Relational Distance and Contracting - Family in Credit Markets

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Abstract

Besides information, decisions are importantly affected by factors such as trust and familiarity. The paper explicitly studies the effect of these factors, referred to as *relational distance*, on various contractual arrangements (guarantee, tied assistance and gift) commonly discussed in economics, in the context of financing a new venture. Given the relational distance between an informed family member and a credit-constrained entrepreneur, we show that these alternative relational contracts are not perfect substitutes; in fact, the family member has a pecking order among them. Besides, very close family, though informed, may not even be able to facilitate bank financing unless the family is wealthy. Thus, the entrepreneur must in turn choose her family who could help obtain a bank loan based on appropriate level of wealth and relational distance. The paper also has broader implications for societal structure and institutional development.

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1 Introduction

Interaction, formal or informal, among players has long been recognized to be important for economic activities. Traders interact for purposes of exchange. Bank acquires familiarity with the borrowers in the process of loan disbursements and repayments over the course of the loan. Employees meet by the water cooler or during smoking breaks. Interaction generates information, breeds familiarity and creates trust. Features such as these form the basis for contracts that we refer to as *relational* contracts.¹ In this paper, we study the implications of the interplay between relational and non-relational contracts. In particular, how do the existence and nature of relational contract facilitate the availability and terms of non-relational contract? Of the players in a relational contract, can one player's actions affect the non-relational contract obtained by the other player? How would the choice of player affect the terms of the relational and non-relational contracts for the other player? We explore these questions in the context of family financing of new ventures.

Relational contracts are ubiquitous. For instance, input suppliers not only sell goods and services but also extend significant amount of credit to their buyers.² While such contracts are often formal, relational contracts may also be informal. Neighbours extend emergency support to each other as a form of mutual insurance. Moneylenders in developing countries offer loans with no for-

¹Baker, Gibbons and Murphy (2002) consider relational contracts to be informal, self-enforcing agreements based on the incentive to maintain reputation over time. Our definition is somewhat different. For our purposes, relational contracts do not necessarily have to be based on the value of future relationship. In fact, we focus on those contracts that are primarily based on past experience and interaction between the parties to the contract. The basis of the historical interaction need not be related to the activities being contracted upon. Moreover, relational contracts could be formal or informal.

 $^{^{2}}$ Rajan and Zingales (1995) note that trade credit represented 17.8% of total assets of all U.S. firms in 1991 and over a quarter of total corporate assets in major European countries.

mal enforcability. The extant economics literature uses lower asymmetric information or repeated game arguments to justify such relational contracts. These arguments cannot explain evidence from experimental economics of cooperative behavior involving anonymously paired subjects.³ Notions such as those of fairness, trust, familiarity, liking and comfort level, could lead to outcomes unexplained through the standard economic arguments. For instance, not all informed suppliers are seen offering trade credit to their buyers; some neighbors are more willing to help than others. For the purposes of our paper, we use the term *relational distance* to refer to these other influences, besides information and repeated game considerations, on relational contracts.⁴ We discuss relational distance in greater detail in Section 2 of the paper.

In this paper, we consider one natural domain of relational distance, namely kin. Family members, friends and neighbours (collectively referred to as "kin") typically meet often due to a sense of familiarity with and proximity to each other. They are likely to possess information about each other which is equally good. However, the relationship among family members is far from simple.⁵ Relational distance, captured in notions of fondness and such like, affects their decisions. In particular, differences in relational distance between family members with the same information, would lead to dissimilar choice of actions. For instance, a father may take different decisions when interacting with his son than with his daughter. A mother's reaction to her daughter may be different from the reaction of her aunt's. Thus, family provides an appropriate setup for analyzing the impact of relational distance on economic behavior and outcomes.⁶

³See Berg et al (1995) for one such experiment.

⁴Petersen (2004) discusses the difference between soft and hard information in the context of financial transaction. However, to a large extent, the difference between the two is in terms of codifiability or verifiability of information and can be discussed within the information framework.

⁵To verify this, one need only attend a typical Thanksgiving meal or Christmas dinner in one's own homes.

⁶In the context of the family, relational distance may also be interpreted as a measure of altruism. While family members may care about the well-being of other members, the degree of altruism could vary significantly. Becker (1981), Bernheim and Stark (1988), among others, have explored the implications of altruism in a variety of contexts,

We consider the financing problem that an entrepreneur may face in starting a new venture and the role the family may play in this context. The prevelance of family funds in small ventures is well documented, both anecdotally and in large surveys. According to the Global Entrepreneurship Monitor (GEM)-sponsored study, family business investments as a percent of informal investments was over 70 percent in India, over 60 percent in the UK, over 55 percent in Hungary and over 50 percent in the US (Astrachan et al (2003)).⁷ Such ventures provide a natural arena for exploring whether and how differences in *relational distance* among family members affect the interaction between relational (e.g., guarantees) and non-relational (e.g., bank loan) contracts.⁸

In a standard adverse selection framework similar to Stiglitz and Weiss (1981), we assume that entrepreneurs with positive and negative NPV projects are credit rationed due to asymmetric information between the bank and the entrepreneur. Better information about the entrepreneur, if made available to a bank, would facilitate the availability of a non-relational contract (in the form of a bank loan) for the entrepreneur's project but only if it is credible. Family is assumed to possess superior information about the entrepreneur vis-à-vis the bank.⁹ We solve for a separating equilibrium in the three-player game, played by the bank, the entrepreneur and the entrepreneur's family. We consider the choice and implications of a variety of commonly seen relational contracts that well-informed family with different degrees of relational distance with the entrepreneur may offer: (1) bank loan guarantee,¹⁰ (2) in-kind assistance to the entrepreneur that is tied directly to

such as marriage, internal resource allocation and voluntary transfer, but not project financing.

⁷Berger and Udell (1998) also provide extensive evidence of participation by alternative, informal sources in entrepreneurial finance, including family and friends.

⁸Relational and non-relational contracts may often co-exist. Alphonse et al (2004) find evidence of trade credit coexisting with bank loans. While the co-existence of relational and non-relational contracts has been widely recognized, there is little research on the *interaction* between such contracts.

⁹There could be other advantages of family participants. They may have an edge over banks in monitoring and enforcing contracts. Credible fear of family ostracization may reduce entrepreneur's incentive to default making her eligible for bank loan.

¹⁰Guarantees on loans are a common relational contract. Avery et al (1998) find, that in the U.S. about 40 percent of small business loans and close to 60 percent of loan dollars were guaranteed and/or secured by personal assets.

the project,¹¹ and (3) gifts to the entrepreneur.¹²

We find that a wealthy kin, irrespective of his altruism (or relational distance), can credibly signal the good entrepreneur. However when the kin is not too wealthy (defined explicitly later), the entrepreneur continues to be credit rationed if the kin's altruism exceeds a threshold level. So, contrary to the existing finance literature on the role of informal funding sources which does not separately account for family's altruistic traits, being informed about the entrepreneur is not a sufficient condition for resolving the problem of credit rationing. In addition, family's altruism (and wealth) have important implications for the mechanism used for signaling the entrepreneur's quality and facilitating bank financing. The alternative relational contracts are not perfect substitutes as they impose differential costs on the family, provide differential incentives to the entrepreneur and signal differential degrees of credibility to the bank.¹³ Finally, the kin's choice of relational contract in turn provides a pecking order of the entrepreneur's choice of kin, who differ in their level of altruism. She prefers a wealthy kin. However, if this is not possible, then she next prefers a kin with altruism in the intermediate range rather than too high or too low. In fact, there are kin with some levels of altruism that the entrepreneur would never choose, given that they cannot credibly signal the entrepreneur's quality. Our simplistic model also has broader implications for societal structure, institutional development and governance.

A number of papers explore the lemons problem in an adverse selection framework similar to

¹¹Assistance in kind is common within the family. For instance, parents often assist their child with contributions towards the down-payment for a child's house. They may offer to pay for her education rather than give a cash gift. Stories of start-ups having their beginnings in the family garage are also well-known now.

 $^{^{12}}$ This is not an exhaustive list of possible financial contracts. A family member could also invest in the entrepreneur's project either in the form of equity or debt. We discuss these in Section 6 of the paper.

¹³Relational distance, the source of the conflict of interest, could be interpreted as the "bias" of the informed party. In that sense, our paper is about information transmission with a biased expert (namely, the informed family member). See Krishna and Morgan (2001), Crawford and Sobel (1982). However, in these papers, the transmission mechanism considered is "cheap talk" unlike alternative relational contracts we consider.

ours. They differ in the mechanisms considered for addressing the problem. For instance, the microfinance literature has discussed the use of group lending and dynamic incentives (Morduch (1999)). However, it focuses more on the role of banks rather than on the informed party (such as family) while also ignoring the differences in relational distance among those offering relational contracts. Moreover, our paper permits the study of alternative relational contracts in a single unified framework.¹⁴

The paper on trade credit by Biais and Gollier (1997) is closest in spirit to our paper. They also consider an adverse selection problem where the buyer is credit rationed. Based on his information, the supplier pledges collateral to obtain a bank loan which he then extends as trade credit to the buyer. The bank, in turn, uses the supplier's action (along with its own independent signal about the buyer) to offer bank financing to the buyer thereby ameliorating the credit rationing problem. However, unlike our paper, the supplier's information advantage is the necessary determinant of the buyer's bank financing. In Biais and Gollier, there is no role for relational distance, which lies at the center of our analysis. We show that information advantage is not a necessary condition for bank financing in our model. Moreover, the primary driver of supplier signaling in Biais and Gollier is the loan collateral, not trade credit. Our paper explicitly provides a unique role to *both* tied assistance and loan guarantee in signaling the entrepreneur's quality.¹⁵

The finance literature on family firms largely focuses on control issues in such firms, treating all family members as a uniform homogenous group (see Shleifer and Vishny (1986), Burkart, Panunzi

 $^{^{14}}$ In a adverse selection framework, Myers and Majluf (1984) show that firms would *sequence* their choice of financial instruments (pecking order) for project financing, using internal funds before debt financing. However, our analysis is focused on the *co-existence* and *interaction* between relational and non-relational contracts.

¹⁵Unlike Biais and Gollier, Burkart and Ellingsen (2004) is based on this feature of in-kind trade credit. However, contrary to their objective, family considers the use of in-kind transfer in our paper purely as a mechanism for signaling rather than a mode of assistance *per se*. Another paper, by Frank and Maksimovic (2004), considers trade credit for its advantage in liquidating collateral. However, they offer no justification for offering *in-kind* assistance.

and Shleifer (2003), Andersen and Reeb (2003)). Our paper instead focuses not on control but on financing of new ventures. More importantly, we consider family members to be heterogeneous, based on relational distance.

The rest of the paper is organized as follows. In the next section, we discuss the idea of relational distance in greater detail. Section 3 lays out the model. Section 4 looks at the implications of relational distance on each of the alternative relational contracts in facilitating bank financing. In Section 5, we sequentially consider the kin's choice of optimal relational contract and the entrepreneur's choice of kin. Section 6 briefly discusses testable implications of the model for alternative societal structures and the rationale behind some key assumptions. Section 7 concludes the paper.

2 Relational Distance

The idea of "relationship" is frequently used in economics to justify transactions or outcomes that may otherwise not have occurred. Information advantage and repeated game are two commonly offered bases for such relationships. While banks are reluctant to offer credit, suppliers are willing to extend trade credit to their buyers due to better information acquired through frequent interaction over the course of the economic relationship (Petersen and Rajan (1997)). Thus, superior information provides an incentive to enter into relational contracts. Alternatively, even without informational concerns, a player may have an incentive to behave opportunistically, thereby eliminating any possibility of an economic relationship. However, if there is the possibility of repeated interaction, the long-term benefits from cooperating may outweigh the short-term gains from opportunistic behavior. Hence, cooperative relationship can be sustained, as in the case of Toyota and its suppliers in the Japanese auto industry (Holmström and Roberts (1998)). However, these two reasons alone cannot explain a number of other economic relationships or transactions. In reality, relationships are complicated and multi-dimensional, and are based on factors that go beyond information superiority and repeated nature of the transactions. For instance, executives of bankrupt firms who are also members of some old boys' network are found to better access financial resources than those without such membership (Uzzi (1997)). There may be no reason to believe that those providing the financing from the old boys' network know the executive well or that the executive is likely to need such assistance again in the future to be willing to not renege on her obligations towards the financiers. Similarly, a supplier who knows all her buyers equally well may still treat them differently. She may allow one a greater delay in repayment than the other though both may have the same default likelihood.¹⁶

Uzzi (1996) studies the structure of ties or relationships between manufacturers and contractors in the New York apparel industry. It provides compelling evidence in support of relationships based on factors besides information and repeated game. Many manufacturers have close ties with contractors who supply a significant proportion of their output to the manufacturer. Uzzi finds that some manufacturers share their decision to permanently relocate with their contractors well in advance of their impending departure. These are contractors with whom the manufacturer had an "embedded relationship". Standard game theory suggests that cooperation can be sustained in repeated games, but it unravels once the players know when the endgame occurs. If the manufacturer-contractor relationships were based on expectation of repeat play, news of the manufacturer's departure would terminate the incentive for cooperative play on the part of the

¹⁶It is often difficult to disentangle these alternative arguments. It is certainly possible that some member of the old boys' network knows the executive seeking financial assistance well which serves as an implicit guarantee for another member of the same network. The executive may also have an incentive to maintain her reputation if there are sufficiently high costs of stigma attached to reneging. Ultimately, these are empirical questions that need to be tested against data.

contractor, leaving the manufacturer open to opportunism, possibly in the form of lower quality products from the contractor. This in turn should have deterred the manufacturer from providing the information to any contractor. However, Uzzi notes evidence to the contrary. Manufacturers do provide such information to contractors they have close ties with, and these contractors indeed maintain the quality of the contracted good. No such information is shared with contractors with whom the manufacturer had arm's-length transactions, suggesting a lower or zero relational distance, even though he may have many transactions with these contractors. Information acquired through protracted interaction may or may not lead to a positive relational distance between players.¹⁷

A variety of other factors distinct from information and repeated game arguments have been identified as affecting individual decision-making. The marketing literature discusses the critical role that *liking* can play in the development and maintenance of relationships. (Nicholson et al (2001)). A supplier may choose to assist one buyer over another if he has a greater "liking" for one than the other. Psychologists point to a variety of factors that may affect one individual's response to another.¹⁸ For instance, *similarity* in opinions, appearance, personality traits, background or lifestyle could influence actions. *Familiarity* too could play a role in decision-making. A better match of expectations and values, or *meeting of minds*, may prompt relational contracting. McKnight et al (1998) explain the existence of such initial trust between new players, who have not had a chance to interact for long, on the basis of personality, institutional and cognitive factors. We use the term *relational distance* to refer to all these other influences, other than information and incentives from

¹⁷It is worth noting that, like information acquisition, the other influences discussed above could also be the *outcome* of greater contact and cooperation. In fact, the evolution of social norms, including trust, fairness and reciprocity, are often the result of general day-to-day social intercourse.

¹⁸See Cialdini (1993) for a detailed discussion on these factors. The marketing literature has long recognized the role of complex psychological factors that affect consumer decision-making. For a general introduction, see the chapter on Consumer Behavior in Belch and Belch (2005).

repeat play, on relational contracts.

3 The Model

<u>Players</u>: We consider three agents: entrepreneur (E), kin (K) and bank (BA). These are all risk neutral and rational. Their utilities are linear in income and payoffs.

Kin represents a member of the entrepreneur's family. He has infinitely divisible wealth or asset, W. The kin's utility, U_K , depends on the utility associated with his own payoff, u_K , as well as on that of the entrepreneur, U_E . The relative weight attached to the entrepreneur's payoff reflects the relational distance between the kin and the entrepreneur. In particular, we assume that the kin's utility is $U_K = u_K + \lambda U_E$, where the parameter, λ , is the inverse of the kin's relational distance with the entrepreneur. In the context of the family, λ may be interpreted as the level of kin's altruism towards the entrepreneur. So, greater the kin's altruism, the lower his relational distance from the entrepreneur, and vice versa. For reasonableness, we assume that $\lambda \in (0, 1)$.¹⁹ As is standard in the literature, we assume that the kin is altruistic towards the entrepreneur, but not vice versa (e.g., Becker (1974), Bernheim and Stark (1988)). So, the entrepreneur's utility is unaffected by the kin's utility.

Assumption 1: Relational distance (i.e., the level of altruism) is common knowledge.

All players are assumed to know the level of a kin's altruism towards the entrepreneur. This is a critical assumption since it also assumes that a bank knows how altruistic a kin is when the bank sees the kin. We discuss this assumption in Section 6.

The entrepreneur, without any funds of her own, needs funds I to invest in a project. She needs

 $^{^{19}\}lambda \ge 1$ would imply that such a kin would (weakly) prefer all consumption be done by the entrepreneur and none by himself. This is unreasonable.

to seek out other sources - namely, bank and the kin.

Assumption 2: W < I.

This assumption, that kin's wealth is not sufficient to fund the entire project, ensures a role for bank financing. For simplicification, we normalize the return to a kin's wealth, the transaction cost of liquidating his wealth, the rate on bank deposits and the risk-free lending rate to zero.

Assumption 3: The banks are competitive and earn zero expected profits.

All through the analysis, a bank loan contract takes a very simple form. It specifies the total loan extended and the interest charged, both of which have to be paid on a specific date.

Even though there must be a role for bank financing (by Assumption 2), the kin can participate in the process of project financing in a number of ways. We consider a few alternative relational contracts. The kin can make cash transfers in the form of gifts to the entrepreneur. He can choose to guarantee a bank loan to the entrepreneur. A guarantee is defined as an amount that a guarantor (kin in this case) promises to pay the bank in case of an entrepreneur defaulting on a loan repayment; but if there is no default, no cost is incurred by the guarantor. Alternatively, the kin can offer assistance in-kind specifically for the entrepreneur's project ("tied assistance") instead of giving the entrepreneur liquid wealth. Any liquid funds (gifts, for example) available with the entrepreneur is deposited in a bank earning the risk-free rate that is normalized to zero.

Assumption 4: There is limited liability for the entrepreneur and the kin.

Funds that either the entrepreneur or the kin does not commit to a project cannot be laid claim upon in case of loan default.

Information and Payoffs: There are two types of entrepreneurs - Good (E = G) with a positive NPV project, and Bad (E = B) with a negative NPV project. The positive NPV project generates a gross payoff, X, with certainty, such that X - I > 0. The negative NPV project generates X

with probability p and zero otherwise, such that pX - I < 0. There are no assets that can be liquidated if the project fails. The entrepreneur knows her type, while the bank does not. The prior probability of E = G is π .

Assumption 5: $\frac{X}{I} < \bar{\rho} = \frac{1}{\pi + (1-\pi)p}$

If the bank is unable to distinguish between the two entrepreneur types, i.e., there is pooling of entrepreneur types, it charges a gross rate, $\bar{\rho}$, to break-even in a competitive industry. By assumption, at this rate it is unprofitable in expected terms for the good entrepreneur, and hence also for the bad entprepreneur, to undertake the project. This is the benchmark case. The lemons problem leads to underinvestment. For project financing to take place, the bank must be able to separate the good from the bad entrepreneur.

<u>Time line</u>: At date 0, nature chooses the type of the entrepreneur. Then, in the first period, the credit-rationed entrepreneur approaches her kin. The altruistic kin decides whether to participate or not participate; if he participates, his strategy requires him to choose one of the following tools - make a gift (P), guarantee an entrepreneur's loan from the bank (C), or offer tied assistance (T) related to the project. Based on the kin's action, the bank decides whether to extend a loan and the entrepreneur decides on whether to undertake the project. In the last period, payoffs are realized and the game ends. We assume that the discount rate is zero.

4 Alternative Relational Contracts and Project Financing

In keeping with the extant literature on informal funding sources, we consider the case where the kin has better information about the entrepreneur than the bank. We make the extreme assumption that the kin knows the entrepreneur's type perfectly. While kin participation is necessary for bank financing, the kin can choose from alternative relational contracts, namely, gift, loan guarantee and tied assistance. In this section, we analyze the implications of these alternative relational contracts for the entrepreneur's access to formal bank credit. We determine separating equilibria under each of these relational contracts such that only positive NPV projects receive bank financing.

4.1 Gift-Giving

Gift-giving among family members is commonplace. The nature and size of the gift could vary significantly, from flowers and garage space to estates, trust funds and business empires. For our purposes, we assume that gifts are made in cash and are therefore fungible.

Without financing considerations, the kin offers $P \in [0, W]$ to the entrepreneur so as to maximize his utility, $U_K = [(W - P) + \lambda P]$. Since $\lambda \in (0, 1)$, the kin will offer nothing to the entrepreneur, i.e., P = 0.

In the rest of the paper, we introduce the entrepreneur's financing requirements. Following the standard result that under information asymmetry, the good entrepreneur with sufficient initial funds can credibly signal her type to the bank (E-signaling). The minimum funds required to deter the bad type from mimicking, is given by²⁰

$$\bar{W} = \frac{p(X-I)}{1-p} \tag{1}$$

Since the entrepreneur does not have any funds, she can credibly signal her type only if the kin has "adequate" wealth (i.e., $W \ge \overline{W}$) and is willing to offer it as a gift. Otherwise, there will be

²⁰Assume that good and bad type entrepreneurs signal by offering collateral of size \overline{W} , \overline{A} , respectively. So, the bad entrepreneur would not have an incentive to copy the good entrepreneur if $\overline{A} \ge p(X - I + \overline{A}) + (1 - p)(\overline{A} - \overline{W})$. Solving this gives the result.

no E-signaling and no project financing.

Assume that the kin has adequate wealth. When would the uninformed kin be willing to offer such a gift? With the possibility of credible E-signaling, the kin would now weigh the cost of changing his actions against the benefit of giving the entrepreneur the opportunity to signal by offering the minimum gift, \bar{W} , to her. The entrepreneur's utility includes the gift \bar{W} , as well as the project payoff (X - I) which the uninformed kin expects to be $\pi(X - I)$. So, the kin's expected utility from offering \bar{W} out of W is $[W - \bar{W} + \lambda(\pi(X - I) + \bar{W})]$. The kin would prefer to offer a gift of \bar{W} if and only if:

$$W - \bar{W} + \lambda(\pi(X - I) + \bar{W}) \ge W$$

or, $1 > \lambda \ge \frac{p}{\pi(1 - p) + p} \equiv \lambda_S^P$ (2)

Proposition 1 A gift from the uninformed kin facilitates bank financing of the entrepreneur's project if and only if the kin has adequate wealth $(W \ge \overline{W})$ and is sufficiently altruistic $(\lambda \ge \lambda_S)$.

The Proposition above emphasizes the close linkage between relational and non-relational contracts and the important role of kin's altruism or relational distance. No kin, irrespecitve of his altruism, was willing to offer a gift when there were no financing considerations. But with project financing as a consideration, kin with higher levels of altruism are willing to offer a gift, i.e., when $\lambda \in (\lambda_S^P, 1)$. The gift-giving is motivated by the possibility that the entrepreneur may be willing to signal her type and obtain bank financing. These considerations do not require the kin to be informed about the entrepreneur. This is contrary to the existing literature's over-arching focus on the informational superiority of relational lenders, such as suppliers and moneylenders, in ameliorating the credit rationing problem. However, a particularly unaltruistic relative will not be willing to offer a gift, irrespective of his initial wealth. Altruism is *not* a sufficient condition for project financing.

Gift-giving - Case of Informed Kin

We now consider the case where the kin knows the entrepreneur's type perfectly and derive conditions for a separating equilibrium.

Absent financing considerations, the kin would prefer to offer no gift. So, with the possibility of a gift enabling bank financing, the kin would do so with the smallest possible gift. Let P^E be the kin's gift to entrepreneur E = G, B. If the kin with the bad entrepreneur mimics the other kin by also offering P^G to enable a bank loan, the bad entrepreneur's payoff is $[p(X - I) + P^G]$, and the kin's payoff is $[(W - P^G) + \lambda \{p(X - I) + P^G\}]$. The kin with the bad entrepreneur would prefer not to emulate the kin with the good entrepreneur with a gift if $[(W - P^G) + \lambda \{p(X - I) + P^G\}] \leq W$,²¹ i.e., if

$$P^G \ge \frac{\lambda p(X-I)}{(1-\lambda)} \tag{3}$$

which is feasible if and only if $W \ge \frac{\lambda p(X-I)}{(1-\lambda)}$, i.e., iff

$$\lambda \le \frac{W}{W + p(X - I)} \equiv \lambda_A^P \tag{4}$$

So, kin with the good entrepreneur must offer a large enough gift $(P^{G^*} = \lambda \frac{p(X-I)}{(1-\lambda)})$ so as to deter mimicing by the kin with the bad entrepreneur. The higher the kin's altruism, the greater his incentive to mimic and hence larger the gift has to be (since $\frac{\delta P^{G^*}}{\delta \lambda} > 0$). Either entrepreneur type receives no gift ($P^G = P^B = 0$) from a kin with $\lambda > \lambda_A^P$.

²¹This condition is the incentive compatibility condition of the kin with the bad entrepreneur (IC_B) . Given that for $\lambda \leq 1$, the kin would otherwise prefer to not offer a gift, IC_B holds with equality. So the participation condition for the kin with good entrepreneur, given by $[(W - P^G) + \lambda\{(X - I) + P^G\}] \geq W$, which when simplied gives $P^G \leq \frac{\lambda(X-I)}{(1-\lambda)}$, is satisfied.

Proposition 2 Gift of size $P^{G^*}(=\lambda \frac{p(X-I)}{(1-\lambda)})$ from an informed kin can facilitate project financing to a good entrepreneur if and only if her kin has sufficiently low altruism $(\lambda \leq \lambda_A^P)$.

According to the above Proposition, a sufficiently large gift from sufficiently distant kin allows banks to separate the good from the bad entrepreneur. Greater a kin's altruism, greater the gift, and hence wealth, that would be required for a separating equilibrium. So, an entrepreneur requiring bank financing should either seek out distant kin, or close but *wealthy* kin.

4.2 Loan Guarantee

A loan guarantee is a promise on the part of a guarantor to compensate the bank with the value of the guarantee in case of default on a loan. While a gift is a permanent transfer of wealth from one party to another, a loan guarantee is a conditional contract between the guarantor and the bank. The willingness to offer a loan guarantee may signal the entrepreneur's quality to the bank. But an uninformed kin would never prefer to offer a loan guarantee since the average project, by Assumption 5, has negative NPV.²²

Loan Guarantee - Case of Informed Kin

We now assume that the kin is perfectly informed about the entrepreneur. Let C^E , $\forall E = G, B$ be the level of loan guarantee offered for an entrepreneur of type E. The standard literature considers the role of loan guarantee from the *borrower* in ameliorating the asymmetric information problem.²³ However, in our model, the guarantee comes from an informed third party, namely the kin, for a loan given to the entrepreneur.

²²Formal proof is available from the author upon request.

²³Offer of collateral or loan guarantee by an informed party converys useful information about unobservable risk characteristics of the borrower. This ameliorates the adverse selection problem enabling bank funding of small and opaque firms (Besanko and Thakor (1987), Gale (1990)).

In a separating equilibrium, a kin with a bad entrepreneur has no incentive to offer a loan guarantee, i.e., $C^B = 0$. The good entrepreneur, on the other hand, obtains a loan at the risk-free rate (assumed to be zero). But for there to be a separating equilibrium, the kin with a good entrepreneur must offer a guarantee, C^G , such that the kin with the bad entrepreneur has no incentive to mimic the former. If the kin with the bad entrepreneur succeeded in mimicing with C^G and obtaining the risk-free loan, the bad entrepreneur would obtain a payoff of (X - I) only if the project succeeds (with probability p) and zero otherwise. So, the bad entrepreneur's expected payoff would be p(X - I). Her kin, on the other hand, would lose his collateral whenever the project fails (with probability (1 - p)) thereby incuring the expected cost of $(1 - p)C^G$.

So, the kin with the bad entrepreneur would not mimic a kin offering a loan guarantee to signal a good entrepreneur if $W - (1-p)C^G + \lambda p(X-I) \leq W$, i.e., if

$$C^G \ge \frac{\lambda p(X-I)}{(1-p)} = \lambda \bar{W} \quad (\text{from (1)}).$$
(5)

Such a guarantee amount is feasible if and only if $W \ge \lambda \overline{W}$, i.e., iff

$$\lambda \le \frac{W}{\bar{W}} \equiv \lambda_A^C. \tag{6}$$

Note, this condition is always satisfied for $W \ge \overline{W}$, i.e., when the kin has "adequate" wealth, separation is feasible for all λ .

Proposition 3 A loan guarantee of size C^{G^*} (= $\lambda \overline{W}$) from an informed kin with inadequate wealth ($W < \overline{W}$) can credibly secure bank financing for the good entrepreneur if and only if the kin has sufficiently low altruism ($\lambda \le \lambda_A^C$). However, if the informed kin is adequately wealthy, he can successfully facilitate bank financing for the good entrepreneur with a loan guarantee, independent of his level of altruism.

The kin with good entrepreneur must guarantee a sufficiently large part of the loan. A potentially large exposure would therefore deter a kin with bad entrepreneur from mimicing. The incentive to mimic is lower for less altruistic kin. So, the wealth requirement for signaling is reduced for less altruistic kin than for the more altruistic kin. The wealth constraint would prevent the latter kin from signaling, even though the kin may have perfect information about the entrepreneur. Thus, the kin's altruism is critical in determining the role of relational contracts in facilitating non-relational contracts. Kin's information advantage alone is not sufficient for signaling the good entrepreneur. However, if the kin is sufficiently wealthy, he can credibly signal the good entrepreneur type, irrespective of the level of altruism.

4.3 Tied Assistance

Tied assistance refers to kin support that is explicitly related to the entrepreneur's project, i.e., assistance in-kind. Instances of in-kind assistance are commonplace in a variety of contexts. Suppliers offer in-kind credit to their buyers. Parents often assist their child with contributions towards the down-payment for a house, or pay for her education rather than give a cash gift. If such in-kind transfer could be immediately or costlessly encashed, it would be identical to a cash gift. So we assume this is not possible.²⁴ Consequently, following an in-kind assistance, the loan amount is reduced by the size of the assistance. This is different from gifts as signals which allow the en-

 $^{^{24}}$ We implicitly assume that either the product provided as part of the assistance is consumed in the project (e.g., fertilizers) or that there is no secondary market for it. In general, the inability to divert non-cash transfers is an important reason for in-kind trade credit (see Burkart and Ellingsen (2004)). Alphonse et al (2004)'s finding supports the claim that trade credit can facilitate bank credit by signaling firm quality.

trepreneur to raise the entire investment amount as a bank loan. Furthermore, unlike a gift, the amount offered as tied assistance is lost if the project fails.

If the kin is uninformed about the entrepreneur type, an offer of tied assistance to the entrepreneur reveals no information to the uninformed bank. So, the bank continues to charge the pooled interest rate, $\bar{\rho}$. By Assumption 5, there is no incentive for either entrepreneur type to undertake the project at this rate. Hence, the kin would not offer such assistance in the first place.

Tied Assistance - case of Informed Kin

Suppose instead that the kin has perfect information about the entrepreneur's type. Let $T^E, \forall E = G, B$ be the amount of tied assistance the kin offers to an entrepreneur of type E. Since T^E gets consumed by the project, tied assistance can only be useful if it credibly signals the entrepreneur types. The kin with the bad entrepreneur would therefore have no incentive to offer tied assistance, i.e., $T^B = 0$. As in the case of loan guarantee, for there to be a separating equilibrium the kin with the good entrepreneur must offer T^G such that it imposes a sufficiently high cost of mimicing on the kin with the bad entrepreneur.²⁵

If the kin with the bad entrepreneur could successfully mimic the other kin with T^G and facilitate a bank loan, the bad entrepreneur would obtain an expected payoff of $p(X - (I - T^G))$. The kin prefers to not distribute the remaining $(W - T^G)$, using Lemma ??. So, the kin with the bad entrepreneur would not have an incentive to also offer T^G if his expected payoff, $[(W - T^G) + \lambda p(X - (I - T^G))] \leq W$, i.e., if

$$T^G \ge \frac{\lambda p(X-I)}{(1-\lambda p)} \tag{7}$$

 $^{^{25}}$ Using the same argument as that in the case of gift giving, we can focus exclusively on the incentive compatibility condition of the kin with the bad entrepreneur.

which is feasible if and only if the minimum required amount is less than the kin's wealth, i.e., iff

$$\lambda \le \frac{W}{p(W + (X - I))} \equiv \lambda_A^T \text{ which is } \ge 1 \text{ if } W \ge \bar{W}$$
(8)

(Since $\lambda < 1$, this condition always holds for $W \ge \overline{W}$.)

Proposition 4 Tied assistance of size T^{G^*} $(=\lambda \frac{p(X-I)}{(1-\lambda p)})$ from an informed kin with inadequate wealth ($W < \overline{W}$) can credibly secure bank financing for the good entrepreneur if and only if the kin has sufficiently low altruism ($\lambda \le \lambda_A^T$). However, if the informed kin is adequately wealthy, he can successfully facilitate bank financing for the good entrepreneur with tied assistance, independent of his level of altruism.

If the kin has inadequate wealth, then he is able to use tied assistance to credibly signal a good entrepreneur only for low levels of altruism (given by (8)). For kin with adequate wealth, he can credibly signal a good entrepreneur for all levels of the kin's altruism. The result for tied assistance as a relational contract is similar to that for loan guarantee. Neither relational contract is used unless the kin is informed. However, unlike a guarantee, the kin has to permanently transfer a part of his wealth irrespective of whether the project succeeds or fails. Tied assistance is similar to gifts as both result in permanent transfers from the kin to the entrepreneur. However, contrary to gifts, tied assistance have to be used in the project. As a result, Proposition 2 differs from Proposition 4.

5 Relational Contract and Relational Distance

Having considered the implications of each of the three relational contracts separately in the previous section, we now first consider the kin's choice among these alternative relational contracts. We compare the kin's expected payoff under each of the three alternative contracts when there is a separating equilibrium. The kin's choice of contract affects the entrepreneur. This would in turn affect the entrepreneur's decision on which kin to approach, if such a choice were available to the entrepreneur. We determine factors affecting the entrepreneur's choice of kin for the purposes of obtaining a non-relational contract in the form of a bank loan.

5.1 Kin's Choice of Relational Contract

We first consider the case where the kin has *inadequate wealth* (i.e., $W < \overline{W}$). In the absence of financing considerations, the kin prefers not to have any contractual arrangements with the entrepreneur. Hence, with financing considerations, the kin must commit some funds, at least in expected terms, to credibly signal the good entrepreneur. A loan guarantee is merely a promise to pay the guaranteed amount *in case of default*, which by assumption never happens when the guarantee is a credible signal.²⁶ So, a credible loan guarantee is costless and hence the kin's most preferred relational contract. Both tied assistance and gift, on the other hand, involve an actual, permanent transfer of the kin's wealth to the entrepreneur, thereby always imposing a cost on the kin. However, unlike tied assistance which is used up in the project, a gift benefits the recipient whether or not the project is undertaken. So, all else equal, tied assistance is more credible than gift as a signaling tool. A kin would therefore need to offer a smaller amount of his wealth when

²⁶Guarantee is costless since, by assumption, the good entrepreneur has zero default probability. However, the result would go through as long as the good entrepreneur's default probability is small enough so that the cost of using some other form of participation to signal E = G remains higher than that under C.

using tied assistance to signal the entrepreneur type compared to a gift, making tied assistance the preferred relational contract over a gift.

We present the result in the following proposition. (The proof follows easily from comparing payoffs of the kin with good entrepreneur under each of the relational contracts.)

Proposition 5 Any kin with inadequate wealth ($W < \overline{W}$) has a hierarchy of relational contracts to credibly signal the good entrepreneur, preferring loan guarantees to tied assistance to gifts.

The Proposition outlines the choice of contract for a not-too-wealthy kin with a given relational distance. He weighs the expected net benefit from the alternative contracts in making his decision. However, not all contracts may be available at different levels of λ . Once we determine the set of *feasible* relational contracts for different levels of relational distance, we can identify the kin's optimal choice of contract based on Proposition 5. Since tied assistance is more credible than a gift, the former can signal a good entrepreneur upto a higher threshold of λ , i.e., $\lambda_A^T > \lambda_A^P$ (compare (8) and (4)). For any level of λ for which a gift is a feasible relational tool for signaling, tied assistance is also feasible. So, the kin never uses gifts as a relational contract for signaling a good entrepreneur (using Proposition 5). We also know that since loan guarantee is costless, it is the least credible and hence would serve to credibly signal a good entrepreneur at a lower threshold of λ , i.e., $\lambda_A^C < \lambda_A^T$ (compare (6) and (8)). So, for any level of λ for which loan guarantee is a feasible relational tool for signaling, tied assistance is also for signaling, tied assistance is also available. But since loan guarantee is less costly than tied assistance, the kin prefers the former over the latter for $\lambda \in (0, \lambda_A^C]$ (from Proposition 5).

If, on the other hand, the kin has *adequate wealth* $(W \ge \overline{W})$, since loan guarantee is costless to the kin under credible signaling, he will always choose this relational contract.²⁷ We summarize

²⁷For this reason, we do not need to explicitly consider the case where the kin with adequate wealth may prefer to offer a gift to facilitate E-signaling than to directly signal the entrepreneur's type to the bank.

the result below.

Proposition 6 An informed kin with inadequate wealth would offer loan guarantee to signal a good entrepreneur if $\lambda \in (0, \lambda_A^C]$, and tied assistance if $\lambda \in (\lambda_A^C, \lambda_A^T]$. But an informed kin with adequate wealth ($W \ge \overline{W}$) would always prefer to signal a good entrepreneur using loan guarantee. However, there is no role for gift in signaling a good entrepreneur.

Therefore, even if the kin is informed, kin's ability to signal and choice of relational contract depend on his wealth and relational distance from the entrepreneur. No signaling is feasible for low relational distance (or, $\lambda > \lambda_A^T$) unless the kin is wealthy. A kin's closeness becomes an obstacle in obtaining a bank loan. The loss of credibility that accompanies a closer relational distance requires the kin with good entrepreneur to offer more and more wealth to convince the bank about the entrepreneur's quality. Lack of adequate wealth ultimately constrains a close kin's signaling efforts. A sufficiently wealthy kin can entirely resolve the lemons problem faced by a good entrepreneur, irrespective of the kin's relational distance from the entrepreneur.²⁸

5.2 Entrepreneur's Choice of Kin For Credible Signaling

We assume that the entrepreneur has a choice of kin who are distinguished by their altruism towards the entrepreneur. Kin's choice of contract directly impacts the entrepreneur's payoff. An entrepreneur looking for project financing would therefore choose a kin so as to maximize her own payoff. For the purposes of the paper, the interesting case is to assume that the good entrepreneur prefers to undertake the project than just obtain the kin's wealth, i.e., X - I > W.

²⁸The results would change if we allowed for positive discounting , a high opportunity cost of kin's wealth or higher transaction costs associated with certain relational contracts such as tied assistance and guarantee. However, these are not critical to the main point in the paper.

The kin is characterized by his wealth and altruism towards the entrepreneur. Given project financing, the good entrepreneur prefers a kin who will also transfer part of his wealth. The greater the wealth transferred, the better off is the entrepreneur. Since loan guarantee does not entail any such transfer in equilibrium, the entrepreneur would have a preference for a kin who would choose to offer tied assitance, i.e., a kin with $\lambda \in (\lambda_A^C, \lambda_A^T]$ who is not too wealthy. The good entrepreneur's resulting payoff would be $(X - I + T^{G^*})$. In the absence of such kin, the entrepreneur would choose any other kin who is able to signal her type with a loan guarantee, thereby giving her a payoff of (X - I), i.e., either any wealthy kin or not-too-wealthy kin with $\lambda \in (0, \lambda_A^C]$ (from Proposition 6).

Proposition 7 A good entrepreneur has a hierarchy of kin choice. She would choose a less wealthy $(W < \overline{W})$ kin with $\lambda \in (\lambda_A^C, \lambda_A^T]$. Thereafter, she would be indifferent between choosing a wealthy kin or a less wealthy kin with $\lambda \leq \lambda_A^C$.

The Proposition above highlights a good entrepreneur's choice of kin for facilitating bank financing. Besides being informed, the kin's relational distance is a critical determinant of the choice of kin and his relational contract. This is also reflected in the non-monotonicity in the entrepreneur's choice of kin. While the entrepreneur may prefer a wealthy kin for sufficiently high and sufficiently low levels of altruism, she prefers a not-too-wealthy kin over a wealthy one for intermediate levels of altruism ($\lambda \in (\lambda_A^C, \lambda_A^T]$).

6 Discussion

Our paper presents a framework for studying relational and non-relational contracts. Insights from this framework are useful for explaining empirical observations. Avery et al (1998) study the relationship between guarantee and small business loans.²⁹ In this context, they find the lack of a systematic relationship between commitment use and owner wealth rather surprising. Such an outcome is perfectly reasonable based on our model where both the wealthy and not-too-wealthy kin may offer a loan guarantee, with the not-so-wealthy kin doing so if and only if they have sufficiently low level of altruism. Therefore, our analysis indicates that allowing for a measure of altruism in the empirical analysis is critical for understanding the role of wealth in commitments towards credit.

Avery et al (1998) also find that personal commitments make up only 10% of total owner investment. Unfortunately, they do not look at the other components of owner investment. However, in our framework, the entrepreneur with not-so-wealthy kin most prefers a kin who offers tied assistance. So, it would not be surprising if a large proportion of owner investment takes the form of tied assistance in the data for low income households.

Besides explaining documented empirical facts, this paper has implications for societal structure and institutions.

Implications of Societal Structure

Our theory has important predictions for the effect of alternative societal structures, based on the interaction between economic well-being (wealth), relational distance, choice of contract and bank financing. While wealthy households choose guarantee irrespective of the relational distance, the outcomes vary for lower levels of wealth.

An important dimension along which societies may differ is the relation between the individual

²⁹Their data on owner characteristics, such as personal commitments in their own business, are based on the overall household, rather than on various household members. In addition, their data does not distinguish between owner collateral and other personal collateral (which could be those by kin). This makes the mapping of our model to the Avery et al paper somewhat suspect. Nevertheless, we think there are broad insights of our paper that may apply. We discuss the Avery et al findings in this light.

and group. In collectivist cultures, the relationship among individuals in a group is intense with high interdependence. On the other hand, there is more "detachment, distance, and self-reliance" in cultures that are individualistic (Triandis et al (1988)). Individuals in such cultures would not subordinate their personal goals to those of the group, such as family or tribe. Thus, in the context of our model, individualistic societies are characterized by lower levels of λ than are collectivist societies. Thus, those within individualistic societies can credibly signal using guarantees rather than tied assistance (from 6).

(1) More (Less) individualistic societies should have a larger (smaller) proportion of bank loans with guarantees than with tied assistance.

This hypothesis is in line with the observation that as societies move from being collectivist to individualistic, there is also a shift in the nature of exchange between individuals. In particular, exchange becomes more generic ("universalistic") rather than individual-specific ("particularistic"). In that sense, tied assistance is less fungible and hence more specific than a loan guarantee.

Societies based on degree of individualism, as above, differ along the "strength of ties" spectrum. However, a nuclear family, besides being close-knit, is also usually small. Joint family, on the other hand, has larger but more dispersed relationships. The benefit of joint family is that there is a larger pool of members with low λ to choose from, as against nuclear families that will likely have a smaller pool and with higher λ .³⁰ It is difficult for an entrepreneur from a nuclear family to choose a kin who may credibly signal. But larger the household, greater the number of loans it can be expected to have. By extension, we would also expect lower bank financing in economies characterized by nuclear family structures.

³⁰The key distinction between nuclear and joint family is the relative difference in average altruism or relational distance. Their altruism could vary depending on whether they are in an individualistic or collectivist society, as long as the average altruism is higher for nuclear than for joint family in either society.

(2) More nuclear the family structure, lower the amount of bank credit.

At a macro level, λ could be thought of as a measure of trust in society. Our model has the counter-intuitive implication that an improvement (deterioration) in such trust would hinder (facilitate) signaling and reduce (increase) bank financing in the economy. Changes in trust could result for many different reasons. Adverse shocks may enhance trust among existing partners in a variety of ways. For instance, suffering brings people closer, shortening the relational distance. On the other hand, it is also possible that adverse shocks may pull people apart in which case the effect will be opposite. A recession characterized by excessive default may reduce people's sense of comfort. In this case, even if the underlying characteristics of the potential entrepreneur does not change, an observed willingness to extend support through guarantee or tied assistance would provide a stronger credible signal to the bank about the entrepreneur's quality. Hence, there would be more bank financing.³¹

(3) An increase (decrease) in trust in society due to an exogenous adverse shock would reduce(raise) the amount of bank credit.

Implications for Institutional Development

The results in our paper suggest that social ties play a critical role in the absence of effective formal institutions. With underdeveloped due-diligence capacity, society benefits if formal financial institutions rely on information embedded in social ties. Our framework suggests that there is a fine line between the usefulness of these ties and cronyism in bank lending. Cronyism is most common amongst very closely-knit groups. With very short relational distance, there would be

 $^{^{31}}$ Avery et al (1998) note that personal commitments in small business finance may have grown in the 1990s due to recessionary factors such as weak commercial real estate markets. This conclusion is not at odds with what would be predicted by our model. However, their focus is on personal commitment which includes guarantees and collateral, rather than tied assistance. Moreover, in our simple model, we do not distinguish between various forms of personal commitment.

greater incentive to mislead the bank about the borrower quality. Bank lending based on cronyism would therefore serve to weaken the economy as a whole and the banking sector in particular. It is only in moderation that cronyism is useful, particularly in poorer countries.

Along these lines, our analysis also recommends caution against stringent "conflict of interest" regulations prohibiting loans involving family participation. Consider pyramidal business groups which are widespread, not just in developing but also in developed countries such as Canada. By their very structure, such groups are characterised by a high degree of opacity making it difficult for outsiders, such as banks, to value the investment opportunities within these groups. Relying on the "social" ties (measured by the stake of the firm at the top of the pyramid in the firm below) and contractual arrangements between these firms in the business group could help outsiders make informed decisions. Governance-based regulations that aim to prevent lending to pyramidal groups could therefore lead to inefficient outcomes.

The nature of kin's contracts should reflect the institutional environment. A poor economy with an unenviable record of collateral claims resolution should expect to witness greater reliance on project-specific in-kind assistance, rather than loan guarantees, for facilitating bank loans. Gifts as a signal of entrepreneur quality would be few and far between. Thus, economies with inadequate institutions for facilitating these alternative relational contracts, such as an effective judiciary, should undertake necessary institution-building measures to encourage such contracts. The inability to enter into preferred relational contracts adversely affects the extent of bank financing.

Key Assumptions

The credibility and effectiveness of a kin's signal relies on the bank knowing the exact level of the kin's altruism. Otherwise, a kin could misrepresent his true level of altruism. The bank in turn would anticipate such a possibility, which would dilute the credibility of the kin's signal. The net result will be one of lower bank financing and hence greater social inefficiency. It is unrealistic to imagine that a bank would know precisely the level of a kin's altruism. However, for our results to go through, knowing the *range* rather than the exact value of a kin's altruism is mostly sufficient. For instance, for a not-too-wealthy kin offering tied assistance to an entrepreneur, as long as the bank knows that the kin's altruism lies in the range $(0, \lambda_A^T]$, it would be willing to offer a loan (from Proposition 4). Such an assumption is not unrealistic. Banks frequently acquire such soft information over the course of their relationship with a borrower, or if the bank exists in a small close-knit community. Besides, one could consider the level of altruism to be a rank ordering of the distance of the relationship between kinship group members. For instance, it may be reasonable to assume that the altruism level of a parent is higher than that of an uncle.

Other Relational Contracts

Besides guarantee, tied assistance and gift-giving, there may be other options available to a kin - extending loans and taking equity stake or partnership in the entrepreneur's project, for example. One justification for ignoring these options may be the ambiguity and informality in kinship financial dealings, making it difficult to distinguish a loan or equity participation from a gift. However, it would be interesting to extend the current framework to explicitly study the implications of these choices.

7 Conclusion

Better information and mutual trust resulting from protracted interaction between players form the basis for contractual arrangements that may otherwise not be possible. In this paper, we show the role of relational distance in the interaction between relational and non-relational contracts. We study this in the context of the social institution of family and its role in venture financing in a credit-rationed environment arising from asymmetric information. Unlike the existing literature on informed agents' role in financing, we explicitly consider the strength of the relationship between players who are party to a relational contract. In our model, altruism is necessary for facilitating bank financing. However, if the kin is not too wealthy, a very high level *per se* of altruism may be accompanied with greater under-investment even when one party (not the bank) is better informed about the borrower. In fact, entrepreneurs seeking bank financing are better off searching for either rich relatives or relatives who are not too altruistic towards them. Furthermore, we show that some altruistic kin may facilitate bank financing even when they are not informed about the entrepreneur's quality. Thus, explicit consideration of relational distance, hitherto largely ignored in the literature, is critical.

Besides being critical for determining the credibility of a kin's signal, the relational distance between players also affects the optimal choice of relational contracts. While the existing literature has ignored the role of relational distance between parties, it has also explored the implications of alternative contracts typically one at a time. However, by allowing for various contractual arrangements in a single model, we show that these relational contracts are not perfect substitutes since they impose differential signaling costs on the kin, based on relational distance and wealth. In fact, the kin has a pecking order of relational contracts. Results of analyses that ignore relational distance or the interaction between alternative relational contracts are likely to be misleading.

The paper offers us insights into the effect of alternative societal structures, such as nuclear and joint families, and individualistic and collectivistic cultures, on bank financing. Some of these may be empirically tested with appropriate data. Our results have broad institutional implications regarding crony capitalism and conflict of interest regulation.

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