# BOARD DIVERSITY, EXTERNAL GOVERNANCE, OWNERSHIP STRUCTURE AND PERFORMANCE IN ETHIOPIAN MICROFINANCE INSTITUTIONS

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**Abstract**

This research investigated the effect of governance dimensions such as board diversity, external governance and ownership structures on the sustainability and outreach performance of Ethiopian MFIs. A panel data of 13 MFIs for 6 years (2003-2008) is used for the study. No study of such type is conducted in the past for the Ethiopian environment. The result indicates that more women on board of directors help in depth of outreach whereas board members with a financial skill and local businessmen reduce depth of outreach. Regulation has an opposite effect in that it reduces sustainability without curtailing depth of outreach. Rating of MFIs activity by rating agencies is found to have a good effect of increasing sustainability and at the same time cater for more women borrowers. On ownership structure it is found that MFIs dominantly owned by individual investors lends less to women and more profitable indicating the commercial orientation of their operation.

**Key words:** Sustainability, Outreach, Governance, Ethiopia

**JEL Classification**: G30, G32, J23

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## 1. Introduction

Microfinance is the delivery of financial services such as saving, credit, insurance and payment products to low income clients. Formal microfinance started with the work of Grameen Bank of Bangladesh (Ledgerwood, 1999). Although the industry recorded impressive growth over the last three decades, still it faces challenges in sustainability and outreach to the poor. Sustainability is an issue of recovering the full cost of doing business and operating without government subsidies and donor funds whereas outreach means extending financial service to an ever wider audience (breadth of outreach) and especially towards the poorest of the poor (depth of outreach) (Conning, 1999).

While appraising the performance of the sector in terms of these two dimensions, a lot need to be done. MFIs still reaches only a small percentage of its potential market worldwide (Ledgerwood & White, 2006). They are also blamed for not reaching the economically active poorest of the poor who is in need of financial services (Hashemi and Rosenberg, 2006). Many MFIs cannot be sustainable worldwide despite high repayment rates. They still require the hands of donors (Cull et al, 2007).

Most studies on MFIs focus on how innovative lending technologies enabled lending to the poor and the impact of MFIs on borrowers welfare (Conning, 1999; Navajas, Schreiner, Meyer, Gonzalez-Vega, & Rodriguez-Meza, 2000). Few studies touched upon the link between MFIs governance and performance. The proper governance of MFIs is important because the sector is growing and managers are controlling significant resources.

The lack of studies on the governance of MFIs is attributed to the lack of proper conceptual framework. MFIs follow diverse organizational formats such as NGOs, banks, credit cooperatives or non-bank financial institutions. This makes the study of governance of MFIs a difficult exercise. This paper is among the many others (such as Hartarska, 2005; Cull et al, 2011; Mersland and Storm, 2007) attempt to study the governance of MFIs by drawing insight from the governance of for profit firms, non-profit firms and banks. Specifically, the research investigate the effect of governance dimensions such as board diversity, external governance and ownership structures on the sustainability and outreach performance of Ethiopian microfinance institutions.

Much of the past research on Ethiopian MFIs focus on performance analysis issues (see Wale, 2009, 2012; Amha, 2004; Kidane, 2007; Kereta, 2006). Limited research is conducted on factors that affect such performance. An exception is the study conducted by Vashisht, Singh and Wale (2011) on the effect of financial decisions. Amha (2008), Ayana, Tsegaye and Erena (2003) studied governance issues in Ethiopian MFIs, but their analysis is descriptive and doesn't provide much guidance. Wale (2015)

addressed the effect of board structure on sustainability and outreach in a rigorous manner although the one country nature of the study produces less variation in the data and many insignificant results. Beyond these, no other study addressed governance issues and their effect on sustainability and outreach in a rigorous manner in Ethiopian MFIs context. The current research will fill this void and provide evidence from a poor economy where governance structures are purported to be weak (Pfister et al, 2008). It is in spirit similar to Wale (2015) study and used a combination of secondary and primary data from 13 MFIs covering the period 2003-2008.

The rest of the paper is organized as follows. Section two discusses the effect of the stated governance variables sourced from different studies. Section three describes the nature and source of data and the econometric approach followed. Section four discusses the descriptive and panel data results and discusses the findings in light of prior studies. The final section concludes the paper and suggests some direction for further research.

## Review of Literature

Governance is defined as a system of check and balances whereby a board of directors is established to oversee the management of the MFI (Ledgerwood, 1999; 111). Governance issues arise whenever all its principals don't manage the organization, or there is a majority-minority shareholding relationship whereby the majority shareholders tend to dominate the minority shareholders or abuse their rights (OECD, 1999). The problem many also arise if there is diffused ownership equity (Gillian et al, 2001). In a diffused ownership structure, there is no incentive for an individual owner to monitor corporate management.

The key mechanisms of effective governance are ownership (including institutional and managerial ownership), board and board structure (size and composition), CEO (manager) and director (board member) remuneration, auditing, information, and the market for corporate control (Keasey et al, 1997). But due to the sensitive nature of the issues, data on managerial ownership and CEO remuneration can't be made available. Auditing is not covered because the mandatory nature of the issue in Ethiopian MFIs. The market for corporate control doesn't work for MFIs as they are not listed on stock exchanges and they are not aggressive profit seekers like corporation.

The current research focuses on the effect of governance dimensions such as board diversity, external governance and ownership structures. Board diversity variables include the proportion of different stakeholders on the MFIs boards such as women, donors, creditors, local businessmen and clients. The external governance variables include supervision by the regulatory authority and rating of the MFIs activity by rating agencies. Ownership structure variables include the proportion of shares owned by NGOs, individual investors, organizational investors and governments. The effects of these variables are discussed in the coming sections. Furthermore, the discussion also includes the effect of some control variables such as lending method, MFIs age and MFIs size.

*Board Diversity*: Board diversity in terms of women and minority representations is important due to equity concerns and because it in fact improve firm performance and shareholder wealth (Carter, Simkins, & Simpson, 2003). Increased performance is possible because women directors spend more time on monitoring activities (O'Regan & Oster, 2005). Besides having a female CEO or a high fraction of women on the board would help the MFI understand its customers better as most MFI clients are women. This helps the MFI to separate the good credit risk from the bad (Mersland and Strom, 2007). Furthermore, there is a dearth of studies on the effect of board diversity in the performance of financial firms (Macey & O'Hara, 2003) and hence there is a need for more research in this area. The study by Hartarska (2005) in MFIs showed that more proportion of women on MFIs boards helps to reach poorer borrowers, but it doesn't have effect on sustainability. This implies that the monitoring role of women in the sample MFIs was less.

The skills that board members bring to the board may also matter. The occupation of board members in nonprofit firms has not been found to affect fundraising, but it does affect the time spent on monitoring (O'Regan & Oster, 2005). The unique nature of microfinance activities requires that board members have financial and banking skills as well as social services experience (Campion, 1998). In addition, since microfinance boards include representatives of donors, equity investors, and creditors (who often provide a significant amount of the funding), the mix of board member skills may affect the ability of various groups to reach consensus in an efficient manner.

An important debate in microfinance is whether clients should be represented on the board. Advocates argue that clients will help provide better information on the target clientele and thus improve performance while opponents argue that clients on the board may weaken the organization (Campion, 1998).

Regarding the representation of different stakeholders on MFIs boards, the study by Hartarska (2005) showed the following results. More donors on MFIs help to reach poorer borrowers but the expense of sustainability. Donors' ability to raise funds may have brought in easy money and thus lower incentive for sustainability. Historically microfinance started operation with donor funds and the primary motive of donors is poverty alleviation. Board members with financial skills improve sustainability and even breadth of outreach. More local businessmen on MFIs

boards improve breath of outreach, but lower sustainability indicating a less clear cut effect. More clients on boards improve sustainability at the expense of depth of outreach. This implies that clients may have been engaged in rent seeking behavior by promoting lending to wealthier borrowers.

*External governance mechanisms*: The manager of a corporation is disciplined by market forces through the market for managers and through the market for takeovers. These market forces have a limited role in microfinance because the market for MFI managers is thin and because most MFIs do not have true owners. As the microfinance industry grows and matures, the competition for donations and customers has shifted the focus toward external governance mechanisms. Donors and creditors are increasingly relying on information from audited financial statements, information disclosed under rules imposed by regulators and rating agencies. The main objective of such external governance mechanisms is to reduce information asymmetries between the different stakeholders and the firm (Healy & Palepu, 2001).

*Auditing:* The impact of audit on firm performance has not received much attention, perhaps because of widespread mandatory audits. In cross country research with varying auditing regulations and practices, studying the effect of auditing as an external governance mechanism may make sense. But in our current research, auditing of financial statement is mandatory and hence studying the effect of this variable doesn't make much sense.

*Regulation*: Regulation introduces the regulator as an additional stakeholder in the governance structure of the MFI. This issue is worrisome as it may create possible mission drift in the MFIs operation (Dichter, 1997). Demands to fulfill regulatory requirements may divert attention away from serving the poor, and may hold back innovation in lending technology that has been the driving force behind MFIs' ability to serve even poorer borrowers. Although recent evidence does not support this hypothesis, it is important to determine if regulation influences MFI performance (Hartarska and Nadolnyak, 2012).

*Rating:* In the absence of developed equity and debt markets, donors and investors could benefit from independent evaluation of MFIs' performance. Rating can help impose market discipline by revealing new information and thus encourage better management. However, the evidence on the effectiveness of rating agencies is somewhat mixed (Partnoy, 1999). Managers of MFIs use ratings to signal their quality to future providers of funds. This suggests a positive relationship between rating and MFI performance. However, Mukhopadhyay (2003) have argued that rating may lead to moral hazard, once the MFI is rated, and funds are secured, managers do not have incentives to exercise maximum effort and may slack off. The study by Hartarska (2005) indicates that the effect of rating is very weak on outreach and non-existent on sustainability. This result is consistent with the recent developments in MFIs rating where raters struggle to survive because they failed to become effective external governance mechanisms.

*Ownership structure*: Private suppliers of microfinance are normally incorporated as member based Cooperatives (COOPs), Non Profit Organizations (NPOs) or Shareholder Firms (SHFs). NPOs are often considered weaker structures since they lack owners with a financial stake in the operations (Jansson and Westley, 2004). It is taken as a matter of truth that this leads to lower financial performance than in SHFs. Gutierrez-Nieto et al. (2007) confirm that this is the case using data from 30 Latin-American MFIs. However, Mommartz and Schor (2002) note that the lack of real owners of MFI doesn't necessarily result in unstable and risky institution. Furthermore evidence from comparisons of SHFs and NPOs in other settings contradict the claim that shareholder owned banks perform better than others. The study by Crespi et al (2004) and Bohren and Josefsen (2007) show that the financial performance of savings banks is at par with commercial banks in Spain and Norway respectively.

In Ethiopian scenario the legal status all MFIs is the same i.e. SHFs. All suppliers of financial services to the poor have to be licensed and registered by NBE and other forms of legal structures (such as NGOs) are not allowed. But NGOs can be shareholders of the SHFs. So use of the term legal status is avoided and ownership structure within the SHFs is rather used as a variable for the study. The owners of the SHFs can be NGOs, individual investors, organizational (institutional) investors and governments and these different ownership structures are studied in this research.

*Lending methods*: Group and individual lending methods are the two chiefly employed approaches to lending in MIFs. The literature document that group lending method reduces sustainability due to the high transaction costs nature of the lending method (Okumu, 2007; Mersland and Storm, 2007). But such lending approach is good to reach the poorest clients as the lender doesn't require physical collateral (Navajas et al, 2000; Mersland and Storm, 2007). Besides this lending approach is good to reach many numbers of clients at once and hence increasing the breadth of outreach (Mersland and Storm, 2007; Seibel and Parhusip 1998)

*Age:* The age of the organization affects sustainability and outreach through accumulated experience from learning by doing, the development of operating systems, experience and training of staff and the level of scale attained (Okumu, 2007).

The effect of MFIs age on sustainability is mixed with Cull et al (2007) finding a positive effect whereas Mersland and Storm (2007) a negative effect. On outreach, MFIs age has a positive effect on breath of outreach. Loan size may also increase with age

(Mersland and Storm, 2007). But increase in loan size with MFIs age may not be regarded as mission drift. Rather future loans may increase due to past successful repayment history of the client. Mission drift is rather a reorientation of MFIs strategy from poorer to wealthier clients (Cull et al, 2007).

*Size:* size is positively related to sustainability and this may be due to financial services delivered to larger group of clients or larger loan size (Bogan, 2008; Mersland & Storm, 2007; Cull et al, 2007). Size is positively related to breadth of outreach as the number of borrowers can itself be another measure of size (Bogan, 2008). The effect of size on depth of outreach is mixed with Hudon and Traca (2006) found negative relationship implying larger MFIs are pro-poor whereas Cull et al (2007) found positive relationship.

## Data and Methodology

*Data:* The data of this study is sourced from two areas. The sustainability and outreach data is sourced from the Microfinance Information eXchange (MIX) Market website (www.mixmarket.com) which is an organization dedicated to the dissemination of quality microfinance data worldwide. Such data pertains to 13 MFIs operating in Ethiopia for six years (from 2003-2008). Although there are close to 30 MFIs operating in the country, no much time series data is available for many of them and hence we used data for the 13 MFIs.

The governance data is collected using a questionnaire distributed to the CEO of MFIs. The data was collected while the CEOs came together to attend a national conference on microfinance development in Ethiopia. The conference was organized by the Association of Ethiopian Microfinance Institution (AEMFI) in the year 2010 at Dire Dawa, Ethiopia. I was one of the paper presenters in that conference and used the opportunity to collect the governance data from the CEOs without hassle. My physical presence there helped to clarify some of the questions to the CEOs at the time.

The questionnaire was distributed to 30 CEOs out of which 19 returned the filled questionnaire (a response rate of 63%). The instrument was designed to capture governance dynamics in the six year period (2003-2008) but not much change is observed in these six years in the governance indicators. Since the two separate datasets need to be matched, the final useable sample of the governance data is reduced to 13 MFIs, although response was available from 19 MFIs. After accounting for missing values, the final data used for regression analysis is 53 MFIs-year observations with the average number of MFIs 10 and the average number of time series 5.3 years.

*The Econometric Model*: A single equation model, consistent with Hartarska (2005), is used in the estimation. This is because the theoretical notion of endogenous governance variables is not always supported by empirical data. The following static panel model is employed.

$$Yit = \alpha + \beta iXit + \beta jCit + \mu i + \varepsilon it \quad (1)$$

Yit is the outcome variable of interest, here sustainability and outreach. Xit represents the explanatory governance variables here includes board diversity, external governance and ownership structure variables. Cit refers to the control variables including lending methods, MFIs age and size. μi is time-invariant unobserved heterogeneity for MFI i. εit is time varying error term for MFI i in period t which is assumed to be identically and independently distributed (i.i.d.) with a zero mean under both the random and fixed effect models. In addition in random effect model the, μi, is also assumed to be i.i.d.

Sustainability is measured by Return on Assets (ROA) and Operational Self Sufficiency (OSS). ROA is the ratio of adjusted net operating income net of taxes to adjusted average total assets whereas OSS is the ratio of financial revenue to the sum of financial expense, net loan loss provision expense, and operating expense. Financial Self Sufficiency (FFS) is another measure of sustainability used in prior research which is adjusted for subsidy. But the data on this measure is not available from the MIX Market database.

Outreach is operationalized by the two dimensions of breath of outreach and depth of outreach. Breadth of outreach is measured by the log of number of borrowers. Depth of outreach in turn is measured by the average loan size (AvLnSz, the ratio of adjusted gross loan portfolio to adjusted number of active borrowers) and the percentage of women borrowers. A lower loan size and a higher proportion of women borrowers indicate a higher depth of outreach to the poorest. All these measures are from MIX (2008) benchmark reports.

Board diversity variables include the proportion of different stakeholders on the MFIs boards such as women, donors, creditors, local businessmen and clients. The external governance variables include regulation of the MFIs activity by regulatory agencies and rating of the MFIs activity by rating agencies. Previous authors used a simple regulated or not dummy to measure regulation (Mersland and Storm, 2007; Hartarska, 2005). This is possible because their research is cross country in nature and some MFIs, in certain countries, are allowed to operate without any form of regulation. But in the Ethiopian case, no MFI can operate without a license from the National Bank of Ethiopia (NBE) and hence the simple regulated or not dummy doesn't serve our purpose. We used a more detailed measure of regulation obtained from Cull et al (2011). This includes reporting requirement by a regulatory body, on site supervision of the MFIs activity by the regulator and whether the regulator conducts regular on site supervision or irregular

supervision. The reporting requirement is dropped as this is a mandatory requirement by NBE and the entire sample MFIs adhere to this requirement at least annually (MicroNed, 2007). Ownership structure is measured by the proportion of shares dominantly owned by four groups of shareholders: NGOs, individual investors, organizational investors and governments. If a particular ownership category is dominant it is coded as one and zero otherwise. The NGO dummy is the omitted category in the regression.

In the control variables, lending methods is measured as the proportion of loan disbursed through group lending methods, MFI age measured in number of years and MFI size measured in log of assets.

Since many of the governance variables are time-invariant, we used the random effect model to estimate their effect. But the validity of the random effect model is checked against pooled OLS model using the Breush-Pagan test. When board diversity variables are used as explanatory variables, the Breush-Pagan test is significant and this indicates that the random effect model is proper as opposed to pooled OLS. However, when external governance and ownership structure variables are used as regressors, the random effect model is proper only for outreach variables, with the pooled OLS model become proper for sustainability variables.

## Results and Discussion

Summary Statistics: The summary statistics are discussed under two parts. The first section deals with the summary statistics of sustainability and outreach variables and control variables whereas the second part deals with the summary statistics of board structure variables.

**Table 1.** Descriptive Statistics of Sustainability and Outreach indicators and control variables

| Variables | N | Mean | SD | Min | Max | CV |
|---|---|---|---|---|---|---|
| ROA | 54 | 0.4% | 9.5% | -35% | 9.85% | 24 |
| OSS | 57 | 130% | 54% | 15% | 232% | 0.42 |
| Borrowers | 59 | 120,227 | 184,021 | 434 | 710,576 | 1.53 |
| AvLnSz | 59 | $129 | $65 | $32 | $314 | 0.5 |
| Women | 56 | 54% | 21% | 15% | 93% | 0.39 |
| Group Loan | 64 | 85% | 19% | 30% | 100% | 0.22 |
| Age | 59 | 7 | 2 | 3 | 11 | 0.29 |
| Size | 59 | $26.6m | $49m | $0.1m | $198m | 1.84 |

*Note: CV stands for coefficient of variation which is the ratio of standard deviation to mean.*

*ROA:* The average ROA is 0.4% which is considered too low. The variation is also too large with MFIs earning a negative ROA as high as 35%. The maximum figure of 9.85% is not also that much high, indicating the weakness of the industry in terms of getting reasonable returns on investment. The coefficient of variation figure (24) substantiate the wide variation observed in the ROA of MFIs.

*Operational Self Sufficiency (OSS):* The average OSS is 130% denoting a typical MFI is operationally self-sufficient. But there are MFIs which have an OSS as low as 15% and as high as 232%. The maximum figure is a very promising result and is probably registered by the purely commercial large MFIs. The coefficient of variation (0.42) is low indicating more similarity in Ethiopian MFIs sustainability figures.

*Borrowers:* The average numbers of borrowers is 120,227. There are wide swings in this variables with some MFIs serving as low as 434 borrowers and others serving as high as 710,576 borrowers. Besides, the coefficient of variation (1.53) is high indicating Ethiopian MFIs show more variability in number of borrowers as compared to other outreach and sustainability indicators.

*Average Loan Size*: The average loan size is $129 with the minimum being $32 and maximum $314. The coefficient of variation (0.5) is low and indicates more similarity in loan size among MFIs.

*Women Borrowers Served*: The average percentage of women borrowers served is 54%. Some MFI have as high as 93% women clients whereas others have a meager 15% women client. The coefficient of variation (0.39) is low indicating Ethiopian MFIs are more similar in their orientation towards serving women borrowers.

*Group Loan*: In the surveyed MFIs 85% of the loan is disbursed through the group lending methodology. Thus this lending method is considered dominant. On the variation of the lending methods used, some MFIs disburse only 30% of their loan using group lending methods and other fully (100%) disburse loans using this method.

Age: The sample MFIs has an average age of 7 years in the year 2008. The youngest MFIs have 3 years age and the oldest have an age of 11 years.

*Size*: The sample MFIs has mean assets of $26.6 million with the minimum $100,000 and maximum $198 million. The coefficient of variation (1.84) is the largest from all variables. This tells that Ethiopian MFIs shows huge variations in terms of number of borrowers and asset which are all a measure of size.

In the next section, we discuss the summary statistics of the governance variables. Some of the variables are continuous whereas others are dummy. Hence the statistics differ by the type of variable measurement.

**Table 2.** Descriptive Statistics of the Governance Variables

| Variable | N | Mean (Mode) | SD | Min | Max | CV |
|---|---|---|---|---|---|---|
| Women* | 64 | 0.25 | 0.23 | 0 | 0.8 | 0.9 |
| Donors* | 64 | 0.09 | 0.29 | 0 | 1 | 3.2 |
| Creditors* | 64 | 0.08 | 0.15 | 0 | 0.67 | 1.9 |
| Local businessmen* | 64 | 0.03 | 0.08 | 0 | 0.4 | 2.7 |
| Clients* | 64 | 0.009 | 0.05 | 0 | 0.29 | 5.6 |
| On site supervision+ | 64 | 100% (Supervised) | | | | |
| Regular on site supervision+ | 64 | 77% (Regular) | | | | |
| Rating+ | 64 | 66% (Rated) | | | | |
| Ownership dominance+ | 64 | 53%(NGO dominant) | | | | |
| Regional dummy+ | 64 | 59% (Oromia), 21% (AA) | | | | |

*Note: *continuous variables; +dummy variables; CV stands for coefficient of variation which is the ratio of standard deviation to mean.*

*Women:* The representation of women on the board of directors is found to be 25%; i.e. out of the average 6 board members, 2 board members are women. This is an encouraging result as women are considered important in MFIs boards for a variety of reasons. But it has to be noted the distribution is uneven as there are MFIs with no women directors and some have as high as 5 women directors.

*Donors:* It is found that the representation of donors on the MFIs boards is 9% i.e. out of the six board members one person is a donor. This variable also shows wide variation as some MFIs have no donors on their boards whereas in other MFIs, all board members are donors. The coefficient of variation (3.2) is high indicating wide dispersion in donors' representation.

*Creditors:* The representation of creditors (members of financial institutions) in the MFI boards is 8%, almost a nil representation for them out of the six board members. But there are some MFIs that have as high as 4 board members from creditors. In general, the no representation of creditors on MFIs boards show that there is limited linkage between the formal financial sectors like banks and the MFIs. But this situation has to be improved. MFIs should target banks as a viable source of debt finance to expand their outreach. Donors' funds are scarce and MFIs should start tapping commercial source of finance available from formal financial institutions. Banks also have to downscale by lending their excess liquidity to MFIs. In this way, they can increase their profitability and discharge their social responsibility of helping the poor in a better way. If such mutual relationship is created between the two institutions, creditors' representation on MFIs boards will be inevitable as the earlier will have a financial stake on the latter.

*Local Businessmen*: The representation of local businessmen in the MFI boards is 3% which imply a nil representation for them. As local businessmen bring more valuable market information to the MFIs, more diversified boards including local businessmen has to be thought by the MFIs in the future.

*Clients:* The representation of clients in the MFI boards is found to be 0.9% which is a nil representation for them. In the future it is also good to think of including clients as board members to serve them better and achieve sustainability and outreach objectives.

*Onsite Supervision*: The survey measured the degree to which the National Bank of Ethiopia (NBE), the regulator of the microfinance industry, conducts on site supervision of the MFIs activity. The entire sample MFIs (100%) informed that the NBE discharges its duties of onsite supervision of the MFIs activity. This is a good external governance practice on the part of the NBE.

*Regular Onsite Supervision:* A follow up question was asked to the CEOs to tell us the extent to which NBE makes regular on site supervision. If supervision is conducted irregularly, systemic crises may be created in between and the industry as a whole may be endangered. For such kind of misfortune not happen, it is recommended to supervise the MFIs regularly. The majority of the respondents (77%) informed that NBE makes regular

on site supervision of their activity every two years. Although the regular supervision is a good outcome, two years is considered longer as systemic crises can happen in between. So it is suggested for the NBE to strengthen its own supervision capacity and observe the industry at a lesser interval possibly six months.

*Rating:* In terms of rating of the MFIs activity and performance by outside rating agencies, the large majority (66%) of the sample MFIs responded that they are rated at least once by rating agencies. This is a good practice and has to be encouraged. Being rated is important to attract external source of funds and communicate transparency of operations to various interested groups.

*Ownership Structure*: Four ownership types (NGOs, individual investors, organizational investors and government) are identified and the proportion of shares dominantly owned by each group is calculated. It is found that NGOs are the dominant owner in the sample MFIs with 53% (7 out of the 13 MFIs) dominantly owned by NGOs. The second dominant shareholders are individual investors and organizational investors each having an equal 19% dominance (in 2 MFIs). Lastly government dominance is only 9% (in 1 MFI). One MFI is left unassigned and this is caused by rounding errors. The overall result shows NGOs dominance in the microfinance industry. Although it has to be proved empirically, this is expected to entail a more emphasis on the social goal of MFIs (outreach) as opposed to the commercial goal of financial sustainability.

It is felt that the result reported above is confounded by the absence of a clear cut dichotomy between some "NGOs", "governmental units" and "organizational investors" in Ethiopian scenario. Some institutions named here as "NGOs" and "Organizational Investors" are affiliated to the government political machinery and even constituted to serve its agenda. Thus, it is confusing to put a dividing line between these organizations. Despite such type of problems the overall result will not change significantly as governments, organizational investors and NGOs have the same social goal rather than commercial goal. Had such type of problem been associated with individual investors, things might have been different as such types of investors are expected to give more emphasis to commercial interest.

*Regional Dummy*: The region with which the MFIs dominantly work is another question forwarded to the CEOs. Even if the operation of the large government owned MFIs is region specific, other private players have branches in different regional states. Thus asking a question regarding the MFIs dominant region of operation is important to know the regional distribution of MFIs and the driver behind this. It is found that most of the sample MFIs dominantly work in the Oromia regional state (59% or 8 MFIs) followed by the Addis Ababa City Administration (21% or 3 MFIs). Other regional states like Amhara, Tigray and Southern Nations, Nationalities and Peoples Region (SNNPR) have few number of (a maximum of two) microfinance players.

The dominance of Oromia regional state and Addis Ababa city administration can be a research issue. Particularly the economic, political and social environments with which microfinance institutions flourish has been studied. For instance Vanroose (2008) found that MFIs flourish in countries where the level of international support is high and in densely populated regions. Although it requires a formal study, these factors may be behind the higher development of MFIs in these two regions as opposed to others.

*Econometric Results*: Before estimating the model, correlation among all variables is checked. The result not reported here for brevity shows that ROA and OSS are highly significantly correlated (0.8244). This suggests the two measures are closer and identical in measuring sustainability. On the opposite the two measures of depth of outreach, average loan size and the percentage of women borrowers are not significantly correlated (-0.1943). Although the negative sign is as expected, the lack of significance and weak correlation indicate that the two measures are not perfect measures of the depth of outreach construct. The size of MFIs measured by assets and the number of borrowers are highly significantly correlated (0.9394). Because of the high explanatory power of firm size for the borrower regression, we removed it from the regression to give more explanatory power to the governance variables. From board diversity variables, the proportion of women and local businessmen on MFIs are highly significantly correlated (0.6615). This indicates that more of MFIs borrowers are women.

Some variables are dropped from the model due to less variation. This includes clients from the board diversity dimension and onsite supervision from the external governance dimension. Because many of the governance variables are insignificant, their joint significance is checked. The result shows that except in the regression where women borrowers are used as dependent variables, in all other models, all governance variables are even jointly insignificant. This clearly indicates their little explanatory power. We believe this is created due to less variation in the data as a result of small sample size rather than genuine reasons.

We will discuss the econometric results into two parts. First is the effect of board diversity variables and next will be the effects of external governance and ownership structure variables. As explained in the econometric model section, the random effect model is chiefly used to estimate the effect of many time invariant governance variables. But its validity vis-à-vis pooled OLS is checked using the Breush-Pagan test. The model adequacy statistics shows that all the included variables jointly explain the measures of sustainability and outreach (the $\chi 2$ statistics is

significant). The R2 values are fairly high in many of the regressions.

**Table 3.** The effect of board diversity variables on sustainability and outreach

| Variables | ROA | | OSS | | LnBorrower | | AvLnSz | | Women | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Coeff. | P-val. | Coeff. | P-val. | Coeff. | P-val. | Coeff. | P-val. | Coeff. | P-val. |
| Women | -0.08 | 0.462 | -0.07 | 0.870 | -2.27 | 0.038** | 48.06 | 0.343 | 0.401 | 0.098* |
| Donors | -0.079 | 0.322 | -0.46 | 0.138 | 1.59 | 0.087* | 46.72 | 0.145 | -2.45 | 0.136 |
| Creditors | 0.038 | 0.711 | -0.47 | 0.231 | 0.824 | 0.236 | 88.57 | 0.036** | 0.18 | 0.277 |
| Local business | 0.086 | 0.828 | -1.37 | 0.401 | 3.4 | 0.241 | 44.93 | 0.795 | -1.38 | 0.057** |
| Clients | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Group loan | -0.001 | 0.232 | -0.007 | 0.089* | -0.015 | 0.004*** | 1.19 | 0.018** | -0.001 | 0.424 |
| Lnassets | 0.015 | 0.258 | 0.186 | 0.002*** | _ | _ | 30.07 | 0.000*** | -0.054 | 0.063* |
| Age | 0.009 | 0.165 | -0.012 | 0.687 | 0.31 | 0.000*** | 2.97 | 0.400 | 0.031 | 0.023** |
| Const. | -0.168 | 0.475 | -0.635 | 0.551 | 9.8 | 0.000 | -489.74 | 0.000 | 1.22 | 0.008 |
| *$R^2$* | | *0.3097* | | *0.6699* | | *0.64* | | *0.6876* | | *0.6736* |
| *$\chi 2$* | | *18.54* | | *41.77* | | *178.28* | | *80.19* | | *21.97* |
| *Breush-Pagan(BP)* | | *9.94* | | *2.63* | | *22.76* | | *3.56* | | *10.32* |
| *P-value (BP)* | | *0.0008* | | *0.0526* | | *0.000* | | *0.0295* | | *0.0007* |
| *N* | | *51* | | *53* | | *55* | | *54* | | *51* |

**values significant at 10%, **values significant at 5%, ***values significant at 1%.*

*Women:* Our result shows more women directors help to reach more women borrowers and thereby improve depth of outreach. This is a good outcome and consistent with Hartarska (2005) result. Surprisingly, more women directors curtail breadth of outreach and with no significant effect on either of the sustainability measures. The expectation was more women directors improve sustainability as they spend more time in monitoring and understand MFIs clients better which help in client screening.

*Donors:* The result shows that these groups of board members increase breadth of outreach with no significant effect on either sustainability or depth of outreach indicators. This result is inconsistent with Hartarska (2005) who found more donors on MFIs improve depth of outreach at the expense of sustainability.

*Creditors:* Boards member with financial skills increase loan size and reduce depth of outreach. Otherwise they have no significant effect on either sustainability or other outreach measures. Although the result is again inconsistent with Hartarska (2005) it give some sense that members of financial institution are more commercial oriented in their lending approach and hence have lower depth of outreach.

*Local businessmen*: This group of board members lends less to women borrowers and thus lower depth of outreach. This is a displacement effect. Otherwise they don't have any significant effect on other outreach and sustainability measures. The result again is inconsistent with Hartarska(2005).

*Clients:* This variable is omitted from the model because of less variation in the data (no clients in the MFIs boards).

**Table 4.** The effect of external governance and ownership structure on sustainability and outreach

| Variables | ROA | | OSS | | LnBorrower | | AvLnSz | | Women | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Coeff. | P-val. | Coeff. | P-val. | Coeff. | P-val. | Coeff. | P-val. | Coeff. | P-val. |
| Onsite supervision | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Regular onsite supervision | -0.07 | 0.054** | -0.063 | 0.702 | 2.34 | 0.000*** | -42.04 | 0.417 | -0.045 | 0.512 |
| Rating | 0.05 | 0.091* | 0.31 | 0.044** | -0.36 | 0.206 | -1.16 | 0.959 | 0.126 | 0.034** |
| Individual Dummy | 0.06 | 0.020** | 0.170 | 0.151 | -0.64 | 0.225 | -1.76 | 0.968 | -0.175 | 0.000*** |
| Organizations Dummy | 0.016 | 0.512 | -0.15 | 0.164 | -0.38 | 0.483 | -3.09 | 0.945 | -0.166 | 0.001*** |
| Government Dummy | 0.005 | 0.908 | -0.05 | 0.786 | 0.85 | 0.253 | 107.36 | 0.089* | 0.307 | 0.000*** |
| Group loan | 0.001 | 0.277 | -0.001 | 0.790 | -0.01 | 0.001*** | 1.75 | 0.000*** | 0.0008 | 0.624 |
| Lnassets | 0.048 | 0.000*** | 0.27 | 0.000*** | _ | _ | 26.94 | 0.011*** | -0.083 | 0.000*** |
| Age | -0.008 | 0.184 | -0.05 | 0.066 | 0.299 | 0.000*** | 5.5 | 0.206 | 0.04 | 0.000*** |
| Const. | -0.814 | 0.000 | -2.57 | 0.007 | 9.7 | 0.000 | -482.05 | 0.001 | 1.43 | 0.000 |
| $R^2$ | | *0.4527* | | *0.7201* | | *0.7927* | | *0.6914* | | *0.7491* |
| $\chi 2$ | | *34.73* | | *113.20* | | *202.63* | | *100.93* | | *98.89* |
| *Breush-Pagan(BP)* | | *0.000* | | *0.000* | | *36.77* | | *12.40* | | *2.54* |
| *P-value (BP)* | | *1.000* | | *1.000* | | *0.000* | | *0.0002* | | *0.055* |
| *NT* | | *51* | | *53* | | *55* | | *54* | | *51* |

**values significant at 10%, **values significant at 5%, ***values significant at 1%.*

*Onsite Supervision*: This variable is dropped from all specifications due to no variation in the data. All MFIs report that NBE conduct onsite supervision of their activity.

*Regular Onsite Supervision*: Increased regulatory activity reduces ROA and increased the number of borrowers. Otherwise it doesn't have any significant effect on any of the depth of outreach measures. The expectation was complying with prudential regulation will lead to mission drift and reduce depth of outreach to maintain the same level of profitability. This doesn't happen, rather profitability reduced and this may be the result of increased costs associated with complying with prudential regulations. This result is inconsistent with the expectation.

*Rating:* Being rated by rating agencies improve sustainability (ROA and OSS) and help to reach more women borrowers. This is a good effect of being rated. It doesn't have effect on the number of borrowers and average loan size. The result partially supports the positive effect of rating which is undermined in recent years.

*Ownership Structures*: Our result here indicates that MFIs dominantly owned by individual investors have less depth of outreach, measured by women borrowers. This group of owners also has positive effect on sustainability, specifically on ROA. MFIs dominantly owned by organizational investors reach lower women borrowers. The effect of MFIs dominantly owned by government organization on the two depth of outreach measures (average loan size and women borrowers) is contradictory. Thus no valid conclusion can be made on the effect of this variable. In sum, our result partially confirms Jansson and Westley, (2004) claim that NGOs are weaker structure with lack of owners and hence their financial performance many be lower as compared to SHFs.

On the effect of control variables, we tried to skim out the consistent findings across Tables 3 and 4 where board diversity and external governance and ownership structure are used as explanatory variables. Group lending methods doesn't have significant effect on sustainability, reduce breath of outreach and increase average loan size. These findings are contradictory to the basic advantage of group lending in that it is good for depth of outreach because no collateral is required and helpful to reach more number of borrowers. At the same time, group lending is cost intensive and expected to reduce sustainability. But all these expectations are not met. On the opposite, firms' size has consistent effect on the expected direction. Larger firms have more sustainability due to economies of scale, lend larger loan size and reach few women borrowers. This clearly indicates the tradeoff between sustainability and depth of outreach. This result is consistent with Bogan (2008), Mersland & Storm (2007), Cull et al (2007). Over the years MFIs reach more number of

borrowers and women borrowers. MFIs age has no significant effect on average loan size.

## Concluding Remarks

In this research, we investigated the effect some governance indicators such as board diversity, external governance and ownership structures on the sustainability and outreach performance of Ethiopian MFIs. A panel data of 13 MFIs for 6 years (2003-2008) is used for the study. No study of such type is conducted in the past for the Ethiopian environment. The study extends some global studies like Mersland and Storm (2007) and Haratarska (2005) in a one country and unique context and complements the approach of Wale (2015).

The summary statistics result of governance variables indicates the following results. The boards of MFIs are not diversified as such despite MFIs having dual mission of sustainability and outreach to the poor which may be contradictory objectives. Especially the representation of creditors, local businessmen and clients are non-existent. The lack of creditors especially on MFIs boards indicate weak link between MFIs and banks through debt finance. The good side is the representation of women on MFIs boards is reasonably good. As most MFIs clients are women, women directors help in understanding clients' needs and selecting good borrowers.

On external governance variables, most of the indicators are good. The NBE conduct regular onsite supervision of the MFIs activity and most MFIs are rated by rating agencies. However, the supervision by NBE is conducted every two years which may be longer and systemic crisis may occur in between. In ownership structure, it is found that Ethiopian MFIs are dominantly owned by NGOs and this group of owners has a social mission of poverty reduction. Thus the sector can be judged to be more inclined to social goals than commercial ones.

Coming to the panel data result, many of the variables are insignificant and this is attributed to low variation in the data rather than genuine reasons. Furthermore, the insufficient variation arises due to the one country nature of the data where governance systems are uniform and the NBE regulations need to be strictly followed by the MFIs. Cross country research with different governance mode may illuminate more light on the effect of many variables.

Despite such limitations, some interesting findings are observed from the panel data models results. More women on board of directors help in depth of outreach. They reach more women borrowers. Board members with a financial skill reduce depth of outreach in that they extend large loan size. More local businessmen reduce depth of outreach measured by the percentage of women borrowers and this is possibly a displacement effect. Regulation has an opposite effect in that it reduces sustainability without reducing depth of outreach. Rating of MFIs activity by rating agencies creates is found to have a good effect of increasing sustainability and at the same time cater for more women borrowers. On ownership structure it is found that MFIs dominantly owned by individual investors lends less to women and more profitable indicating the commercial orientation of their operation.

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