

# Does Multiple Borrowing Encourage Microfinance Clients to Claim Greater Social Benefits?

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## ABSTRACT

### Purpose

For many, corporate social responsibility in the context of microfinance means acting ethically and sustainably and in the best interests of clients within financial intermediation activities. This study goes beyond this type of obligation to examine social benefits (e.g., death benefits) provided by a microfinance institution in addition to microcredit, known as a "credit plus" business model. Access to these social benefits is likely to be of great benefit to the vulnerable poor and the temptation to be eligible for access, especially in the context of multiple memberships and borrowings from other financial institutions that generate social capital and dissemination of information about the social benefits, is likely to be strong.

### Design/methodology/approach

Using the OLS regression model this study examines whether members of a microfinance institution who are concurrently members of at least one other such institution disproportionately access the social benefits offered by the microfinance institution besides access to microcredit.

### Findings

This study finds a significant association between the uptake of incremental social benefits for only members of the institution offering these benefits and not those with borrowings from other microfinance institutions.

### Originality

The contribution of this study lies in its analysis of a substantial, non-identifiable client data from branch-level aggregates and statistics are computed. This aggregation is partly a matter of necessity in that although clients can be uniquely identified in the dataset, the loan officers and branch managers who deal with the clients cannot.

**Keywords:** microfinance, multiple borrowing, credit plus, social benefits

## 1. Introduction

Microfinance as a means of providing microcredit effectively to the vulnerable poor, particularly to women, without the requirement for collateral, has become well-known around the world (see Gutiérrez-Nieto and Serrano-Cinca (2019) for a review). The key objective of microfinance is poverty alleviation combined with financial and social inclusion, particularly for women.

Numerous studies provide positive evidence of microfinance programs on clients' economic lives, including greater cash-flow, consumption expenses, financial freedom and well-being (Haftom, 2013; De Silva, 2012; Khandker & Samad, 2013). However, the last two decades of exponential growth in microfinance programs and their outreach has also seen mounting criticism of their worth (Adams & Pischke 1992; Duvendack & Maclean 2015). Many stakeholders believe that mission drift has occurred and that microfinance institutions (MFIs) have lost focus on their original principle of social responsibility (e.g., Beisland, D'Espallier & Mersland 2019; Maïtrot 2019). The emergence of 'scandals' and 'crises' (see, for instance, Ho & Mallick 2017; Guérin, Labie & Morvant-Roux 2018) in the microfinance sector in different countries across the world has polarised views on the impact of microfinance (e.g., Duvendack & Maclean 2015).

To address this issue MFIs are moving towards offering social benefits beyond low-collateral loans linked with national priorities, such as education, training and skills development (e.g., Huis et al. 2019), community development (e.g., Nayak & Panigrahi 2020), health services (e.g., Murshid & Bowen 2019; Murshid & Ely 2019), nutrition (Marquis & Colecraft 2014),

and insurance (Hussain & Ahmed 2019) in different countries across the world (Prior & Argandona 2009).

The ASA Philippines Foundation, a large, not-for-profit microfinance institution (MFI) in the Philippines supplied the data for this study. As well as microcredit loans, this MFI provides social benefits for its female-only members. These services include health benefits, death benefits, hospital and medical benefits and scholarships for members' children with no repayment required. This strategic move towards offering benefits in addition to microfinance lending and saving represents a significant shift for an MFI in acting in a socially responsible way. From both financial and social perspectives, a broad spectrum of stakeholders, ranging from customers to communities, can benefit from such provision (Sison & Fontrodona 2011). Many MFIs undertake similar initiatives; however, concerns remain for the sustainability and the development of the sector (Reichert 2018).

Chakrabarty and Bass (2015: 487) argue that "though many microfinance organisations offer social activities to help create economic and social wealth in developing countries, the impact of such social activities remains an underdeveloped area of inquiry". This study addresses this research gap in part by examining the relationship between multiple borrowings by microfinance clients and their take up of benefits offered by a microfinance institution in addition to the provision of microcredit. It examines whether members with multiple borrowings across different MFIs are likely to diffuse knowledge concerning social benefits offered by one of their MFIs (ASA Philippines Foundation) so that these clients are associated disproportionately with the take-up of these social benefits. Using a single microfinance

institution as a case context and a unique dataset involving thousands of non-identifiable microfinance program clients, the findings reveal no evidence of clients with multiple microfinance institution borrowings, and therefore by inference multiple borrowings, in receipt of disproportionate non-financial benefits incremental to standard microcredit service provision. This finding is consistent with other research (Schicks 2013) and modelling (Lahkar & Pingali 2014) that suggests multiple memberships or borrowings are not the concern for microfinance institutions that they are often claimed to be (e.g., Mohan et al., 2013).

## 1.1 Background

Recent microfinance industry-wide growth has been accompanied by concerns about client multiple borrowing and over-indebtedness, casting doubt on the ethics and effectiveness of the microfinance business model (Schicks 2013; Mohan, Potnis & Mattoo 2013), particularly given the tendency for commercialisation of microfinance institutions (Vanroose 2007). In several countries, borrowing from multiple MFIs has become a common practice for clients in areas with a high concentration of MFIs (Kar & Bali Swain 2018). Other studies (Cieslik et al. 2019) refer to multiple borrowing from two perspectives (Casini 2015; Mia 2017); firstly, 'client poaching' by MFIs and secondly, 'loan repayment and recycling' by clients. Regardless of the underlying incentives, client multiple borrowing practices make the governance of loans and overall activities of MFIs more challenging (Mehdi, 2016; Schicks, 2014).

Multiple borrowing does not necessarily lead to overindebtedness (Lahkar, Pingali & Sadhu 2016; Chichaibelu & Waibel, 2017) and can enhance opportunities for MFI clients to mix

with the broader community and engage in more extensive networking that assists in building trust and social capital (Ojong & Simba, 2019). Microfinance programs around the world have a strong pivotal role in harnessing social capital as well as complementing the formation or further strengthening of social capital (Habib & Jubb 2013). There is increasing literature identifying the building of social capital through group-lending models as an element essential to the functioning of microfinance programs and supporting the well-being of microfinance clients (Mayoux 2001; Molyneux 2002). Social capital develops cooperative behaviour and leads to the success of loan relationships among MFIs and their borrowers (Postelnicu & Hermes, 2018; Ojong & Simba, 2019). However, group-lending can also lead to adverse social outcomes that harm well-being, such as intimidation and harassment of borrowers, in particular, when groups include family or relatives (Rathore, 2015).

The remainder of this paper proceeds as follows. Section 2 reviews the literature and develops the hypothesis while the research methodology is explained in Section 3 and the sampling and data considerations in Section 4. Section 5 reports the results and Section 6 concludes.

## 2. Prior Literature

### 2.1 Theoretical Development

In addition to poverty alleviation, membership of microfinance institutions has been found to enhance social capital (e.g., Habib & Jubb, 2012; Feigenberg et al., 2014). The frequent meetings within groups comprised of familiar members, the social bonds involved in group responsibility for defaulting clients, and the shared experiences

of disaster and hardship, create trust and networks that are likely to disseminate knowledge of microfinance institution accessibility, and policies and procedures within those institutions (Ojong & Simba 2019).

Social ties are a powerful phenomenon that in other contexts (e.g., interlocking directorates) have been found to disseminate information and experiences, provide environmental scan and contribute to business sustainability (e.g., Bryant 2012). Social capital enhances the social relationship that benefits MFI clients by providing 'productive information' about the market and 'psychological aid' in the form of behaviour emulation (Sanders & Nee 1996). In this form, social ties also help MFI members for "getting the word out" about various services offered by MFIs or other agencies (Banerjee et al. 2013). However, there are also claims that microfinance, especially under a joint liability lending model where group members are responsible for delinquent borrowers, can undermine social capital (Banerjee & Jackson, 2017).

This study uses a social network framework to argue that multiple MFI memberships influence members in availing more of the social benefits offered by one of their microfinance institutions in comparison with their counterparts who are members of one microfinance institution. As such, it is conjectured that individuals with multiple MFI memberships are more likely to take advantage of social benefits (e.g., medical, disaster relief, scholarships for childrens' education) offered by a microfinance institution.

## 2.2 Prior Research

### *Microfinance products and services:*

Microfinance programs are well-known for their collateral-free loans products offered to disadvantaged populations and most often to women around the world. Over the last two decades, microfinance services and products have diversified and can be classified into two major categories, namely, financial and non-financial services (Ijaiya & Afolabi, 2012). Financial services include loans, savings, insurance, leasing, pensions and fund transfer, (Ijaiya & Afolabi 2012). Non-financial services include, for instance, entrepreneurial and management training, skill development, information and technological development, consultancy and advisory services, marketing assistance for clients' microenterprises, business to business (b2b) linkage promotion, and social services, for instance, financial, numeracy and literacy training, medical and health services, civic education and support for people with HIV/AIDS, disaster relief, and nutrition (Ahiabor 2013; Paul, Insaah & Nangpiire 2014)<sup>1</sup>.

Concurrently, growth and increased competition in the microfinance industry have motivated MFIs to become more client-responsive and diversify their products and services to meet clients' interests and enhance institutional sustainability (Grant 2000). In many countries, attracting new clients now requires MFIs to offer 'credit plus' services (Ijaiya 2016). Given this, non-financial services have become a standard inclusion in many MFIs' policies to increase client outreach and the financial viability of the microfinance policy framework.

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<sup>1</sup> Other social services/ benefits, such as business development services, and rehabilitation loans after disaster are provided by microfinance institutions,

but these do not fall within the scope of this current study since it focuses on direct financial grants that are not repayable.

In some cases, MFIs have been involved in post-disaster aid and recovery efforts through providing disaster relief (e.g. medicine, food, clothing, and clean water) to both members and non-members (Brown & Nagarajan, 2000). Moreover, some MFIs extend rehabilitation assistance for rebuilding houses and property of members as well as non-members (Ijaiya, 2016). Extending these social services also assists MFIs to build a reputation in the community for future membership outreach, strengthening and enhancing the growth of MFIs (Ijaiya 2016).

Researchers have documented the benefits of these types of social benefits. For instance, the business development services of MFIs in Ghana had a positive impact on MSEs' (micro and small enterprises) growth in terms of their efficiency and competitiveness, as well as improving the repayment capacity of MFI clients (Asiama & Osei, 2007). The Poverty Outreach Working Group (2006) also pointed out that some MFIs provide non-financial products to very poor members to strengthen their livelihoods and financial capacity to retain continuing membership.

One such 'credit plus' service provided by MFIs around the world is death benefits (life insurance) (Churchill 2000). This type of life insurance policy (death benefits) not only provides clients with support in a period of loss but also assists MFIs to reduce their risk and increase institutional sustainability. The Grameen Bank in Bangladesh requires members to contribute 1 per cent of their loan amount for life insurance, which covers the institutional risk of death mitigating members' ability to repay loans (Parameswaran & Raper 2003).

Several studies (e.g., Angelucci et al., 2015; Banerjee et al. 2015) suggest that offering financial services only as a solution to poverty

reduction is not adequate. Armendáriz and Szafarz (2011) argue that poor households benefit from a combination of services rather than the provision of credit only. Khandker (2005) suggests that because of the multidimensional nature of poverty, poor people need access to a coordinated combination of both financial and non-financial assistance to overcome poverty. Such developmental services are vital for making credit more fruitful and impactful for clients (Lensink et al., 2018). To address the various financial and non-financial needs of clients, MFIs are incorporating new non-financial services/products that not only attract more clients but also sustain their growth and financial sustainability (Grant 2000; Poverty Outreach Working Group, 2006; Angelucci et al., 2015; Lensink et al., 2018).

#### *Multiple memberships and social capital of MFI clients:*

According to Putnam (1993), different features of social organisation, e.g. network, trust, and norms can enhance the efficiency of society by facilitating coordinated actions. Economic theory suggests that repeated interactions between individuals can help build and maintain social capital, whereas encouraging interaction can be a useful tool for developing social capital.

Evidence exists that an increase in the number of MFIs and their outreach among impoverished communities has resulted in significant socio-economic benefits for microfinance clients and their families, although the benefits are contested by some (Duvendack and Maclean 2015). However, this increase in MFIs has also prompted increased competition in various parts of the world (e.g., Bylander et al., 2019). This industry growth can be seen from two

competing perspectives. First, it empowers clients with more comprehensive MFI membership options accompanied by choices in financial and non-financial services and social benefits (Deb, 2019). The second perspective brings anecdotal evidence (Cieslik et al., 2019; Debnath, & Roy, 2018; Guha, & Chowdhury, 2014) of clients taking more than one loan from multiple MFIs at the same time (beyond their capacity) resulting in multiple loans. Such incidences of a single borrower with three or more different concurrent loans are not uncommon (Bylander et al., 2019; Cieslik et al., 2019). Several studies (Debnath, & Roy, 2018; Guha, & Chowdhury, 2014) claim that multiple memberships with multiple borrowing for low-income clients increases the incidence of over-indebtedness and consequently default on loans.

However, studies of multiple membership or multiple borrowing and their impact on clients' and MFIs' sustainability reveal contradicting results. Some studies (Cieslik et al., 2019; Debnath, & Roy, 2018) find a negative impact of multiple borrowing on loan repayment and the sustainability of MFIs, while other findings (Guha, & Chowdhury, 2014; Krishnaswamy, 2007) are the opposite. Krishnaswamy (2007) claims a positive impact of multiple borrowing on loan repayments, finding that multiple borrowers perform equal to or better in loan repayment than those with a single loan in the same villages. The study also found that the arrears rates for multiple borrowers are lower than or equal to the overall arrears rate for the MFIs. Also, the rate is lower than or equal to the arrears rate in overlapping areas.

Nevertheless, failure to repay because of multiple borrowing have been reported. For instance, Gwendolyn (2001) and

Vogelgesang (2003) found that borrowing from multiple MFIs increases the incidence of over-indebtedness and increases rates of failure to pay loan commitments. Their studies found that multiple borrowing led poor clients to become poorer and simultaneously impeded MFIs' sustainability. Chaudhury & Matin (2002) found an exponential increase in households in Bangladesh taking multiple loans from more than one MFI and, as a result, their repayment rate had declined. The same picture emerges in different geographical locations (Debnath, & Roy, 2018).

However, multiple memberships are likely to lead to better networking with other group members from different MFIs. By mixing with members of different MFIs, knowledge diffusion about available benefits is likely to increase, rendering more highly networked clients more likely to have stronger social capital. According to Basargekar (2010), the relation between social capital and microfinance programs is stronger than is the case for any other development program. Basargekar claims that social capital is cultivated through peer group pressure and monitoring, which replaces conventional control requirements in MFIs.

These social networks among group members provide a setting designed to encourage members to encourage loan repayment by fellow group members (Postelnicu & Hermes, 2018) and reduce the risks for MFIs. The group lending method substitutes for the need to invest in screening and monitoring by the organisation. Postelnicu & Hermes (2018) claim that this lending model creates social collateral that enhances repayment by borrowers. Most MFI clients are confronted with information opacity in that they have to deal with a lack of widely available and

transparent information about the financial and social services provided by MFIs (Maïtrot 2019). Social capital makes communications possible in such an environment as members become more aware of their rights and knowledge about their financial institutions (Postelnicu & Hermes, 2018).

Social capital also improves the creditworthiness of MFI clients, who tend to be female. MFI membership enhances social capital that contributes to a greater sense of community, trust, reliance on each other in crises, information sharing, skilling-up, effective decision-making, and bargaining power within the family and community and the creation of a support system (Feigenber et al., 2010). Dufhues et al. (2012) examined the importance of social capital in explaining microfinance clients' knowledge and awareness of financial matters, their creditworthiness and repayment performance. Most of these studies find a positive association between social capital and clients' awareness, repayment and creditworthiness.

Over several studies, Dufhues et al. (2011), Dufhues et al. (2012) and Dufhues et al. (2013) measure social capital based on social network analysis using information from borrowing households in Thailand and Vietnam. These studies find that social capital is associated with better repayment performance, depending on the nature of social ties between individuals. Wydick, Karp-Hayes & Hilliker-Kempf (2011) investigated how social capital can benefit increasing the social performance of MFIs. The study reveals that religious and social networks are essential to rural households in Guatemala in accessing credit. Sundeen and Johnson (2012) examined how social capital and social networks impact the financial and social performance of MFIs. Their sample

covers approximately 2000 MFIs in 115 countries (1995- 2011). The findings reveal that social capital widens options and has a positive impact on MFI performance, with a trade-off between financial and social performance.

Cassar, Crowley & Wydick (2007), using survey data from borrowers in South Africa and Armenia, measure social capital (group homogeneity and intra-group trust ) within borrowing groups and show that both these measures are positively linked with repayment performance. Feigenberg et al. (2013) demonstrate the building of social capital among new clients in a group that is economically meaningful. This research also shows that introducing people into community groups has long-term economic benefits. Feigenberg et al. (2014) in a follow-up study found that the gains in social capital continue to accrue for long-standing microfinance groups when clients in those groups are made to interact more frequently (weekly rather than monthly), even for established groups. Further, the shared borrowing history of group members enhances social capital gains.

In summary, benefits for both MFIs and their clients arise from the social capital developed by the group meeting business model used by many MFIs, some with joint liability for loans and others lending on an individual basis.

### **2.3 Hypothesis Development**

Competing arguments exist as to whether clients of microfinance institutions with multiple borrowings are more or less likely to take advantage of social benefits/ services offered by MFIs. On the one hand, by networking with other group members from other institutions, knowledge diffusion about available benefits is likely to occur, rendering more highly networked clients more likely to

apply if eligible for benefits. On the other hand, those with access to multiple loans may be less likely to seek or need incremental benefits by way of social services/ benefits offered by an MFI. Hence no direction is predicted in the hypothesis that follows.

***H1: Uptake by clients of social benefits is associated with the number of loans at different microfinance institutions a client accesses.***

### **3. Research Method**

The research involves a single MFI located in the Philippines, ASA Philippines Foundation (ASA hereafter)<sup>2</sup>. This institution is one of the largest MFIs in the Philippines and in addition to more traditional financial intermediation services directed to vulnerable women, offers a suite of social benefits accessible to all members. On average, 15-16 per cent of ASA's gross income or 5-6 per cent of its net income is spent on provision of these services as part of its commitment to social responsibility. At the time of data collection, no other MFI in the Philippines offered these types of social benefits on such a scale. These benefits include disaster assistance, death benefits, hospital and medical expense benefits, and eligibility for educational scholarships for the dependants of members.

The business model adopted by ASA is individual lending to females with weekly branch group meetings at which repayments are made. Group members are not responsible for the repayment of loans made to others in the group, so the harms (see, for instance, Czura 2015) that can flow from joint liability are not present in the context for this study. Nevertheless, group activities and training occur at the weekly meetings, and

new potential members come through referrals from group members so that personal connection and trust is maintained. This study examines the association between the branch-level benefits offered (in total value and value for each benefit type) and client-reported MFI borrowings (i.e., membership of ASA and any other MFIs) using thousands of client-level observations of benefits paid under these schemes, aggregated to branch-level.

An OLS regression model is developed to examine the number of clients with one, two, three, and four loans, those engaging in peer-to-peer lending and the association of each of these with the uptake of social benefits. The hypothesis variable is the value by branch of social benefits (in total and by each type of benefit) received by clients. Controls include 1) the gender of regional and area managers since gender is important for CEOs (Hartarska, Nadolnyak & Mersland 2014) and loan officers (Bibi et al., 2018) in MFI performance; 2) branch age since the older the branch, the more likely the client has had opportunity to borrow elsewhere and the better the MFI performance (Wijesiri, Yaron & Meoli 2017); 3) MFI size since it is associated with MFI performance (Wijesiri et al., 2017); 4) branch size since the more clients within a branch, the greater the chance of multiple MFI memberships and multiple loans; and 5) the number of dependants since this might influence borrowing behaviour (Debnath & Roy 2018; Thai 2018).

#### **3.1 Data**

The data for this study come from two separate surveys of the clients. For the first dataset, non-identifiable client-level data by branch was provided to the researchers by a

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<sup>2</sup> ASA Philippines Foundation has no connection with a microfinance institution named ASA in Bangladesh.



single Philippines MFI, ASA Philippines Foundation. This MFI is a large, not-for-profit institution adopting a group lending model and lending to females only. The data are gathered from a survey of clients in some branches in late 2018, conducted by the MFI. Typhoon Haiyan, one of the most severe typhoons to have affected the Philippines impacted on clients and branches in November 2018 and, consequently, data from some branches are not available.

The branches are set up so that one loan officer is responsible for up to fifteen groups of up to 30 clients each, with five loan officers per branch. Unique identifiers were not available for loan officers. However, individual branches, regional managers (RMs) (who supervise up to five areas or 25 branches-or potentially 3,750 clients [25 branches x 5 loan officers x 30 clients]) and area managers (AMs) who supervise up to five branches-or potentially 750 clients (5 branches x 5 loan officers x 30 clients), were identifiable. The client-level data were aggregated as counts, averages (e.g. branch group size, branch number of dependents) or totals (e.g. the total number of clients borrowing from at least one other MFI).

The second data set involves a survey of clients conducted independently of the same MFI by one of the authors in early 2019. This survey asked for responses to questions about the social benefit activities conducted by the MFI. Client names were not used in this survey, but the branches to which clients were attached were identifiable. All data were gathered following ethical protocols and the relevant university-level approvals.

The social benefit uptake data was aggregated by branch and merged with the first dataset based on branch identity. This aggregation resulted in data for 113 branches where at

least one client was a recipient of at least one of the social benefit services provided by the MFI. However, some branches had missing data for the number of dependants, and so the sample size varies between 108-111 branches for the multiple regressions. It is important to note that only branches surveyed in relation to social benefits provided are included in this study.

## 4. Results

### 4.1 Univariate Results

Table 1 reports the descriptive statistics for the variables of interest for the 113 branches with at least one client in receipt of at least one social benefit. The mean number of clients in a branch with a loan with only the focal microfinance institution is 880, with only three branches reporting no members with a loan and 3,305 the maximum. Given that the potential maximum number of clients per branch (without an extension) is 2,250 (5 x 15 x 30), and for the actual sample the mean number of clients per branch is 1200, around 73 per cent of clients, on average, report having only one loan. Those with two loans average 294 per branch or around 25 per cent of an average branch. Only around 2.5 per cent of the clients (or 30 clients) from an average branch has three loans and only 3.5 clients, on average have four loans. Interestingly, 12 clients on average per branch engage in peer-to-peer lending, but more worryingly the maximum number in at least one branch here is 240.

The mean weighted average number of loans per branch, calculated as the mean of the count of clients within each branch with one, two, three and four loans respectively

weighted by the number of loans<sup>3</sup>, is 1691 with at least one branch having clients with no loans (likely a new branch where members need to save for a period before being eligible to borrow) and at least one branch having clients with 4527 as the weighted average number of loans.

Clients with established repayment histories are free to borrow in repeated loan cycles according to pre-defined limits. The branch mean weighted average number of loan cycles is 2644<sup>4</sup> with a minimum of 276 and a maximum of 11983.

The mean weighted average loan amount for branches is PhP 7.758M with a minimum less than PhP 1M and a maximum of over PhP 46M.<sup>5</sup> The branch mean for self-reported growth in annual income is a modest PhP 1274 with a range between zero and PhP 4894. However, this calculation relies on recall of prior year income and should be regarded with caution.

Clients in each branch have approximately three dependants on average, ranging between one and five. The mean *Branch Age* is 1128 days or just over three years. The average group size within each of the fifteen groups under the responsibility of one loan officer is 21.6 clients.

In terms of social outreach benefits, the branch mean amount for Disaster assistance is PhP 8195, for Death benefits is PhP 13288, for Hospital and Medical benefits is PhP 581 and for Scholarships is PhP 7971, totalling a mean per branch of PhP 30632 with a minimum of zero and a maximum of PhP 229600.

In terms of gender, 38 per cent of regional managers are female, and this proportion is 42 per cent for area managers. It is not possible to identify the gender of loan officers, but all clients are females under the business model of this MFI given that females have been found to use funds more wisely and default less than males (Dzanku 2019).

Table 2 reports the Pearson's correlations between the variables of interest. The highest correlation ( $r=.625$ ), not unexpectedly, is between the independent variable *Branch Age* and the dependent variable *No. with One Loan* (signifying the number of clients per branch with a loan only from the focal microfinance institution). There are high correlations between all of the dependent variables, but since the regressions are run separately, this is not an issue. No correlation amongst the independent variables is higher than 0.30, signalling that multicollinearity should not be a concern.

<sup>3</sup> For instance, Branch X might have 200 clients with one loan, 100 clients with two loans, 20 clients with three loans and 2 clients with four loans. In this case the weighted average number of loans –  $200 \times 1 + 100 \times 2 + 20 \times 3 + 2 \times 4=468$ .

<sup>4</sup> For example, Branch Y might have 200 clients in their first loan cycle, 100 clients in their 2-3 loan cycle, 20 clients in their fourth to fifth cycle, 10 clients in their sixth to tenth cycle and 2 clients in their above tenth cycle. In this case, the branch weighted average number of loan cycles is  $200 \times 1 + 100 \times 2 + 20 \times 4 + 10 \times 6 + 2 \times 10=560$ .

<sup>5</sup> For example, Branch Z might have 200 clients with loans between PhP 3,000-6000, 100 clients with loans

between PhP 7,000-10,000, 20 clients with loans between PhP 11,000-15,000, 10 clients with loans between PhP 16,000-25,000, 10 clients with loans between PhP 26,000-30,000, 10 clients with loans between PhP 31,000-40,000, 2 clients with loans between PhP 41,000-50,000, 2 clients with loans between PhP 51,000 – PhP 75,000, 2 clients with loans between PhP 76,000 - 100,000 and one client above PhP 100,000. In this case, the branch weighted average loan is calculated as  $200 \times 3,000 + 100 \times 7,000 + 20 \times 11,000 + 10 \times 16,000 + 10 \times 26,000 + 10 \times 31,000 + 2 \times 41,000 + 2 \times 51,000 + 2 \times 76,000 + 1 \times 100,000=$  PhP 2.686M.

**Table 1: Descriptive Statistics (N=113 branch observations)**

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of clients per branch	113	1200.5	544.2	163	3782
Clients with Loan with Focal MFI	113	880.3	560.9	0	3305
Clients with Loans with Focal MFI plus Another MFI	113	293.5	199.7	0	933
Clients with Loans with Focal MFI plus Two Other MFIs	113	30.2	42.8	0	264
Clients with Loans with Focal MFI plus Three Other MFIs	113	3.5	12.6	0	128
Clients Engaged with Lending	113	12.0	30.6	0	240
RMFemale	113	38.1%			
AMFemale	113	41.6%			
No. of Client Dependants	111	2.96	0.75	1.00	5.18
Branch Age (days)	113	1127.8	964.3	-274	3314
Ave Branch Client Group Size	113	21.6	4.192	0	27.3
Total Benefit (PhP)	110	30631.7	45198.8	0	229600
Disaster Benefit (PhP)	113	8195.4	27660.78	0	172000
Death Benefit (PhP)	113	13288.4	25926.3	0	160000
Hospital Benefit (PhP)	113	580.7	788.2	0	5000
Scholarship Benefit (PhP)	113	7971.4	17613.7	0	150000

## 4.2 Multivariate Results

Results are reported only where the F statistic for the regression is significant, although regressions were run for all five dependent variables (loans with one, two, three, four microfinance institutions and client engaged in lending). Where few client numbers are observed (particularly for the latter two dependent variables) often the model was not significant, and so results are not reported. Robust regression is conducted in all cases whereby the identity of the Regional Manager (RM) who has responsibility for several branches is controlled for using STATA's clustering technique

Table 3 reports the results from robust regression where the hypothesis variable of

interest is the *Total* benefits (in PhP) received by clients within the branch (TotalAssist). The regression is run separately for dependent variables measuring (Panel A) the number of clients at branch-level with loans with only the focal microfinance institution, (Panel B) the number of clients with two loans, including one from a different institution and (Panel C) the number of clients with three loans, including from two other institutions besides the focal institution. The  $R^2$  for Panel A is a healthy 50 per cent but drops markedly (to less than 10 per cent) for clients with multiple borrowings as the dependent variable.

**Table 2: Pearson's Correlation Table (N=108 branch observations)**

	No. with one loan (sqrt)	No. with two loans (sqrt)	No. with three loans (sqrt)	No. with four loans (sqrt)	No. with lending activities (sqrt)	RMFemale	AMFemale	No. Dep.	Branch Age	Branch Group Size
No. with two loans (sqrt)	0.161*									
No. with three loans (sqrt)	0.071	0.609***								
No. with four loans (sqrt)	0.042	0.252**	0.546***							
No. with lending activities (sqrt)	0.140	0.101	0.176**	0.282**						
RMFemale	-0.009	0.204**	0.127	0.048	0.149*					
AMFemale	0.228**	0.158*	0.033	0.048	0.134	0.278**				
No. of Dependants	-0.258**	-0.152	-0.100	-0.174	-0.143	0.088	-0.175			
Branch Age	0.625***	-0.061	0.006	0.107	0.102	-0.010	0.241**	-0.290**		
Average Branch Group Size	0.280**	0.071	-0.092	-0.102	0.076	-0.001	0.036	-0.083	0.103	
Total Assistance (sqrt)	0.129	0.014	-0.079	-0.107	-0.126	0.064	0.063	0.045	-0.083	0.141

**Legend:** RM=Regional Manager, AM=Area Manager, No. of Dependants = Average number of dependants, Branch Age=Period from branch establishment to survey date, Branch Group Size=Average group size, significance levels \*\*\*=p<.001, \*\* = p<.05, \*=p<.10, Variables are transformed as appropriate to achieve low standard errors using square root

The variable of interest (TotalAssist) is positive and significant in Panel A (p<.01), but not significant in Panels B and C (loans with two and three microfinance institutions respectively). This result suggests that clients with multiple borrowings are not associated with receipt of social benefits offered by the MFI.

**Table 3: OLS Robust Regression Total Assistance Benefit (N=108 branch observations, clustered on Regional Manager Identity)**

Dependent Variable	No. in Branch with Loan with only focal MFI (sqrt) (Panel A)			No. in Branch with Loan with focal plus another MFI (sqrt) (Panel B)			No. in Branch with Loan with focal plus three other MFIs (sqrt) (Panel C)		
	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t
TotalAssist (sqrt)	0.013	0.004	3.080**	0.000	0.004	-0.080	-0.001	0.001	-1.320
RM Female	0.217	1.454	0.150	2.269	1.360	1.670	0.172	0.261	0.660
AM Female	1.922	1.408	1.370	1.496	1.440	1.040	0.137	0.220	0.620
No. of Dependants	-0.843	1.308	-0.640	-1.342	0.842	-1.590	-0.381	0.290	-1.310
Branch Age	0.006	0.001	7.140***	-0.001	0.001	-1.210	0.000	0.000	0.280
Ave Branch Group Size	0.544	0.102	5.350***	0.097	0.130	0.750	-0.042	0.027	-1.560
_cons	9.140	4.984	1.830	17.211	4.048	4.250***	3.107	0.865	3.590***
F stat	48.900			3.280			2.250		
p-value	0.000			0.013			0.000		
R <sup>2</sup>	0.497			0.088			0.066		
No. of Clusters	31			31			31		
Root MSE	7.351			6.124			1.567		

**Legend:** TotalAssist = square root of value in PhP of benefits accessed in each category (Disaster, Death, Hospital and Medical, Scholarship), RM=Regional Manager, AM=Area Manager, No. of Dependants = Average number of dependants, Branch Age=Period from branch establishment to survey date, Branch Group Size=Average group size, Variables are transformed as appropriate to achieve low standard errors using square root (sqrt). \*\*\*significant at p<0.01, \*\* significant at p<0.05, \*significant at p<.10.

Tables 4 - 7 report the results for similar analyses, but with the value of different types of social benefit rather than their total by branch. Table 4 reports the results for Disaster Benefits with an outcome identical to that described above for TotalAssist. The Disaster Benefit Value is positively associated with clients who borrow only from the focal microfinance institution (Panel A) and not significant for second and third multiple membership clients (Panels B-C). The R<sup>2</sup> for Panel A is a healthy 52 per cent but

drops markedly (to less than 10 per cent) for clients with multiple memberships as the dependent variable.

For *Death Benefit* as the hypothesis variable, reported in Table 5, there is no significance reported in Panels A and B and weak negative significance (p<.10) reported in Panel C. Again, this result suggests multiple borrowing is not a factor in accessing excessive member benefits. Once again, the R<sup>2</sup> for Panel A is a healthy 49 per cent but drops markedly (to less than 10 per cent) for clients with multiple memberships as the dependent variable.

**Table 4: OLS Robust Regression Disaster Assistance Benefit (N=111 branch observations, clustered on Regional Manager Identity)**

Dependent Variable	No. in Branch with Loan with only focal MFI (sqrt) (Panel A)			No. in Branch with Loan with focal plus another MFI (sqrt) (Panel B)			No. in Branch with Loan with focal plus three other MFIs (sqrt) (Panel C)		
	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t
Disaster Benefit (sqrt)	0.094	0.037	2.550**	0.015	0.031	0.480	-0.003	0.006	-0.500
RMFemale	-0.205	1.308	-0.160	2.170	1.264	1.720	0.111	0.250	0.440
AMFemale	2.296	1.349	1.700	1.482	1.388	1.070	0.113	0.222	0.510
No. of Dependants	-0.884	1.190	-0.740	-1.322	0.853	-1.550	-0.383	0.284	-1.340
Branch Age	0.006	0.001	7.510***	-0.001	0.001	-1.120	0.000	0.000	0.320
Ave Branch Group Size	0.559	0.097	5.770***	0.091	0.121	0.750	-0.044	0.028	-1.560
_cons	9.395	4.625	2.030	17.125	4.133	4.140***	3.024	0.881	3.430***
F stat	57.330			3.000			2.560		
p-value	0.000			0.020			0.039		
R <sup>2</sup>	0.517			0.088			0.056		
No. of Clusters	32			32			32		
Root MSE	7.179			6.041			1.565		

**Legend:** Disaster Benefit = square root of value in Php of benefits accessed in each category (Disaster, Death, Hospital and Medical, Scholarship), RM=Regional Manager, AM=Area Manager, No. of Dependants = Average number of dependants, Branch Age=Period from branch establishment to survey date, Branch Group Size=Average group size, Variables are transformed as appropriate to achieve low standard errors using square root (sqrt). \*\*\*significant at p<0.01, \*\* significant at p<0.05, \*significant at p<.10.

For *Hospital Benefit* as the hypothesis variable, reported in Table 6, there is significance (positive) only for clients with two loans (Panel B). This finding is somewhat concerning as of all the evidence sets required to establish eligibility for the benefit medical evidence is probably the easiest to flout (compared with disaster area evidence, death certificates, and educational attainment evidence for scholarships). This research may be of practical benefit to the focal microfinance institution in designing policies and procedures around the payment of medical expenses that take account of multiple borrowing risk. The result may suggest that in the event of genuine illness, vulnerable clients seek access to other borrowing sources, or it may suggest opportunism on the part of clients. The R<sup>2</sup> for

Panel A is a healthy 49 per cent but drops markedly (to less than 12 per cent) for clients with multiple borrowings as the dependent variable.

For the dependant *Scholarship Benefit* results reported in Table 7, only two models create sound fit statistics. The R<sup>2</sup> for Panel A is a healthy 49 per cent but drops markedly (to less than 10 per cent) for clients with multiple borrowings as the dependent variable. Again, the hypothesis variable is not significant in either Panel A or B.

In all regressions, for the number of clients borrowing only from the focal microfinance institution, two control variables, *Branch Age* and *Group Size* are highly significant (p<.001).

**Table 5: OLS Robust Regression Death Benefit (N=111 branch observations, clustered on Regional Manager Identity)**

Dependent Variable:	No. in Branch with Loan with only focal MFI (sqrt) (Panel A)			No. in Branch with Loan with focal plus another MFI (sqrt) (Panel B)			No. in Branch with Loan with focal plus three other MFIs (sqrt) (Panel C)		
	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t
Death Benefit (sqrt)	0.007	0.007	1.050	-0.003	0.005	-0.520	-0.003	0.001	-1.790*
RMFemale	0.241	1.424	0.170	2.164	1.241	1.740*	0.053	0.253	0.210
AMFemale	2.225	1.404	1.580	1.472	1.374	1.070	0.117	0.221	0.530
Number Dep.	-0.739	1.350	-0.550	-1.294	0.827	-1.560	-0.384	0.272	-1.410
Branch Age	0.006	0.001	7.190***	-0.001	0.001	-1.270	0.000	0.000	0.420
Ave Branch Group Size	0.594	0.109	5.440***	0.102	0.125	0.820	-0.041	0.026	-1.560
_cons	8.965	5.109	1.750*	17.204	3.980	4.320***	3.122	0.841	3.710**
F stat	48.600			3.050			2.530		
p-value	0.000			0.018			0.000		
R <sup>2</sup>	0.490			0.088			0.078		
No. of Clusters	32			32			32		
Root MSE	7.378			6.042			1.546		

**Legend:** Death Benefit = square root of value in PhP of benefits accessed in each category (Disaster, Death, Hospital and Medical, Scholarship), RM=Regional Manager, AM=Area Manager, No. of Dependants = Average number of dependants, Branch Age=Period from branch establishment to survey date, Branch Group Size=Average group size, Variables are transformed as appropriate to achieve low standard errors using square root (sqrt). \*\*\*significant at p<0.01, \*\* significant at p<0.05, \*significant at p<.10.

**Table 6: OLS Robust Regression Hospital Benefit (N=111 branch observations, clustered on Regional Manager Identity)**

Dependent Variable	No. in Branch with Loan with only focal MFI (sqrt) (Panel A)			No. in Branch with Loan with focal plus another MFI (sqrt) (Panel B)			No. in Branch with Loan with focal plus three other MFIs (sqrt) (Panel C)		
	Coef.	Std. Err.	t	Coef.	Std. Err.	t	Coef.	Std. Err.	t
Hospital Benefit (sqrt)	0.009	0.048	0.190	0.075	0.033	2.320**	0.005	0.017	0.300
RMFemale	0.119	1.427	0.080	2.409	1.259	1.910*	0.788	0.597	1.320
AMFemale	2.177	1.388	1.570	1.036	1.200	0.860	0.265	0.670	0.400
Number Dep.	-0.715	1.372	-0.520	-1.181	0.841	-1.400	-0.438	0.466	-0.940
Branch Age	0.006	0.001	6.610***	0.000	0.001	-0.590	0.000	0.000	0.210
Ave Branch Group Size	0.604	0.107	5.630***	0.091	0.117	0.780	-0.103	0.067	-1.550
_cons	9.008	5.460	1.650	15.150	3.827	3.960***	7.215	2.361	3.060**
F stat	41.930			3.310			2.020		
p-value	0.000			0.012			0.092		
R <sup>2</sup>	0.486			0.120			0.046		
No. of Clusters	32			32			32		
Root MSE	7.413			5.934			3.202		

**Legend:** Hospital Benefit = square root of value in PhP of benefits accessed in each category (Disaster, Death, Hospital and Medical, Scholarship), RM=Regional Manager, AM=Area Manager, No. of Dependants = Average number of dependants, Branch Age=Period from branch establishment to survey date, Branch Group Size=Average group size, Variables are transformed as appropriate to achieve low standard errors using square root (sqrt). \*\*\*significant at p<0.01, \*\* significant at p<0.05, \*significant at p<.10.

## 5. Discussion

This study fills a research gap in that little is known about the social benefit activities of MFIs offered in addition to microcredit. The value of benefits received by clients for disaster relief, death in the family, hospitalisation and medical expenses, and scholarships for clients' children are examined for a sample of 113 MFI branches

comprising over 170,000 clients. The research question investigated is whether clients with multiple borrowings are more associated with benefit uptake than those belonging only to a single institution. Multiple borrowing concerns observers of the microfinance industry, but evidence exists that it may not be as harmful as appears.



**Table 7: OLS Robust Regression Hospital Benefit (N=111 branch observations, clustered on Regional Manager Identity)**

Dependent Variable	No. in Branch with Loan with only focal MFI (Panel A)			No. in Branch with Loan with focal plus three other MFIs (Panel C)		
	Coef.	Std. Err.	t	Coef.	Std. Err.	t
Scholarship Benefit (sqrt)	0.007	0.012	0.530	0.001	0.008	0.080
RMFemale	0.066	1.430	0.050	2.215	1.291	1.720*
AMFemale	2.002	1.368	1.460	1.448	1.293	1.120
No. of Dependants	-0.719	1.349	-0.530	-1.297	0.846	-1.530
Branch Age	0.006	0.001	7.380***	-0.001	0.001	-1.350
Ave Branch Group Size	0.602	0.103	5.830***	0.098	0.125	0.780
_cons	9.050	5.302	1.710*	17.081	4.154	4.110***
F stat	50.630			3.760		
p-value	0.000			0.006		
R <sup>2</sup>	0.487			0.086		
No. of Clusters	32			32		
Root MSE	7.400			6.048		

**Legend:** Scholarship Benefit = square root of value in PhP of benefits accessed in each category (Disaster, Death, Hospital and Medical, Scholarship), RM=Regional Manager, AM=Area Manager, No. of Dependants = Average number of dependants, Branch Age=Period from branch establishment to survey date, Branch Group Size=Average group size, Variables are transformed as appropriate to achieve low standard errors using square root (sqrt). \*\*\*significant at p<0.01, \*\* significant at p<0.05, \*significant at p<.10.

The findings reveal that perhaps except for hospitalisation and medical benefits paid to clients, those accessing the benefits, for the most part, are associated only with the focal microfinance institution and are not multiple borrowers. Of practical significance to the microfinance institution involved in this study is the case it makes for heightened controls over payments for hospitalisation and medical expenses. Of significance for the microfinance industry is that little to no evidence of potential opportunism by clients is identified. The results suggest that the social ties encouraged by membership and borrowings in multiple microfinance institutions, and the enhanced contacts through frequent attendance at meetings associated with these multiple memberships, do not seem to be associated with the diffusion of a tendency to claim social benefits.

As with most research, this study is subject to several limitations. First, the data analysed in this study emanates from a single microfinance institution. An advantage of this is that all clients are subject to the same policies and procedures in recruitment, enforced savings and first and subsequent loan eligibility and terms. On the other hand, the generalisability of results across MFIs is necessarily limited, and the results may not apply, not only for other MFIs, but also for this type of institution in other countries.

Second, the data for this study were collected by the MFI. Clients may have perceived a power relationship in their responses to survey questions or may not have answered truthfully about the number of loans with other MFIs. On the other hand, the client-sample size (over 170,000 observations) that is aggregated to branch-level should randomise any bias. Additionally, the timing

of the client-level data collection coincided with Typhoon Haiyan, an extremely severe typhoon in a country used to typhoons, which meant that some branches in severely affected areas are not included in the sample. To the extent that data from the included compared with not included branches is not representative, the results in this study may contain bias.

The contribution of this study lies in its analysis of a substantial, non-identifiable client-level sample from which branch-level aggregates and statistics are computed. This aggregation is partly a matter of necessity in that although clients can be uniquely identified (by number not by name) in the dataset, the loan officers and branch managers who deal with the clients cannot. Hence analysis at client-level is not possible. Importantly, this limitation also guarantees

the anonymity of clients, areas and regions within the Philippines, consistent with ethics approval requirements.

In terms of future research, examining the social benefits provided by the focal microfinance institution at another point in time would be valuable in order to create a longitudinal comparison. Examining the practices of other microfinance institutions in the Philippines and elsewhere would also be of benefit in order to examine whether the types of outreach activities in terms of social benefits offered by microfinance institutions are similar.

In terms of empirical analysis, multilevel modelling that controls for loan officer identity (if known), as well as area manager identity would be valuable. This current study controls for one level only – regional manager identity.

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