishment, n=25).

A unique aspect of our design is that officials’ decision to be corrupt or to be honest in the preliminary stage determined the social norm, which was, therefore, not exogenously imposed. However, this implied that it was not under our control to balance the sample sizes for the treatments in which we varied the descriptive social norm. We did two pilot sessions before we started collecting the data reported in the paper, to select game parameters that would likely provide balanced sample sizes. Our goal was to determine parameters such that we obtained a roughly equal number of honest and corrupt officials. In these pilots, we found that subjects were very likely to be corrupt. Data from our experiment suggests, however, that corruption levels are lower than those observed in the pilots.8

Once participants made their decisions in the main stage, they completed socio-demographic and post-decision questionnaires. In these questionnaires, participants were asked to estimate the percentage of firms that would offer the private payment, and the percentage of officials that would accept it. With this information on beliefs, we were able to assess whether participants correctly estimated the average behavior in their treatment. In addition, participants also

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8 The pilots were conducted using classroom experiments with low-powered incentives (a few randomly chosen subjects were paid for their decisions). Interestingly, we observed more corrupt behaviour in this setting, although the temptation to be selfish should have been weaker. We observe the opposite and hence have more data in the treatments with honest officials.
responded about instances of corruption that they had personally experienced or that they had heard from the media or other sources.

4. Results

We first report results from the main stage of the experiment, then discuss the findings from the preliminary stage. Figure 3 shows the proportion of firms who offered a bribe as a function of treatment in the main stage. As can be seen in the figure, there was a higher proportion of bribe offers when firms participated with an official from a group of corrupt officials, as compared to firms facing an official from a group of honest officials (Fisher’s exact test, two tails, \( P = 0.0015 \)). While the proportion of bribe offers was higher when there was no punishment option, as compared to when officials could exert this option, the difference was not statistically significant (Fisher’s exact test, two tails, \( P = 0.21 \)).

A Probit regression with a social norms dummy variable (-1 for treatments with Corrupt officials, 0 for treatments with Honest officials), corroborates the effectiveness of social norms in influencing bribe rates (coefficient = 0.82, Std. Err. = 0.32, \( P = 0.01 \)). Also, the regression showed no significant effect of a punishment dummy variable (1 for treatments with the punishment option, 0 for treatments without punishment; coefficient = -0.27, Std.Err. = 0.29, \( P = 0.35 \)) or of the interaction of the punishment dummy with the social norms dummy (coefficient = -0.17, Std.Err. = 0.47, \( P = 0.71 \)). The effect of social norms on bribe offers was robust to the inclusion of several controls in the analysis, such as participants’ gender and subjective relative economic status, whether they were enrolled in an economics/business/accountancy degree, or whether they reported having experienced corruption personally (all these variables were nonsignificant in the analysis, all \( Ps > 0.30 \)).
Figure 3. Proportion of firms that offered a private payment to the associated official as a function of treatment in the main stage.

In the post-decision questionnaire, 15 percent of firms mentioned having witnessed or experienced corruption directly in their lives. We assessed whether this type of experiences had any effect on the game play. From those with direct experiences of corruption, 30 percent offered a bribe in the experiment, compared to 35 percent of bribe offers in the group of those who reported not having had a direct corruption experience in their lives (Mann-Whitney U test, $Z = 0.36, P = 0.72$). Furthermore, almost 95 percent of participants in the role of firms reported thinking that the situation represented in the experimental game (a firm facing the possibility of bribing a public official) was common or very common in real life.

Finally, we were also interested in assessing participants’ guesses of the others’ decisions in the session. Table 1 shows the comparison of participants’ (post-decision) estimation of firms and officials’ choices against the actual choices in each treatment. As shown in the table, there was a systematic overestimation of corruption in treatments with honest officials. In contrast, estimations in treatments with corrupt officials were accurate, except for the overestimation of bribe offers in the treatment with punishment. Over-estimation of bribe offers and
acceptances were found in the preliminary stage as well. Whereas (mean ±1 sem) 46 percent (±4) of firms were estimated to offer the private payment (95% CI: [37, 55]), only 32 percent of firms did so in the preliminary stage. In turn, 53 percent (±5) of the officials were estimated to accept the payment (95% CI: [43, 64]), but only 31 percent of them actually accepted it.

Table 1. Comparison of the estimations of bribe offers and acceptances against actual overall decis ions in stage 2.

<table>
<thead>
<tr>
<th>Treatments</th>
<th>Firms’ actual decisions</th>
<th>95% CI</th>
<th>Officials’ actual decisions</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social norms</td>
<td>Punishment</td>
<td>Bribe offers</td>
<td>95% CI</td>
<td>Bribe accepted</td>
</tr>
<tr>
<td>Honest</td>
<td>Without</td>
<td>29%</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>Officials</td>
<td>With</td>
<td>20%</td>
<td>36%</td>
<td>51%</td>
</tr>
<tr>
<td>Corrupt</td>
<td>Without</td>
<td>60%</td>
<td>59%</td>
<td>75%</td>
</tr>
<tr>
<td>Officials</td>
<td>With</td>
<td>44%</td>
<td>54%</td>
<td>72%</td>
</tr>
</tbody>
</table>

*Correct estimation; *2 Over-estimation.

Results from the preliminary stage

In the preliminary stage all officials had exactly the same instructions. However we implemented five independent treatments for firms in order to make more effective use of their participation. These treatments did not interfere with the main goal of the preliminary stage which was to classify officials as either honest or corrupt. The four treatments varied as a function of two factors. That is, before deciding whether to offer a private payment, firms were required to estimate either descriptive or injunctive norms, for either firms or officials. We used an unincentivized protocol to solicit the estimation of norms, in which there was no feedback involved (we were not interested in the accuracy of their estimation, but on the fact that thinking about others’ behaviour or moral beliefs could focus participants’ attention on social norms; e.g., see Krupka & Weber, 2009). For descriptive norms, we asked participants to estimate the percent of firms (or officials) in the session that would offer (accept) the private payment. For injunctive norms, we asked participants to estimate the percent of firms (or
officials) in the session that would think that offering (accepting) the private payment was the correct thing to do. There was no estimation required in the control treatment. Therefore, the five independent treatments for firms comprised: 1) the control (n=29); 2) the estimation of descriptive norms for firms (firms’ behavior, n=29); 3) the estimation of descriptive norms for officials (officials’ behavior, n=29); 4) the estimation of injunctive norms for firms (firms’ moral attitude, n=28); and 5) the estimation of injunctive norms for officials (officials’ moral attitude, n=28).

Results from the preliminary stage, more specifically, the effect of estimations of the social norm upon bribe offers, were consistent with the findings of the main stage. That is, as participants perceived corruption to be more common, they showed a higher probability of offering a bribe. This was particularly evident when we divided the sample in each treatment in the preliminary stage by the median of the reported estimation of the descriptive or of the injunctive social norm (except in the control treatment in which participants did not make any estimation). The comparison of the proportion of bribe offers in the lower and the higher half for each treatment was significant in the two treatments in which participants estimated the descriptive social norm (Fisher Exact tests, two tails; for estimations of firms’ behavior: $P < 0.001$; for estimations of officials’ behavior: $P < 0.01$; for estimations of firms’ beliefs: $P = 0.08$; and for estimations of officials’ beliefs: $P = 0.21$). Then, for each treatment, we also compared the proportion of bribes offered in the lower and the higher half against the control treatment, and a similar finding was obtained. We found significant differences against the control only for participants whose estimations of bribe offers and acceptances were relatively high (Fisher Exact tests, two tails; for higher estimations of corruption in firms’ behavior: $P < 0.01$; for lower estimations of corruption in firms’ behavior: $P = 0.13$; for higher estimations of corruption in officials’ behavior: $P < 0.01$; for lower estimations of corruption in officials’ behavior: $P = 0.45$; for higher and lower estimations of firms’ corrupt moral attitudes: $P < 0.49$ and $P = 0.23$, respectively; for higher and lower estimations of officials’ moral attitudes: $P < 0.49$ and $P = 0.46$, respectively).
Overall, the effect of the descriptive social norm in the main stage and the results in the preliminary stage both present the same picture: estimations or perceptions of corrupt behavior affect people’s proclivity towards corruption.

5. Discussion

In the present study, we evaluated the effect of descriptive social norms and the possibility of sanctions on bribe offers in a collusive bribery game. These two factors may co-vary within societies and therefore, it was crucial to use an experimental methodology to parse their consequences. Results showed that participants in the role of firms were sensitive to the information about public officials’ typical behavior. When the official came from a mostly-corrupt group, the proportion of bribe offers was more than double relative to when the official came from a mostly-honest group. In this context, we did not find a statistically significant effect of the possibility of sanctions.

To our knowledge, this is the first time that such a contagion effect is shown in the realm of corruption. This effect of descriptive social norms on bribe offers could be behind results in other bribery experiments that use cross-national samples. Whereas some studies have relied on varying participants’ nationality to study social norms, many other factors could co-vary with people’s country of origin, thus making it difficult to obtain clear cut conclusions from those data. The present study thus complements and improves previous research on bribery and social norms.

Though there is ample evidence that people are willing to punish behavior they disapprove of (Fehr and Gächter, 2002), we find that fear of punishment is, at best, a mild deterrent to offer bribes. We find slightly lower rates of bribe offers when the punishment option is present, but the effect is not statistically significant. It is perhaps surprising that the addition of a material risk did not have a strong effect, the addition of information on norms, without adding any material risk, did. Further research is needed into the potentially deterrent effect of punishment.

To sum up and conclude, present results showed a significant effect of the descriptive social norm on bribe offers. Despite the information provided,
overestimation of corruption was common and was also associated with a choice for bribery. Based on these findings, we conclude that the scientific study of corruption would benefit from a better understanding of the factors shaping people’s beliefs about relevant descriptive norms. This knowledge could be used to avoid potential vicious cycles of feedback between people’s overestimation of corruption and corrupt behavior itself, which may be particularly relevant in countries where perceived corruption is high.

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