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Multiple Borrowing in the Philippines:

A Pilot Area Study based on Branch Client Data

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Multiple Borrowing in the Philippines

A Pilot Area Study based on Branch Client Data[1]

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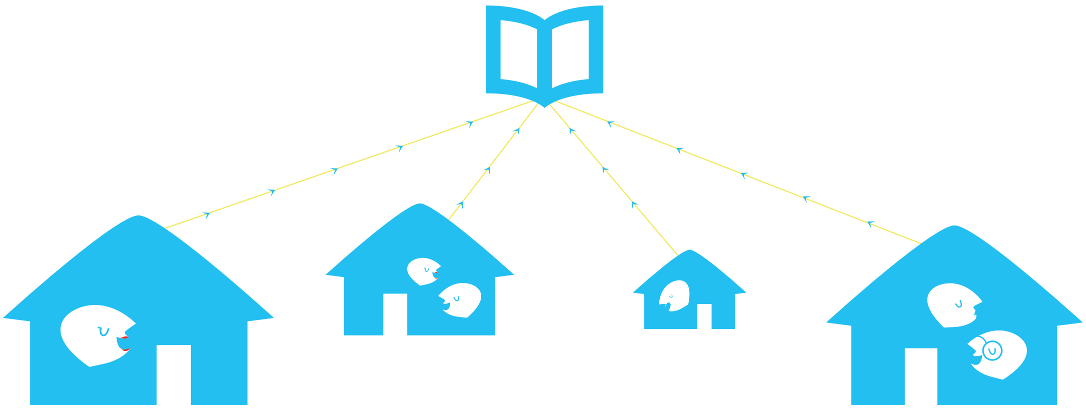
ABSTRACT



This study quantifies the incidence of multiple borrowing, creates a profile of multiple borrowers, and assesses the broad correlation between multiple borrowing and delinquency in a selected community where multiple borrowing is widely believed to take place, the "Commonwealth" district of Quezon City. It uses consolidated branch client data from microfinance institutions (MFIs) that serve households in this community. Multiple borrowing is defined narrowly in this case as borrowing from two or more MFIs. Clients were traced across MFIs using a search algorithm based on names, birth dates, and street addresses. The results suggest that, on average, 14 percent of active MFI clients borrow from more than one MFI. Because loan sizes are generally uniform, multiple borrowers account for a similar proportion of all outstanding MFI loans, though there are important distinctions across various types of loans and there are substantial variations in the prevalence of multiple borrowing across MFI. There are generally no systematic differences in the demographic characteristics between single borrowers and multiple borrowers and there is no evidence *to date* to suggest that multiple borrowing is associated with repayment difficulties and delinquency. These findings should be taken as preliminary and should not be taken as nationally representative.

Keywords multiple borrowing, microfinance

OVERVIEW

This report is second in a series of notes on multiple borrowing in the Philippines, reflecting the use of various data sources (as explained in the Review of the Literature) to estimate the incidence and correlates of multiple borrowing. It uses consolidated branch client data obtained from several MFI partner organizations operating in the "Commonwealth" neighborhood[2] of Quezon City to quantify the incidence of multiple borrowing and to assess its correlates. This exercise complements the other sources of data on multiple borrowing—a household survey and a series of focus group discussion (FGDs)—which are described and analyzed in other reports (or other chapters of an integrated report). Each data source has its own strengths and weaknesses – data from household surveys are self-reported, for example, and are thus vulnerable to misreporting; meanwhile, FGDs, though instructive, are not representative of the relevant population. As explained more fully in the next section, consolidated information has the merit of objectivity and relative comprehensiveness. In principle and by construction, the consolidated information also represents the universe of MFI clients in a particular community (though as described below, this may not necessarily be true, in this case). Nonetheless, these data have at least one important weakness: we are unable to determine whether MFI clients are simultaneously borrowing from other sources of credit—including commercial banks, moneylenders, government institutions, and informal sources such as family and friends. As explained in the next section, the analysis of the data is also subject to errors of inclusion and exclusion.

The Commonwealth district was chosen as a pilot district, in large part reflecting views of numerous representatives of the MFI community (received during the early stages of the research project) indicating that multiple borrowing, if it is at all taking place somewhere in the Philippines, is likely taking place at least in this neighborhood, where several MFIs are known to operate. Combining information from a variety of sources – key informant interviews, (incomplete) government listings, and ocular inspections – the research team confirmed that indeed numerous MFIs as well as formal and informal lenders do business in the Commonwealth area. There is evidence to suggest that up to 14 MFIs were present in this area in 2011.

The authors consolidated branch client data provided by MFIs in the Commonwealth district, as outlined below in the next section, to trace individuals or households that borrow simultaneously from two or more MFIs. The results of the analysis suggest that some 14 percent of MFI clients are multiple borrowers, taking all the MFIs in the Commonwealth area as a group. Across MFIs, there are substantial variations in the incidence of multiple borrowing, ranging from 4 percent to 26 percent. There are generally no systematic differences in multiple borrowing across demographic groups and there is no evidence *to date* that suggests multiple borrowing is associated with delinquencies or repayment difficulties. These dimensions, along with their nuances, are explored more fully below.

The rest of the report is organized as follows: Section 2 describes the data and methodology and list several important limitations of the study. Section 3 reports the main results and tests the robustness of the findings using alternative search functions and algorithms. Section 4 draws some preliminary conclusions and outlines possible extensions.

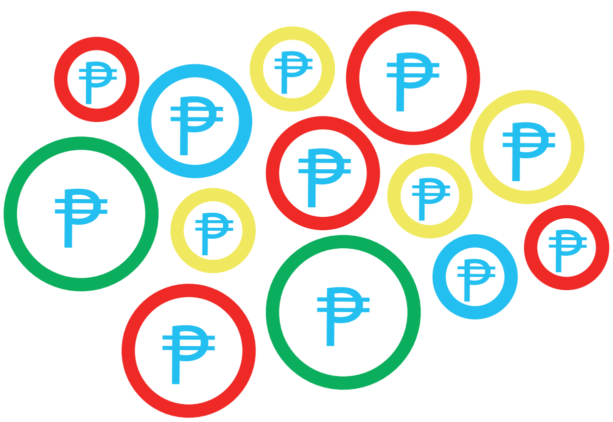
[2] In this report we will refer to the Commonwealth as a district, as an area, a community or as a neighborhood, and use these terms interchangeably. It is not, however, a district in any political or administrative sense, as is well known. It consists of several villages and subdivisions in Quezon City loosely referred to as "Commonwealth" as these neighborhoods can be found mostly somewhere along or near Commonwealth Avenue.

DATA AND METHODOLOGY

The Sample of MFIs included in the Study

MFIs found to be operating in the Commonwealth district were invited to participate in this study. Most of the invited MFIs agreed to share extracts from their branch client database to the authors, for research purposes and protected by a confidentiality agreement. However, a number of other MFIs in the Commonwealth neighborhood were, for a variety of reasons, unwilling or unable to share data, and were therefore left out of this area study.

Indications suggest that the MFIs excluded from the exercise tend to be the smaller MFIs.[3] To the extent that they represent a disproportionate share of multiple borrowing (i.e., in case multiple borrowing is more prevalent among the smaller MFI[4]), the incidence of multiple borrowing reported here may be biased or underestimated.



As agreed, MFIs that participated in this study are not identified by name in any part of this report, to help protect potentially sensitive research findings. Some partner organizations provided client databases separately for several branches. Rather than identify those units as branches of a single MFI, this report treats every single branch/database as a separate unit, yielding a total number of 13 units.[5] All the tables in the next section therefore refer to these 13 units, without distinguishing MFI units from MFI branch units.

On average, each MFI provided a list of over 1,000 active clients yielding close to 14,000 observations. The number of clients in the databases provided varies from a low of 46 to over 2,500. The tables provided below do not report the absolute number of clients by MFI, as this may serve to distinguish and reveal the identity of MFIs at both ends of the distribution – the largest and smallest MFIs, which are well-known to the MFI community.

Data fields and information provided by the MFI

Every MFI that agreed to participate in this study was provided with a data template and list of fields (see Annex), including columns/fields for the name of the client, date of membership, age and birth date, address, spouse name, loan cycle, amount of loan outstanding and amount disbursed to date, loan use and an index of whether the client missed payment.[6] Because of significant variations in data management processes and the availability of electronic administrative data across MFIs, there are equally significant variations in the formats in which the data are kept; the completeness of information; the quality of information (including the prevalence of encoding and typographical errors); and the typologies and categories used (in particular, the fields relating to loan use and whether a client has missed a payment).

[3] The partner MFIs cumulatively represent some 60 percent of outstanding MFI loans nationwide and account for a similar share of all MFI clients, using 2010 data from MIX Market. There are no disaggregated data to indicate what percent of outstanding loans in the Commonwealth area is represented by this group.

[4] One representative of a participating MFI suggested the process by which this might happen: A smaller MFI, in general, is less able to diversify its risks. To reduce risks, they may recruit clients from among the "good" clients of the larger MFI, thus leading to more prevalent multiple borrowing among clients of the smaller MFI.

[5] Only two MFIs in this neighborhood are known to be large enough to operate more than one branch. Identifying the branches as such may reveal the identity of the MFI unnecessarily.

[6] In some cases, this is indicated by the number of days a payment is overdue; in other cases, it is a simple categorical variable indicating whether or not a client has missed any payment.

Within some MFIs, a client may be eligible to take out multiple loans for a variety of intended purposes, such as for example: microenterprise-related activities, education, and health care. This then forms a different class of multiple borrowing – those taking out multiple loans from the same MFI – a point which we explore more fully below, in the sub-section on the specific definition of "multiple borrowing." If so, then additional data on such loans were provided by the relevant MFIs.

The data were provided by MFIs between March 2011 and July 2011. As agreed with participating MFIs, all the data provided refer to the list of clients considered active as of January 31, 2011. Borrowing behavior suggested by the consolidated data can then be safely assumed as contemporaneous borrowing behavior or taking place during the same period.

Definition of "Multiple Borrower" used in this study

A client is classified as a multiple borrower if found to be simultaneously indebted to two or more MFIs. Note that this is a narrower definition of multiple borrowing, compared to household survey-based studies that allow a broader definition of multiple borrowing to include borrowing from sources of credit other than MFIs. In addition, in this study, a separate class of borrowers is identified as "own-MFI multiple borrowers" (for want of a better term) if clients have multiple outstanding loans from the same MFI. Conversations with loan officers suggest that such "own-MFI multiple borrowing behavior" may or may not necessarily be known to the MFI, depending on the level of sophistication of their data-sharing and information systems.

Search procedure or search algorithm

To identify multiple borrowers, client names and other identifying information were matched across all MFIs. The matches were conducted using search functions and merging routines in MS Excel and Stata. First, last names and first names were matched exactly. Birth dates were then matched along with the street address. This step in the matching procedure, however, was hampered by incomplete data and typographical errors in the address fields. Most entries had missing street numbers and streets names were sometimes spelled incorrectly.

In case of imperfect matches, client data were manually inspected to establish the likelihood that they refer to the same client(s). To allow for spelling errors and typographical lapses, the authors tested a variety of matching procedures – e.g., matching the first three characters of the first names and last names. These procedures, however, were found to yield numerous false positives. (A more comprehensive list of matching rules and procedures will be appended to this study in due course.)

Errors of inclusion and exclusion in this study's search procedure

More generally, the search procedure is vulnerable to errors of inclusion and exclusion. That is, clients may be incorrectly classified as a multiple borrower (error of inclusion) or a client may be incorrectly excluded from among the list of multiple borrowers (error of exclusion). In cases where relatives share first and last names and birthdays and live in the same neighborhood, for example—not likely, but nonetheless a possible occurrence—clients may be incorrectly classified as multiple borrowers, thus leading to an overestimate of multiple borrowing. Where spelling errors and encoding errors prevent the search procedures from matching correctly, clients may be incorrectly excluded from among those classified as multiple borrowers, thus leading to an underestimate of multiple borrowing. In addition, because of the narrow definition adopted in this study – multiple borrowing from MFIs alone, ignoring loans from formal and informal sources other than MFIs – the estimates of the incidence of multiple borrowing in the next section may be treated as a lower bound.

RESULTS

This section reports the estimates the incidence of multiple borrowing for the MFI community as a group, by MFI, and along selected dimensions. It then uses simple OLS regressions and Probit regressions to describe the correlates of multiple borrowing. Because the analysis is subject to errors of inclusion and exclusion, and because the data are, at best, a cross-sectional snapshot missing important changes over time, the correlations should be interpreted as mere statistical association. No causal inferences are made. In addition, because this is an area study, the results here should not be interpreted as nationally representative.

The incidence of multiple borrowing

Table 1 presents the incidence of multiple borrowing among MFI clients on average. The MFIs are numbered from 1 to 13, corresponding to the units/branch client databases, as previously explained. The summary figures are reported for each MFI, on average, and in relation to other MFIs to which clients of a specific MFI are simultaneously indebted.

Table 1 : The Incidence of Multiple Borrowing (In percent of all clients)

	Percent of Clients Concurrently Borrowing from the following MFIs													Percent Multiple Borrower
	MFI 1	MFI 2	MFI 3	MFI 4	MFI 5	MFI 6	MFI 7	MFI 8	MFI 9	MFI 10	MFI 11	MFI 12	MFI 13	
MFI 1	0.0	0.1	0.0	0.0	1.0	0.3	0.1	1.0	2.5	0.1	2.4	0.7	0.0	7.0
MFI 2	0.1	0.0	0.0	0.0	4.2	0.1	0.1	0.5	1.1	1.8	1.9	4.2	0.0	11.9
MFI 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	3.9
MFI 4	0.0	0.0	0.0	0.0	2.4	1.7	0.9	1.1	2.2	0.0	1.7	2.4	0.2	10.9
MFI 5	0.6	3.2	0.0	0.5	0.0	0.9	0.7	1.1	1.3	0.6	2.3	4.9	0.1	13.9
MFI 6	0.8	0.3	0.0	1.5	3.8	0.0	1.0	1.0	2.2	1.0	1.3	2.3	0.2	13.6
MFI 7	0.2	0.4	0.0	1.1	3.8	1.3	0.0	3.4	0.0	0.2	0.4	4.6	0.2	13.5
MFI 8	2.0	1.3	0.0	0.8	3.5	0.8	2.0	0.0	0.1	0.1	6.7	6.0	0.0	20.4
MFI 9	4.0	2.0	0.0	1.2	3.4	1.3	0.0	0.1	0.0	0.0	4.3	0.2	0.0	14.0
MFI 10	0.1	4.2	0.0	0.0	1.7	0.7	0.1	0.1	0.0	0.0	1.6	4.7	0.5	11.3
MFI 11	2.4	2.3	0.0	0.6	3.7	0.5	0.1	3.4	2.7	0.8	0.0	4.3	0.1	17.7
MFI 12	0.6	4.1	0.3	0.7	6.3	0.7	1.1	2.4	0.1	1.9	3.4	0.0	0.2	18.6
MFI 13	0.0	0.0	0.0	2.2	6.5	2.2	2.2	0.0	0.0	8.7	2.2	8.7	0.0	26.1
Un-weighted average														14.0

Note: Columns 1 to 13 do not necessarily sum to column 14; multiple borrowers may be borrowing from more than two MFI
Source: Authors' Calculations

Table 1 should be read as follows: Take the first row, last column, for example. It indicates that 7 percent of MFI1's clients are multiple borrowers and are therefore borrowing from at least one other MFI. However, they do not borrow from every other MFI. No one borrows from MFI3 among MFI1's clients, for example. In contrast, up to 2.4 percent of MFI1 clients borrow from MFI11. Cumulatively, 7 percent of MFI1 clients borrow from at least one other MFI. Columns 1 to 13 do not sum to the last column, because the final column ignores whether a client is borrowing from just one other MFI or from several other MFIs. In other words, a client is classified as a multiple borrower, whether he/she is borrowing from just one other MFI or from all the other MFIs.

Taking everything together, Table 1 suggests that about 14 percent of MFI clients are multiple borrowers, on average. This is invariant to whether or not the average is weighted by the absolute number of clients. It is not large, and is at the lower end of the distribution of the incidence of multiple borrowing documented across selected countries. But neither is this incidence trivial.

In fact, the average masks substantial variations across MFIs: at the lowest end, only 4 percent of clients are multiple borrowers (MFI3); at the top end, 26 percent of clients are multiple borrowers (MFI13). The averages also suggest that at least some multiple borrowers in every MFI borrow from MFI12. In fact, large fractions of multiple borrowers borrow from MFI12. Close to 9 percent of MFI13's clients borrow from MFI12, for example, and likewise 6 percent of MFI8's clients. In contrast, almost no multiple borrowers take out loans from MFI3.

Multiple loans from the same MFI

As previously indicated, "own-MFI multiple borrowing" exists in a few MFIs. These clients take out several loans from the same MFI for a variety of purposes. On average, they represent up to 5 percent of MFI clients, where own-MFI multiple borrowing exists. There is some overlap between multiple borrowing as defined in Table 1 and own-MFI multiple borrowing, as we define here; that is some multiple borrowers in Table 1 also take out several loans from the same MFI. But the fraction of such borrowers is not large. On average, own-multiple borrowing adds another 1 percentage point or so to the incidence multiple borrowing in Table 1, in percent of all active clients.

The share of all oustanding loans of multiple borrowers

In general, loan sizes are uniform so the share of loans accounted for by multiple borrowers is roughly proportional to the incidence of multiple borrowing as reported in Table 1. Not surprisingly, the share of loans accounted for by multiple borrowers is about 14 percent and all the other averages are consistent. However, there are some striking patterns in loans accounted for a sub-group of clients that are both multiple borrowers and "own-MFI multiple borrowers". In particular, such multiple borrowers account for a disproportionate share of the 2nd and 3rd own-MFI loans. In one case (MFI8), for example, multiple borrowers as a group represent twenty percent of all active clients and, within the same MFI, their share of the first kind of loan outstanding is 20 percent, as expected. However, their share of the second kind of loan outstanding (e.g., which may be a health service or education-related loan) sharply rises to 40 percent. One possibility is that these are individuals widely perceived to be responsible clients, and are thus eligible for multiple loans within the same MFI and also qualify for loans elsewhere.

Profile and correlates

The majority of multiple borrowers have outstanding loans from only two MFIs. On average, they represent about 85 percent of all multiple borrowers. Some have loans from three or more MFIs; they represent about 2 percent of all MFI clients or 15 percent of all multiple borrowers. In the case of MFI10, however, clients with three loans from three different MFIs represent over 20 percent of all multiple borrowers.

There is no evidence that multiple borrowing is associated with delinquent payment, at least not among the active clients. This should be interpreted with caution. This indicates the average observable outcome *to date* and does not at all address the possible impact of economic or income shocks and whether multiple borrowers can become more vulnerable as a result. There are large differences in the availability of information on missing payments. Nor are such information maintained consistently across MFIs.

In general, there is no strong evidence linking multiple borrowing to specific lengths of membership, loan cycles, client age, and other demographic patterns. There are some suggestive patterns. Multiple borrowers with two or three loans tend to be on longer loan cycles (the observations with four or more loans are too small to indicate consistent patterns). Multiple borrowers also tend to be somewhat older.

Although these are cross-sectional data and do not capture the changes over time, some of the summary information may suggest some of the dynamics. For example, multiple borrowers with three loans among MFI10's clients joined the MFI just the year before, while all other multiple borrowers have been members of other MFIs longer, suggesting a possible sequencing of multiple loan-taking.

Table 2 : The Number of Loans of Multiple Borrowers (In percent of all multiple borrowers)

	MFI 1	MFI 2	MFI 3	MFI 4	MFI 5	MFI 6	MFI 7	MFI 8	MFI 9	MFI 10	MFI 11	MFI 12	MFI 13
Two loans	85	82	100	83	85	87	88	88	82	78	84	84	83
Three loans	15	17	0	17	14	13	9	10	17	21	16	14	8
Four or more loans	1	1	0	0	1	1	3	2	1	1	1	2	8
All	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: Authors' Calculations

Table 3 : The Profile of Multiple Borrowers - Selected MFIs *in units as indicated*	MFI 7	MFI 8	MFI 10	MFI 12
Incidence of multiple borrowing	13.5	20.4	11.3	18.6
Loan Cycle (average)				
Single borrower	4.2 *	2.9	3.1 *	3.2
Multiple borrower (Two loans)	4.5 *	2.8	3.8 *	3.3
Multiple borrower (Three loans)	7.3 *	3.1	4.3 *	3.2
Multiple borrower (Four or more loans)	1.0 *	2.7	3.0 *	2.3
Percent on their first loan cycle				
Single borrower	56.8 *	25.9	24.0	18.4
Multiple borrowers	63.3 *	34.6	11.4	14.0
Date of membership (average)				
Single borrower	2008.4 *	2008	2009	2009.3
Multiple borrower (Two loans)	2008.0 *	2008	2009	2009.2
Multiple borrower (Three loans)	2006.0 *	2008	2010	2009.2
Multiple borrower (Four or more loans)	… *	2008	…	2009.5
Age (average)				
Single borrower	42.7	42.6	42.1	40.4
Multiple borrower (Two loans)	48.8	45.4	45.4	39.8
Multiple borrower (Three loans)	55.8	47.2	47.1	42.2
Multiple borrower (Four or more loans)	…	46.7	35.0	43.6
Missed payments (share of clients missing at least one payment)				
Single borrower	0.69	0.04	0.00 *	…
Multiple borrower (Two loans)	0.69	0.03	0.00 *	…
Multiple borrower (Three loans)	0.40	0.06	0.00 *	…
Multiple borrower (Four or more loans)	0.50	0.00	0.00 *	…

* Indicates small number of observations. The corresponding averages may not be consistent with the other averages
Source: Authors' calculations

Finally, there are no apparent differences in loan use among multiple borrowers and regular borrowers, though the data may be largely self-reported (that is, not verified) and presently of limited use. Missing data also constrain our ability to do more comparisons across MFIs.

SUMMARY & PRELIMINARY CONCLUSIONS

This study is second in a series of studies that attempts to quantify the incidence of multiple borrowing, create a profile of multiple borrowers, and assess the broad statistical relationship between multiple borrowing and delinquency in a selected area where multiple borrowing is widely believed to take place, the “Commonwealth” district of Quezon City.

Unlike previous approaches – which are, broadly, either household survey-based or are based on focus group discussions – this study uses consolidated branch client data from MFIs that serve households in the Commonwealth community. Multiple borrowing is defined narrowly in this case as borrowing from two or more MFIs. Clients were traced across MFIs using a search algorithm based on names, birth dates, and street addresses.

The main results suggest that, on average, 14 percent of active MFI clients borrow from more than one MFI. Because loan sizes are generally the same, multiple borrowers account for a similar proportion of all outstanding MFI loans, though there are important distinctions across various types of loans and there are substantial variations in the prevalence of multiple borrowing across MFI. There are generally no systematic differences in the demographic characteristics between single borrowers and multiple borrowers and there is no evidence to date to suggest that multiple borrowing is associated with repayment difficulties and delinquency.

The results here should be treated as preliminary and interpreted with caution. Because the analysis is subject to errors of inclusion and exclusion, and because the data are a cross-sectional snapshot that do not capture adequately changes over time, the correlations should be interpreted as mere statistical association. No causal inferences are made. In addition, because this is an area study, the results should not be interpreted as nationally representative.