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Institutional framework and capital structure of microfinance institutions

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ABSTRACT

This article addresses the question of whether institutional frameworks matter in the capital structure of microfinance institutions. We studied a sample of 292 MFIs between 2004 and 2009. Our findings suggest that creditor rights, a country's legal tradition, and the level of financial sector development are significantly related to MFIs' level of external finance. Furthermore, the positive relationship between banking sector development and borrowings enables us to conclude that the microfinance sector and the formal banking sector are complementary. In addition, a split sample technique is used in order to assess the external validity of the model. Findings from this cross-validation strengthen the results obtained from the whole sample and indicate that our model seems to predict well the effect of institutional variables on the capital structure of MFIs.

1. Introduction

According to the 2011 *State of the Microcredit Summit Campaign Report* (Reed, 2011), MFIs are playing an increasingly important role in the financial system in most developing countries. The results of several recent impact studies are controversial[1] regarding the effectiveness of microfinance in alleviating poverty and fighting financial exclusion. Hartarska and Nadolnyak (2008b), Becchetti and Castriota (2011), and Rai and Ravi (2011) provide strong evidence that MFIs improve the welfare of population and alleviate microbusiness financing constraints, whereas Duflo, Banerjee, Glennerster, and Kinnan (2013) find heterogeneous effects of microfinance on financial inclusion. As Earne and Sherk (2013) argue, funding is crucial in improving financial inclusion because it ensures that MFIs have the resources needed to expand through increasing the number of clients served and geographical and product diversification. Efficient MFIs that access cheap external funding may thus offer cheap loans to poor borrowers and to income-generating activities and micro enterprises, thereby promoting and supporting their development (Ghosh & Van Tassel, 2011).

According to the existing literature in corporate finance, access to external funding sources on attractive terms is determined not only by firm-level characteristics but also by the institutional environment (Demirgüç-Kunt & Maksimovic, 1999). Several empirical studies extensively reviewed the relationship between institutions and corporate finance decisions in developing and developed economies. Differences in legal and financial systems seem to be responsible for differences in investment policies (Acharya, Amihud, & Litov, 2011; Demirgüç-Kunt & Maksimovic, 1998; Houston, Lin, Lin, & Ma, 2010), dividend policies (Brockman & Unlu, 2009; Byrne & O'Connor, 2012), bank lending policies (Bae & Goyal, 2009; Ge, Kim, & Song, 2012; Haselman, Pistor, & Vig, 2010; Qian & Strahan, 2007), and firms' capital structure (Fan, Titman, & Twite, 2012; Giannetti, 2003; González & González, 2008; La Porta, López-de-Silanes, Shleifer, & Vishny, 1997; Öztekin & Flannery, 2012). The literature on the relationship between institutional environment and capital structure converges on the idea that firms operating in a better institutional environment may benefit from easier access to external funding with attractive conditions (Antoniou, Guney, & Paudyal, 2008; Booth, Aivazian, Demirgüç-Kunt, & Maksimovic, 2001; Demirgüç-Kunt & Maksimovic, 1999; Fan et al., 2012; Li & Ferreira, 2011). The main argument of these studies is that, better institutional environments can overcome information asymmetries in credit markets and consequently affect firms' funding policies. This seems to be the case with MFIs. As argued by Garmaise and Natividad (2010), information asymmetries likely contribute to raising the cost of finance in less developed and emerging markets where MFIs operate. In credit markets with weaker institutions, information frictions will make it difficult and expensive for MFIs to raise funds and may even appear to constrain their growth (Garmaise & Natividad, 2010). Moreover, the regulatory framework, and the openness and level of development of the financial system affect MFI funding policies (Earne & Sherk, 2013). Our article thus assumes that institutional environment and financial sector development affect the funding policies of microfinance institutions.

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[1] The debate on the effectiveness of microfinance has been amplified by the Andhra Pradesh crisis.

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The literature on microfinance institutional framework and capital structure is still growing. Studies that focus on institutions explain the observed differences between MFIs in terms of performance and efficiency by macroeconomic and macro-institutional features (Ahlin, Lin, & Maio, 2011; Patten, Rosengard, & Johnston, 2001; Vanroose & D'Espallier, 2013). Vanroose and D'Espallier (2013) investigate the relationship between financial sector development and MFI outreach and provide evidence that MFIs flourish and act as a substitute when the formal financial sector fails.

Studies that examine capital structure in microfinance can be categorized in at least four ways. The first category explores whether capital structure improves MFI efficiency and financial sustainability (Bogan, 2012; Hoque, Chishty, & Halloway, 2011; Hudon & Traca, 2011; Kyereboah-Coleman, 2007). The second category investigates whether ratings reduce the price of financing and help MFIs raise funds (Garmaise & Natividad, 2010; Hartarska & Nadolnyak, 2008a). Hartarska and Nadolnyak (2008a) show that rating agencies differ greatly in their impact on MFIs' ability to raise funds. Their evidence also suggests that subsidizing rating does not help MFIs raise more funds. Garmaise and Natividad (2010) show that rating significantly reduces the price of financing while having a mix impact on the quantity. They find that being rated does not significantly increase the amount of loans that MFIs receive from outside creditors. The third category describes MFI financing practices and links sources of financing to the stage of MFI development (De Sousa-Shields & Frankiewicz, 2004; Fernando, 2004; Ledgerwood & White, 2006). The fourth category examines the determinants of the international funding of microfinance and provides evidence that profitability and better outreach are more likely to increase an MFI's chance of attracting international commercial debt (Mersland & Urgeghe, 2013).

These identified studies seem to overlook the impact of the institutional environment on the capital structure of MFIs. The link between institutional framework and capital structure has not yet been subject to investigation in the field of microfinance. This article intends to fill the gap by examining whether institutional frameworks account for MFI funding policies. The article thus attempts to answer the question of whether institutional framework variables have an effect on the capital structure of MFIs. Our study concentrates on three institutional variables: the strength of legal rights, a country's legal tradition, and the size of the banking sector.

Our study relates to those that previously examined the relationship between the institutional environment and firm financing in the non-financial sector. MFIs are hybrid organizations insofar as they combine banking logic (profitability, clients as customers) and development logic (poverty alleviation, clients as beneficiaries) (Battilana & Dorado, 2010; Kent & Dacin, 2013). As Gaul (2009) shows, MFIs depend less on subsidies over time. Yaron's Subsidy-Dependence Index (SDI) declined between 2003 and 2007, from 56% to 47%. This reduction in subsidies is likely due to the commercialization of microfinance. This commercialization trend thus accentuates the hybridization of logics in microfinance. To our knowledge, our article is thus the first to analyze whether institutional frameworks matter for the capital structure of hybrid organizations such as MFIs. We thus borrow extensively from general law and finance literature, which examines the link between institutional environment and capital structure. We measure capital structure by the leverage (the ratio of total debt to total assets) and donated equity as a percentage of total assets. Given that the capital structure of some MFIs, similar to those of banks, includes deposits, we then split leverage into deposits and borrowing (non-deposits liabilities). We also conducted an empirical study of 292 MFIs between 2004 and 2009 to verify our main assumption that the institutional environment has an influence on the financial structure of MFIs. The hypothesis is not rejected. We provide evidence that creditor rights, a country's legal tradition, and the size of the banking sector are significantly related to MFIs' need for external finance. In that sense, we add to the general literature on microfinance and to the specific literature on the financial structure of MFIs. The positive relationship between banking sector development and borrowings enable us to conclude that the microfinance sector and the formal banking sector are complementary. We thus extend the work of Vanroose and D'Espallier (2013), who first assumed that the traditional financial sector and the microfinance sector compete, and show that MFIs respond to a need that banks cannot fulfill.

To gauge the robustness of the results, we change the measurement of the size of the banking sector. In addition, we randomly split the initial sample in two sub-samples and use cross-validation techniques in order to assess the external validity of our models. Findings from this cross-validation strengthen the results obtained over the whole sample and indicate that the model seems to predict well the effect of institutional variables on the financial structure of MFIs.

The remainder of the article is organized as follows. Part two describes the conceptual framework. Part three develops the research methodology. We present and discuss the results in part four.

2. Background

2.1. How important are institutional framework for microfinance funding?

For MFIs, deposits, debts (commercial debts, subsidized debts, or bonds offering), and equity (shareholder equity and donated equity) are the three main sources of external funding (Consultative Group to Assist the Poor (CGAP), 2010[2]; Hoque et al., 2011). MFI debt differs not only by its type and its instruments but also according to its maturity. Based on the study of a sample of 289 MFIs, Cull, Demirgüç-Kunt, and Morduch (2009) drew a picture of MFI funding instruments. Commercial funding and deposits seem to be the main funding source of shareholder-based MFIs, whereas non-commercial borrowings and donations are the main funding source of MFIs registered as non-governmental organizations (NGOs).

A unique feature of MFI funding is that a part of MFIs' external financing can be subsidized. Subsidized external debts, also called *soft loans* or *concessionary borrowings*, are contracted at favorable conditions, that is, below market rates. They are often provided by government aid agencies (United States Agency for International Development [USAID]), multilateral banks (World Bank), or apex organizations and foundations. According to the Consultative Group to Assist the Poor (CGAP) (2010) more than US$2 billion per year of public money is being disbursed globally to the microfinance sector through apex funds. Funds are disbursed by apexes to microfinance institutions mostly as subsidized loans, but occasionally as grants. Soft equity, also called *subsidized equity*, is a financial instrument that is channeled mainly through micro investment vehicles (Hudon & Traca, 2011). Returns expected by donors in this case are below the market rate. Finally, MFIs receive subsidies in the form of donations and cash, and donors in this case are not necessarily expecting any positive returns. Subsidized equity is part of equity. Some recent studies indicate that a large number of microfinance programs are still depending on donor subsidies to meet their costs. Hermes and Lensink (2011) report that 8% of MFIs are close to being profitable and 70% of MFIs still receive subsidies from donors, governments, and so on. The 2010 MFI benchmarks (The MIX, 2011) reports that 50% of the 1300 MFIs studied are financially self-sufficient and have an operational self-sufficiency ratio of over 1.03. This indicates that approximately 50% of MFIs still depend on subsidies. D'Espallier, Hudon, and Szafarz (2013) find that only 23% of the world's MFIs survive without subsidies. Given that donors are often geographically far away from MFI operations (Hudon & Traca, 2011) and that MFIs may have information that donors

[2] Consultative Group to Assist the Poor (CGAP) is an independent policy and research center dedicated to advancing financial access for the world's poor. It is supported by more than 30 development agencies and private foundations who share a common mission to alleviate poverty. Housed at the World Bank, Consultative Group to Assist the Poor (CGAP) provides market intelligence, promotes standards, develops innovative solutions, and offers advisory services to governments, microfinance providers, donors, and investors. Source: CGAP Microfinance Gateway website.