

DO GROUP DYNAMICS INFLUENCE SOCIAL CAPITAL GAINS AMONG MICROFINANCE CLIENTS? EVIDENCE FROM A RANDOMIZED EXPERIMENT IN URBAN INDIA

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Abstract

As an intrinsic part of the classic microfinance model, group meetings are intended to employ social capital to ensure timely repayment. Recent research suggests that more frequent meetings can increase social capital among first-time clients. Using randomized variation in group meeting frequency for 174 microfinance groups in India, we demonstrate that social capital gains associated with more frequent meetings continue to accrue across multiple lending cycles. However, these effects are reduced when group members differ in their borrowing history. In addition, clients who start with low levels of empowerment report higher social capital gains when matched with similar clients. We discuss how current microfinance policy debates overlook the creation of social capital, including through repayment meeting frequency, and we encourage regulators to undertake a holistic understanding of microfinance's impacts. © 2014 by the Association for Public Policy Analysis and Management.

INTRODUCTION

There is wide-ranging evidence that social capital contributes to economic development, yet less is understood about how policy interventions can be designed to encourage the formation of such social capital.¹ While group-based development programs, such as microfinance, can foster social interaction, it is unclear in what settings and for whom such instruments are likely to be effective. Although definitions of microfinance vary, defining characteristics include small loan amounts, an emphasis on entrepreneurial activity, demographic targeting of the poor and women, and the formation of borrower groups. The classic microfinance model founded and disseminated by the Grameen Bank of Bangladesh involves “solidarity groups” of five people.

Evidence on whether participation in microfinance groups continues to build social capital long after the group has been formed, particularly for those with low baseline empowerment, is limited. An important reason for the dearth of evidence is the endogenous nature of social ties. In particular, it is very likely that individuals with specific traits (e.g., those who are more prosocial or have more to gain from group activities) are more likely to engage in community activities. Observational studies, therefore, struggle to identify either how individual membership in different community groups or changes in membership within such groups impact social

¹ We follow Robert Putnam (1993) in defining social capital as “features of social organization, such as trust, norms and networks.”

capital. Randomized field experiments offer an important method for addressing this selection concern. However, recent randomized field experiments that vary individual access to microfinance have rarely studied social capital as a potential product of microfinance. Banerjee et al. (2014) report findings from randomizing entry of a microfinance institution (MFI) across urban Indian slums and find few positive effects on a battery of financial and developmental outcomes. Angelucci, Karlan, and Zinman (2014) consider a similar intervention in Morocco and also find limited positive effects. Neither study measures social capital as an outcome.

One exception is Feigenberg, Field, and Pande (2013), which demonstrates that it is possible to build economically meaningful social capital among new clients in a microfinance group. This research also shows that introducing people into community groups has long-term economic benefits. What is left unclear is whether community groups are also potential policy instruments for *sustaining* social ties among individuals who have a history of interaction, such as members of long-standing microfinance groups. In particular, is there any benefit to continuing to promote social interaction among those already acquainted? If not, there is limited scope for harnessing existing community groups to foster social capital formation. Moreover, does heterogeneity among group members, either with respect to institutional history or initial empowerment, influence the value of such programs?² Both questions are important for determining how much emphasis to place on social interaction when designing social programs for the poor.

This paper builds directly on Feigenberg, Field, and Pande (2013) and examines two novel questions. First, do gains in social capital continue to accrue for long-standing microfinance groups when clients in those groups are made to interact more frequently? Second, does heterogeneity in the borrowing history of group members and baseline empowerment affect social capital gains?

Our analysis uses a follow-up field experiment conducted with the same MFI as in Feigenberg, Field, and Pande (2013). In contrast to the previous work, here we work with a broader pool of clients who vary significantly in terms of length of borrowing history with the MFI. At the start of the experiment, close to 30 percent of the clients were first-time borrowers while 40 percent had taken out multiple previous loans and had been with (at least) some of their current group members for close to two years. This enables us to compare the impact on social capital of promoting social interaction among different types of clients.

Our first finding is that gains in social capital that result from interacting on a weekly as opposed to monthly basis are large and positive, *even for clients who have been interacting for more than a year*. Similar to Feigenberg, Field, and Pande (2013), we find that weekly repayment assignment is associated with an increase in social contact of 0.59 standard deviations relative to monthly repayment assignment. What is more surprising is that the benefits of more frequent interaction are equally large for groups that have been together for at least one previous cycle. That is, the data suggest only very slightly diminishing marginal returns to programs that promote social interaction—the estimated impact on groups of old members is 0.72 standard deviations while that on groups entirely composed of new borrowers is 1.1 standard deviations. These new results strengthen the policy case for considering existing group-based programs such as microfinance as a vehicle for building social capital.

² Baland, Somanathan, and Vandewalle (2008) study the nature of social heterogeneity in attrition from microfinance in particularly poor and tribal parts of India—fractionalization, even within broad caste categories, does not predict group survival but it does predict individual exits, particularly by members of traditionally disadvantaged communities.

Second, group composition matters. Relative to members from a group where all share the same borrowing history, members who share the same group but have been with the MFI for differing lengths of time report fewer social capital gains. We see similar heterogeneity in impacts when we consider baseline empowerment. Specifically, among borrowers who must ask for spousal permission to go to their neighbor's house, weekly clients exhibit a 0.93 standard deviation increase in social contact relative to their monthly counterparts (whereas the gain for those who need not ask for permission is 0.54 standard deviations).

Taken together, the policy implications of these findings are twofold. First, they indicate an important role for group-based development policy even in communities where members are relatively well-connected, as is often true in village settings. Second, the findings indicate that group-based development policies are particularly valuable for relatively marginalized or isolated community members, such as women from religiously conservative households.

The remainder of the paper is structured as follows. The second section describes the randomized experimental design, various sources of data, and the empirical strategy. The next section presents results related to social interactions. The following section explicates the link between our research findings and policy debates, and the final section concludes.

BACKGROUND AND EXPERIMENTAL DESIGN

This experiment is one of three randomized controlled trials that were conducted in Kolkata between 2006 and 2008 in partnership with Village Financial Services Private, Ltd. (VFS). VFS is an MFI that currently offers loans varying in size from 4,000 to 15,000 INR (66 to 246 USD)³ to over 160,000 women in Kolkata. The official criteria for selection into VFS are that women be between the ages of 18 and 55, that the households have some income-generating activity in the form of a business, and that clients own the home in which they reside.⁴ VFS clients mirror the typical profile of the urban poor in developing countries with households reporting an average per capita income of less than \$2 per day at baseline. In the endline survey, over 80 percent of the clients report borrowing from other MFIs.

Individual loans are disbursed to five-member groups of women. Loan officers assemble members into groups that can be composed of members who may or may not know one another. For example, if two family members come to VFS to borrow a loan, they will be organized into a five-member group with another three women chosen by the loan officer. Therefore, VFS clients may never have met the other women in their loan groups. While VFS gives individual liability loans, groups are asked to meet together to jointly repay their installments to loan officers. Default is very low—VFS reports a repayment rate of 99 percent in 2008 to 2009.⁵

As described in Feigenberg, Field, and Pande (2013), VFS repayment meetings last, on average, just under 20 minutes and typically take place in the home of one of the group members. Group members come to meetings with their installment amount and passbook, a ledger for the client of how much was paid at each meeting. Loan officers conduct each repayment meeting, during which group members take an oath promising regular repayment, deposit payment with the loan officer, and

³ We use a March 2013 conversion rate of 61 INR to 1 dollar, but the conversion rate in 2010 fluctuated between 40 INR and 50 INR to 1 dollar.

⁴ While we find these criteria to hold among the majority of our clients, we found exceptions while exploring the summary statistics.

⁵ Microfinance Institution Grading Report (2009), <http://www.mixmarket.org/sites/default/files/Rating-2008-9.pdf>.

have their passbooks marked as confirmation of their payment. The loan officer maintains a separate record of how much each client paid at a particular date, which is later recorded in an office computer. The oath encourages group responsibility, but the loan contracts are individual liability. Group members have time to socialize with one another in an unstructured way en route to meetings, while waiting for the loan officer to arrive, and while waiting for one's turn to pay.

Experimental Design

Between January and September 2008, we randomized 148 five-member client groups into two repayment schedules (74 in each category). Randomization occurred after group formation and loan size had been determined but prior to loan disbursement.⁶ No clients dropped out of the study between group formation and loan disbursement. Weekly client groups met and repaid weekly, beginning one week after loan disbursement. Monthly client groups met and repaid on a monthly basis, starting five weeks after loan disbursement. All clients received individual liability loans, which, depending on client experience with VFS, ranged from 4,000 to 12,000 INR (66 to 197 USD). All loans had the same tenure (10 months) and interest rate charged (an implied 22 percent annual percentage rate [APR]).

Our randomized experimental design shares features of earlier repayment flexibility experiments that we conducted with VFS. The first of these, as described in Field and Pande (2008) and Feigenberg, Field, and Pande (2013), randomized first-time clients into two treatment arms: weekly meeting and repayment or monthly meeting and repayment. The results from this experiment indicate that clients who meet weekly are far more likely to form lasting relationships with other group members compared to clients who were required to meet monthly. Furthermore, we show that social capital gained through this experiment had economic returns in the form of increased levels of risk-sharing between clients in the long run.⁷ In the current study, we replicate the previous experiment among both old and new clients to determine whether it is possible to encourage social capital formation even among long-time bank clients. The key difference between the current study and Feigenberg, Field, and Pande (2013) that is central to our analysis is client heterogeneity in terms of VFS borrowing history. The exact distribution of experience in our experimental sample of 739 clients is as follows: 29.0 percent (214) were first-time borrowers, 27.7 percent (205) previously had taken out one VFS loan, and 43.3 percent (320) previously had taken out two VFS loans. In composing the client groups, loan officers prioritized keeping clients who were in the same group in a previous loan intervention together and replaced drop-outs from those groups with new clients. For example, if three members of a group from a previous loan cycle continued on to the next, the group in the new loan cycle would have three old clients and two brand new clients.

⁶ Randomization was stratified (into eight batches) depending on date of group formation. The first and last batches consisted of 12 and 16 groups, respectively, while the middle six were made up of 20 groups each.

⁷ The second experiment, described in Field et al. (2013), required that client groups (mostly second loan cycle clients) repay at the same frequency (fortnightly) but varied whether repayment started two weeks or two months after loan disbursement. Our current experiment includes elements of both experiments: specifically, the treatment group both repaid less frequently and also began repayment later. In Field et al. (2012), we examine data from the same experiment as analyzed here with a focus on the links between repayment flexibility and financial stress outcomes. Our analysis shows that clients required to repay monthly were less likely to report feeling "worried, tense, or anxious" and more likely to feel confident about repayment.

Data

Our analysis makes use of multiple data sets. We surveyed clients on household activities and demographic information twice: before entering the loan cycle (baseline) and shortly after the loan cycle ended (endline).⁸ Of the 739 study clients, we were able to collect a baseline survey from 706 and an endline survey from 728 clients.

Client Characteristics

The average client in our sample is 35 years old and has completed primary education. Our respondents are predominantly Hindu and roughly 90 percent are married. Twenty-six percent of the clients report their primary occupation as being a housewife. Others reported occupations including business owner and casual laborer. The average borrower reports a household size of four, and 81 percent report that their family owns the home they live in.

We also asked clients about financial autonomy and mobility. Over 51 percent of clients report at least one financial asset or account that is separate from their husband. Turning to mobility, 15 percent need permission to go to their neighbor's house. As group meetings are conducted in the group leader's house, we see this as the empowerment measure that is very likely influenced by our intervention. Specifically, if the client goes on a weekly basis to at least one neighbor's house, then over time she is likely to be empowered to make visits without explicit permission.⁹ Characteristics that have been identified in the literature as important predictors of low empowerment play an important role in our data as well: Older women with waged or fixed salary employment are less likely to have to ask for permission to go outside the home and married women are more likely to go outside in general. Literate, female business owners from wealthier households report having separate bank accounts more often. Muslim women in our sample are less likely to have independent accounts and ask for permission more frequently.

As is common among the urban poor in developing countries, households face frequent shocks with roughly half the sample reporting a birth, death, flood, or illness in the past 30 days. On average, a household loses 0.66 days of work when a shock occurs.¹⁰ It is also clear that informal networks play an important role in reducing risk. Clients reported receiving an average of 1,711.1 INR (28 USD) and giving an average of 3,796.4 INR (62 USD) in transfers to family and friends over the last 12 months.

To explore the strength of the microfinance group network, our baseline survey asked each client about two of her four group members. (This selection was random.) For each of these two group members, the interviewee was asked whether she knew the group member's husband's name, whether she was willing to help the group member in a time of need, and whether she talked about her business with the group member. Responses to these questions provide a measure of baseline knowledge of group members since the baseline survey occurred after groups had been formed

⁸ The baseline survey was conducted an average of 14 days before the loan was disbursed. While we were able to survey 89 percent of clients before the loan was disbursed, 11 percent of our clients were surveyed an average of eight days after loan disbursement. There is no statistical difference between monthly and weekly contract clients in the average number of days after disbursement that these clients were surveyed.

⁹ The fraction of clients who need permission to go to a farther away destination, such as a relative's house or another location that is reported to be more than 15 minutes away, increases to roughly 50 percent.

¹⁰ This can be particularly damaging given that these households report average health, education, household, and drinking water expenditures of 1,444.36 INR or 24 USD per month.

but prior to loan disbursement. On average, 75.2 percent of clients were aware of the name of the husband of another group member. While the reported willingness to help another group member is very high (with over 90 percent of clients answering affirmatively), only 16.2 percent of respondents talked to other group members about their businesses.

We also observe variation in the loan cycle composition of groups. The average group in our sample includes 1.5 new members. Reflecting the fact that loan officers prioritized keeping previous groups intact, we observe clustering of first-time borrowers. The average new client has 2.4 group members who are also new clients, while the average returning borrower has only 0.7 such group members. This difference is driven by the fact that 47.0 percent of first-time borrowers have groups composed entirely of new borrowers (there are 19 such groups), while 49.3 percent of returning borrowers have groups without a single first-time borrower (there are 53 such groups). Existing clients/borrowers carry loans that are on average 25.3 percent larger than those taken out by their new counterparts.

Social Interactions

To measure social interactions, we first exploit data collected during group meetings. The survey was administered every four weeks in both weekly repayment and monthly repayment groups to ensure identical frequency with which borrowers were asked about social behavior (which, in turn, potentially could influence actual behaviors). As interviews occurred in the presence of other group members, we chose not to interview clients about relationships with particular group members (for further discussion on this, see Feigenberg, Field, & Pande, 2013). Instead, clients were asked about the total number of group members with whom they had discussed personal matters, engaged in home visits, etc. Group meeting survey data were collected from all 739 borrowers. However, to mitigate sample selection concerns, we exclude responses recorded after week 23 of the loan cycle (clients were permitted to finish repaying loans in full after this date). Once the sample is restricted to include only observations within 23 weeks of loan disbursement, we are left with 707 clients in the sample and an average of 3.8 responses per client.

To summarize overall changes in social interactions, we construct a Group Meeting Social Contact Index. This index estimates average effect size based on responses to the following three survey questions: (1) "How many group members have visited you in your house in the last two weeks?" (2) "How many people in the group did you talk to about business matters in the last two weeks?" and (3) "How many people in the group did you talk to about personal matters in the last two weeks?" Each component z-score included in the index is constructed by subtracting the control group mean from client responses and dividing by the control group standard deviation.¹¹ For each included outcome measure, client-level responses are averaged over all group meetings that occurred between the first and 23rd week after loan disbursement. On average, clients reported having visited 0.75 group members and having been visited by 1.5 group members in the last two weeks. In addition, clients reported having spoken with 1.1 group members about business matters and with 1.4 group members about personal matters in the past two weeks.

To examine the strength of pair-wise social ties, we complement the group meeting data with endline survey data. The endline survey was completed for 728 borrowers, resulting in a total of 2,908 pair-wise observations. Since surveys were conducted in respondents' homes, surveyors could ask about particular pair-wise relationships. Paralleling the group meeting data analysis, we construct an Endline Social Contact

¹¹ For further discussion of this index, see Feigenberg, Field, and Pande (2013).

Index. This index estimates average effect size based on responses to the following three survey questions: (1) “On average, how many times did you meet this group member (outside group meetings) in the last 30 days?” (2) “Do you talk to her about her family?” and (3) “On a scale of 1 to 5, on average, how close are you to this group member (1 is a stranger and 5 is your husband/closest family member)?” On average, clients reported two pair-wise meetings over the past 30 days. Clients reported speaking to 39.3 percent of group members about their families, and the average reported closeness measure was 3.

Randomization Check

Table 1 reports a randomization balance check using baseline data. Panel A considers borrower and household characteristics and panel B empowerment measures. Column (1) shows the mean of each characteristic for clients assigned to the monthly group. In column (2), we report the *P*-value of whether the mean of each characteristic is different for weekly clients. The two groups are balanced, as the weekly group is not significantly different from the monthly group on any characteristic.

We are particularly interested in whether women with little history of interaction are likely to gain more in terms of social capital from joining a group. It is, of course, the case that women who join recently look different from those who already have taken out multiple MFI loans. Columns (3) through (5) examine whether baseline characteristics vary depending on client tenure and contract assignment. To do so, we estimate

$$Y_{gi} = \beta_1 \text{New}_{gi} + \beta_2 W_g + \gamma X_{gi} + \varepsilon_{gi} \quad (1)$$

where Y_{gi} is the outcome of interest for client i in loan group g and W_g is an indicator for group assignment to the high frequency (weekly) repayment treatment arm. X_{gi} includes controls for stratification dummies and loan size. New_{gi} is an indicator for whether client i is a first-time VFS borrower. Column (3) reports the coefficient β_1 and column (4) the coefficient β_2 in the above regression. Finally, in column (5), we show the mean for monthly returning clients in the control group.

New clients are younger and have smaller loans than returning borrowers. They report nearly an extra year of formal education but also having to ask permission to go 15 minutes outside the home. As noted previously, new clients are also much more likely to be placed in groups with a larger fraction of new borrowers since loan officers want to preserve returning borrowers' group structure.

Empirical Strategy

Randomization of client groups into weekly or monthly repayment means that we can estimate the causal effect of meeting frequency on social capital outcomes with the following regression:

$$Y_{gi} = \beta_1 W_g + \gamma X_{gi} + \varepsilon_{gi}. \quad (2)$$

In our primary analysis in Table 2, we examine whether differences in client outcomes across monthly and weekly groups vary with their own borrowing histories and with the fraction of other newcomers in a group. To do so, we estimate

$$Y_{gi} = \beta_1 W_g + \beta_2 \text{New}_{gi} + \beta_3 \text{NumNew}_{gi} + \beta_4 W_g \times \text{New}_{gi} + \beta_5 W_g \times \text{NumNew}_{gi} + \beta_6 \text{New}_{gi} \times \text{NumNew}_{gi} + \beta_7 W_g \times \text{New}_{gi} \times \text{NumNew}_{gi} + \gamma X_{gi} + \varepsilon_{gi} \quad (3)$$

where NumNew_{gi} is the number of first-time VFS borrowers in loan group g other than individual i .

Table 1. Randomization check.

	Control mean (monthly client) (1)	Monthly vs. weekly P-value (2)	New (3)	Weekly (4)	Control mean (monthly and returning client) (5)
Panel A: Borrower and Household Measures					
Client Age	34.499 (0.452)	0.270	-1.088* (0.576)	-0.604 (0.604)	35.690 (0.490)
Client is Married	0.912 (0.015)	0.703	0.007 (0.025)	0.008 (0.022)	0.914 (0.017)
Client Years of Education	6.705 (0.175)	0.579	0.779*** (0.290)	0.140 (0.334)	6.245 (0.219)
Household Size	4.084 (0.073)	0.150	0.022 (0.123)	-0.144 (0.101)	4.162 (0.087)
Client is a Housewife	0.262 (0.023)	0.702	-0.021 (0.038)	-0.010 (0.032)	0.259 (0.027)
Household Head is Muslim	0.043 (0.016)	0.906	-0.044 (0.031)	-0.001 (0.026)	0.091 (0.036)
Fraction of New Members in the Group	0.330 (0.018)	0.136	0.518*** (0.044)	0.038 (0.025)	0.126 (0.009)
Loan Amount	8400.000 (95.230)	0.840	-2220.828*** (199.38)	137.754 (174.669)	9115.523 (80.717)
Household Owns Its Home	0.837 (0.024)	0.154	0.000 -	0.062 (0.044)	0.784 (0.025)
Total Household Expenditures in Last 30 Days	1428.553 (230.033)	0.910	558.294 (573.522)	-89.755 (424.969)	1172.173 (95.529)
Panel B: Empowerment Measures					
Ask Permission to Go to Neighbor's House	0.148 (0.019)	0.759	0.001 (0.045)	-0.029 (0.043)	0.143 (0.023)
Left Home Everyday in the Last Week	0.500 (0.026)	0.462	0.024 (0.048)	-0.030 (0.044)	0.460 (0.032)

Table 1. Continued.

	Control mean (monthly client) (1)	Monthly vs. weekly P-value (2)	New (3)	Weekly (4)	Control mean (monthly and returning client) (5)
Client and Husband Have Separate Financial Assets/Accounts	0.519 (0.026)	0.572	0.052 (0.051)	-0.019 (0.042)	0.494 (0.032)
Ask Permission to Go to Market	0.291 (0.024)	0.511	0.034 (0.040)	-0.024 (0.041)	0.307 (0.030)
Ask Permission to Go to Relative's House	0.504 (0.026)	0.526	0.021 (0.042)	-0.027 (0.045)	0.525 (0.032)
Ask Permission to Go 15 mins. from House	0.403 (0.026)	0.501	0.087*** (0.031)	-0.003 (0.030)	0.422 (0.032)

Notes

1. Total Household Expenditures in Last 30 Days includes expenditures on education, health, drinking water, and house repairs.
2. Column (1) reports the mean value of the outcome variable for clients assigned to the monthly repayment contract. Column (2) reports the p-value on the difference between the means of the monthly and weekly values of each variable. Columns (3) and (4) report the coefficients of a regression of the outcome variables listed in the row on whether the respondent is a first time client (column 3) and whether the client was assigned to the weekly repayment (column 4). Column (5) reports the mean value of the outcome variable for returning clients assigned to the monthly repayment contract.
3. Differences in means are estimated with stratification fixed effects. * Significant at .1 level; ** Significant at .05 level; *** Significant at .01 level. Standard errors are clustered by loan group.

To explore the impact of baseline empowerment on social capital formation, we estimate a similar triple interaction specification in Table 3:

$$Y_{gi} = \beta_1 W_g + \beta_2 \text{Permit}_{gi} + \beta_3 \text{NumPermit}_{gi} + \beta_4 W_g \times \text{Permit}_{gi} + \beta_5 W_g \times \text{NumPermit}_{gi} + \beta_6 \text{Permit}_{gi} \times \text{NumPermit}_{gi} + \beta_7 W_g \times \text{Permit}_{gi} \times \text{NumPermit}_{gi} + \gamma X_{gi} + \varepsilon_{gi} \quad (4)$$

where Permit_{gi} is an indicator variable equal to 1 if the borrower reports having to ask permission to go to a neighbor’s house when surveyed at baseline and NumPermit_{gi} is the number of VFS borrowers in loan group g other than individual i who report having to ask permission to go to a neighbor’s house. Both equations (3) and (4) allow us to identify the extent to which personal and group member characteristics interact with repayment assignment to determine changes in measured social contact.

In Table 4, we estimate a pair-wise specification that interacts repayment assignment and pair-wise borrowing history:

$$Y_{gip} = \beta_1 W_g + \beta_2 \text{SameHistory}_{gip} + \beta_3 W_g \times \text{SameHistory}_{gip} + \gamma X_{gi} + \varepsilon_{gip}. \quad (5)$$

Here, SameHistory_{gip} is an indicator equal to 1 for pair members that are both returning or are both first-time borrowers. This specification is used to test whether pair-wise evidence of impact heterogeneity is consistent with findings from the analogous client-level specification outlined in equation (3).

In all specifications, standard errors are clustered at the level of randomization—the loan group. All specifications in Tables 2 through 4 include controls for stratification cell, loan size, client age, whether the client is married, the client’s total years of education, whether the client is a housewife, whether the household head is Muslim, and household size.

RESULTS

Does Meeting Frequency and Group Composition Affect Social Capital?

Table 2 presents the main results on social capital formation. In columns (1) to (2), the dependent variable is the Group Meeting Social Contact Index (for variable construction, see the section on Background and Experimental Design). Column (1) estimates equation (2); the coefficient on “Weekly” is large in magnitude (0.592) and statistically significant at the 1 percent confidence level. Column (2) estimates equation (3) and the results suggest that the impact of weekly assignment on social contact is large and highly significant regardless of group borrowing history. In particular, the estimates from column (2) reveal that social contact gains are almost identical between new clients with group members who are all new and returning borrowers in groups with all returning borrowers: Those in the first category experience a 1.098 standard deviation increase in reported social contact, while borrowers in the latter group experience a 0.722 standard deviation increase in reported social contact, indicating slightly diminishing returns to mandated interaction. This result is striking since it implies that promoting social interaction does more than just help strangers get to know one another more quickly.

The remainder of Table 2 shows parallel regressions in which the outcome variables are the three measures used to construct the Group Meeting Social Contact Index. The odd columns show that weekly clients have between a 0.480 and 0.680 standard deviation gain in each of the three social capital measures and all estimates

Table 2. Does meeting frequency change social interaction?

	Group meeting social contact index		Number of members visited me in my home			Talked business matters		Talked personal matters	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Weekly	0.592*** (0.129)	0.722*** (0.171)	0.480*** (0.171)	0.656*** (0.235)	0.680*** (0.130)	0.738*** (0.187)	0.497*** (0.147)	0.668*** (0.197)	
Weekly× New Client× Number of New Group Members		0.531** (0.218)		0.280 (0.281)		0.553** (0.219)		0.658** (0.253)	
Weekly× New Client		-0.576** (0.284)		-0.352 (0.384)		-0.662** (0.284)		-0.587* (0.343)	
New Client		-0.207 (0.206)		-0.625** (0.246)		0.00684 (0.194)		-0.100 (0.261)	
Weekly× Number of New Group Members		-0.293* (0.166)		-0.261 (0.207)		-0.211 (0.171)		-0.397** (0.188)	
Number of New Group Members		-0.0664 (0.111)		-0.222* (0.133)		0.00168 (0.116)		-0.0131 (0.140)	
New Client× Number of New Group Members		0.0129 (0.147)		0.288 (0.180)		-0.116 (0.143)		-0.0573 (0.186)	
Control Mean- All Monthly	-		1.277 (1.174)		0.738 (0.766)		1.132 (1.041)		
N	707	707	707	707	707	707	707	707	
Implied Effects									
Weekly (old, no new group members)		0.722*** (0.171)							
Weekly (new, all (4) new group members)		1.098*** (0.256)							

Notes: 1. Group Meeting Social Contact Index estimates average effect size across three measures based on group meeting survey questions: (1) "How many group members have visited you in your house in the last two weeks?"; (2) "How many people in the group did you talk to about business matters in the last two weeks?"; and (3) "How many people in the group did you talk to about personal matters in the last two weeks?" For each included outcome measure, client-level responses are averaged over all group meetings that occurred between the first and 23rd week after loan disbursement.
 2. All regressions control for stratification cell, loan size, age, marital status, whether client is Muslim, household size, years of education, and whether client is a housewife.
 *Significant at 0.1 level; **significant at 0.05 level; ***significant at 0.01 level. Standard errors are clustered by loan group.

Table 3. Heterogeneity in social capital impacts by baseline empowerment.

	Group meeting social contact index	
	(1)	(2)
Weekly	0.544*** (0.130)	0.483*** (0.155)
Weekly × Must Ask Permission to Visit Neighbor × Number Group Members		0.572**
Must Ask Permission to Visit Neighbor		(0.235)
Weekly × Must Ask Permission to Visit Neighbor	0.387*	-0.130
	(0.210)	(0.255)
Must Ask Permission to Visit Neighbor	-0.0783 (0.137)	0.0881 (0.179)
Weekly × Number Group Members		0.0813
Must Ask Permission to Visit Neighbor		(0.148)
Number Group Members Must Ask Permission to Visit Neighbor		0.0427
		(0.104)
Must Ask Permission to Visit Neighbor × Number Group Members Must Ask Permission to Visit Neighbor		-0.130
		(0.124)
<i>N</i>	707	707

Notes: 1. Group meeting social contact index estimates average effect size across three measures based on group meeting survey questions: (1) “How many group members have visited you in your house in the last two weeks?”, (2) “How many people in the group did you talk to about business matters in the last two weeks?”, and (3) “How many people in the group did you talk to about personal matters in the last two weeks?” For each included outcome measure, client-level responses are averaged over all group meetings that occurred between the first and 23rd week after loan disbursement. Must Ask Permission to Visit Neighbor is an indicator for whether client must ask permission to go to her neighbor’s house. 2. All regressions control for stratification cell, loan size, age, marital status, whether client is Muslim, household size, years of education, and whether client is a housewife. *Significant at 0.1 level; **significant at 0.05 level; ***significant at 0.01 level. Standard errors are clustered by loan group.

are significant at the 1 percent level. Columns (6) and (8) reveal that the weekly contract differentially increases social contact for new groups by inducing new client groups to discuss personal matters and business more frequently.

In sum, there are significant increases in social interaction associated with weekly repayment assignment, consistent with what has been shown in previous work, and more surprisingly, borrowers assigned to weekly repayment experience increased social contact regardless of whether they are coming together for the first time as a new borrowing group or returning to old groups for a second loan cycle. In particular, the increases in reported social contact are comparable in magnitude for first-time borrowers with group members who are also new to VFS and for returning borrowers in groups with other returning borrowers. Interestingly, the implied estimates are substantially smaller for groups that contain a mix of old and new borrowers. However, that may be driven by selection into mixed groups.

Table 3 provides intuitive and compelling evidence regarding the effect of baseline empowerment on subsequent social capital gains from more frequent group

Table 4. Pair-wise evidence on social capital impacts.

	Endline social contact index	
	(1)	(2)
Weekly	0.0613 (0.102)	0.359** (0.169)
Weekly × Same History	0.186* (0.112)	
Same History	0.104 (0.0807)	
Sample N	All Clients 2900	Pairs of new borrowers 494

Notes: 1. Endline social contact index estimates average effect size across three measures based on endline survey questions: (1) “On average, how many times did you meet this group member (outside group meetings) in the last 30 days?”, (2) “Do you talk to her about her family?”, and (3) “On a scale of 1 to 5, on average, how close are you to this group member? (1 is a stranger and 5 is your husband/closest family member)?” Same History is an indicator equal to 1 for pair members that are both returning or are both first-time borrowers.

2. All regressions control for stratification cell, loan size, age, marital status, whether client is Muslim, household size, years of education, and whether client is a housewife.

*Significant at 0.1 level; **significant at 0.05 level; ***significant at 0.01 level. Standard errors are clustered by loan group.

meetings. Among borrowers who must ask their spouse for permission to go to a neighbor’s house, an indicator of low levels of individual empowerment, weekly clients have a 0.931 standard deviation gain in the Group Meeting Social Contact Index relative to their monthly counterparts. This is significantly higher than the 0.544 standard deviation effect for weekly clients who need not ask permission (which is itself significant at the 1 percent level). Column (2) estimates equation (4) to identify how other group members’ baseline empowerment affects social capital gains. The column (2) estimates reveal that increases in social contact are particularly pronounced for groups in which all members have low baseline empowerment. This finding mirrors the evidence on impact heterogeneity from Table 2: In both cases, gains are largest for groups that have less-developed social networks at baseline.

Finally, Table 4 estimates the pair-level specification outlined in equation (5). The first column consists of all clients, while the second column only includes pairs in which both members are new borrowers. The dependent variable is the Endline Social Contact Index, which is used to measure social contact for particular group member pairs. Column (1) estimates are consistent with Table 2 in that borrowers assigned to weekly repayment schedules experience larger average gains in social capital when they have the same borrowing history. Moreover, column (2) reveals that pair-wise gains are largest for pairs of new borrowers as we would anticipate based on Table 2 findings.

POLICY LEVERS

We show social capital gains of maintaining high (weekly) frequency meetings, even beyond the first loan cycle. Unlike Feigenberg, Field, and Pande (2013), our sample of clients exhibits significant variation in both borrowing history and baseline empowerment. This allows us to present an intuitive heterogeneity within this effect: New borrowers meeting weekly in groups with all new borrowers experience the largest increases in social capital, but these increases are only slightly larger than the implied gains in social capital for returning groups that are required to meet

weekly. Most strikingly, our results indicate large positive gains in social capital among groups that have already been together for at least a year, which suggests a role for public policy to foster social capital among a broad set of individuals and settings. In addition, women with low baseline empowerment benefit more when paired with group members with similar empowerment. Our findings thus speak directly to two policy issues, particularly in India: first, social capital's absence in emerging microfinance regulatory debates, and second, the policies regarding repayment/meeting frequency and group composition.

The Absence of Social Capital in Microfinance Regulatory Debates

Microfinance policy changes in India have been shaped around a number of outcome goals, yet social capital has been ignored. In response to allegations of microfinance's central role in dire debtor outcomes, the Reserve Bank of India commissioned a subcommittee to consider regulatory options for MFIs. The resulting Malegam Report, named for the subcommittee chair, focused on traditional regulatory tools and recommended, for example, interest rate ceilings below the prevailing market rates and maximum loan sizes. While it recommended group-based as opposed to individual lending, it did not address the issue of group size or group formation policies. The reactions to the Malegam Report were accordingly divergent—the largest MFIs welcomed the prospective regulations (at least publicly), others equated the report and its recommendations with an effective moratorium on lending, and state regulators from Andhra Pradesh complained that the national recommendations did not go far enough in protecting microcredit borrowers.¹² In acknowledging the regulatory disagreements, the Malegam Report nonetheless highlights the “universally agreed-upon” goals of MFI financial sustainability and consumer affordability. Echoing this purported consensus, the introduction to the pending national Indian bill articulates the legislative intent as “promoting financial inclusion,” with no mention of social inclusion. Social capital has thus been notably overlooked as an important and plausible goal in these regulatory debates.¹³

Moreover, microfinance has recently suffered allegations of perpetuating an “economy of shame” (Karim, 2011). This term, rooted in an anthropological case study of loan recovery techniques in Bangladesh, captures potentially adversarial and alienating facets of loan recovery techniques and microfinance-based social interactions. (We note that outside microfinance, “naming and shaming” is gaining prominence as a recovery tool against corporate guarantors, as financial companies utilize the legally permissible lever to punish “willful default” on corporate debt.)¹⁴

Our research challenges this characterization. By systematically documenting social interactions, we show how microfinance can build community and social capital, rather than simply rely on such capital, or, even worse, destroy it. Beyond our

¹² See SKS Microfinance Welcomes the Malegam Committee Report (2011), <http://www.sksindia.com/downloads/malegam-committee-report-20-01-11.pdf>; David Roodman, Retort to the Malegam Report (2011), <http://www.cgdev.org/blog/retort-malegam-report>; Krishna Prasad, Malegam Report Caters to Big MFIs, *The Times of India*, Jan. 21, 2011 (“The state government on Thursday assailed the Malegam Committee report submitted to the RBI on Wednesday and said ‘it addressed the concerns of only the big MFIs and fell short of expectations to put in place an effective protection mechanism for the borrowers’”).

¹³ Commenting on the recent history of repayment frequency in the law of microfinance, Sarkar (2014) notes not only how consumer protection concerns motivated the use of repayment frequency as a regulatory instrument but also how alternate legal provisions regarding borrower harassment might more effectively address these concerns.

¹⁴ Govt to Consider ‘Naming and Shaming’ Corporate Defaulters, *The Times of India*, Sept. 15, 2013.

quantitative evidence, in our own qualitative interviews with borrowers,¹⁵ we found that women reported regularly speaking about a number of issues with their fellow group members, including festival-related travel plans and expenditures, and more rarely, household financial and spousal disputes. Our empirical analysis challenges a simple shaming characterization of intragroup dynamics, and at the very least shows that microfinance's relationship to social capital needs further attention in policy debates.

Repayment Meeting Frequency and Group Composition Policies

Our findings illustrate a specific mechanism by which to promote social capital. In earlier work, Feigenberg, Field, and Pande (2013), we have noted that meeting frequency, rather than repayment frequency, drives the social capital gains we record, but the two are often intertwined in institutional policies. In parallel to the broader microfinance debates, the specific policy debate regarding repayment frequency also overlooked the issue of social capital formation. In supporting less-frequent repayment, the Malegam Report noted the possible financial stresses imposed on borrowers by less-flexible terms, such as illiquid investment avoidance and the administrative costs to MFIs of servicing more payments. In temporarily supporting regulations that preserved flexible repayment schedules, the Report emphasized the need to design repayment schedules suited to borrower circumstances but made no reference to how meeting frequency in repayment schedules could produce social capital between borrowers.

The debates, however, did acknowledge two plausible connections between social capital and repayment/meeting frequency, though both spoke to social capital's effect on microfinance, not microfinance's potential effect on social capital. First, a 2010 report on the state of microfinance in India suggested that the repayment meetings were too short to produce the meaningful relationships between borrowers and loan officers needed to deter default.¹⁶ Second, convinced of social capital's role in the viability of microfinance, the Malegam Report actually recommended that MFIs lend to individual borrowers only as members of joint-liability groups and not as independent clients.

The current state of Indian microfinance with respect to repayment frequency and broader regulatory requirements remains conflicted. The Andhra Pradesh state ordinance places a minimum length of time of one month between repayments. (The Malegam Report had recommended a gradual move to a monthly requirement but suggested an interim policy allowing MFIs to offer weekly or fortnightly repayment plans.) However, a proposed national bill remains agnostic on specific figures but reserves the right for the central bank (Reserve Bank of India) to regulate the "periodicity of repayment."¹⁷ Neither the ordinance nor the bill addresses the issue of meeting frequency directly. Andhra Pradesh's rural development minister earlier noted that he had no plans to change the state ordinance, passed prior to the writing of the proposed national bill. The disagreement complicates the policy landscape by posing a federalism and constitutional challenge to the division of

¹⁵ We conducted two focus groups, with, respectively, five and three VFS borrowers each, as well as 10 additional individual interviews with different VFS borrowers.

¹⁶ N. Srinivasan, *Microfinance India: State of the Sector Report 36* (2010).

¹⁷ In February of 2014, the Parliamentary Standing Committee on Finance rejected the MFI bill, making it likely that the pending bill will lapse. After general elections, the new government will have to decide whether to reintroduce the bill, possibly with very different provisions. *Parliamentary Panel Rejects MicroFinance Bill*, *The Economic Times*, Feb. 11, 2014, http://articles.economicstimes.indiatimes.com/2014-02-11/news/47235813_1_microfinance-bill-draft-report-mfis.

microfinance policy control between the state and national government (Becker, 2013).

This policy and legal dispute between Indian national and subnational authorities exemplifies the heterogeneity of legal structures in which microfinance policy operates. Microfinance is regulated through transnational frameworks, existing banking statutes, and separate microfinance-specific laws—so even when optimal policies are identified, enacting them requires jurisdiction-specific paths that are as yet unclear. Policy-wise, we believe that a textual reading of either the state ordinance or national bill should not preclude the use of meeting frequency to create social capital. To the extent that institutional policies intertwine meeting and repayment frequencies, our findings of long-term social capital gains from heightened meeting frequency should be internalized in ongoing policy debates on repayment/meeting frequency.

Finally, our results also inform group composition policies. Individual MFIs may believe that exposing new borrowers to old borrowers might promote discipline or some form of knowledge sharing for new borrowers. Given our empirical results, MFIs should take into account the social capital benefits of keeping clients with similar tenures together in lending groups, since social capital gains from weekly meetings are largest among new borrowers in groups with all new borrowers. MFIs should consider these group dynamics and social capital gains when deciding how to replace dropouts and rebalance groups in subsequent lending cycles. Lehner (2009) theorizes that “The growth of group lending programs may slow down when new borrowers with looser social ties enter, and consequently, the group lending technology loses some of its power.” However, our results suggest that group formation policies can help effectively integrate borrowers with such low baseline social capital.

On the specific issue of borrowing histories, that topic has been recently discussed in terms of credit bureau formation. In December 2013, plans for the Credit Information Bureau of India to begin credit ratings for MFI customers materialized.¹⁸ While more perfect information about past borrowing, including among multiple lenders, has spurred discussion about how MFIs could screen borrowers, the issue of how borrowing histories of potential members might inform group formation has, to our knowledge, not been directly broached. Our findings on heterogeneity of group tenure suggest that such personal attributes traditionally used only for individual screening may also provide surprisingly useful bases for group formation.

More generally, despite the Malegam Report’s positive disposition toward group (as opposed to individual) lending, it failed to engage with broader recommendations on how MFIs should think about group composition. The 2010 report on the state of microfinance did note the possibility of MFI staff being aware of group composition at entry. Yet, this mention, made only in a footnote, did not offer ways in which MFIs might think about group composition later in time, in light of attrition.¹⁹ These oversights illustrate the need to explicate how attrition-based group composition policies can be leveraged in nuanced ways.

CONCLUSION

Group meetings are an intrinsic part of the classic microfinance model, which have the potential to increase social capital. Using a field experiment in India, we document how social capital is produced among members of microfinance

¹⁸ Krishna Prasad, CIBIL to Set up Microfinance Credit Information Bureau, *The Hindu*, Dec. 3, 2013.

¹⁹ N. Srinivasan, *Microfinance India: State of the Sector Report* 52, fn. 21 (2010).

groups, even long after they have joined the group. We also demonstrate heterogeneity in that production: Clients who are new to microfinance programs are more likely to benefit from more frequent meetings if paired with other new members. Group composition is not randomized in our experiment (or in other MFI lending schemes), which represents a caveat on the interpretation of our results. Nevertheless, we show how for a more mature and diverse microfinance client population than reported in Feigenberg, Field, and Pande (2013), development programs that aim to cultivate social capital among women can have a strong effect on group cohesion for an extended period of time and not just at the onset of the program.

The increasing regulation of microfinance has raised the question of which regulatory instruments to use and toward what ends. In the Indian legislative debates, the use of these regulatory instruments, including repayment/meeting frequency, has been framed largely with respect to short-term financial outcomes. Our empirical research documents the positive, long-term social impacts of high (weekly) meeting frequency, including the particularly large effects on new borrowers in groups with all new borrowers. As microfinance regulatory frameworks expand globally, policymakers should take a more holistic approach to regulation and consider microfinance's nonpecuniary benefits, particularly social capital.

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