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# **DOES SOCIAL CAPITAL FACILITATE THE POOR'S ACCESS TO CREDIT?**

## **A REVIEW OF THE MICROECONOMIC LITERATURE**

*By Thierry van Bastelaer*

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## FOREWORD

There is growing empirical evidence that social capital contributes significantly to sustainable development. Sustainability is to leave future generations as many, or more, opportunities as we ourselves have had. Growing opportunity requires an expanding stock of capital. The traditional composition of natural capital, physical or produced capital, and human capital needs to be broadened to include social capital. Social capital refers to the internal social and cultural coherence of society, the norms and values that govern interactions among people and the institutions in which they are embedded. Social capital is the glue that holds societies together and without which there can be no economic growth or human well-being. Without social capital, society at large will collapse, and today's world presents some very sad examples of this.

The challenge of development agencies such as the World Bank is to operationalize the concept of social capital and to demonstrate how and how much it affects development outcomes. Ways need to be found to create an environment supportive of the emergence of social capital as well as to invest in it directly. These are the objectives of the Social Capital Initiative (SCI). With the help of a generous grant of the Government of Denmark, the Initiative has funded a set of twelve projects which will help define and measure social capital in better ways, and lead to improved monitoring of the stock, evolution and impact of social capital. The SCI seeks to provide empirical evidence from more than a dozen countries, as a basis to design better development interventions which can both safeguard existing social capital and promote the creation of new social capital.

This working paper series reports on the progress of the SCI. It hopes to contribute to the international debate on the role of social capital as an element of sustainable development.

Ismail Serageldin  
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## **A REVIEW OF THE MICROECONOMIC LITERATURE**

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## INTRODUCTION AND METHODOLOGY

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.

However, several classes of institutional arrangements offer to these borrowers valid substitutes for individual collateral, and to the lenders low-cost alternatives to imperfect creditworthiness information.<sup>1</sup> 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.<sup>2</sup> 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 decreases.

This section of the microeconomic literature review on social capital examines the empirical evidence on the relationship between social capital and 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. This perspective helps situating the relatively recent and innovative concept of microfinance within a continuum of institutional arrangements of credit for the poor.

The different types of credit arrangements targeted at the poor are discussed in this paper according to a roughly decreasing order of lender-borrower closeness and exogeneity of

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<sup>1</sup> 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).

<sup>2</sup> 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.

the lending methodology.<sup>3</sup> 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.

## 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 Lounsbury, 1993: 807), and a widespread way to crystallize social relations in an informal—yet often formally run—system of internal credit delivery.<sup>4</sup> 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 12<sup>th</sup> or 13<sup>th</sup> 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 members. Besley, Coate and Lounsbury (1993) point to a reason for the observed prevalence of random over bidding ROSCAs: “the [personal] gains from early default [in bidding ROSCAs] are greater, and individuals with the lowest disutility from social disapproval and sanctions have a stronger incentive to bid in order to obtain the pot early” (1993: 807).<sup>5</sup> 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,

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<sup>3</sup> This classification was inspired in part by Michael Woolcock’s Ph.D. dissertation (1998).

<sup>4</sup> The concept of ROSCA is known as *chit fund* in India, *kye* in Korea, *partners* in Jamaica, *susu* in Ghana, *njangkeh* in Cameroon, *tontine* in Senegal, *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).

<sup>5</sup> The proceeds of the distribution are usually used for consumption purposes, although Chipeta and Mkandawire (1991) report that, in Malawi, these loans are used more for the purchase of working capital than for consumption. There is evidence in Nepal that business groups use ROSCAs to accumulate funds for investment purposes.

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 inexistent 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."<sup>6</sup>

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

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<sup>6</sup> 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[nteraction] and producing a reduction in transactions costs, but its durability gives it the property of capital" (1998: 7).

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.<sup>7</sup> 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.<sup>8</sup> 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.<sup>9</sup> 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.

## **LOCAL MONEYLENDERS**

Loans from family and friends are perhaps the most common form of informal finance. These arrangements are characterized by uncollateralized loans that carry no or little interest, feature open-ended repayment arrangements, and have a strong focus on reciprocity. The traditional local moneylender can be seen as a commercialized variation on this widespread type of lending arrangement.

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.<sup>10</sup> 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

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<sup>7</sup> 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.

<sup>8</sup> Because of a programmatic focus on poverty alleviation and correspondingly strict targeting principles, most microfinance organizations exclusively serve the poor’s financial needs.

<sup>9</sup> Adams (1992), mentions a ROSCA operating in 1987 among employees, all owners of doctoral degrees, of the International Monetary Fund.

<sup>10</sup> For descriptions of moneylending practices in Africa, see Adegboye (1969) and Udry (1990).

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.

## **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 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.

## **GROUP-BASED MICROFINANCE PROGRAMS**

The peer monitoring, 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”.<sup>11 12</sup> Like the ROSCA, the group-lending technology has attracted the interest of practitioners as well as theoreticians.<sup>13</sup>

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

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<sup>11</sup> “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.

<sup>12</sup> 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).

<sup>13</sup> 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 and Guinnane (1994), Devareux and Fishe (1993), Besley and Coate (1995), Aghion and Gollier (1996), Conning (1997), and Madajewicz (1997).

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.<sup>14</sup>

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.<sup>15 16</sup> 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 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).<sup>17</sup> 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.

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<sup>14</sup> For more information on the German precursor approach to banking for the poor, see Tilly (1989).

<sup>15</sup> 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.

<sup>16</sup> 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.

<sup>17</sup> 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.

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. Finally, it will examine whether lending methodologies that draw on social capital-type factors reach the poorest members of their target membership.

## **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,<sup>18</sup> 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).<sup>19</sup> 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.<sup>20</sup>

*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

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<sup>18</sup> 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.

<sup>19</sup> 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.

<sup>20</sup> 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.

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.<sup>21</sup> 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 which 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.<sup>22</sup> 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 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.<sup>23</sup> 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

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<sup>21</sup> 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.

<sup>22</sup> 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).

<sup>23</sup> 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.

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.

Conning (1996) presents the theoretical argument that "social collateral" can replace individual collateral in group-based lending programs, but only under particular circumstances, the varying presence of which helps explain the different success rates of lending programs. As Conning summarizes it, "group borrowers must in effect meet collateral requirements not just as borrowers but also as monitors. For this reason, group loans will only be chosen over other sources of finance when group members have a decided cost advantage in monitoring and sanctioning each other relative to outside lenders and intermediaries. Borrowers will prefer to join groups where the returns to their projects are not too correlated for reasons quite apart from conventionally defined risk-sharing." (p. 3). This approach highlights an important point about the cost of social capital creation in credit programs: group formation and participation are costly activities, and this fact affects the borrower's choice of credit source. Conning does not acknowledge that this choice is, in most instances, limited to traditional moneylenders or credit groups. This choice is itself simplified by two factors, the large interest rate differential in favor of the moneylender, and the observed segmentation of the credit market among these two sources on the basis of loan use.<sup>24</sup>

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<sup>24</sup> The overall lack of competition between established moneylenders and new microfinance NGOs can be partly explained by a *de facto* segmentation of the market between investment and consumption financing needs, the former usually being met by NGOs, and the latter by moneylenders. The relative stability of this cohabitation is exemplified by the general lack of convergence of interest rates charged by moneylenders and NGOs. Evidence from Nepal and Bangladesh, however, indicates that in situations where the functional segmentation is not present, households borrow consumption funds from both NGOs and moneylenders (sometimes using one type of loan to repay the other), and some interest rate convergence is observed.

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.*

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”. This observation reflects Conning’s above argument about the importance of low covariance among projects for repayment under joint liability. 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%.

In this respect, it should first be mentioned that there is considerable debate among practitioners about the computation and comparability of repayment rates. These can vary widely depending on a number of factors, particularly the proportion of the loan that needs to be reimbursed for the repayment record to remain immaculate, the length of eventual “grace periods”, and the age of the groups included in the calculation. There is indeed some evidence that repayment rates decrease as the age of the borrowers’ group increases, suggesting that, as the end of the lending cycle nears and the marginal need for further credit decreases, individual interest for good repayment record decreases, and that group cohesion is insufficient to maintain collective repayment discipline. Hossain (1988) reports such negative relationship between repayment performance and length of membership in several Grameen centers.

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.<sup>25</sup> 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 non-defaulters. Matin (1998) reports a general breakdown of joint liability in one of Grameen’s oldest branches.<sup>26</sup> 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.<sup>27</sup> 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

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

<sup>26</sup> 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)

<sup>27</sup> 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.

exclusion.<sup>28</sup> 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 savings than they are in investing in a new business.<sup>29</sup> <sup>30</sup> 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.

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

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<sup>28</sup> 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.

<sup>29</sup> 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.

<sup>30</sup> 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.

mechanisms that are communal and transparent, such as group lending, the shame of being exposed is diminished, along with the collective pressure to repay.

Note, as a note of caution, that empirical observations of credit programs are somewhat limited in highlighting the actual role of joint liability in repayment records. When repayment is regular, it is by definition difficult to demonstrate this role. Moreover, the mixed evidence on actual enforcement of joint liability does not necessarily mean that this arrangement is ineffective: joint liability can be effective even without actual enforcement.

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.<sup>31</sup> Weak enforcement of joint liability should therefore be observed concurrently with low occurrence of exclusion of defaulting members. Matin and Sinha (1998) 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 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.

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

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<sup>31</sup> 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.

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? And do these factors feature social capital-type characteristics?

The first of these factors involves the continuous relationship between program officers and the borrowers.<sup>32</sup> 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 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).<sup>33</sup>

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<sup>32</sup> As Kähkönen's (1999) review of the literature on social capital and water delivery also suggests, vertical relationships between providers and users are as important to the success of delivery programs as relationships within user associations.

<sup>33</sup> 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.

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.

### **Credit for the Poorest?**

Earlier sections of this paper have presented evidence that social networks are important elements of most types of formal or informal programs that provide credit access to the poor. Regardless of the arrangements through which they combine borrowers and lenders, these networks achieve the enviable goal of closing a gap in the financial structure that commercial banks are unwilling or unable to fill. Some evidence suggests, however, that they have not been successful at completely closing this gap, and that the poorest members of society often do not have access to microfinance services.

If faced with an income-smoothing system, as described above, that requires regular repayments on a loan long before the investment creates a return, the most risk-averse—often the poorest—among the potential customers will not consider membership in the program. Hashemi (1997) reports the results of an exercise conducted in four villages where Grameen and the Bangladesh Rural Advancement Committee are active. This exercise was meant to determine why households targeted for membership into the programs chose to self-select themselves out of membership. The major reason for not joining, advanced by 49% of non-participating respondents, was a concern for not being able to repay the loan and be burdened with another debt. Very poor village members who do apply for membership have little chance of being accepted as part of a joint-liability group under a situation where entrepreneurial ability matters less in the screening process than preexisting income (Ito, 1998). In addition, the costs faced by the lender when trying to overcome the poorest’s aversion to repayment risk often require subsidization, an option that is increasingly unattractive to microfinance organizations and donors (Morduch, 1998a). Finally, and as mentioned earlier, screening processes tend to be more rigorous in indigenous credit programs that depend exclusively on local sources of funds (such as ROSCAs), and hence the poorest are even less likely to have access to credit under such programs.

### **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 if 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.<sup>34</sup> This gradation helps explain why ROSCAs, 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 19<sup>th</sup> 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. The importance of these relations in ensuring repayment through peer pressure, however, 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 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. Such programs, however, have not been fully successful at harnessing these social

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<sup>34</sup> 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.

elements to ensure that the poorest members of the communities in which they operate be given equal access to credit.

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