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Trust, trust games and stated trust: Evidence from rural Bangladesh

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ABSTRACT

Levels of trust are measured by asking standard survey questions on trust and by observing behavior in a trust game using a random sample in rural Bangladesh. Follow-up questions and correlations between stated expectations and the amount sent in the trust game reveal that the amount sent is correlated with a general measure of trust. The trust and need motives combined with expectations explains differences in amounts sent, and this highlights the potential importance of motives that cannot be inferred directly from people's behavior and expectations alone.

1. Introduction

There is a great deal of recent theoretical and empirical evidence that trust between people fosters co-operation and economic activity and is hence crucial for economic and social development (e.g., Fukuyama, 1995; Knack and Keefer, 1997). Not surprisingly, the interest in measuring and explaining the determinants of trust, especially in developing countries, has therefore increased rapidly over the last decade. Unfortunately, trust turns out to be difficult to measure. The main objective of this paper is to contribute to our understanding about what the main methods used – trust games and trust surveys – actually measure, based on a non-student sample in a developing country.

Trust has been measured either by using attitudinal trust, most commonly framed by the question "Generally speaking, would you say that most people can be trusted, or that you cannot be too careful in dealing with people?" as in the General Social Survey (GSS) question, or by conducting a trust game; see Wilson and Eckel (2011) for a comprehensive state-of-the-art overview of different ways of measuring trust. Trust surveys have been criticized for not implying consequences for the respondents, which is in contrast to trust games (also denoted investment games; Berg et al., 1995) where the decisions have real monetary effects. Briefly, a trust game is a two stage game involving a "sender" and a "receiver." The sender is given a certain amount of money and has to decide how much of it to send to the anonymous receiver and how much to keep. Any positive amount sent by the sender is normally tripled before it is given to the receiver, who then decides how much to return to the sender. A selfish sender who anticipates that the receiver will be selfish too should send nothing to the receiver, since he/she should realize, by using backward induction, that the receiver has no incentive to send anything back. However, a Pareto improvement is possible if the receiver returns at least one-third of the tripled amount received.

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The amount sent by the sender is typically regarded to be an indicator of trust, and the amount returned by the receiver an indicator of trustworthiness.

Glaeser et al. (2000) combined a trust game with an attitudinal trust survey among undergraduate students at Harvard and found poor correlation between stated trust and the amount sent in the trust game, while the amount returned was significantly explained by stated trust. They concluded "that most work using these survey questions needs to be somewhat reinterpreted" (p. 814). This conclusion should be read in the light of their interpretation that a trust game measures trust and trustworthiness. Recent research on trust games has however found other motivations beyond pure trust and trustworthiness to be important, such as unconditional altruism and risk preferences (e.g., Cox, 2004; Holm and Danielsson, 2005; Karlan, 2005; Schechter, 2007). In the present study, we explicitly asked about the motives for sending and returning money using follow-up questions after a trust game. We also asked about the senders' expectations with respect to how much they expected to get back from the receivers. In addition, we analyzed the outcome of the trust game *per se* by using conventional descriptive and regression approaches.

We conducted the combined attitudinal trust survey and trust game among household heads in rural Bangladesh. There are at least three advantages of using this sample rather than the more frequently used choice of a student sample in an industrialized Western country:[1] (i) We can afford to use financial stakes that are high in comparison to their normal wages, implying that the participants have strong incentives to take the game seriously and therefore think carefully about how to act. (ii) We obtain more variation in the socio-economic background variables. (iii) Bangladesh's top ranking in the Transparency International's corruption perception index five years in a row (2001–2005) (Transparency International, 2003, 2004, 2005)[2] makes it particularly interesting for a study of trust. The fact that individuals associated with public institutions are perceived to be corrupt may affect overall trust in society, and as argued by, e.g., Alesina and La Ferrara (2002), trust in existing institutions may affect trust in other people. This is different from the bottom-up perspective put forward by Putnam (1993), i.e., that trust develops largely through people's interactions in local voluntary organizations.

Overall, our results support and extend the recent findings that the motives behind the observed behavior in trust games are more complicated and mixed than often believed. For example, in our case we found that the appearance of trust or trustworthiness may sometimes simply be a reflection of long-term self-interest, derived from the fact that one important stated motive for both sending and returning money was that people believed that they would be punished, either during their lifetime or in an after-life, if they acted too selfishly in the trust game. This type of information, we believe, would have been impossible to obtain based solely on revealed behavior.

The rest of this paper is organized as follows. Section 2 presents our survey and the organization of the experiment, Section 3 presents the main descriptive results from both the attitudinal trust survey and the trust game, Section 4 provides econometric analysis, and Section 5 summarizes and concludes the paper.

2. The survey and the organization of the experiment

Bangladesh consists of six divisions, each made up of several districts. In total, Bangladesh has 64 districts, 16 of which are located in the Dhaka division. The survey and the experiment were conducted in five districts of the Dhaka division: Netrokona, Mymensingh, Manikganj, Gazipur, and Narayanganj. The enumerators were first allocated to different parts of the village and then asked to visit every fourth household. If the household head was not around, the enumerators were instructed to return later and, if still unsuccessful, to use a replacement household.[3] The trust game was conducted at the end of a rather extensive household survey. The participants were paid 100 Bangladesh Taka (TK) to complete the whole survey and the trust game. The subjects were informed about the trust game at the end of the survey. Half of the subjects participated in the game as senders, and half as receivers. Both the senders and the receivers were given the following initial information before the game was explained:

> You will be confronted with a decision situation that involves real money. How much you earn depends on the choices made by you and another participant, and it may happen that you earn nothing. The other participant is any household head in the nearby village, [. . .], who is Hindu [or Muslim] by religion. That person is also participating in our survey and will get the same participation fee as you once you have completed the questionnaire. You will not know who the other participant is, and that person will not know who you are. Your choices and outcomes will be confidential. Please do not talk to anyone during the experiment.

[1] Needless to say, there are disadvantages too, including lower educational levels among the respondents, which may induce more cognitive errors. Moreover, it is more expensive and logistically difficult to set up a large-scale experiment in the countryside.

[2] This is a composite index based on the degree of corruption perceived by business people and country analysts. Corruption is defined as the abuse of public office for private gain, e.g., bribe-taking by public officials in public procurement.

[3] We have approximately 23 percent replacement households in our final sample, which is almost solely due to lack of availability. Only 2 percent of those who were available did not want to participate in the survey. In the villages, people from the same family chain normally live in clusters of a few households. Thus, a replacement with the next household, or even with the next to the next household, should not bias our results.