

IMPERFECT INFORMATION, SOCIAL CAPITAL AND THE POOR'S ACCESS TO CREDIT

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ABSTRACT

The last fifty years have seen the large-scale implementation of financial programs that specifically target the poor. Many such early programs, often implemented by governments, were not able to satisfactorily deal with information uncertainties, and hence resulted in weak incentive structures, heavily bureaucratic and politicized approaches and inevitably low repayment performance. More recently (even though the concept is more than a century old), a new type of approach to lending to the poor—known as microfinance—has designed specific methods to deal with information uncertainties, resulting in impressive program performance. Almost concurrently, social scientists and development practitioners have identified and assembled growing anecdotal evidence to suggest that the forms of capital traditionally used in growth theory (natural, physical and human) are missing an important element. This concept, generically known as “social capital”, includes the various networks of relationships among economic actors, and the values and attitudes associated with them.

A large part of the success of microfinance programs resides in their ability to surmount the significant information problems inherent in dealing with poor customers with no banking experience and unknown creditworthiness. Hence this literature review examines how social capital can help reduce the cost of imperfect information in small financial transactions, and thereby improve the performance of credit delivery programs in the developing world. It will suggest that, although social ties facilitate the poor's access to credit and lowers its cost, they do so in a more diverse and complex manner than the mainstream literature on development finance indicates. In addition to the horizontal networks of borrowers that are largely credited for the success of organizations like the Grameen Bank, credit delivery systems also rely heavily on vertical and/or hierarchical relationships between lenders and borrowers.

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INTRODUCTION

In industrial economies, households generally obtain credit, against individual guarantees, from commercial sources that reach loan decisions on the basis of readily available information on borrowers' credit risk. In most developing economies, however, poor households usually do not have access to these guarantee mechanisms, such as non-real estate-based collateral. This situation, combined with the overall lack of information about these potential borrowers' creditworthiness, contributes to a virtual exclusion of this group of borrowers from formal credit markets.

Many governments in developing countries identified this situation and developed lending programs specifically targeted at the poor. Most of these programs were not able to satisfactorily deal with information uncertainties, and hence resulted in weak incentive structures, heavily bureaucratic and politicized approaches and inevitably low repayment performance. In reaction, several classes of institutional arrangements were developed, mostly by NGOs, to offer to poor borrowers valid substitutes for individual collateral, and to provide to lenders low-cost alternatives to imperfect creditworthiness information.² An increasing number of finance institutions provide credit to the poor on the basis of "social collateral", through which borrowers' reputation or the social networks to which they belong, take the place of traditional physical or financial collateral. Since these arrangements build, to various degrees, on the extent and strength of personal relationships, they provide a fertile ground for the analysis of the role of social capital in the provision of credit.³ In addition, credit arrangements rely on several classes of social capital identified in the conceptual literature, such as horizontal, vertical and ethnic-based relationships. Finally, the role of social connections in obtaining credit is also greatest for poor borrowers: as the financial needs of the borrowers increase, their reliance on immediate social networks for credit access decreases.

This paper, largely based on a review of the literature, will briefly present the main concepts behind the term of social capital, then review how different methodologies of development finance rely on various elements of social capital to lower information uncertainties and increase repayment rates. A conclusion summarizes the main findings of the paper.

² Stiglitz and Weiss' (1981) paper on incomplete information equilibrium in credit markets has served as the theoretical background for many empirical inquiries into credit market interactions. Stiglitz writes: "[U]nless new institutions find substitutes for the mechanisms used by the moneylenders to overcome the problems of screening, incentives and enforcement, the moneylenders' power is unlikely to be broken by the entry of institutional credit" (1990: 238).

³ In a number of developing countries, access to commercial credit (or favorable lending terms) can often be secured via personal relationships between borrowers and bank managers. Although these relationships testify to personal relations that are sufficiently strong to sometimes result in extra-legal transactions, they will not be covered in this paper, on account of its focus on finance that targets the poor.

WHAT IS SOCIAL CAPITAL?⁴

Traditionally, the concept of capital has included natural, physical—or produced—and human capital as the main building blocks of economic development and growth. It is now recognized that these three types of capital determine only part of the process of economic growth, because they overlook the way in which the economic actors interact and organize themselves to generate growth and development. The missing link, in other words, is social capital (Grootaert, 1997).

The social capital of a society includes the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development. Social capital, however, is not simply the sum of the institutions that underpin society (“structural social capital”), it is also the glue that holds them together. It includes the shared values and rules for social conduct expressed in personal relationships, trust, and a common sense of “civic” responsibility, that makes society more than a collection of individuals (“cognitive social capital”).

The scope of the concept of social capital varies considerably in the literature. The narrowest concept of social capital is associated with Putnam (Putnam 1993; Putnam and others 1993) who views it as a set of “horizontal associations” between people: social capital consists of social networks (“networks of civic engagement”) and associated norms that have an effect on the productivity of the community. While originally this concept of social capital was limited to associations having positive effects on development, recently it has been relaxed to include groups that may have undesirable outcomes as well, such as associations with rent-seeking behavior. The key feature of social capital in this definition is that it facilitates coordination and cooperation for the mutual benefit of the members of the association (Putnam 1993).

A second and broader concept of social capital was put forth by Coleman (1988) who defines social capital as “a variety of different entities, with two elements in common: they all consist of some aspect of social structure, and they facilitate certain actions of actors — whether personal or corporate actors — within the structure” (p. 598). This definition expands the concept to include vertical as well as horizontal associations, and also the behavior within and among other entities such as firms. Vertical associations are characterized by hierarchical relationships and an unequal power distribution among members. This wider range of associations covers a wider range of objectives — positive as well as negative. Coleman is explicit about this: “A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others” (p. 598). In fact, this view of social capital captures social structure at large, as well as the ensemble of norms governing interpersonal behavior.

A third and most encompassing view of social capital includes the social and political environment that shapes social structure and enables norms to develop. In addition to the largely informal, and often local, horizontal and hierarchical relationships of the first two concepts, this view

⁴ This section draws heavily on “The Initiative on Defining, Monitoring and Measuring Social Capital: Overview and Program Description.” Social Capital Initiative Working Paper No. 1, April 1998. Washington, D.C.

also includes the most formalized institutional relationships and structures, such as government, the political regime, the rule of law, the court system, and civil and political liberties. This focus on institutions draws on North (1990) and Olson (1982), who have argued that such institutions have an important effect on the rate and pattern of economic development.

These three concepts of social capital should not be seen as alternatives, but rather as different manifestations of the social capital present in a society. Horizontal and hierarchical associations and macro-institutions can and should co-exist in order to maximize the impact of social capital on economic and social outcomes. For example, macro-institutions can provide an enabling environment for local associations to develop and flourish, and in turn local associations can sustain the regional and national institutions and add a measure of stability to them. This kind of complementarity will enhance the contribution of social capital to development (Serageldin and Grootaert, 1997).

SOCIAL CAPITAL AND FINANCE FOR THE POOR

Different types of credit arrangements targeted at the poor rely on social ties and interactions as part of the design and implementation of their delivery and enforcement mechanisms. They are discussed in this presentation according to a roughly decreasing order of lender-borrower closeness and exogeneity of the lending methodology.⁵ They are, respectively, the rotating credit and savings associations (ROSCAs), the local moneylenders, trade credit, and the group-based microfinance programs. Some of these arrangements, especially the ROSCA and the group approach to lending, have generated more theoretical and empirical coverage than others—as well as more controversy—and this fact is reflected in the space devoted to both of them in the following pages.

1. Rotating Savings and Credit Associations

Rotating Savings and Credit Associations (ROSCAs) are a “response by a socially connected group to credit market exclusion“ (Besley, Coate and Louny, 1993: 807), and a widespread way to crystallize social relations in an informal—yet often formally run— system of internal credit delivery.⁶ Besson (1995) claims that the oldest identified ROSCAs are more than 400 years old, but Izumida (1992) describes the *kou* system, introduced in Japan in the 12th or 13th century, whose features are strikingly similar to that of the contemporary ROSCA.

A ROSCA is a group of men and/or women who contribute to a collective fund, which is at regular intervals distributed—randomly, by auction, or by collective decision—to one of the group’s

⁵ This classification was inspired in part by Michael Woolcock’s Ph.D. dissertation (1998).

⁶ The concept of ROSCA is known as *chit fund* in India, *kye* in Korea, *partners* in Jamaica, *susu* in Ghana, *njangeh* in Cameroon, *tontine* in Francophone Africa, *cheetu* in Sri Lanka, *arisan* in Indonesia, and *pasanaku* in Bolivia. Under their different formats, they have been extensively studied by anthropologists, economists and sociologists. In addition to the references presented in the text, see Bouman (1977) and Wu (1974).

members. In effect, all members of the group (except the last person in the rotation) receive an advance that they repay through their contribution to the fund for the duration of the cycle; the earlier an individual's position in the rotation, the larger the credit he/she receives, and the lower the risk he/she faces (if a person fails to contribute after he/she receives the fund, only those members after him/her will be adversely affected). At the end of a cycle, i.e., when each member has received the fund once, the ROSCA is dismantled or, more often, reconstituted with the same or similar membership. This creates the possibility that well-performing member can move up in the rotation, providing an incentive for good payment record that spans several rotations, and—if new entrants are chosen carefully—potentially reinforces the efficiency of the association.

ROSCAs play an important role as a risk management tool; they can offer an insurance mechanism against income shocks, provided that these shocks are not correlated among participants. They are an extension of traditional savings groups which, as documented by Maloney and Ahmed (1988) and Begashaw (1978), are constituted of individuals who, regularly or irregularly, deposit funds with an individual or a subset of the group. Funds are returned to individual savers at the end of a given period, and there is no systematic rotational distribution mechanism.

Van den Brink and Chavas (1997), in their study of a ROSCA system in a Cameroon village suggest that, when properly run, this system is more efficient than all other credit arrangements in the region. It reaches 90 percent of all households, and handles thousands of transactions each year at a low transaction cost, mobilizing about 11 percent of village income. Besley, Coate and Loury (1993) have shown that in addition to providing an instrument to save up for large or indivisible purchases, ROSCAs are an improvement over autarkic savings.

ROSCAs function as long as individuals value the benefits of membership in the association (or the absence of collective ostracism) more than the benefits of defaulting. As a result, all members contribute to the fund even after they have received the total group collection. The collective trust that enables this system to function can be present at the beginning of the first rotation (if the members are chosen on the basis of pre-existent levels of trust among themselves.) But, as Rutherford (forthcoming) points out, the system can also create the levels of trust that makes its operations possible, even if its members didn't know each other at the beginning of the cycle. Rutherford describes the functioning of Bangladeshi ROSCAs, most of which are set up and run by small-time shopkeepers who recruit the members and arrange the rotational mechanism. Since most of the new members don't know each other, trust is in-existent when the first rotation begins, and is built over time, as participants learn to identify members who perform well, and eliminate those who are unreliable. Rutherford writes: "Trust is more of a verb than a noun. Perfect strangers, coming together with the limited aim of running a ROSCA, can sometimes construct and practice trust more easily than people with histories of complex relationships with each other."⁷

⁷ This observation highlights one of the persistent riddles in the literature on social capital: is trust a left- or right-hand side variable? Collier presents an attractive solution to the puzzle: "[trust] is an intermediate variable, produced by S[ocial] I[n]teraction and producing a reduction in transactions costs, but its durability gives it the property of capital" (1998: 7).

Since all sources of the rotating funds are, by design, internally generated, one should expect that social factors be a critical element of their performance. Although there are significant financial reasons to join a ROSCA, the main defining characteristic of a performing association lies in the reduction of the risk of opportunistic behavior that results from the peer pressure for performance by all members. Advancement toward the beginning of the rotation is a group-sanctioned recognition of the member's creditworthiness—due to his or her good payment record—while failure to contribute to the fund creates extraordinary pressures for repayment from other members. Outright default is seen by members as a direct threat to the survival of the ROSCA, and is treated accordingly. The costs of default include social mechanisms that extend beyond the domain of the ROSCA into community-wide sanctions such as peer pressure and social ostracism, which affect every aspect of that individual's social and economic life. Villagers claim that “not even death is an excuse” for default, indicating that obligations to the fund have a hereditary character. However, according to Van den Brink and Chavas, “while social pressure is certainly great, people do keep a sharp eye on the transactions costs involved in enforcing payment” (1997: 752), as the costs of loan recovery eventually outweigh the benefits of compliance.⁸ This reflects the implicit recognition that social relations can be damaged by enforcement of payment obligations, and hence can adversely affect the social fabric that makes the ROSCA possible.

Although ROSCAs are financing instruments mostly used by the poor, they are not exclusively so, contrary to microfinance.⁹ According to Adams and Canavesi de Sahonero (1989), the most likely ROSCA subscribers in developing countries can be found among white-collar workers in large cities.¹⁰ Van den Brink and Chavas suggest, however, that in the case of Cameroon, the existence of looser social networks in urban settings result in enforcement mechanisms that rely less on community sanctions (such as prestige loss) and more on forceful seizure of the delinquent member's property. Nevertheless, the ROSCA appears as a fairly inflexible system of credit delivery, whose survival relies almost entirely on the use of social pressures to ensure the preservation of the personal resources of group members within the association. As is apparent in the above discussion, the ROSCA's worldwide appeal is in large part due to its ability to successfully resolve the information problems that plague many other credit programs. By seeking information about potential members' creditworthiness, and by using information about existing members to change their place in the rotation, ROSCAs can affect their risk structure, and hence their survival.

⁸ Van den Brink and Chavas also describe a “trouble bank” from which ROSCA members can borrow to cover their contribution to the fund. Similar emergency funds for Indonesian ROSCAs are described by Hospes (1992). Other means of avoiding default include adjusting the order of rotation so that high-risk members are moved toward the end of the cycle, or buying one high-risk member's desired commodity and keeping it as collateral until the end of the rotation.

⁹ Because of a programmatic focus on poverty alleviation and correspondingly strict targeting principles, most microfinance organizations exclusively serve the poor's financial needs.

¹⁰ Adams (1992) mentions a ROSCA operating in 1987 among employees, all owners of doctoral degrees, of the International Monetary Fund.

2. Local Moneylenders

Moneylenders, typically landowners or traders, are often the only source of credit available to the poor in developing countries, especially in the rural areas of Asia.¹¹ Their loans are extended quickly and for short periods, and at interest rate levels that are high in comparison with other lenders, including microfinance programs.

Like the other credit arrangements presented in this paper, moneylending is a method to address imperfect information in segmented financial markets. Because of their long-term presence in the village and their networks of influence over many aspects of the community life, moneylenders have a good knowledge of the credit-worthiness of the borrowers, and can design personalized interest rate structures accordingly. As Stiglitz (1990: 352) notes, “the local moneylenders have one important advantage over the formal [lending] institutions: they have more detailed knowledge of the borrowers. They therefore can separate out high-risk and low-risk borrowers and charge them appropriate interest rates”. Mansuri notes that most moneylenders are not primarily in the business of lending money: funds lent are often a means to obtaining returns on other transactions in which both lender and borrower are involved. Since these relationships are the very mechanism through which information about the borrower and his/her ability to repay is indicated to the lender, a segmentation by borrower-lender clusters often arises. Timberg and Ayar (1984) report that they asked an Indian moneylender how he decided to accept additional clients; he responded that he never had a new client. Onchan (1992) describes the arrangements within Thai villages, where a half-dozen moneylenders routinely operate with little competition.

The lending relationships that moneylenders cultivate with the borrowers are of a long-term nature, and they are usually based on a pattern of personal interactions with the borrowers and their families. They directly draw on the traditional patron-client relationship, or a set of hierarchical social interactions reminiscent of the vertical dimensions of Coleman’s (1988) definition of social capital. These relationships are, by nature, unequal, as the moneylender has access to several classes of means—including harassment and force—to ensure repayment. Interest rates are often set in such a way that full repayment is unlikely and unexpected from the lender’s side, and the loan is used as a way to secure asset transfers or long-term indenture relationships with borrowers and their families.

3. Trade Credit

Apart from self-finance, trade credit is, in many countries, the only source of operational funds for small and medium enterprises. Social relations are an important element of a traditional solution to this situation: trade credit among enterprises or, credit provided by shopkeepers to their customers. When information about borrowers is difficult to find, or when access to commercial banks or microcredit is unavailable, enterprises rely heavily on credit from their suppliers. Personal

¹¹ For descriptions of moneylending practices in Africa, see Adegboye (1969) and Udry (1990).

relationships between the purchaser and the supplier, as well as the links that result from a shared ethnic background, are critical elements of the existence of trade credit.

Stone and al. (1992) describe an effective system of informal information gathering among microentrepreneurs in Brazil that, like the networks of diamond merchants in Europe, places a premium on untarnished reputation. Fafchamps (1996) compares the trade credit practices in three African countries. He finds that in countries where the manufacturing sector is relatively small (Ghana and Kenya, as opposed to Zimbabwe), credit information is available within Asian business groups, or as a result of repeated cash transactions. Using data from the World Bank's Regional Program for Enterprise Development, Biggs and Raturi (1998) empirically document how ethnic ties among Asian groups in Kenya significantly affect access to trade credit. They find that, although borrowers' ethnicity is not an important determinant of access to commercial banks, more Asian-than African-owned firms give supplier credit, and that they prefer to do so within their own ethnic group, regardless of the length of the relationship between supplier and purchaser. Sanderatne (1992) reports that poor urban and rural households in Sri Lanka heavily rely on store credit, a variation on trade credit, to buy food and other provisions. Since there is no formal accounting system involved, the arrangement is conditional on the trust that the customers place in the shopkeeper.

4. Group-based Microfinance Programs

The group lending, or “solidarity group” approach to credit delivery is based on the assumption that the poor represent a much lower credit risk than the formal financial sector generally assumes and that, under specific circumstances, they can be trusted to repay small uncollateralized loans, using a lending methodology that relies on traditional and personal interactions among borrowers. Group lending is the most visible—but by no means the earliest or most widespread—form of financial services for the poor, which are collectively labeled “microfinance”.^{12 13} Like the ROSCA, the group-lending technology has attracted the interest of practitioners as well as theoreticians.¹⁴

¹² “Microfinance” is a more recent concept than “microcredit”. It was developed in the early 1990s to include both the borrowing (microcredit) and deposit-taking (microsavings) aspects of financial services for the poor.

¹³ Other microfinance programs, such as BRI and BKK in Indonesia, are based on individual-liability loans. They feature repayment rates that are comparable to those of group-lending systems, suggesting that there is more at play in explaining high repayment performance than social networks among borrowers. These programs build on pre-existing relationship within communities, by using the testimony of a respected community figure as collateral on the borrower's loan. The three largest microfinance programs in Indonesia, Badan Kredit Kecamatan (BKK), Badan Kredit Desa (BKD) and Bank Rakyat Indonesia (BRI), built their successful lending program on this type of social collateral (Robinson 1992; 1994). This arrangement is apparently specific to Indonesia, according to Armendariz de Aghion and Morduch (1998), who attribute it to a “long history of strong but decentralized village government structures on which programs like the BKD can piggy-back—and replication has not been attempted elsewhere” (1998: 5-6).

¹⁴ For theoretical approaches of the role of groups in addressing imperfect information and transaction costs in credit delivery, see, for example, Stiglitz and Weiss (1981), Stiglitz (1990), Varian (1990), Banerjee, Besley

Although the group-based approach to lending to the poor saw a rapid expansion from the early 1970s, through the work of UNO in Brazil and the Grameen Bank in Bangladesh, the concept is more than a century old. Woolcock (1998) describes the conditions that led to the “first deliberate attempt to establish financial institutions with the poor in developing economies on the basis of their social, rather than their material, resources” (1998: 95). He is referring to the “People’s Banks”, as were collectively called the credit cooperatives that Frederick Raiffeisen created in mid-nineteenth century Germany. These cooperatives present intriguing parallels with the goals, methods and results of present-day group lending programs, as exemplified in some of the eligibility requirements for membership set forth by Raiffeisen: residence in small rural communities, trustworthiness as gauged by current members, and unlimited liability for loans of fellow members. Ghatak and Guinnane (1998) list two important differences between the “People’s Banks” and Grameen-type models, both of which affect the role of social capital in explaining performance. The first difference is the source of funds: while some German cooperatives relied on external sources of funds for their on-lending operations, they mobilized a large part of their capital from local funds, cooperative assets, and (member and non-member) deposits. The second difference relates to the duration of the group, which in the German model was a direct result from of the long-term participation of members in the cooperative. In the Grameen approach, groups exist only for the duration of the extended loans, although in practice groups that are constituted for new loans often share the same membership.¹⁵

The most visible and studied example of group-based lending is the Grameen Bank in Bangladesh, although many different variants of its approach have been implemented on other continents.^{16 17} The Bank was started in 1976 by Mohammad Yunus, a professor at the University of Chittagong, as a research project. By 1994, the Bank had served half of all villages in Bangladesh, with a total membership of more than 2 million, of which 94% are women. Small uncollateralized loans are repaid in weekly installments. Using the group lending methodology and transparent loan decisions, the Bank has consistently reported repayment rates in excess of 95%. (Note that microfinance specialists generally discount repayment rates as indicator of performance

and Guinnane (1994), Devereux and Fishe (1993), Besley and Coate (1995), Aghion and Gollier (1996), Conning (1997), and Madajewicz (1997).

¹⁵ For more information on the German precursor approach to banking for the poor, see Tilly (1989).

¹⁶ According to Pitt and Khandker (1995), group-based lending programs have shown promising results in Bangladesh, Cameroon, Malawi, South Korea, and Malaysia. The methodology has proven less successful in India, Egypt, Venezuela, Kenya, and Lesotho. Group-lending methodologies have also be introduced in poor areas of industrial countries, where they also have met with mixed success. See following footnote.

¹⁷ Severens and Kays (1997) have identified 328 microenterprise lending programs in 47 US States in 1995. 85 percent of these programs were less than ten years old, but in that relatively short period of time, they had collectively lent \$126 million to 171,555 people. According to Light and Pham (1998), about 20% of these programs in the US use a group lending methodology; others are based on individual loans. Among the former group, the relative short track record of the Women’s Self-Employment Project in Chicago is more promising than that of most other group-based credit in the US, whose performance has been much less effective than that of their model in Bangladesh. Balkin (1993: 253-4) suggests that the poor in the United States “are relatively impoverished in social capital”; Solomon (1991) notes that the loan discipline exerted over members does not match that exhibited by Grameen.

of credit programs, focusing mostly on traditional financial indicators and, from the borrowers' side, the rate of return on investments they finance with the borrowed funds.) According to Khandker, Khalily and Khan, despite posting profits at the program level since 1986 (with the exception of 1992), the Bank is not yet fully independent of subsidies. Although faced with lack of financial clarity and inflated success claims, Morduch (1998b) calculates that Grameen would have to raise the nominal rate on its loans from 20% per year to 33% to be able to function without subsidies. In addition, Grameen has benefited from a close relationship with the Bangladesh government (it was established by the Grameen Charter, a special decree of the Bangladesh (Central) Bank, and its board includes Government officials).¹⁸ The co-production aspect of credit delivery systems is also described in Evans (1996). He reports on a Grameen replication model in Vietnam, which, apart from its high repayment rate, is characterized by the combination of pre-existing relationships within the context of a close synergy with the municipal government.

The remainder of this section will first describe the features of group-based lending programs that draw on social relations; it will then examine the empirical role of these features in explaining the performance record of these programs and propose additional explanations for these successes.

Main Social Features of Group-lending Programs and Supporting Evidence

The two main “social” elements of the group-based lending programs are discussed below.

1. Self-selected, small, and homogeneous borrowers' groups in densely populated areas are jointly liable for loans.

The main constraint faced by non-local lenders in offering credit access to the poor resides in severe imperfect information problems, which Matin (1997) describes as hidden information, hidden action,¹⁹ and enforcement constraints. The main innovation of microfinance programs stems from the observation that potential customers of these programs have a comparative information advantage over the lender, which could be mobilized to develop mutually advantageous financial services. As described by Matin, joint liability “is a contract in which the provision of the private good (e.g.: an individual's access to credit) is made conditional on the provision of the public good (group repayment). This is seen as an effective and least costly incentive making the borrowers use their knowledge about each other in screening the “right” people (thereby smoothing the hidden information problem), engaging in peer monitoring (thereby reducing the hidden action problem) and exerting peer pressure (thereby alleviating the imperfect enforcement constraint)” (1997: 262).²⁰

¹⁸ While this has been presented as an example of successful public-private collaboration in the provision of credit to the poor, the inability of other microfinance organization in Bangladesh to claim a similar status under the Grameen Charter has led some of them to suggest that the benefits from this coproduction scheme do not extend to all microfinance providers.

¹⁹ This refers to the use that the borrower makes of the loan, and the accuracy of the reporting of the income from the loan-financed activity.

²⁰ The importance of the screening-out process in the success of the group lending approach cannot be overstated. By increasing their attention on the screening process, members decrease the need for peer monitoring and pressure at a later stage. Note that the hidden information problem is closely related to the

The combination of these three factors contributes to cost of lending that, on average, is significantly lower than if the lender had to address all of them directly, allowing it to disburse larger amounts and to reach poorer people (through riskier loans) than if these factors were absent.²¹ In effect, this is made possible by the *de facto* transfer of information gathering from the lender to the group.

Self-selection of group members is a major element of this process. Wenner (1995) finds in his study of credit groups of Costa Rica that groups that screened members according to reputation had a significantly lower delinquency level than those that didn't. Similarly, Sharma and Zeller (1997) find in their empirical study of repayment performance of three microfinance programs in Bangladesh that default rates are lower for self-selected groups. In Burkina Faso, work by Kevane (1996) presents examples of ill-formed groups, several of which had been established by program officials, and included members who had never met each other. Ghatak (1997) suggests that *ex-ante* threat of joint liability would lead to assortative matching. Hossain (1988), for example, reports that under the Grameen Bank scheme people are asked to choose as partners "like-minded people of similar economic standing who enjoy mutual trust and confidence." As a result, "safe" borrowers face a lower effective interest rate compared to the risky borrowers. This, in turn, attracts "safe" borrowers back in the market, thereby improving the quality of the pool of borrowers. Self-management of groups is usually more successful than direct involvement by outsiders, although regular and sustained contact with NGO staff is a recognized element of high repayment rates, as detailed below.²² Finally, the ability of groups to be constituted on the basis of earlier collective action (not necessarily credit-related) serves as a filtering device and increases the likelihood of good credit performance (Bratton 1986). The Bolivian BancoSol program, which relies on groups composed of five to seven borrowers, includes groups that previously existed as ROSCAs, contributing to their high success rates as microfinance institutions.

The importance of *group size* in fostering program performance is subject to debate in the literature.²³ The Grameen Bank, and most of its replications, uses groups of five persons, as a compromise between the search for economies of scale and easy enforcement of joint liability. BancoSol groups usually consist of 4-7 members (Andersen and Nona, 1998). Mosley and Dahal (1985) show that, in a Grameen replication in Nepal, mutual trust was low in groups of more than 20 persons.

Homogeneity of groups, mostly in terms of village location, gender, landholding and income levels, has also been shown as an important element of high repayment rates. While groups in Malawi often include kinship-related members (Schaefer-Kehnert, 1983), members of the same

concept of adverse selection in economics, while the hidden action problem is similar to the moral hazard and state verification concepts.

²¹ See Andersen and Nina (1998) for a theoretical demonstration of how limited joint liability group lending reduces interest rates for clients who are not able to offer collateral.

²² These observations mirror the findings of Uphoff (1992), Narayan (1995) and Ostrom (1995) that voluntary organizations that have roots in the community are more effective than externally imposed groups.

²³ See examples for Ghana in Osuwu and Tetteh (1982), for the Dominican Republic in Devereux and Fische (1993) and Adams and Romero (1981), and for Zimbabwe in Bratton (1986).

family are not allowed by Grameen to be active in the same credit group. Using the example of Small Farmers' Development Program in Nepal, Devereux and Fische (1993) suggest that the focus on group homogeneity helps reduce the potential for cross-subsidization between group members. They write that "[i]f groups are organized with non-homogeneous members, which might occur if some members misrepresent their economic status, then the potential for default or delinquency is high and the chance that the group will remain together over time is low" (1993: 106). Conning (1996) adds that this homogeneity also relates to a relatively low covariance among the returns to borrowers' projects.²⁴ The empirical evidence on the role of homogeneity in explaining group performance is mixed, however. The high level of racial and religious heterogeneity which characterizes the rural part of Arkansas where the Good Faith Fund attempted to replicate the Grameen model in 1988 is cited by Mondal and Tune (1993) as one of the reasons of the program's difficulties. Mosley (1996), however, reports the arrears rate reported by BancoSol in Bolivia between homogenous and non-homogenous groups were not significantly different. He suggests that the likelihood of obtaining peer support is higher in a non-homogenous group. Sadoulet (1997) finds supports for this claim in a microfinance program in Guatemala. He suggests that, to the extent that participation in a group-lending scheme provides a forum for insurance arrangements, heterogeneity in risk can become an attractive element of the system. Similarly, Zeller's study of the determinants of repayment rates among 146 lending groups in Madagascar suggests that "heterogeneity in asset holdings among members, and related intragroup diversification in on- and off-farm enterprises, enables members to pool risks so as to better secure repayment of the loan" (1998: 618).

The low level of *population density* in the Arkansas region studied by Mondal and Tune compounded the program's difficulties, as proximity among members facilitates mutual knowledge of creditworthiness and monitoring, and the holding of regular meetings. In Bangladesh, Hossain writes, "elements like taking the bank to the people and intensive interaction of bank staff with borrowers may not be appropriate and could become too costly for sparsely populated environments" (1988: 81). Difficulties encountered by microfinance groups in setting up Grameen replications in the sparsely populated hills of Nepal help underscore the importance of high density for group lending program success.

2. Denying access to future credit to all group members in the case of default by any member is the most effective and least costly way of enforcing joint liability.

²⁴ The importance of group homogeneity, already mentioned in the above section on ROSCAs, presents an intriguing counterpart to a conclusion of Grootaert's (1998) study of the determinants of household expenditures in Indonesia. According to this study, the more internally heterogeneous the institutions in which households participate, the higher the level of household expenditures per capita. Note that this apparent contradiction may be resolved by a disaggregation of the factors whose homogeneity is examined. The importance of homogeneity in explaining the results of collective action probably differs according to the factor under consideration. For example, it may be that heterogeneity in knowledge levels has an opposite impact on collective action than heterogeneity in income.

Liability for loans depends on whether these are made to the group, or directly to its members. Several studies suggest that, regardless of the arrangement, *joint liability* has a positive impact on loan repayment rates. Hossain (1988) and Schaefer-Kehnert (1982) reports repayment rates of 98.6% and 97.4%, respectively, in Bangladesh and Malawi, on loans made to individuals but guaranteed by the group. Tohtong (1988) reports similar rates for loans made by the Bank for Agriculture and Agricultural Cooperatives (BAAC) in Thailand under a similar arrangement. BAAC experienced less-successful return rates with programs of joint liability on group loans. Bratton (1986) reports a different situation in Zimbabwe, where recovery rates were higher for group loans than for individual loans with joint liability (both were higher than the recovery rate on individual loans with individual liability), except in period of bad harvests. According to Huppi and Feder (1989: 23), “if an individual repays while the majority of the group defaults, he or she would be made worse off by having paid their share and subsequently also being responsible for the share of delinquents”. Joint liability on individual loans therefore appears in the literature as an attractive way to balance the contrary effects of peer pressure and free riding by members. From the lenders’ point of view, the most effective way to enforce joint liability would then be to deny access to future credit to all members of the group in case of default by any of its jointly liable members. This is known in the microfinance literature as the *contingent renewal principle*.

The next section examines the empirical validity of the two above principles, and suggests that if social capital factors critically impact the efficacy of credit delivery programs for the poor, they do so through more channels than those described this far.

The Mixed Evidence of the Role of Social Relations in Group-lending Programs

The recent literature on microfinance has brought to light several findings which question or complement the role of the above two tenets of successful group lending in explaining claims of repayment rates above 95%. These findings are important in light of the focus on information uncertainties that is behind this paper. Indeed, if the horizontal relationships among members that supposedly underline the success of group-lending are less important than previously thought, one needs to ask through which channels the significant information uncertainties discussed earlier are successfully addressed by this lending methodology.

Although it is, in principle, the functional cornerstone of group-lending programs, the enforcement of **joint liability** is often limited by significant practical and political factors, however without causing these programs to collapse. Several authors observe that, while being widely discussed in weekly center meetings, joint liability is not always enforced, making the threat of shared responsibility in many credit programs effectively non-credible.²⁵ Jain (1996) studies the repayment history of two Grameen centers with low repayment and which were eventually closed, and reports that in no case were group members asked to repay the loans of defaulters, even at the cost of the closure of the center and the loss of credit access by all members in the center, including

²⁵ Inversely, weak enforcement of the contingent renewal rule adversely affects members’ investment in joint liability avoidance strategies.

non-defaulters. Matin (1998) reports a general breakdown of joint liability in one of Grameen's oldest branches.²⁶ Montgomery (1996) reinforces this observation in a study of the Bangladesh Rural Advancement Committee (BRAC)'s repayment arrangements: in 30 BRAC Village Organizations (VOs), including about 1,200 members, borrower groups did not resort to joint-liability arrangements to maintain repayment discipline. Instead, defaulting borrowers relied on kin and close friends, rather than fellow borrowers, to meet weekly demands for repayment.²⁷ Failure to satisfy these demands does, however, often lead to exclusion from the program, and Montgomery provides anecdotal evidence that the poorest members face a larger risk of being subject to exclusion.²⁸ This suggests that instead of social capital vested among peer borrowers, group-lending schemes rely heavily on traditional family and friends contacts (see above), and that whatever social capital developed within a VO can play an exclusionary role against its poorest members. Bennett, Goldberg and Hunte (1996) find that, in two fledging microfinance programs in Asia (RSDC in Nepal and SRSC in Pakistan), "many groups do not link access to new loans to past performance and very few actually assume credit risk for their fellow members" (1996: 273). In another context, however, Ghatak and Guinnane provide specific examples of the actual enforcement record of German "People's Banks" (1998: 19). Since, as mentioned above, operating funds for the cooperatives originated locally, the social pressure for repayment was significant and—although no comparative research is available—the anecdotal evidence suggests a stricter enforcement policy than observed in today's, externally funded, credit groups.

Several authors (Armendáriz de Aghion and Morduch (1998), Rutherford (1996) and Ito (1998)) argue that microfinance programs, at least those they observed in Bangladesh, provide loans that help poor people better manage their other sources of income more often than they finance new investment projects. This observation—microfinance as an income-smoothing rather than an investment instrument—has the following implication for the role of social capital in credit provision. Almost all microfinance programs are based on schedules of weekly collections of small amounts of principal and interest. Since these reimbursements usually start a few weeks after the first loan is given, only those borrowers who have access to sufficient liquidity to cover the first repayment will join the program. This suggests that these borrowers have a preexisting source of income, and that they are more interested in ensuring that income against risk by accumulating

²⁶ Matin writes that "[t]o the extent that the effectiveness of peer pressure decreases as the proportion of irregular borrowers increase, the bank will focus effort in containing irregularities by encouraging individual liability (even partial) and thereby rewarding the relatively regular borrowers. This implies that the potency of enforcing joint liability in triggering peer pressure is highest when it may be least required (i.e. when most borrowers are regular repayers) and fails when required the most." (1998: 75)

²⁷ Gibbons and Kasim (1994) report that Grameen's experimentation with one-time (rather than weekly) repayment failed to obtain high repayment performance. Weekly meetings and repayment presumably contribute to sustained communication among members and to continued mutual monitoring.

²⁸ BRAC's own reports indicate that the annual drop-out rate from its credit program was 16 percent in 1992 and 10 percent in 1993, although it is difficult to estimate the proportion of these rates that results from exclusionary peer pressure.

savings than they are in investing in a new business.^{29 30} If this is the case, however, the microfinance program lends against the borrower's future income stream, rather than (or at least in addition to) the "social collateral" embodied in the joint liability clause.³¹

In addition, the efficacy of joint liability arrangement is sometimes affected by cultural or religious traits. The literature mentions several examples in Ireland and Burkina Faso where local norms of behavior are not naturally compatible with the importance of enforceability and credibility in financial transactions, and with the concept of mutual penalties. Aryeetey (1996) suggests that, in rural Africa, the pressure to repay a loan is directly linked to the fact that credit and debts are intensely private issues, and as a result is most effective in view of the risk of being exposed as a debtor. Hence, under credit mechanisms that are communal and transparent, such as group lending, the shame of being exposed is diminished, along with the collective pressure to repay.

Although the literature generally recognizes that **contingent renewal** is a much stronger incentive for repayment than joint liability, it has proven difficult to separate the efficacy of the two concepts. Indeed, if threats of denial of future credit are deemed not credible by group members, joint liability loses most of its incentive power.³² Weak enforcement of joint liability should therefore be observed concurrently with low occurrence of exclusion of defaulting members. Matin and Sinha (1998) indeed found that, in four Bangladeshi villages, very few microfinance customers thought that their chances of getting another loan depended on the performance of other members of their groups. Matin indicates that, in his survey of Grameen, "[t]here was a total of 81 groups [405 members] in the centres surveyed. Of these, there were only 2 groups where none of the members had any overdue loan at the time of survey. In about 35% of the groups, all the members had overdue loans. Despite this, borrowers [who had] outstanding loans, got a repeat loan from the bank. [T]he bank sees [this] as an important way to contain the repayment crisis. As one bank staff put it: "You never solve a repayment crisis by withholding future access to loans. It is by ensuring future access that you might have a chance of solving it. If borrowers know that default

²⁹ In effect, they are borrowing against future savings, which likens them to ROSCA members. This observation, made by Rutherford (1997), is consistent with the earlier mention of the earlier incarnation of some BancoSol groups as ROSCAs.

³⁰ Ito (1998) points out that Grameen-type loans are not intrinsically conducive to the start-up of new businesses. The small size of the loan, the weekly repayment schedule and meeting obligation, and the inflexible reimbursement schedule represent significant constraints to the development of business projects that are generally risky and do not usually produce quick returns.

³¹ This hypothesis receives support from recent field research in Bangladesh by Lisa Young Larance, which suggests that the role of pre-existing social capital in the self-selection of lending groups in that country may be overestimated in the literature. In a society that puts a high price of female seclusion, opportunities for women to establish strong social links on which to build lending groups are limited. Hence group selection may be more guided by the perceived business success of potential group members than by existing relationships among them. Most respondents in Larance's study acknowledged that lending group operations created a high level of social capital among members, thus questioning the unidirectionality of the relationship between social capital and successful microfinance programs.

³² Similarly, and as Huppi and Feder point out, contingent renewal only has a positive effect on repayments as long as borrowers believe that the majority of their peers will also repay, and that the lender is in a position to provide "good" clients with continued access to credit in the future.

does not carry any penalty and that they might not get further loans even if they cleared their loan, because of the group or because they have another overdue loan, they will simply not repay anything” (1998: 69).

These observations reflect the fact that enforcing the termination threat is costly for the lender, as well as the borrower; renegotiation, delaying future loans or manipulating their size are more likely outcomes in default situations. Enforcement of contingent renewal strategies on groups is also damaging to the credibility and political attractiveness of credit programs. Denial of future loans to the group if one individual defaults hurts the other members of the group who may be perfectly suitable clients, especially in the default results from an illness or a family crisis. In addition, strict enforcement reduces the customer cohorts by a multiple of the number of customers affected by a similar measure in individual loans programs, and this is a real concern for microfinance programs whose success is, in part, judged on the basis of large and growing memberships. These demands presumably affect the staff's handling of default cases.

In addition, to the extent that credit programs are run by NGOs characterized by a strong poverty alleviation goal (as is almost always the case), the potential effect of contingent renewal enforcement affects the lender's incentive to use this central element of repayment discipline as often as the risk of default would require it. The political cost of enforcing repayment by imposing sanctions on the poor also suggests why government-run group-based programs have a generally mixed performance record. Finally, rigorous enforcement of joint liability is not without social costs. The combination of these elements helps explain why group-based microfinance organizations are not always eager to enforce the two central elements of their methodology, suggesting that other social factors may be directly involved in explaining their continuing success.

Additional Social Elements of Microfinance Programs

If, as the above evidence suggests, the two main features of group-based lending programs (joint liability and contingent renewal) are not always enforced, what compensating factors help explain their very high repayment rates? Indeed, since such lending programs rely on a large extent on reputation and credibility, one should assume that repayment discipline that is not strictly enforced is likely to collapse. Yet, this is not widely observed. And if groups don't always rely on horizontal social capital to lower informational uncertainties, which mechanisms or factors take their place? And do these factors exhibit social capital characteristics?

The first of these factors involves the continuous relationship between program officers and the borrowers.³³ As a result of the weekly meetings between the loan officer and the borrowers, personal relationships between them develop. Woolcock (1999) observes that Grameen Bank loan officers are often called upon to assume the roles of marriage counselor, conflict negotiator, training

³³ As Kähkönen's (1999) review of the literature on social capital and water delivery also suggests, vertical relationship between providers and users are as important to the success of delivery programs as relationships within user associations.

officer and civic leader. At the same time, the loan officer gradually acquires information about the borrowers' creditworthiness, which can be used in enforcing repayment schedules and other program decisions.

The second factor that helps explain why programs that do not strictly enforce their two main policies remain successful relates to a—presumably unwitting—recreation of traditional patron-client (i.e., vertical social capital) between loan officers and borrowers. Sanae Ito writes that “fellow members of the same centre are loosely united with a sense of serving a common “patron” whose discretionary power to sanction loan applications serves them as the biggest incentive to act as they are expected to. In such a patron-client relationship, [Grameen] bank workers who are under tremendous pressure to maintain high repayment rates often pass this pressure on to bank members, who will then be forced into demonstrating their allegiance to their “patron” through exercising peer pressure on problematic members” (1998: 9).³⁴

Finally, Jain suggests that the main function of Grameen groups and centers is to foster a culture wherein both the members and the functionaries follow the Bank norms as a matter of routine or “cultural habit”, as a result of “the repetition of identical behavior by all 30 members, week after week, 52 times a year” (1996: 83). Similarly, the success of microfinance organizations at instilling a common sense of duty and purpose among their staff (or “corporate culture”) is another indication that social capital plays a distinct role in credit programs that target the poor, although not always and not necessarily—or directly—through its impact on peer pressure and joint liability schemes.

CONCLUSION

An important determinant of the role of social ties that emerges from the literature is the existence and durability of credit systems characterized by the closeness of the borrowers to the source of funds (and, in a related fashion, the endogeneity of the lending methodology). When the credit provider is closely related to the borrower (and, presumably, the arrangement between them is of their own design), the role of interpersonal ties is a central element in ensuring repayment. When, on the other hand, there is no *a priori* relationship between the borrower(s) and the lender (and, as is often the case, the lending arrangements are extraneously proposed by the lender to the borrower), social factors are less likely to be central elements in explaining credit discipline, and their mobilization requires significantly more effort.³⁵ This gradation helps explain why ROSCAs,

³⁴ The combination of an individual relationship (which itself leads to less imperfect creditworthiness information) with a patron-client style of dependence presents an interesting parallel between microfinance programs and traditional moneylending activities.

³⁵ The mobilization of savings from members and the general public by credit organization blurs the line between these two extreme situations. As a larger part of the organization's capital comes from its members, and less from donors, the role of social ties in enforcing repayment discipline would be expected to increase. It would be interesting to conduct research linking the share of internally generated loanable funds to the enforcement of joint liability arrangements and repayment performance.

which are based on indigenous structures and are internally funded, rely on social pressure among the lenders/borrowers to guarantee financial discipline to a much larger extent than group-based lending programs. The 19th Century German credit cooperatives represent a middle ground between these two situations: although they used joint liability mechanisms to ensure repayment, most of their operating funds were provided locally. Not surprisingly, their repayment records—at least based on the available anecdotal evidence—were very high.

The literature also suggests that the use of existing social ties improves the access of the poor to credit, but that they do so through various channels whose relative importance is subject to significant debate. This is especially true in view of the large variations in geographical, economic, social and political settings in which these lending programs operate. There is, however, little doubt that social connections among borrowers in group-lending schemes allow significant savings in the screening, mutual monitoring and enforcement. However, the importance of these relations in ensuring repayment through peer pressure—and hence their ability to address all inherent informational uncertainties—is the source of much controversy in the literature. Indeed, joint liability and contingent renewal, the two main instruments of peer pressure for repayment, are often enforced imperfectly by lenders, hence damaging the credibility of the system with the borrowers. Yet this breakdown in one of the main tenets of the group-based approach does not necessarily result in the institutional weaknesses or failings that should be expected to follow.

This suggests that, in addition to the well-documented inter-borrower relations, other social factors help account for high repayment rates; in particular the quality of the relation between the borrowers and the lender organization's staff plays a role that has been underrepresented in the literature. A critical element of program success is the existence of trust between borrowers and lenders, which is in large part created and maintained by the predictable and transparent application of the lender's rules. Implicit or unconscious reliance on traditional patron-client relationships between loan agents and borrowers reinforces adherence to the program's rules, even if they are not consistently enforced. In addition, the "corporate culture" among the staff of the lender organization also appears to be a critical element of program performance. The capacity of microfinance organizations to instigate high levels of trust and mutual support among their field workers is one of the main characteristics of their operations, which, in turn, reflects their ability to successfully draw on the diverse social elements of their environment in developing successful programs of credit delivery for the poor.

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