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Profiling trust: An empirical analysis

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ABSTRACT

We conduct an empirical study in an educative community in Mexico City. Our objective is to identify which are the profiles (individuals' set of observable characteristics) that people in our sample consider more trustworthy. We also analyze how these perceptions of trustworthiness are matched by the responses and characteristics of individuals upon whom trust was deposited (reciprocity). Our results indicate that age and social proximity are regarded as good signals of trustworthiness by the individuals in the sample. However, reciprocity decisions are determined by education, risk aversion, and the individuals' expectations about how much other individuals will trust them. Even considering that there would be some element of error in the individuals' perceptions, we observe that there is no intersection between the characteristics that individuals perceive as the best components of a trustworthy profile and the characteristics that determine reciprocity decisions.

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1. Introduction

Social closedness, which can be measured through an individual's social network, might determine trust (Karlan et al., 2009); but there are other determinants of trust, such as personal characteristics, institutional factors, and environmental features (Bachmann and Zaher, 2013). Moreover, Ljunge (2014) finds evidence that trust is influenced by cultural ancestry due to the existence of intergenerational channels of trust transmission. Given the above, it can be inferred that an individual's decision of trusting or not another individual is complex since several factors come into play. We work with the hypothesis that individuals use profiles or set of other individuals' observable characteristics when trying to identify trustworthy people. In this paper, we empirically analyze which are the set of characteristics (profiles) that makes one individual more trustworthy in the eyes of another individual, given their social network, and whether certain individual characteristics that are included in the most preferred profiles truly identify trustworthy individuals.

Answering this question is of relevance because it might contribute to the explanation of why, in a given social network, some economic transactions, informal or formal, take place and some other do not. Social networks and trust play a role in reducing the asymmetric information problems associated with financial transactions (Townsend, 1994; Foster and Rosenzweig, 1995; Easterly and Levine, 1997; Zak and Knack, 2001; Guiso et al., 2001; Adato et al., 2006; Chantarat and Barret, 2007). These information frictions limit financial contracts and participation in formal financial markets.

The central idea is that social networks develop direct monitoring mechanisms that produce information about

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the financial behavior of the individuals that belong to such networks. Also, social networks tend to use social sanctions to improve the enforcement of contracts. Furthermore, this literature sustains that the operation of financial institutions is always-regardless of the degree of development-based on trust. Trust and social networks can improve the efficiency of a society by facilitating the coordination of actions, and the negotiation and execution of compliance of agreements and contracts (Putnam, 1993). According to Guiso et al. (2001) and Ferrary (2003), the existence of social networks and trust translates into greater degrees of development and institutionalization of the financial sector. Higher levels of trust placed in both other individuals and formal institutions indicate greater use of formal financial instruments and increased efficiency in the implementation of contracts (Guiso et al., 2001; Zak and Knack, 2001; Ferrary, 2003; Guiso et al., 2008).

On the other hand, social networks have been classified according to three layers of social interaction (Putnam, 1993; Guiso et al., 2001; Lin, 2005a,b). The first layer is characterized by close and trusted relations that are established with direct family members or close friends. These relations provide individuals with support and/or resources, are characterized as being intense and reciprocal, and generate dense and closed social networks. The second layer consists of links that serve the purpose of sharing information and resources with business partners, acquaintances, colleagues, and people with the same political or religious affiliation. These networks are typically open. The third layer of social relations creates networks that pool individuals who share a vertical or authority-based relationship.

Individuals who participate in dense social networks have been found to demonstrate higher levels of interpersonal trust (Marsden and Campbell, 1984; Coleman, 1990; Granovetter, 1973, 1985; Hansen, 1999), whereas higher levels of trust in institutions have been found in individuals who participate in open and diverse social networks (Fukuyama, 1995; Putnam, 2000). Hierarchical networks connect people with political resources and formal institutions preserving their anonymity. Trust toward society in general is considered the foundation of collective action and social cohesion (Fukuyama, 1995; Putnam, 1993, 2000; Zak and Knack, 2001). These studies that support the argument that social networks create trust (Granovetter, 1985; Coleman, 1990; Putnam, 2000). For example, Karlan et al. (2009) develop a model where social networks create trust when individuals use their connections in social networks as social collateral to ensure informal financial transactions.

Moreover, Bacharach and Gambetta (2001) consider trust as a type of belief that emerges in games with a particular payoff structure. According to those authors, the *primary problem of trust* is the question that the person who deposits trust upon someone else asks to her/himself: Can I trust this person to do X? Hence, the truster faces uncertainty about the other person's payoffs derived from doing X. This uncertainty about the true nature of the trustee causes the emergence of the *secondary problem of trust*: The truster must analyze whether external signs sent by the trustee are good predictors of her/his true level of trustworthiness. In this paper, we employ this definition of trust in the sense that agents use profiles (sets of external characteristics) of people with whom they might establish a trust-based relationship to decipher whether certain trustee's profiles are good indicators of her true level of trustworthiness.

There are several attributes that identify a trustworthy individual that span from individual characteristics to cultural conventions. When an individual has been considered trustworthy, based on her apparent characteristics and does not act as expected, then she should expect to suffer adverse consequences that might affect her future contracts. Punishment and bad reputation should provide enough incentives for an individual to choose to behave in a trustworthy manner. Notice that the idea of network connections as social collateral that generate trust, as used by Karlan et al. (2009), is also present in this context.

It is difficult for an individual who potentially trusts another individual to be certain about the relevant attributes that define a trustworthy individual. Thus, an individual's observable attributes are signals about her trustworthiness. Attributes that are identified as better signals of trustworthiness should be less costly to display for those individuals who are truly trustworthy than for those who are not trustworthy but want to appear as if they were. Hence, the problem of an individual who potentially trusts another individual is decoding the trustworthiness signals sent by the individual.

The objective of this paper is to find out which are the individual's set of characteristics that determines her level of trustworthiness, given her social network. That is, we intend to use the idea of social connections as social collateral of Karlan et al. (2009) with the notion of trust of Bacharach and Gambetta (2001), in which an individual who trusts another must rely on observable signals (set of observable characteristics) in order to ascertain how trustworthy any given individual is.

To achieve this goal, we design and implement an empirical strategy to identify which profiles (or sets of individual characteristics) a group of people in a particular community consider more trustworthy. Finally, we analyze reciprocity to determine whether these perceptions are matched by the responses of the individuals upon whom trust was placed. The steps we take in our empirical methodology are the following: (i) we study the socio-demographic and social network characteristics of a particular community's members by means of a survey, (ii) we determine the profiles that individuals who belong to this community consider trustworthy by implementing a vignette experiment and a trust game, and (iii) we study whether the profiles that individuals consider trustworthy are good predictors of a true level of trustworthiness – in terms of reciprocity – using the results of the trust game.

The experimental protocol known in the literature as the trust or investment game (Berg et al., 1995) has been used to measure the degree of trust and reciprocity between the players. This game has been implemented in laboratories as well as in the field (Glaeser et al., 2000; Karlan, 2005; Houser et al., 2010; McEvily et al., 2012). Similarly to these studies, we combine two experiments and a survey to measure trust and trustworthiness.