Large stakes and little honesty? Experimental evidence from a developing country

Andreas Leibbrandt [a], Pushkar Maitra [a], Ananta Neelim [b],*

[a] *Department of Economics, Monash University, Australia*
[b] *Behavioral Business Lab, RMIT University, Australia*

HIGHLIGHTS

- We study honesty in a cheap talk experiment.
- Dishonesty can result in a gain of several months' worth of income.
- Dishonesty increases with stake size, but that there is still substantial honesty.
- Majority of receivers do not follow recommendations, irrespective of stake size.

ARTICLE INFO

ABSTRACT

We experimentally study the extent to which individuals are honest when lying can result in a gain of several months' worth of income. Randomly selected individuals from villages in Bangladesh participated in a sender–receiver cheap talk game. We varied the potential benefits from providing false recommendations. While we find that individuals are more likely to provide false recommendations when stakes are very large, we still observe that almost half of the senders refrain from lying. In contrast, receivers are generally suspicious and the majority does not follow recommendations.

© 2018 Published by Elsevier B.V.

1. Introduction

Honesty is a key ingredient in aiding economic transactions, especially in developing countries where individuals cannot rely on formal institutions to enforce contracts. There is indirect evidence from cross country studies showing honesty is non-pervasive in developing countries (Pande and Olken, 2012; Gachter and Schulz, 2016). While such evidence uncovers an important problem for developing countries, it provides fewer insights on the general level of honesty in such environments, particularly if dishonest behavior that hurts others is moderated by informal norm based mechanisms deterring dishonesty. In this paper, we use an artefactual field experiment in a developing country to provide direct insights on the level of honesty and its robustness. We examine whether increases is stakes from a day's wage to several months of income affects honesty.

Our study contributes to the experimental literature on honesty (Gneezy, 2005; Sutter, 2009), social capital in developing countries (Cardenas and Carpenter, 2008) as well as the research on the relationship between stake size and pro-social behavior (Cameron, 1999; Leibbrandt et al., 2015) in three important ways. *First*, we study honesty in a developing country, where valuation and application honesty may be different from developed countries *Second*, we study honesty using much larger stakes than related studies. Fischbacher and Föllmi-Heusi (2013) and Kajackaite and Gneezy (2017) examine the effects of stakes on cheating behavior also using relatively large stakes (corresponding to a few hours of typical student wages), but still much lower than the stakes in our study (between a daily wage and several months of typical wages). The use of very large stakes allows us to thoroughly investigate whether honesty is a normal good. *Third*, our participants are a

Table 1
Results of regressions for senders.

	Senders						Receivers	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
HI	−0.342*** (0.041)	−0.334*** (0.063)	−0.361*** (0.078)				−0.15 (0.126)	−0.18 (0.112)
MO_1				0.146*** (0.020)	0.333*** (0.072)			
MO_2				−0.159*** (0.043)	−0.037 (0.068)	−0.366*** (0.027)		
HI_1				−0.333*** (0.024)	−0.265*** (0.081)	−0.579*** (0.082)		
HI_2				−0.384*** (0.066)	−0.223** (0.086)	−0.545*** (0.043)		
Constant	0.696*** (0.030)	0.616** (0.281)	0.403 (0.256)	0.704*** (0.023)	0.479* (0.266)	0.545** (0.208)	0.57*** (0.054)	0.00 (0.213)
Sample size	121	121	90	121	121	90	121	119
Difference estimates								
MO_3-MO_1				−0.146***	−0.333***			
MO_3–MO_2				0.159***	0.037			
MO_1–MO_2				−0.305***	−0.369***	−0.366***		
HI_1–HI_2				0.05	−0.04	−0.034		
MO_1–HI_1				0.479***	0.597***	0.579***		
MO_2–HI_2				0.225***	0.186***	0.178***		
Additional controls	No	Yes	Yes	No	Yes	Yes	No	Yes
Include MO_3	Yes	Yes	No	Yes	Yes	No	Yes	Yes

Notes: OLS regressions presented. The dependent variable in columns 1–6 is the choice of sending a true message. Columns 3 and 6 exclude participants in the MO_3 treatment. The dependent variable in columns 7 and 8 is the choice of following sender message. All regressions include village fixed effects. Standard errors clustered at the village level.
*** $p < 0.01$.
** $p < 0.05$.
* $p < 0.1$.

random sample of the population in several locations, allowing us to provide a comprehensive investigation into the individual determinants of honesty without concerns about selection of specific types of individuals into the experiment.

2. The experiment

We use the Gneezy (2005) cheap talk sender–receiver game: a two-player sequential move game with two payoff distributions between Senders and Receivers. Only the Sender knows the payoff distributions and makes an honest or deceptive recommendation on which distribution is better for the Receiver. The Receiver then decides whether or not to follow. Our experiment varies the size of stakes between moderate (MO) and high (HI). In the MO stakes treatments, option 1 was always Tk 50 for the sender and Tk 50 for the receiver, denoted as (50, 50). Option 2 was either: $MO_1 = (90, 10)$; $MO_2 = (100, 0)$ or $MO_3 = (60, 40)$. In the HI stakes treatment option 1 was (5000, 5000) while option 2 was either $HI_1 = (9000, 1000)$ or $HI_2 = (10000, 0)$.[1],[2] The average monthly per capita income of the participants was Tk 1663. This implies that the stakes in the MO and HI treatments amounted to a little over daily income and several months of income respectively.[3]

In addition to choices made by Senders and Receivers, we elicited information on beliefs about the choices made by their opponents. After senders (receivers) had made their choices they were asked to guess how many out of the matched receivers

(senders) in their session they expected to follow recommendations (sent true recommendations). We provided monetary incentives (Tk 20) for accurate guessing. 39% of the senders and 37% of the receivers guessed correctly.

We randomly selected 242 participants residing in 18 villages (in the outskirts of the capital city) in Bangladesh to participate in our experiment. To minimize anonymity concerns from conducting experiments in small villages, Senders and Receivers were always residents of different villages. They participated in simultaneously held sessions and all relevant information was communicated using mobile phones to establish credibility. (Leibbrandt et al., 2015)

3. Results

3.1. Sender

Across all treatments 61% of the messages are true. The honesty rates are similar to those reported in the literature. Senders are rather optimistic that receivers will follow their recommendation: they believe that 67% will follow recommendations which was greater than the receivers follow rate of 54% ($p < 0.01$, Wilcoxon Signed-rank [WSR], two-tailed).

Consistent with the conjecture that honesty is a normal good, Fig. 1 shows that larger stakes decrease the likelihood of true messages: 66% of participants in the MO treatments sent a true message compared to 47% in the HI treatments (Difference $p = 0.06$, Wilcoxon–Mann–Whitney [WMW], two-tailed).

This decrease is not the result of lower sender follower beliefs in HI. In fact, senders believe that receivers are more likely to follow in the HI (65.3%) than in the MO (71.7%, n.s.) treatment. When applying the framework developed in Sutter (2009), which categorizes Senders who send true messages as benevolent if they believe that more than 50% of the receivers follow recommendations, we find a relatively high percentage of benevolent senders (71%) and that the likelihood of sophisticated truth-telling (telling the truth assuming

---

[1] Taka (Tk) is the local currency of Bangladesh. At the time of the experiments Tk 100 equaled USD 1.22.

[2] The sample size (Sender–Receiver pair) for each of these treatments are as follows: $MO_1 = 30$, $MO_2 = 30$, $MO_3 = 31$, $HI_1 = 15$ and $HI_2 = 15$.

[3] As a part of this study, we also conducted another set of treatments where Senders had an option to remain silent. The option to remain silent was only available for the MO treatments. We do not present any analysis or discuss results using data from these treatments in this paper.