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Abstract. Where does generalized trust—that is, the inclination to place trust in strangers—come from? Our claim is that in economic action, sources of generalized trust may not differ much from the sources of personalized trust. Contrary to a common assumption of a sharp distinction between personalized and generalized trust, we assert a likely spillover effect from relational exchange to a person's expectations in interacting with an anonymous other. Our research integrates behavioral measures elicited by a novel incentivized trust game with survey data using a random sample of 540 entrepreneurs of private industrial firms in the Yangzi delta region of China. We show that entrepreneurs with more experience in relational exchange display greater trust in strangers. Likewise, we find robust evidence of a positive association between beliefs in the effectiveness of community business norms and generalized trust.

Introduction

Managing companies and transacting business in globalized markets require a basic level of generalized trust, the inclination to believe that strangers will act cooperatively, or at least benignly. Such generalized trust motivates transactions between strangers by enabling calculative assessment of the reliability of commitments to formal agreements. But what is the source of such trust? For developed economies, formal institutions backing the security of property rights and confidence in contractual agreements afford a credible basis of such trust. Generalized trust is not limited to developed economies, however. Many developing and medium-income countries lack the quality of political and economic institutions assumed as necessary conditions for generalized trust, and yet there, too, and throughout the global economy, trust in strangers is oftentimes comparable with trust levels measured in the United States and Japan (Buchan et al. 2002).

China is a case in point. Since the 1980s, the country has experienced a rapid transition to a market economy and, with this, a rise in participation in international market exchange. This development was not driven or associated with a rapid improvement of formal institutions guiding business transactions (Nee 1992, Clarke et al. 2008, Nee and Opper 2012). In China's transition economy, economic actors confront daily the uncertainties of weak private property rights and enforcement of contracts. Not surprisingly, a defining feature of China's market development has been its strong reliance on relational exchange in markets and with politicians, rather than arm's-length transactions (Xin and Pearce 1996, Tsui and Farh 1997, Guthrie 1998, Peng and Luo 2000, Park and Luo 2001). Yet these relational exchange strategies typically have not led to network closure; instead, they coincide with expansive, outward-looking business strategies connecting producers with national and international upstream and downstream markets (Tsui et al. 2016, Nee et al. 2017).

Where does the proclivity to place trust in strangers come from, when formal institutions are not a reliable source of assurance? Our claim is that, contrary to a common assumption of a sharp distinction between personalized and generalized trust (Yamagishi and Yamagishi 1994), there is a spillover effect from experience in *relational exchange*—defined as economic action that is enabled, motivated, and guided by an ongoing social relationship—that sways an economic actor's social expectations in interacting with an anonymous other.

Our approach rests on the assumption that different dimensions of relational exchange not only help to establish trust across dyadic ties but also help to build cognitive resources and experience needed to display

a certain level of trust in strangers—a prerequisite required in any form of anonymous market exchange (Blau 1964, Ekeh 1974, Gulati 1995, Whitener et al. 1998, Das and Teng 2002). Note that even when institutions ensure the enforceability of contractual agreements, informal sources of trust remain important in business transactions (Macaulay 1963). We focus on the workaday experience of relational exchange in standard market transactions. Specifically, we explore to what extent the reliance on exchange relations in markets, the experience of cooperation with others, and the enforcement of norms in daily business transactions generate positive spillover effects on the inclination of a chief executive officer (CEO) to trust an anonymous other.

Here, we depart from standard economics and game theory, where cooperation and trust-like behavior is a situational construct generated by the possibility to punish in repeated games (Fudenberg and Tirole 1991). In our experiment, trust arises in a specific game that may involve more than two players, but such behavior is motivated by the players looking forward at the negative consequences of deviating from trust in the game at hand. There is no spillover to other games. This means that we also differ from the common approach of describing agents as "discrete types" following distinct strategies as cooperators or defectors (Frank 1988, Evans and Revelle 2008) and from a similar perspective identifying trust as a personality trait (Farris et al. 1973, Dasgupta 1988). Instead, we shift from discrete types to a focus on experience in ongoing social relationships and industrial districts (Uzzi 1996). This perspective is well grounded in organizational and strategy research highlighting the importance of relational exchange in cultivating personalized trust in interfirm and personal relations (Gulati 1995, Whitener et al. 1998); the impact of personalized trust on negotiations, contract, and alliance types (Gulati and Singh 1998, Barden and Mitchell 2007, Li et al. 2008, Kong et al. 2014, Lioukas and Reuer 2015); and also the link between personalized trust and corresponding performance effects (Zaheer et al. 1998). Zucker (1986) and Putnam (1993) argue that informal institutional antecedents of generalized trust arise from relational exchange and cooperation. An empirical confirmation of spillovers from experience in relational exchange to generalized trust, however, has been absent—both in the broader literature on sources of generalized trust and in the literature exploring managerial trust.

Our analysis focuses on 540 founding entrepreneurs of private firms in the Yangzi River delta region of China. The research design combines measures of generalized trust elicited by a novel incentivized trust game and behavioral data on everyday business transactions and individual-level information collected from a manager and firm-level survey. By bringing together results from our trust game and the behavioral survey data, we are able to examine the link between past experience of relational exchange and an individual's willingness to trust a stranger as purveyor of a sizeable reward, despite informational asymmetry and uncertainties.

Social Mechanisms of Generalized Trust

Behavioral learning theory underscores that experience lays the basis for repeated exchange (Simon 1957, Homans 1974). When circumstances replicate or appear similar to the context of past success, the person is more likely to perform similarly. With regard to the trustworthiness of strangers, people extrapolate from social learning and direct experience (Glanville and Paxton 2007). That is, people make inferences about human nature from their past experiences of personalized trust, drawing on information accumulated over a long history of interactions (Yamagishi and Yamagishi 1994). Social norms thus become internalized and help predict choices that involve expectations of social behavior beyond the boundaries of dense networks and the local neighborhood (Blau 1964, Ekeh 1974).

In situations involving trust, there is always a vulnerability to risk and uncertainty because "trust involves putting resources in the hands of parties who will use them to their own benefit, to the trustor's benefit, or both" (Coleman 1990, p. 98). More specifically, trust is defined as the inclination of a person to believe that another person will act for her benefit and that the other person will not take advantage of her if there is opportunity to do so (Ben-Ner and Halldorsson 2010). If the trustee is trustworthy, the trustor will likely be better off than if trust was not bestowed, but if the trustee is not trustworthy, the trustor will be worse off. Unlike a contractual agreement, trust does not involve a binding commitment from the other party. Also, in generalized trust, the trustor has no ability to monitor or control that other party (Mayer et al. 1995) and lacks ex ante information about the trustee. Consequently, trust is a bet on the prospect of winning against the chance of losing. It involves a bias in the processing of imperfect information about exchange partner's intentions (Yamagishi and Yamagishi 1994).

As many experimental studies show, trustors are not necessarily overly naïve or gullible but act prudently on positive and negative information available to them when placing trust in a target person (Yamagishi et al. 1999, Snijders and Keren 2001). Trustors are seemingly better at using cues on likely behavioral responses than nontrustors. This type of "social intelligence" is commonly associated with the cognitive resources acquired from a person's experience of relational exchange. For instance, Macy and Skvoretz's (1998) computer simulation shows that local cooperation and trust in dense networks and

neighborhoods diffuse when chance contacts "infect" strangers, who then spread successful strategies and norms to new neighborhoods. Glanville et al. (2013) investigate this link in examining the association between the frequency of social interaction and generalized trust using panel data from the General Social Survey. In both studies, social and economic exchange embedded in social relationships and dense neighborhoods constitute the sources of the cognitive resources and social capital motivating generalized trust (Lin 2002).

In this paper we examine mechanisms associated with relational exchange and social links to a behavioral inclination for generalized trust. The reliance on relational exchange in markets shapes an economic actor's stock of cognitive resources, affecting the amount and quality of information that can be drawn on in forming a judgment about the expected action of a stranger. Similarly, an actor's experience of cooperative behavior shapes expectation and outlook. Finally, through relational exchange, a person learns what type of behavior will trigger sanctions or rewards from others (Buskens and Raub 2002). We argue that the normative component of relational exchange is likely to inform expectations as to how others will act. When relevant information is lacking, one intuitively draws on past experiences of norms guiding exchange within one's social group in predicting likely responses of strangers.

Relational Exchange
Personalized trust develops through relational exchange and is guided by social norms of fairness and reciprocity (Homans 1974, Whitener et al. 1998). Frequent interaction in ongoing social relationships fosters ease of information flow. Because the source of information is known to be trustworthy, getting information is cheap, richer, more detailed, and accurate (Granovetter 1985). Repeated exchange between the same partners reduces uncertainty and facilitates the emergence of behavioral commitment and trust (Cook and Emerson 1978, Kollock 1994, Bian 1997, Lin 2002). Moreover, repeated exchange offers benefits by fostering affect, cohesion, and commitment so that the relationship itself becomes an object of awareness and appreciation (Lawler and Yoon 1993, 1996; Thye et al. 2002).

Exchange partners can choose not to reciprocate the cooperative behavior of another actor. Because of the ever-present element of risk, there is a strong signaling effect of commitment compared with the negotiated form of exchange where assurances serve to reduce such risks (Molm et al. 2000). Commitment and trustworthiness are signaled in forgoing alternative partners, whereas actors who switch their exchange partners frequently signal the opposite (Xiao and Tsui 2007). Hence, trust is emergent because the risk of

nonreciprocal behavior places attention on the signaling of trustworthiness through commitment (Kollock 1994). Past successes or failures in trust shape a person's propensity to trust others (Axelrod 1984, Hardin 1991). In this perspective, relational exchange is a prerequisite of trust and trustworthiness (Gambetta 1988).

But does experience accrued in relational exchange generate trust only in these existing personal networks, or does the experience also inform the cognitive bias that spills over to new relationships? Economic actors commonly confront the need to make strategic choices in decisions involving buyers and sellers from outside that actor's immediate circle of trusted business acquaintances. In such situations, we assert that individuals employ cognitive resources accrued from past experience as a reference point. Those with a limited stock of relational exchange experience will not feel comfortable in predicting the likely response of a stranger and may therefore choose not to place trust in a stranger if other alternatives are readily available. By contrast, a history rich in experience of repeated exchange offers important cues for new encounters under similar conditions. Such depth or intimacy in business relations is reflected in multiple ways: by frequency of exchange, the degree of personalized exchange, and the involvement of social capital. It follows that—all else being equal—economic actors with deeper experience of relational exchange in markets will place greater trust in strangers than those who are less involved (Henrich et al. 2005).

Hypothesis 1. *Reliance on relational exchange in markets is positively associated with generalized trust in future encounters.*

Cooperation
Certain patterns of cooperative behavior are particularly effective in building commitment and trust. These include cooperative behavior in indirect reciprocity that involves a one-sided favor received without the expectation of direct reciprocation (Nowak 2006). The specific type and nature of such unilateral exchanges can vary greatly, stretching from private loans to the extension of business advice, or other forms of personal help or attention in close-knit business communities. The common element is that others extend a voluntary favor without the explicit expectation of direct reciprocity on the part of the beneficiary. Although gift-givers may expect return favors at some point in the future, quid pro quo reciprocity is not an explicit condition (Mauss 1990). Through such cooperative behavior, beneficiaries learn that they are trusted by others. Kollock (1994, p. 319) emphasizes this type of unilateral exchange as a critical "*test* of trust" that reinforces personalized trust between the recipient (trustee) and benefactor (trustor). Such experience has

an especial relevance as a basis for generalized exchange with strangers, in which "what one party gives to another is not directly contingent on what he or she receives from the other" (Yamagishi and Cook 1993, p. 236).

University-based laboratory experiments confirm that cooperative behavior is a solution to the problem of uncertainty in economic exchange and functions as a social glue of commitment and trust. For example, Kollock (1994, p. 314) examine the effects of uncertainty about product quality by investigating "exchange situations in which deceit and opportunism are possible...where actors can move into and out of different exchange relations" in an experiment mimicking real-world situations reported in case studies of commodity exchanges in Thailand. His analysis of the patterns of trades between students assigned to the roles of buyers and sellers showed that under uncertain quality conditions, in which informational asymmetry leads to risks of deceit and opportunism, cooperation through repeated exchange signaled commitment between a buyer and seller despite a better offer from another seller. By contrast, certainty ex ante as to the quality of goods reduced the incentive for cooperation and commitment. Other university-based experiments have variously demonstrated similar social dynamics (Lawler and Yoon 1996, Yamagishi et al. 1998, Molm et al. 2000).

Furthermore, there is also a likely spillover effect influencing an individual's worldview, as beneficiaries of cooperative behavior learn that cooperation, commitment, and trust can generate tangible value advantages and rewards. Through this form of operant conditioning, these individuals are likely to form a mirror image of other people's trustworthiness; that is, *because I was trusted myself, I should trust others.* This experience may increase a person's willingness to engage in exchanges outside of the immediate circle of family, friends, and acquaintances. In other words, reciprocity need not be direct or even indirect but can be in the form of serial reciprocity wherein a person reciprocates for what he or she has received regardless of expectation of future reciprocity (Moody 2008). In his study of New York City's garment industry, Uzzi (1996) underscores the importance of joint problem solving for trusting behavior extending beyond the period of active cooperation. The willingness to extend cooperation beyond any expectation of future exchange is similar to risks assumed in generalized trust.

Just as positive rewards reinforce cooperation, the withholding of support will undermine trust. Those who feel that they have been let down by others are less likely to extend trust to others (Hardin 1996). Empirical studies using large-scale cross-sectional survey data have shown that a traumatizing personal experience encountered in social (e.g., a divorce) or economic (e.g., financial misfortune) exchange limits an individual's inclination to trust strangers (Alesina and La Ferrara 2002, Rahn et al. 2009). Members of minority groups experiencing frequent discrimination are less likely to trust others.

CEOs experienced in cooperative behavior are likely to expect that other people as either buyers or sellers in market contexts also value the benefits of successful exchange. Past success in cooperation frames expectations enabling individuals to resolve the problem of uncertainty through a cognitive bias to be trusting despite imperfect information (Yamagishi and Yamagishi 1994). It follows that cumulative experience of cooperative behavior at the micro level has spillover effects in the emergence of generalized trust.

Hypothesis 2. *Beneficiaries of cooperative behavior display higher levels of generalized trust in future encounters.*

Norms Guiding Exchange

Trust would not be possible without the enforcement of norms guiding relational exchange. Norms are ideas about what others should do, ought to do, or are expected to do in given circumstances ascertained through punishment for nonconformity and rewards for conformity (Homans 1974, Nee 2005). As a general rule, sanctioning mechanisms, which can range from negative gossip to economic penalties and ostracism, need to be sufficiently strong and effectively enforced, so that untrustworthy behavior is not paying off over time. Mutual trust among members of close-knit social groups is always higher than trust in individuals unconnected with other group members because one can be reasonably sure that norms of cooperation and fairness will be enforced in a predictable way (Coleman 1990). Norms of mutual help and contract compliance are at the heart of informal commercial codes maintained by formal as well as informal business associations, which in cases of noncompliance trigger sanctions directed at the violators in the form of negative reputation effects and loss of business (Macaulay 1963, Stringham 2003, Mokyr 2010, Nee and Opper 2012).

Importantly, experience of norm enforcement not only shapes an agent's within-group behavior of relational exchange but also forms expectations regarding the likely intentions of others not a part of a person's immediate social circle. The reason is that norms—once repeatedly enforced—become internalized over time as cultural beliefs that guide social behavior even when the application of the same norm may not be rational in a different context. (Etzioni 2000). A traveler, for instance, will tacitly (rather than in a calculative way) rely on her at-home rules of the game whenever information on local behavior is not known or readily available. Whereas this form of trust is rooted in a person's local experiences, it shapes confidence in the stability of reciprocity and exchange in more general

terms (Yamagishi and Cook, 1993, Cook 2005, Henrich and Henrich 2007). Experience accumulated over a life course embodies the "social heuristics" likely to predict a person's behavioral choices if other cues are not readily available or too complex to process (Rand et al. 2012; for a mathematical formalization, see Bear and Rand 2016).

It follows that the enforcement and internalization of norms of cooperation guide individual behavioral choices also when transacting outside of one's immediate social circle. As with a person's experience of relational exchange and cooperative behavior, a belief in community enforcement of norms shapes tacit confidence in the stability of reciprocity and exchange in more general terms.

Hypothesis 3. *Confidence in the enforcement of norms guiding exchange corresponds with higher generalized trust in future encounters.*

Measuring Generalized Trust
Laboratory-in-the-Field Trust Games
To measure generalized trust, earlier social science research relied on survey questions such as "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" (from the General Social Survey and World Value Survey). With such generic questions, however, the "answers do not reveal either the reference group or the types of action or the stakes that respondents have in mind when making such an assessment" (Ermisch et al. 2009, p. 750). Research designs relying on incentivized tasks with real monetary rewards aim to overcome ambiguities by specifying clearly the situational context, stakes, and reference group, which are typically described as an anonymous other (Camerer 2003). In recent years, anthropologists, development economists, sociologists, and political scientists have studied populations in their natural settings in laboratory-in-the-field applications of incentivized research designs (Cardenas and Carpenter 2008). The shift to natural settings has facilitated the inclusion of otherwise hard-to-reach study populations such as rural producers (Baldassarri 2015), entrepreneurs (Fehr and List 2004, Holm et al. 2013), and members of socially disadvantaged groups such as dwellers of urban slums (Binzel and Fehr 2013). The linking of survey data on individual attributes, attitudes, and experience with behavioral measures elicited in incentivized games has opened up possibilities for deeper analysis of background factors. A key advantage is that "a survey typically consists of a large number of randomly chosen independent respondents. . . . Thus it is relatively easy to combine survey responses if the participants of the experiment do not interact with each other" (Fehr et al. 2002, p. 4).

A New Trust Game
As Coleman (1990, p. 91) observed, "Situations involving trust constitute a subclass of those involving risk. They are situations in which the risk one takes depends on the performance of another actor." Clearly, willingness or aversion to exposing oneself to the discretion of another person (the trustee) involves both a component of risk (in the sense that more than one outcome is possible) and a belief component (the trustor's subjective belief that the trustee's action will or will not be advantageous to him). Although these components are seldom separated in the literature on trust behavior, it is important to not confound trust with an individual's general proclivity to accept risk or to behave in an altruistic manner. Our elicitation method overcomes this by letting the subjects choose between being exposed to a social risk (involving trust in others) and an alternative nonstrategic form of risk (a lottery) where the outcome is not affected by the discretion of another individual.

In our trust game, respondents face two alternative payment distributions and are asked to choose whether to entrust the decision between them to another person (the trustee) *or* to a lottery. Payment I gives the trustor CNY 580 (USD 92) and the trustee CNY 50 (USD 7.94). In this distribution, the payoff to the respondent is many times larger than for the trustee. Payment II gives the trustor CNY 15 (USD 2.38) and the trustee CNY 55 (USD 8.73). This distribution is unfavorable for the respondent insofar as the trustee gets the bigger share.

The trustee, a stranger to the trustor, is described as a real person who lives and works in China. However, we stripped our scenario of any concrete settings and employed an "abstract" instead of a "natural" frame. This is because responses are known to correspond closely with an individual's personal interpretation of the task (Harrison et al. 2007b). Reliance on an abstract frame thus minimizes the risk that CEOs associate differently with the task at hand. Also, we decided to offer substantial rewards (with a maximum of USD 92 for approximately 25 minutes) because a competitive wage rate is required to reveal real-life behavioral choices (Levitt and List 2007).

Each respondent is presented with 10 separate choices as to whether to delegate the payment decision to the trustee (option A) or to the lottery (option B) (see the participant form in Appendix A). For each successive decision, the given lottery probability for payment I (initially 0%) increases by 10 percentage points, whereas the given lottery probability for payment II (initially 100%) decreases by 10 percentage points. For the first decision, option A (i.e., reliance on the trustee's decision) is expected to be the most attractive option, as there is zero probability of payment I through the lottery. With each decision further down the list, the relative attractiveness of option B (i.e.,

reliance on a random lottery outcome) increases. A person's level of trust is revealed by the switching point from option A to option B—that is, where along this list the trustor prefers to leave the decision to a random lottery rather than to another person. The further down the list the person switches (i.e., the higher switching point from option A to option B), the greater the respondent's proclivity to trust a stranger.

Considering that the incentivized trust game involves independent decisions by the subject and the trustee (who we label as "person X" in our instructions), the procedure is relatively easy to handle in a field context with decentralized interview sites for each subject. In the game, staff members of the Shanghai Academy of Social Sciences served as trustees. Their decisions were collected prior to the individual field visits, so that the resulting cash reward could be determined and awarded on site without delay. The number of trustees was substantively smaller than the subject pool, so that these decisions were repeatedly "matched" with the decisions of the trustors.

The incentivized game simulates situations where one person can make a big difference (of CNY 565, or nearly USD 90) to another person at a low personal cost (in this case CNY 5, or 79 cents). Situations such as this are widespread in the business world. For example, a manager can inform others in the business community about a malfeasant's dishonest scheme, which may save others from loss of business and substantial financial losses. Similarly, CEOs who for some reason are not able to accept a business proposition by a new client can make an effort to pass on the request to someone else, instead of just declining. We also think that the asymmetry of the situation has the advantage of getting the subjects to think harder about the decision to trust than in situations where the trustor and trustee are in more equal positions. In such situations, subjects can fall back on focal distribution principles (e.g., to obtain equal splits), which may "disturb" the decision to trust and generate less variation in the data. In addition, we believe that there is no ambiguity as to when trust is considered to be misplaced, given that if the trustee chooses payment II, the trustor is clearly let down. The same is not always the case in the standard trust game. We provide theoretical arguments and some empirical evidence on how this new trust elicitation method relates to the standard trust game and other preferences such as risk aversion in Appendix B.

Method
Background and Sample of This Study
Data for this study were collected in 2009 as part of a longitudinal study following a stratified random sample of 700 CEOs and their private companies located in seven municipalities (Nanjing, Changzhou, and Nantong in the Jiangsu province; Hangzhou,

Wenzhou, and Ningbo in the Zhejiang province; and the Shanghai municipality) in China's Yangzi River delta region. The industrial sectors included in our sample of firms range from labor intensive to knowledge intensive (ordinary machinery, automobile and vehicle parts, textile, pharmaceutical, and electronic and communication appliances), and they represent the Yangzi River delta region's most important manufacturing industries.

The recruitment of participants for the survey followed a two-stage procedure. The sample frame came from local private firm registers provided by China's Bureau of Industry and Commerce. Small-scale household companies with fewer than 10 salaried workers and firms in business for less than three years were excluded from the sampling pool. In addition, the survey oversampled medium and large-scale firms (with more than 100 or with more than 500 employees, respectively) to secure established business ventures and their CEOs for the study.

To rule out that observed behavioral choices of CEOs displayed in the trust game simply reflect a company's recruitment strategy, this study only focuses on the 544 founding CEOs, as entrepreneurs participating in the 2009 survey, and excludes professional managers. Of these, 397 respondents had been sampled for the first survey wave in 2006 (which generated a response rate of 25%), and 147 respondents had entered the 2009 survey (with a response rate of 55%).

Preparation and Implementation
The 2009 CEO survey consists of two parts: (1) the standard CEO and firm survey eliciting firm and personal information on the CEO and (2) several behavioral tasks and games, which all CEOs agreed to participate in. A central advantage of including behavioral games in an existing longitudinal research effort is that subjects and researchers had the opportunity to establish a trusting professional relationship. Because of the long-term established ties with the local research organization (a research unit of the Shanghai Academy of Social Sciences) and repeat visits by interviewers and scholars, it is reasonable to assume that the incentivized game and instructions enjoyed high credibility.

The questionnaire design builds on an extensive range of face-to-face qualitative interviews with managers and staff of manufacturing companies in the same region. Questionnaires and behavioral tasks were first designed in English and then translated into Chinese. A back-translation into English was then used to eliminate any potential deviation in meaning. The trust game was first tested on a small scale with undergraduate students at Lund University. Following focus group discussions with the research team, local experts, and the field interviewers, minor revisions of

the questionnaire and game were made. To standardize the conduct of interviewers and the protocols specifying the correct implementation of the behavioral game, all interviewers participated in a multiday training workshop conducted in Shanghai. Detailed manuals and instructions were taken to the field, where senior members of the research teams were in charge of continuous quality control during the data collection period.

All data were collected in face-to-face interviews conducted by teams of two professional local interviewers (one interviewer responsible for the survey and one responsible for conducting the game) at the company's premises, typically in the manager's office, without additional people present. Although time consuming and rather costly, the decentralized implementation of the survey and games has two central advantages over other approaches. First of all, most CEOs would be too busy to attend any off-site appointments. Second, the decentralized setting guaranteed that participants did not know about each other, so that cross-talk could not bias the results (Cardenas and Carpenter 2008). Following standard procedure, the trust game was completed after the survey (Fehr et al. 2002). In light of concerns regarding situational factors influencing behavioral choices, this strategy guarantees that all participants have gone through at least a comparable interview situation (of about one hour in duration) and have been focusing on the same set of questions prior to the trust game. In a broader sense, the survey offered a "cooling-off period" separating the actual game from the "heat" of conducting everyday business decisions. Furthermore, we chose to rely on a paper-and-pencil design to minimize potential errors related to the uneven distribution of computer literacy (Cardenas and Carpenter 2008). Although we made specific efforts to facilitate the written instructions, we avoided any examples clarifying the link between specific choices and resulting payment schemes in order not to prime participants for one strategy or another.

The collected survey data were screened through a range of quality control measures to catch potential entry, transfer, and coding errors. To confirm the reliability of the information, we performed logical checks for entries of repeat participants and cross-checked the companies' web page information. If outliers were detected, a call-back system was applied to confirm the correctness of entries. Overall, the correlation between responses collected in the 2006 survey and the 2009 survey is high for most variables of interest (with correlation coefficients above 0.6), supporting the validity of the self-reported data. After excluding incomplete or incorrectly completed questionnaires, the sample includes 540 valid responses for the incentivized trust game and questionnaire.

It should be noted that participating CEOs operate slightly smaller (with an average of 103 compared with 117 employees) and slightly less profitable (with a mean annual profit of CNY 2.7 million compared with CNY 3.4 million nationally) firms in comparison with the national average of private firms (comparison data were obtained from National Bureau of Statistics of China 2009). This is mainly because of the focus on founding entrepreneurs still in charge of company operations. Larger companies or companies that scale relatively quickly typically shift to professional CEOs. In light of the specific group of respondents, our sample therefore appears to be sufficiently representative of the private firm population at large.

Measurement and Variables

All variables used for this study are generated by the 2009 CEO survey and behavioral game. The firm information collected in 2009 covers the years 2006–2008; personal information on exchange experience reaches back to the founding year of the firm. Personal background information reflects contemporary and historical experience. The trust data reflect the individuals' preferences as elicited in 2009.

Generalized Trust. A person's level of trust elicited in the trust game is revealed by the switching point from option A to option B—that is, where along the list the trustor prefers to leave the decision to a random lottery rather than to another person. Overall, for all the participants in our trust game, the mean value of the switching point from the social risk option to the lottery option is 5.16. That is, the average individual switches to the lottery option once payment I has a probability of slightly more than 40%. The largest group of CEOs ($n = 126$) shifts to the lottery option when the probability of receiving payment I is 50%. Those who switch earlier display lower levels of trust in strangers, and those who switch later display higher levels. Close to 5% of the respondents would under no circumstances entrust a stranger to make the payment decision, and 0.9% would under no circumstances leave the decision to a random lottery. The observed trust levels do not vary much between different industrial sectors. This may indicate that different sector rules and levels of competition do not influence behavioral responses. We do, however, observe some regional variation. The city displaying the highest level of generalized trust is Shanghai (5.89), whereas respondents in Nantong (in the Jiangsu province) reveal the lowest trust levels (4.43). In line with the expectations of Glaeser et al. (2000), the results of the trust game show a weak correlation (0.07), with the standard trust measure collected through our survey questionnaire.

Furthermore, it is important to know whether the decision to participate in our study is in itself a reflection of trust. It is conceivable that those subjects who display

low levels of trust are less likely to participate in the survey. To explore a potential link between trust levels and survey response rates, we exploit the fact that respondents were recruited into the sample at different times (2006 and 2009) with different response rates. Standard mean comparison tests reject a difference in average trust levels across the two recruitment pools at the 1% level.

Explanatory Variable. Our set of variables describing experience in relational exchange captures the distinct dimensions previously discussed in our hypotheses: reliance on relational exchange in markets (Hypothesis 1), the experience of cooperation (Hypothesis 2), and norms guiding exchange (Hypothesis 3).

1. *Relational exchange:* Relational exchange involves transactions in markets enabled, motivated, and guided by ongoing social relationships. Our measure of relational exchange combines the embeddedness of economic action in a preexisting social relationship (emphasized by Granovetter 1985) with the "repeated exchange" used by economists to refer to ongoing exchanges between the same buyer and seller, wherein an initial transaction cumulatively forms a personal relationship. We note that in competitive markets, transactions involve voluntary exchange contingent on a market-clearing price. In political markets, by contrast, *guanxi* turns on the utilitarian use of political connections to obtain private benefits through the political arena; that is, an economic actor wants the rights over public resources and assets, or regulatory advantages over competitors (Tullock 1967, Krueger 1974). Transactions in political markets are prone to bribery and corruption, which is not the case in open markets. Our focus is on relational exchange in competitive markets, which we assess with three measures: the percentage of return customers in a company's total sales, the percentage of customers the CEO knows in person, and the reliance on personal relations in dealings with customers (using a Likert scale from one to seven). The latter is an exact replication of a measure introduced by Peng and Luo (2000).

2. *Cooperation:* We focus on two benchmark events of cooperation, defined as helping another person at a cost to oneself, that CEOs easily recall and typically regard as important (Nowak 2006). First, CEOs were asked to what extent their friends provided start-up capital for the firm at the founding stage. In a country where private firms are virtually excluded from bank lending (particularly at the start-up stage), loans from friends are an important and highly appreciated source of finance (Tsai 2002). Often these loans come at a low interest rate or even interest-free, and the repayment scheme can be handled flexibly. Second, CEOs were asked whether the most important customer was secured through the manager's social network or through impersonal market

mechanisms. The introduction of new customers is a common form of cooperation wherein members of a business community serve as brokers, introducing others to new business opportunities they might otherwise miss out on. Whereas such introductions are fairly widespread and not dependent on the size of the company, not all such introductions are economically important. Therefore, we focus on whether a company's key customer was secured through this form of exchange.

3. *Norms:* The measurement of norms guiding relational exchange involves particular challenges and is not part of standard survey modules. We define a norm as expectation or guideline for social behavior that is enforced through informal sanctions. Thus to identify the existence or absence of certain business norms, we employ Ellickson's (1991, p. 128) specification that "the total absence of enforcement actions against detected violators of a guideline is conclusive evidence that the guideline is not a rule." This, in turn, is consistent with Fehr and Fischbacher's (2004, p. 185) methodological recommendation that "the explicit study of sanctioning behavior provides instruments for measuring social norms."

On the basis of extensive qualitative field interviews conducted prior to our survey and game, we designed a set of seven different scenarios describing standard business conflicts. These scenarios address (1) informal lending agreements, (2) mutual help within business networks, (3) repayment of loans, (4) late deliveries of orders, (5) delivery of substandard quality products, (6) late payment for goods and services, and (7) unfair competition. All of these scenarios focus on business norms identified through qualitative interviews.

For each norm scenario, the CEOs were asked to identify the likely audience response to certain types of behavioral misconduct: (a) nothing will happen; or there will be (b) gossip about the incident, (c) a bilateral tit-for-tat response, (d) a general change in the quality of the business relation between the protagonists, or finally, (e) community sanctions by those who learn about the incident. Multiple answers were possible for options (b)–(e). Choice (a) signals the *absence* of norm-based sanctions, whereas choice (e) signals the strongest sanction, involving not only bilateral but also multilateral punishment for the violator.

The scenarios were distributed at various points in the questionnaire, so as to reduce the risk of a method response bias. Each scenario was described in a personalized style using a naturalistic narrative frame familiar to all CEOs. The use of common Chinese family names (in nickname formats) and the explicit invitation to think about the likely responses in their local business community encouraged respondents to choose their answers based on their personal experience with local market integration norms. The overall reliability of scale was satisfactory, with a scale reliability coefficient of 0.88 if

no sanctions were expected (choice (a)) and 0.76 for community sanctions (choice (e)).

To operationalize the extent to which CEOs can rely on norms, we created two different indices, each relying on the total count of the extreme positions. "Absence of local norms" sums up how often the respondent chose alternative (a) as a likely outcome in the seven scenarios. The resulting index value ranges from 0 to 7, with high values reflecting the absence or weakness of norms regulating standard cases of malfeasance in exchange relations. In our sample, 43.5% of the respondents expected some form of sanction in each of the seven scenarios. The mean value of 1.4 suggests a relatively strong reliance on norms when it comes to standard business conflicts. Seven percent of the respondents do not expect any response in any of the seven scenarios, indicating a relatively strong divide when it comes to the enforcement of informal business norms. "Strength of community sanctions," the second index, sums up how often the respondents expected that there would be community responses to bilateral business conflicts in market exchange. In our sample, 41% of the respondents never expect any community sanctions, whereas 9% are confident that contract breach or malfeasance would reliably be sanctioned by the local community in at least five of the seven scenarios. The mean value is 1.6 with relatively strong city variation, ranging from 0.9 in Shanghai to 2.3 in Ningbo.

Control Variable. To mitigate the potential influence of confounding effects, we include a set of personal characteristics, covering gender, age (and age squared), and years of education, that have in prior trust games been confirmed as predictors of generalized trust (Ermisch et al. 2009, Ben-Ner and Halldorsson 2010, Binzel and Fehr 2013). In addition, we aim to proxy the respondent's socioeconomic background using a set of 10 dummy variables reflecting the father's last position before retirement: technical personnel, sales and marketing staff, accounting and finance, administrative officer, enterprise director, ordinary worker, retail service staff, farmer, military personnel, or unemployed. The father's professional background provides a relatively reliable measure of the respondent's upbringing and socioeconomic background. Furthermore, we include the household status of the respondent at birth. The difference between rural and urban household registration continues to describe not only geographical origin but also life chances (Whyte and Parish 1984). We also include the respondent's last income level before founding the firm. Using prior income instead of current income levels (Fehr et al. 2002, Ermisch et al. 2009) lowers the risk of reverse causality, given that higher trust in strangers may influence an individual's investment decisions and could thereby influence future revenues. To control for nonlinear income effects, we

include the squared term of income. A set of dummy variables controls for manufacturing sector and municipality to capture regulatory differences in the local environment. Finally, we include controls for potential treatment effects and the different teams of interviewers. Although interviewers were instructed not to directly observe the choices made by the interviewee, the absence of anonymity may influence an individual's behavioral choices or increase prosocial behavior, so that revealed trust levels may be inflated (Ermisch et al. 2009). Although we have made an effort to standardize the execution of the game and survey, subtle interpersonal differences in style and appearance can influence respondents' behavioral choices. Table 1 provides summary statistics and a correlation matrix.

Analytical Approach
Given the noncontinuous nature of the trust measure, we apply ordered probit estimations to test the three research hypotheses. In our model all explanatory variables as well as control variable are generated through survey responses. Because of the high correlation between both norm measures (see Table 1), regressions include only one proxy for community norms at a time. The presentation of results follows a stepwise procedure, first including only personal predictors (Model 1 in Table 2) and then gradually including measures of relational exchange (Model 2) and community norms (Models 3a–4b). All control variables are included in all specifications.

Results
Table 2 summarizes the results. Model 1 includes only the control variables reflecting a CEO's personal background. Model 1 does not indicate a significant association between trust and personal characteristics such as age, gender, and education, which differs from earlier studies (Alesina and La Ferrara 2002). This is probably attributable to the use of a homogeneous sample, that of only one professional group. However, there is a net significant association between trust and a CEO's previous income before starting the firm, and between trust and the last position of the CEO's father.

Models 2, 3a, and 3b include measures of depth of relational exchange relationship, experience of cooperative behavior, and norm enforcement. Models 4a and 4b test for joint association between characteristics of relational exchange and generalized trust. Results for all models are in line with Hypothesis 1, that *reliance on relational exchange in markets is positively associated with trust in strangers.* In particular, the intensity of reliance on relational exchange with customers shows the strongest positive association with generalized trust ($p < 0.01$). Support for Hypothesis 2, predicting that *experience of cooperation in markets is positively associated with trust in strangers,* is somewhat weaker. Although

Table 1. Descriptive Statistics and Pairwise Correlations

Variable	Obs.	Mean	SE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 Trust	540	5.17	1.97	1																	
2 Return customers (%)	540	68.25	16.93	0.08*	1																
3 Customers known in person (%)	540	52.45	26.06	0.08*	0.44*	1															
4 Reliance on personal relationship with customers	540	4.66	1.09	0.19*	0.06	0.06	1														
5 Share of loans from friends	540	3.27	10.28	0.13*	0.07	0.08	0.06	1													
6 Firm found most important customer through network	540	0.24	0.43	0.03	0.04	0.08*	0.06	0.06	1												
7 Absence of business norms	540	1.43	2.12	−0.19*	−0.04	−0.06	−0.12*	−0.09*	−0.10*	1											
8 Strength of community sanctions	540	1.64	1.86	0.14*	0.14*	0.12*	0.22*	0.06	0.08*	−0.27*	1										
9 Male	540	0.85	0.36	0.00	0.06	0.06	−0.02	−0.05	0.01	−0.01	0.03	1									
10 Age	540	43.79	7.88	−0.02	−0.01	−0.01	0.02	−0.03	−0.10*	0.00	−0.06	0.10*	1								
11 Rural hukou status at birth	540	0.49	0.50	−0.03	0.14*	0.09*	−0.05	−0.03	−0.05	0.00	0.13*	0.11*	−0.08*	1							
12 Years of formal education	540	12.70	2.91	0.08*	−0.25*	−0.25*	0.04	0.02	0.07	0.00	−0.06	−0.03	−0.17*	−0.38*	1						
13 Last annual income before becoming an entrepreneur (in CNY 10,000)	540	3.34	3.74	0.09*	−0.05	0.02	0.02	0.06	0.09*	−0.06	0.02	0.04	−0.05	−0.11*	0.18*	1					
14 Trust in police (1–5)	540	3.66	0.65	0.07	0.01	0.00	0.18*	−0.05	0.03	0.09*	0.05	−0.02	−0.04	0.01	0.01	−0.03	1				
15 Trust in judges and court (1–5)	540	4.06	0.61	−0.02	0.00	0.00	0.06	−0.11*	−0.07	0.06	0.01	−0.08	−0.03	0.05	−0.08	−0.10*	0.29*	1			
16 Sales based on written contracts (%)	540	89.22	19.06	0.03	−0.03	−0.06	0.03	−0.04	−0.03	−0.06	0.02	−0.01	−0.03	0.01	0.11*	−0.03	−0.02	0.02	1		
17 Supplies based on written contracts (%)	540	85.86	20.87	0.08*	−0.08*	−0.07	0.04	0.02	−0.05	−0.02	−0.05	0.02	−0.05	−0.06	0.18*	−0.01	0.01	0.04	0.54*	1	
18 International certification	540	0.35	0.48	−0.03	−0.01	−0.08*	−0.04	0.03	0.2	0.01	−0.03	0.12*	0.00	0.06	0.12*	0.01	−0.03	−0.04	0.15*	0.16*	1
19 Association membership (0–3)	540	0.42	0.65	−0.03	−0.04	−0.02	−0.07	−0.04	0.04	−0.03	−0.04	0.12*	0.11*	0.11*	0.01*	0.04	−0.02	0.03	0.06	0.05	0.15*

*p < 0.05.

Table 2. Ordered Probit Analysis of Relational Exchange and Generalized Trust

	Model 1	Model 2	Model 3a	Model 3b	Model 4a	Model 4b
Relational exchange						
Percentage of return customers		0.007** (0.003)			0.007** (0.003)	0.007** (0.003)
Percentage of customers known in person		0.004* (0.002)			0.004* (0.002)	0.004* (0.002)
Reliance on personal relationship with customer		0.183*** (0.046)			0.170*** (0.046)	0.160*** (0.047)
Cooperation						
Firm found most important customer through network		0.145 (0.118)			0.149 (0.119)	0.144 (0.118)
Loans from friends at founding stage		0.012* (0.007)			0.011* (0.007)	0.012* (0.007)
Norms						
Absence of local norms (0–7)			−0.087*** (0.023)		−0.066*** (0.023)	
Community sanctions (0–7)				0.093*** (0.026)		0.060** (0.027)
Personal background						
Male	0.051 (0.142)	0.028 (0.133)	0.031 (0.143)	0.021 (0.143)	0.009 (0.134)	0.007 (0.134)
Age	0.014 (0.053)	−0.011 (0.054)	0.016 (0.053)	0.012 (0.053)	−0.009 (0.053)	−0.011 (0.053)
Age squared	−0.0001 (0.0006)	0.0002 (0.0006)	−0.0002 (0.0006)	−0.0001 (0.0006)	0.0001 (0.001)	0.0002 (0.001)
Rural household	0.102 (0.110)	0.087 (0.110)	0.066 (0.111)	0.055 (0.111)	0.060 (0.111)	0.058 (0.111)
Years of education	0.008 (0.020)	0.029 (0.020)	0.011 (0.020)	0.008 (0.019)	0.031 (0.020)	0.029 (0.020)
Income before becoming an entrepreneur	0.071** (0.030)	0.056* (0.030)	0.062** (0.030)	0.070** (0.030)	0.050* (0.030)	0.056* (0.030)
Income squared	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)
Controls[a]	YES	YES	YES	YES	YES	YES
Observations	540	540	540	540	540	540
Log pseudo likelihood	−1058.483	−1035.156	−1051.155	−1051.95	−1030.83	−1032.43
Pseudo R^2	0.038	0.059	0.044	0.044	0.063	0.061

Note. Robust standard errors are in parentheses.
[a]Father's last position, sector, city, treatment, and interviewer.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

personal introduction of key customers is not significant at conventional levels, CEOs who received loans from friends at the founding stage are more trusting of strangers than others ($p < 0.10$).

Hypothesis 3, predicting that *confidence in effectiveness of norms guiding exchange within the local community corresponds with higher generalized trust*, is strongly confirmed. In Models 3a and 3b, which exclude variables for reliance on relational exchange and cooperative behavior, the absence of reliable community sanctions of business norms is negative and highly significant ($p < 0.01$), while the intensity of community sanctions is positive and significant ($p < 0.01$). Under inclusion of all variables of interest (Models 4a and 4b), the size of the norm effect drops somewhat but remains significant ($p < 0.05$). The lower levels of significance are due to a positive correlation between *relational exchange* and *community norms* (0.22; see Table 1). Not unexpectedly, the strength of norm enforcement is not independent of relational exchange in the business community. However, exploration of direct interaction effects—between various measures of relational exchange and norms—shows no significant moderating effect. (Regression results are available from the authors upon request.) Norms and individual experience

in relational exchange operate as separate channels contributing to generalized trust.

The positive association between generalized trust and the experience of having had friends help out financially has two possible interpretations. On the one hand, generalized trust may increase purely from the fact that one received financial support at a crucial career stage; on the other hand, the source of financial support (perceived benevolence) could matter more than the act of receiving a loan per se. To determine which interpretation most applies—that is, whether our positive result is likely to support Hypothesis 2 or instead indicates a financial effect that runs independent of the social structure—we explore different avenues of financial help that CEOs may have received, including the individual's family (Model 4c) and formal banking institutions (Model 4d). We also explore whether financial independence at the founding stage is associated with similar effects (Model 4e). The results (see Table 3) undermine the idea that financial support per se or even financial independence increases generalized trust. For family loans and bank loans, we identify no significant effect on generalized trust; for financial independence, we even identify a significantly negative association. Hence, financial independence seems to limit rather than

Table 3. Ordered Probit Analysis of Entrepreneurs' Relational Exchange, Modes of Start-up Loans, and Generalized Trust

	Model 4b	Model 4c	Model 4d	Model 4e
Relational exchange				
Percentage of return customers	0.007** (0.003)	0.007** (0.003)	0.007** (0.003)	0.007** (0.003)
Percentage of customers known in person	0.004* (0.002)	0.004* (0.002)	0.004* (0.002)	0.004* (0.002)
Reliance on personal relationship with customer	0.160*** (0.047)	0.169*** (0.047)	0.167*** (0.046)	0.168*** (0.046)
Cooperation				
Firm found most important customer through network	0.144 (0.118)	0.147 (0.117)	0.143 (0.117)	0.142 (0.117)
Loans from friends at founding stage	0.012* (0.007)			
Loans from family at founding stage		0.005 (0.006)		
Loans from bank at founding stage			0.0002 (0.002)	
Trade credit offered by key supplier				−0.055* (0.110)
Norms				
Community sanctions (0–7)	0.060** (0.027)	0.061** (0.002)	0.063** (0.023)	0.064** (0.027)
Personal background				
Male	0.007 (0.134)	−0.018 (0.139)	−0.026 (0.140)	−0.028 (0.141)
Age	−0.011 (0.053)	−0.006 (0.053)	−0.004 (0.053)	−0.003 (0.053)
Age squared	0.0001 (0.001)	0.0001 (0.0006)	0.0000 (0.0006)	0.0001 (0.0006)
Rural household	0.058 (0.111)	0.063 (0.110)	0.059 (0.111)	0.058 (0.110)
Years of education	0.029 (0.020)	0.027 (0.020)	0.026 (0.020)	0.027 (0.020)
Income before becoming an entrepreneur	0.056* (0.030)	0.059** (0.030)	0.054* (0.030)	0.053* (0.030)
Income squared	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)
Controls[a]	YES	YES	YES	YES
Observations	540	540	540	540
Log pseudo likelihood	−1032.43	−1035.12	−1035.69	−1035.57
Pseudo R^2	0.061	0.059	0.058	0.059

Note. Robust standard errors are in parentheses.
[a]Last position of father, sector, city, treatment, and interviewer.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

increase a person's trust level. Thus—in line with Hypothesis 2—there is more likely to be a positive trust effect from a favor from one's social (but not kin) group than from financial support per se.

Discussion and Conclusion
Contribution and Implications
This is the first study of the sources of generalized trust using a large random sample of CEOs—entrepreneurs as founders of private firms—who make decisions in a carefully constructed and incentivized trust game. Our results contribute to knowledge about social mechanisms embedded in relational exchange and their likely spillover on generalized trust.

Our study shows that cumulative experience of relational exchange contributes not only to personalized but also to generalized trust. We highlight *reliance on relational exchange*, *cooperation*, and *norms* as crucial factors, establishing a robust link between experience in local cooperation and choice of placing trust in an anonymous other in a one-shot transaction. Our results confirm a positive association between reliance on relational exchange and cooperative behavior and the proclivity for generalized trust. Entrepreneurs who relied more on relational exchange to build their customer base were more likely to extend trust to strangers in financial transactions. Those who received loans from friends at the founding stage tend to be more

trusting than others in financial transactions with strangers, as predicted by our cooperation hypothesis. It should be noted that these detected statistical relationships probably underestimate the real effect, because some of the entrepreneurs with high reliance on relational exchange and experience of local cooperation may have been encouraged to trust strangers earlier but have been let down, which would discourage them to trust in our game. Confidence in local norm enforcement is another crucial factor in the production of generalized trust. In communities where credible commitment to business norms is weak, economic actors are less likely to trust strangers, and in communities where actors have confidence in the reliability of community sanctions, they are more likely to engage in trusting behavior with a stranger. The received wisdom echoed by Yamagishi et al. (1998, p. 166) that "strong and stable social relations (such as family ties and group ties) promote a sense of security within such relations but endanger trust that extends beyond these relations" we think needs rethinking in light of the finding that generalized trust is nurtured by the same social mechanisms as personalized trust.

In a broader context, our findings also offer a novel interpretation for why long-distance trade and globalization may evolve from the bottom up without ex ante provision of formal institutions safeguarding contract enforcement and property rights. They also

provide answers as to why production and trading in clustered and often close-knit communities in China did not lead to network closure but rather served as a training ground for participating in interprovincial and even international trade (Nee and Opper 2012). However, the observed link between relational exchange and trust in strangers should not imply that trust is granted in any naïve or absolute way. In real-world transactions, managers carefully scrutinize prospective business partners—specifically, those not embedded in one's own business network—before formalizing new business relations. Our own interviews have revealed that managers oftentimes test potential business partners with small impromptu orders of small batches that allow them to test the quality, reliability, and timely delivery of goods and services before entering larger contracts. The point we are making is that the extension of trust toward individuals outside of one's own network and the development of business ties with "new" partners are more likely for individuals who have—through extensive relational exchange—accumulated the cognitive resources to assess and enter new exchange relations outside of their immediate circle of acquaintances. In competitive markets, a willingness on the part of entrepreneurs to move beyond reliance on closed family and friendship networks to rely more on colleagues for their human capital—knowledge and know-how—for inputs in the governance of their firms enables higher firm performance (Nee et al. 2017).

Our findings have some practical implications, too. They clearly show that trust must be cultivated through cumulative experience of relational exchange. This implies that generalized trust cannot be subject to command-and-control policies from above. The emergence of trust remains—to a nonnegligible extent—a true bottom-up phenomenon embedded in and nurtured by relational exchange. This limits the role of policy makers in "creating" trust in business communities by means of ad hoc implementation of novel laws and regulations, as well as the import of international best-practice norms. At the same time, our observations encourage managers in countries with weak formal institutions to take full advantage of the power of relational exchange as a practice ground to develop the type of generalized trust required in open networks and anonymous market exchange.

Limitations and Future Research

One obvious limitation of our research design is the use of a relatively homogeneous sample of CEOs managing medium-sized private firms located in one of China's most developed manufacturing regions. It is conceivable that exclusion of CEOs running different types of organizations such as state-owned and foreign firms may lead to a certain selection bias of respondents.

Also, the focus on manufacturing firms and exclusion of the service sector may have invited a distinct bias. Furthermore, we acknowledge that our focus on medium and large-scale private companies may have an unintended evolutionary selection effect. We cannot rule out that founders who are too trusting or who trust for different reasons do not successfully grow their companies into sizeable operations, or are even eliminated from the market. Without parallel studies using a similar design to explore the link between relational exchange and generalized trust with different groups of respondents, we cannot fully ascertain the general validity of the observed mechanism linking experience in relational exchange with CEO trust.

Another limitation of our study is the absence of potential contextual boundary conditions—also discussed recently in research exploring the link between relational exchange and personalized trust (Lioukas and Reuer 2015). For generalized trust, too, it is perfectly possible that relational exchange will not generally foster the cultivation of generalized trust but may depend on situational moderators and institutional boundary conditions. Generally speaking, antecedents of trust are likely to be affected by context and specific domains (Mayer et al. 1995). Specifically, skeptics may wonder whether China's cultural context may have positively influenced the confirmation of a link between relational exchange and the display of generalized trust. After all, the country is commonly perceived as a collectivist society, where community links may—at least theoretically—exert a different impact on behavioral responses than in more individualist societies or different cultural contexts (Hofstede 1980). That notwithstanding, we note that Fukuyama (1995) argues that collectivist societies tend to have a lower level of trust than individualist societies. Finally, critics may emphasize China's specific political context, which could influence the modes of interfirm operation and corresponding behavioral effects. However, we note that our findings are consistent with Macaulay's (1963) study, which documented the importance of social ties and norms in shaping trust between principals and agents in Chicago. Even in institutional environments where formal rules and their enforcement enable a calculable assessment of risks, the informal institutional elements of relational exchange are still critical in developing generalized trust in larger business communities.

A systematic analysis of such contextual factors—as, for instance, the institutional quality embedding relational exchange—would require the design and application of a large-scale trust game involving CEOs operating in different settings. Ideally, this would involve the application of identical trust games in different country settings following the model of Henrich et al. (2005), who conducted identical cooperation games in 15 different country settings. Alternatively,

the repeated application of our trust game in different single-country settings could over time accumulate the type of information needed to move toward a meta-analysis allowing a more fine-grained understanding of the mechanisms and contingencies shaping the association between relational exchange and generalized trust.

Furthermore, whereas our questionnaire design elicited behavioral measures that explicitly capture prior and not current experience—some of which dating back to the firm's founding stage—we are well aware that this strategy is not sufficient to alleviate justifiable concerns associated with cross-sectional designs. We share this concern with virtually all research introducing incentivized tasks, which—for cost considerations alone—do not allow the execution of panel-data studies repeated over multiple years. Rather than offering a definite understanding of causality, our findings should therefore be interpreted as verifying a pattern of relations that is consistent with our causal claim and warranting further research—possibly involving different elicitation methods of trusting behavior.

Finally, we note that it is beyond the scope of this research to explore whether generalized trust fostered through relational exchange is actually proving to be beneficial in contracting and market exchange. Further research may involve a stronger focus on different firm strategies to validate the crucial role of generalized trust in company management.

Acknowledgments

Appendix A. Participant Form
A verbatim extract of the form presented to participants appears below.
Subject Form:
QID |__|__|__|__|
Firm name: _____
Interviewer name:_____
Information to the subjects

General information (GI)
The purpose of this part of the study is to gain additional insights into economic behavior. You will make choices in different situations that will be explained later. To make it more interesting, realistic and fun, we will, at random, let participants in this study earn some real money. One of your choices made will be selected at random to determine

a "money-earning decision" and you will be paid today according to your choice in this task. Hence, the amount of money you earn will depend on the choices made. This means that you may earn money on any of the decisions made, but you will not know how much you will earn, before you have made all choices. The maximum amount you can earn is 580 CNY and the minimum is 0 CNY.

You should know the possibility to earn real money is important in economic experiments and that there are strict rules against deceiving persons that participates [*sic*]. Hence, all information given here about money and other aspects are true and will be carried out according to the information given. Please note also that there are no "right" or "wrong" choices in the decisions you are going to make. Therefore, make decisions according to what you think is best. Your answers will only be used for research purposes and will be kept strictly confidential.

Read the instructions to each task carefully. Ask the Interviewer if there is anything you do not understand. In each task you will make ten decisions where you choose between two options.

(T2)

In this situation one of two payments is possible. Each payment will give you and a person you probably do not know (say, person X) a certain payoff:

Payment I: you get 580 CNY and X gets 50 CNY.

Payment II: you get 15 CNY and X gets 55 CNY.

You cannot choose payment, but you can choose between two options (A, B) of how the payment is to be decided:

Option A: You let X decide about the payment of money. (See further explanation below.)

Option B: Payment I and II are chosen according to the probabilities below.

Further explanation: X has already made his/her decisions, but we will not tell you about them. So you have to make your own decision based on what you think X has decided.

We have information about X's decisions in an envelope. This envelope will be opened only if one of the decisions below is randomly selected as your "money-earning decision." X has been informed that you will be asked to choose between the two options (A, B). X made his/her choice contingent on you choosing Option A in each of the decisions below. X does not know your identity and you will not learn the identity of X either. However, you should know that X is borne [*sic*] and lives in China.

Decision 1: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to get Payment II for sure.

Decision 2: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to have a random draw where we either get Payment I or Payment II. The probability of Payment I is 10% and the probability of Payment II is 90%.

Decision 3: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to have a random draw where we either get Payment I or Payment II. The probability of Payment I is 20% and the probability of Payment II is 80%.

Decision 4: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to have a random draw where we either get Payment I or Payment II. The probability of Payment I is 30% and the probability of Payment II is 70%.

Decision 5: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to have a random draw where we either get Payment I or Payment II. The probability of Payment I is 40% and the probability of Payment II is 60%.

Decision 6: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to have a random draw where we either get Payment I or Payment II. The probability of Payment I is 50% and the probability of Payment II is 50%.

Decision 7: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to have a random draw where we either get Payment I or Payment II. The probability of Payment I is 60% and the probability of Payment II is 40%.

Decision 8: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to have a random draw where we either get Payment I or Payment II. The probability of Payment I is 70% and the probability of Payment II is 30%.

Decision 9: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to have a random draw where we either get Payment I or Payment II. The probability of Payment I is 80% and the probability of Payment II is 20%.

Decision 10: (Circle your choice of Option below):

Option A I let X decide between Payment I (I get 580 CNY and X gets 50 CNY) and Payment II (I get 15 CNY and X gets 55 CNY).

Option B I would like to have a random draw where we either get Payment I or Payment II. The probability of Payment I is 90% and the probability of Payment II is 10%.

Appendix B. The Standard Trust Game and Our Trust Elicitation

Here, we explain how the traditional trust game is linked to trust and how the trust elicitation used in this paper differs. In the trust game, first developed in Berg et al. (1995), two players, A (he) and B (she), who are anonymous to each other, receive an initial sum, M. Player A can then decide to send

a sum, x, between 0 and M to player B. The sum sent by A will be tripled by the experimenter when B receives it. Player B can then send back a sum, y, between 0 and $3x$. The amount sent by A is taken as a measure of trust, and the amount returned by B measures trustworthiness. We will first focus on the trust measure.

In the traditional trust game, when A sends money to B, he transfers both money and the power of decision to B. Many things may motivate the amount sent, such as altruism and efficiency concerns, in addition to expectations of getting more money back. The second thing to note is that A can get back anything between 0 and $3x$. As long as x is positive, A is exposed to risk considering that the amount returned is unknown and uncertain when he decides about x. From an economic theory point of view, A's beliefs about the amounts returned for a given x corresponds to subjective beliefs about a probability distribution over the interval 0 to $3x$. Now (for a given x), this subjective probability distribution should reflect trust. For instance, a person with a high level of trust would believe that B will return x or more with a high probability, whereas a person with low level of trust would believe that it is probable that less than x is returned. As a consequence, the expected value of the subjective distribution of returns should be increasing in trust. This gives the rationale for perceiving x as a measure of trust. A problem is that (according to economic theory) the expected utility of this distribution is affected by the curvature of the individual's utility function, which in turn is directly linked to the individual's risk preferences. Furthermore, when x is increased, the outcome distribution will be "wider" for A, which means risk increases. Hence, x also measures the individual's willingness to take risks.

A consequence of the reasoning above is that a trusting individual who believes that it is highly likely that B will return much may not choose a high x if he is risk averse. Furthermore, there is overwhelming evidence (see Harrison et al. 2007a) that a majority of people are risk averse, even for small stakes, and that people exhibit heterogeneity in risk preferences, which suggests that risk aversion matters in the standard trust game. In addition to this, as initially mentioned, A's preferences for efficiency and altruism may also affect the choice of x.

In the trust elicitation used in this paper, the stakes are held constant, and the possible outcomes are the same regardless of whether they are determined by another person or a lottery. This means that the difference in risk between trusting and not trusting is dampened. What should be decisive in our game is A's beliefs that B will choose the favorable outcome for A and not A's risk preferences for uncertain events in general. In addition, it is not A's altruism or concern for efficiency that is measured by A's willingness to hand over the power of decision to B; it is his beliefs about B's preference for these matters. Our trust elicitation measure, we argue, is less confounded by preferences for risk, efficiency, and altruism.

In the study, we actually elicited both risk aversion and trust (see Holm et al. 2013 for details). Two versions of risk aversion were elicited using the multiple price list format (see Binswanger 1980, Holt and Laury 2002). The correlation coefficients between trust and our two risk aversion measures are relatively low (0.14 and 0.18) but positive. As indicated

above, in the standard trust game there are convincing theoretical reasons for believing that trust and risk aversion should be negatively correlated. With our elicitation method we find no negative correlation; instead, we find a weak positive correlation. This suggests that our measure is not affected by risk aversion in the way the standard trust game is expected to be.

We also conducted a small follow-up study among 92 Cornell students in October 2017 to check how the standard trust game relates to our trust elicitation. All subjects both played the standard trust game as A players and completed our trust elicitation. The order the subjects performing the tasks was reversed for 50% of the subjects. We found a positive but relatively small correlation coefficient (0.23) between the trust measures. This suggests that the two measures partially pick up different dimensions of trust.

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