The Role of Subsidization and Organizational Status on Microfinance Borrower Repayment Rates

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Summary. — We use multilevel analysis to examine the effect of different types of external funding (donations vs. subsidies) on microfinance institutions’ borrower repayment rates. Using information on 947 MFIs over a 10-year period we find that private funding is positively related to MFIs’ abilities to screen borrowers and to monitor borrower repayment rates. We also find that MFIs that have a higher proportion of private donor funds to public subsidies have lower rates of portfolios at risk, fewer delinquent loans, and that their overall portfolios are less risky. Finally, we find that diverse organizational structures have a distinct impact on MFI loan portfolios.

Key words — microfinance, subsidies, donations, borrower repayment rates, loan write offs, supervision

1. INTRODUCTION

A prevailing intuition in the literature is that when traditional banks increase their customer base, it leads to the creation of risky loan portfolios resulting in increased loan-related losses (see, for example, Foos, Norden, and Weber (2010)). The microfinance industry has rapidly expanded over the past two decades and there are concerns that it may be growing too fast (Gonzalez, 2010). Setting aside the question of how banks and MFIs are funded, it is clear that the main activity of both lies in the provision of loans to their respective customer base. Therefore, a related concern among academics, practitioners, and policy makers is that MFIs too might be at increased risk as a result of such fast growth. With this backdrop of concern, we ask two questions: (1) Is there a difference between non-profit and for-profit MFIs in terms of MFI loan growth and repayments rates? (2) Do MFIs that obtain more donations (relative to subsidies) have higher loan repayment rates?

It is well recognized in the literature that MFIs are not monolithic institutions and that their organizational characteristics (for-profit vs. non-profit, regulated vs. unregulated), provide for a significant difference in how they conduct their operations, generate revenues, and perform overall. In particular, Cull and Morduch (2007) shows that at least 21% of MFI assets are subsidized, with non-profit MFIs being more heavily subsidy-dependent. This subsidy dependence implies that they are an important component of MFIs’ capital structure, and should not be ignored when analyzing MFI performance. Moreover, institutions that receive more donor funds tend to be monitored more which, in turn, positively impacts their performance (Callen, 1994).

Besides serving as a supervision tool, MFIs’ subsidies and donations impact their outreach activities, where the institutions that receive more subsidy funding tend to display greater outreach to the poor (see, for example, Nawaz, 2012). This is important as MFIs that provide greater outreach activities might end up having a poorer pool of borrowers than those with lesser outreach which, in turn, can lead to lower repayment rates. Recent research shows that many MFIs are unsure about their future funding (Armendariz, D’Espallier, Hudon, & Szafarz, 2010) which then adversely impacts their social mission of poverty eradication, and results in their making larger loans (in order to reduce their transaction costs) rather than providing smaller sized loans (see Mersland & Strom, 2010) as per their mission. Besides being regulated/non-regulated, MFIs can also be either not-for-profit institutions or profit-seeking (Cull et al., 2009; Mersland & Strom, 2009). A MFI’s particular profit-orientation (i.e., nonprofit or for-profit) may determine the goals that it pursues, including a determination of its borrower base (McIntosh & Wydick, 2005). In particular, for-profit MFIs focus on maintaining and enhancing profitability, reducing their dependence on subsidies and donations, and maintaining a low risk loan exposure (Copestake, 2007). This is not necessarily the case for non-profit MFIs who prefer to maintain their subsidy/donation dependence with the goal of maintaining their social objectives (Cull & Morduch, 2009; Morduch, 2000), which can then adversely impact loan repayment rates.

We use two publicly available datasets to answer our research questions. First, we obtain data from the Mixmarket.org website, which has information on 1,400 MFIs totaling 6,313 observations over a 10-year period (2000–10). The data are self-reported by the MFIs but verified by Mixmarket specialists. The MFIs are also rated on a diamond scale from 1 to 5 to represent their transparency, with 1 being the lowest and 5 being the highest level of MFI reporting transparency. Second, we obtain data from the World Bank website in order to create specific subsidy measurements. Both resources are used by researchers in the field (see, for example, Cull, Demirgüç-Kunt, & Morduch, 2011; Cull & Morduch, 2007; Nawaz, 2012, among many others). We specifically build on the work of Gonzalez (2010) who analyze MFI borrower growth and its relationship to the loan portfolio quality using data from 821 MFIs from 91 countries over the period 2000–08 and report a positive relationship between MFI loan growth and repayment rates. However, they do not account for MFI organizational differences (for-profit vs. non-profit) when examining MFI loan portfolios or across differences in the external funding.

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Our main findings are as follows. We find support for the notion that better loan repayment rates are associated with MFIs that receive more donor-to-subsidy funding. In particular, we find that an increase in the ratio of private donor funding to public subsidization lowers the portfolio-at-risk (PAR30) of MFI institutions as well as their overall loan risk. This supports prior findings that the presence of active institutional donors improves the efficiency and the performance of nonprofit institutions (Callen, 1994; Callen et al., 2003). Higher repayment rates by MFI borrowers can be attributed to different performance functions such as borrower screening and follow-up on the loan, or just a lower quality of new borrowers (Clair, 1992). The combination of those two factors has been detrimental toward loan growth and has resulted in loan delinquencies. Specifically, four countries (Nicaragua, Morocco, Bosnia and Herzegovina, and Pakistan) have experienced abnormal loan delinquencies due to an erosion of MFI lending disciplines (see Chen, Rasmussen, & Reille, 2010). We use these macro level delinquencies that are arguably unusual in a microfinance setting, as a robustness check of our finding on donor control and performance. Specifically, we employ the same model as these authors and confirm that our main findings still hold in such a setting. We further find that regulated MFIs have higher loan repayment rates than their non-regulated counterparts. Finally, related to our second question, we find that being a for-profit MFI increases the write-off ratio as well as its total risk.

Our results contribute to the microfinance “trade off” debate which focusses on MFI outreach vs. MFI profitability by specifically showing that being non-profit is associated with better loan performance. Furthermore, to the best of our knowledge, we are the first to explicitly examine the effect of different types of external funds (public donations vs. private giving) and their impact on micro loan repayment rates. While the traditional banking literature has examined the effect of subsidies and their impact either on rural (David, 1984) or on traditional banks (Guibourg & Segendorff, 2007), there is a paucity of research on MFIs with a focus on loan growth, profit status, and on the different types of external funds that they receive. It is possible that our findings will contribute toward promoting an efficient allocation of donor funds and, in improving our understanding of the different lending practices used within specific MFI cohorts (regulated vs. non-regulated, as well as profit vs. not-for-profit). It is noteworthy that almost 25 billion dollars went toward the microfinance sector in 2011, and although public funding (subsidies) dominates the landscape currently, private funding is growing at a faster clip (Lahaye, Rizvanolli, & Dashi, 2012). Our findings affirm that private funds should be encouraged and promoted. The remainder of the paper proceeds as follows. Section 2 provides the background to our work; Section 3 describes the dataset and the models that we employ. We provide our results in Section 4. Section 5 offers discussion of findings and conclusions. The Appendix details all variables used in the study for convenient reference.

2. LITERATURE REVIEW

(a) Loan growth and repayment rates

The literature on traditional banking shows a negative relationship between bank loan growth and bank repayment rates (Foos et al., 2010; Rajan, 1994). At least three explanations exist to explain this trend. First, banks that attempt to increase their market share might decrease their screening standards which may lead to a larger number of non-performing loans (Dell’Ariccia & Marquez, 2006). Second, even if loan standards are maintained at the same level, the clients who are attracted to them might be of a lower average quality (Clair, 1992). Findings by Sinkey and Greenawalt (1991) support this assumption in illustrating that an increased volume of loans leads to increased loan losses. They also find a positive relationship between bank charge offs, loan rates, and volatile funds. Others show that loan growth via an expansion of services to new or existing customers has a negative effect on loan charge-offs but, over time, the rate tends to increase (Clair, 1992). These findings support the institutional memory hypothesis which maintains that loan officer skills decline over the bank loan cycle, as observed by the decline of corresponding loan screening standards. However, a decline in loan portfolio standards may be caused by larger agency problems, which may include issues between loan officers and management or between management and its shareholders/outsiders (see Berger & Udell, 2004). These findings are relevant for the current research since we view the deterioration of lending standards as a decline in management decisions, due to the overflow of external funds that are provided by the different parties (government vs. private donors).

Although empirical evidence in traditional banking strongly supports the notion that loan growth leads to a decline in borrower repayment rates, this relationship seems to fail in microfinance settings. In particular, Gonzalez (2010) finds that the deteriorating impact of MFI growth on loan repayment occurs only for outliers, and is not a common trend for most MFIs. Although he does not find an overall negative relationship between MFI loan growth and repayment rates, CGAP (2010) reports a loan repayment crisis in four countries from 4 different regions over 2007–09. The analysis shows that low loan repayment rates were due to extensive loan growth accompanied by increased competition and a decline in lending discipline (rather than due to the then-prevailing global economic crisis, as some have argued). These findings underscore the importance of examining what specific factors might be associated with MFIs’ loan portfolios, especially for growing MFIs.

(b) Differences between MFIs and traditional banks

While drawing on research on traditional banking is a useful starting point, it is important to be mindful of the key differences between traditional banks and the MFIs. First, MFIs provide small unsecured loans while traditional banks usually provide larger collateralized loans. The provision of smaller loans to significantly greater number of borrowers reduces a MFI’s risk exposure through diversification. Second, MFIs are primarily focused on female borrowers who are considered to be more reliable borrowers and have much higher repayment rates than men (see, for example, D’Espallier et al., 2011; Morduch, 1999a, 1999b). Third, MFIs employ innovative lending mechanisms that are not typically used in the traditional banking sector, such as group lending (Morduch, 1999a, 1999b), high frequency (typically weekly) repayments (Field & Pande, 2008), dynamic incentives (Godquin, 2004), and sequential lending (Chowdhury, 2005) that have been shown to increase loan repayment rates. Finally, within MFIs there are significant differences between for-profits and nonprofits. Non-profit MFIs aim to maximize their outreach through loans to a large customer base, while for-profit MFIs aim to maximize profits (McIntosh & Wydick, 2005) possibly
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