

FINANCING STRUCTURE AND OUTREACH OF SELECTED SADC MICROFINANCE INSTITUTIONS (MFIS)

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Abstract

This paper probes the link between financing structure and outreach noting the commercialization trend for selected Southern Africa Development Community (SADC) MFIs. Assuming MIX panel data on 60 MFIs, this study tackles outreach depth and breadth - a diversion from an outreach depth-centered study which employed Planet Rating data on 74 Sub-Saharan African MFIs. Robust panel methods show that, both outreach depth and breadth are affected by the same variables, though in a different way. Equity, deposits and 'new' MFIs significantly further depth whilst borrowings limit depth. Breadth is constrained by borrowings, equity and 'new' MFIs while deposits expand the breadth. We suggest that, permitting MFIs to collect deposits go a long way in spurring outreach depth and breadth.

Keywords: Financing Structure, Outreach, Microfinance, Mfis, SADC

JEL Classification: G21, I32

1. INTRODUCTION

Hermes & Lensink, (2007: F1) noted that, 'Lack of access to credit is generally seen as one of the main reasons why people in developing economies remain poor.' Soaring financial exclusion is attributed to the lack of strong financial intermediation backed by sound MFI financing (Kapper 2007). Though microfinance has proven its mettle by enhancing access to financial services and products to the poor (Iezza & La Cour 2010; Khawari 2004; Ayayi & Sene 2010), MFIs' capital constraints in developing countries limit access to financial services by the larger proportion of the population (Kumar 2012). Demand for microfinance thus remains un-quenched as stated by Paul (2010) that, 'Demand for microfinance currently outstrips supply by \$300 billion and in order to reach those without access, MFIs need to expand.'

The quest to meet the ballooning demand for microfinance has seen MFIs embracing commercial financing options to broaden their financing options - a phenomenon known as commercialization. Commercialization has been applauded for ensuring financial sustainability (FS) and opening up broader financing opportunities for MFIs (Sekabira 2013). In this respect, the manner MFIs are financed (financing structure) has greatly changed. Hoque et al., (2011) noted the marked transition of NGOs and non-bank MFIs into regulated microfinance banks capable of attracting deposits as the search for adequate financing sources. Quayes (2012) giving the instance of Latin American MFIs acknowledged the significant strides made by NGOs in deviating from subsidy dependency into profitable institutions. Deposit attraction plus debt usage has been increasing, evidencing the evolution of MFI financing structure (Hoque et al. 2011). According to

Lafourcade et al. (2006: 123), 'The future of microfinance as a commercial industry has become the dominant strand of thought behind several international development organizations.' This has seen a growing trend towards commercial microfinance in respect of financing and pricing of products. This paradigm is linked to the institutionalists' camp which posit that, express fight against poverty require permanent institutions (F.S) which are large and stable, exploit massive outreach and are innovative hence operate at low cost (Rhyne, 1998; Robinson 2001; Brau & Woller 2004; Von Pischke 1996). Murdoch (2000: 620) restated that:

....financially sustainable programs can make the greatest dent in poverty. Third, that financial sustainability will give programs access to commercial financial markets. Fourth, that since they come at no cost to donors, financially sustainable programs are superior weapons for fighting poverty. Fifth, that subsidized programs are inefficient and thus bound to fail. Sixth, that subsidized credit most often ends up in the hands of the non-poor. Seventh, that successful microfinance programs must be nongovernment programs. And, eighth, that subsidizing credit undermines savings mobilization.

However, commercialization has brought fears of mission drift - igniting debate on whether FS deepen outreach or spark mission drift. Welfarists content that, commercial microfinance disregards the poor thus the future of microfinance has to be funded by donations, subsidies or grants (Brau & Woller 2004). Increased lending rates on loans are thought to deter the poor from accessing loans and other services. Institutionalists argue that, given the limited resources availed by donors (Johnson 2015), inconsistency of donors in funding development

(Ayayi & Sene 2010) on the back of unchecked abuse of donations, outreach is limited. Also, considering that donors and governments are now weaning off MFIs, commercial financing methods are being instituted (Hoque et. al, 2011). They wrote that, '...commercialisation is the only way to attract money needed to expand the outreach and to liberate the system from dependency on foundations and other charitable donors.'

Evidence on the trade-off between FS and outreach has remained inconclusive. There is evidence aligned to FS being a hindrance to outreach depth (see Cull et. al. 2006; Cull et al. 2009; Hermes et al. 2011; Hartarska & Nadolnyak 2007). Other writings hail the compatibility of FS and outreach (Quayes 2012; Manos & Yaron 2009). Conversely, Hermes & Lensink (2007: 8) argued that,

...most of the evidence on the depth of outreach on microfinance institutions suffers from being anecdotal and case study driven. The existing studies do not systematically explain differences in depth of outreach of microfinance institutions, nor do they explicitly explore whether there is a trade-off between the depth of outreach versus the strife for financial sustainability.

Whereas prior inquiry queried the link between FS and outreach and recently, the link between financing structure and FS (see Sekabira 2013; Bogan 2012) - a direct relationship between financing structure and outreach remain one of the virgin research areas in microfinance as sparse facts exist. The relationship remains implied in studies meant to interrogate either outreach or MFI efficiency (see Kumar 2012; Cull et al. 2011; Hermes & Lensink 2011; Quayes 2012; Zerai & Rani 2012). Whilst Johnson (2015) delved on capital structure and outreach depth considering 74 Sub Saharan Africa MFIs, his study did not address the integrity of outreach, i.e depth and breadth. It remains a duty to understand the relationship between the financing structure and outreach depth and breadth as well as identifying institutional characteristics that have an impact on outreach considering selected SADC MFIs. Cull et al. (2009: 19) noted that, 'the exact nature of trade-offs in microfinance differ across regions, but meaningful trade-offs need to be recognized and weighed everywhere.' In this realm, refocusing on how commercialized MFI financing relates to both depth and breadth of outreach in SADC with the intent of informing MFI financing is a worthy cause.

The SADC region is of interest given the deplorable poverty levels which call for informed MFI financing methods for sustainable poverty alleviation. The International Council of Social Welfare stated that more than half of the SADC population lives on less than a dollar per day (ICSW 2014). Still, gloomy microfinance outreach in SADC (Karim et. al. 2011) explains financial exclusion and the poverty in the region thereby calling for apt MFI financing structures which confer the best outreach, hence control poverty. The financing structure of MFIs in the region mimics that of commercial banks - implying that commercialization has taken its toll in the region (Karim et. al 2011). In this realm, it remains worthy to question how commercial financing relates to outreach in the region.

The study is structured as follows: section II covers the literature review; section III describes the data and the methodology; empirical results and the

conclusions are captured in sections IV and V respectively.

2. LITERATURE REVIEW

2.1. Microfinance Outreach

The provision of microfinance products and services (loans, deposits, insurance, consultancy etc) to a broad clientele base define outreach (Conning 1999). Schreiner (1999) noted the variation in the meaning of 'outreach' mentioning the poverty (welfarists) and the financial systems approach (institutionalists) in what has been popularized as the microfinance schism (Morduch 2000). The poverty and the financial systems approaches are synonymous to the welfarist and institutionalist paradigms accordingly (Brau & Woller 2004). Microfinance outreach according to welfarists is meant to reach the poorest whilst institutionalists target less poor client niche in order to limit outreach related costs.

Schreiner (1999) suggested various ways of evaluating the net benefits of microfinance to the community as indicated by: scope and clients' worth, affordability to clients, depth, breadth and length. Yaron (1992) proposed: the value of outstanding loan portfolio and the average value of loans extended, the amount of savings and average value of savings accounts, the variety of financial services offered, the number of branches and village posts, percentage of the total rural population served, the annual growth of MFI assets in real terms and women participation. However, outreach depth and breadth are popular in microfinance literature hence are discussed hereunder.

2.2. Breadth of Outreach

The total number of the clients served by an MFI defines the breadth of outreach (Hishigsurem 2004; Rosenberg 2009). In this regard, the total number of clients doing micro-saving, borrowers, those accessing micro insurance, consultancy etc delineates outreach breadth (Ganka 2010; Mersland & Strom 2010; Hermes et al., 2008). This definition goes well with institutionalists who believe in serving large numbers of the poor hence make a noticeable impact in poverty alleviation. Thus the shallow outreach depth is covered up by large number of clients served (Navajas et al. 2000). The more the clients served, the greater the impact of microfinance on poverty levels. In line with the financial systems approach, financially-sustainable MFIs widen outreach breadth thus reach as many of the poor as poverty-oriented organizations with narrow breadth (Rosenberg, 1996). For example, some self-sustainability-oriented credit unions in Colombia had more poor clients than some poverty-oriented village banks in Costa Rica and Guatemala (Paxton and Cuevas, 1998). Impliedly, the clients served are not necessarily the poorest.

2.3. Depth of Outreach

Outreach depth is synonymous with the poverty camp and it defines the extent microfinance reach and serves the poor. Schreiner (1999: 7),

Depth of outreach is the value that society attaches to the net gain of a given client. In welfare theory, depth is the weight of a client in the social-welfare function. If society has a preference for the poor, then poverty is a good proxy for depth. For example, society likely prefers that a street child or a widow get a given net gain than that a richer person get the same net gain.

The gist is if MFIs fail to serve the poor, then they operate purely as banks. The number of purely-poor clients served better defines an MFI's outreach depth as it meets the social mission of microfinance.

Cull et.al. (2007) acknowledging Ledgerwood (199) wrote that, 'number of clients as a measure of outreach considers only the total number of clients served from various products of an MFI without their relative level of poverty. Microfinance's average loan size has been used as a proxy of the depth of outreach using relative level of poverty. Smaller loans indicate poorer customers'. Other measures of outreach depth include percentage of women borrowers, rural clients served, minorities reached and the illiterate clients (Schreiner 1999). Outreach depth thus is more pronounced where the less privileged are accorded chance to access financial services.

3. MFI FUNDING

Though the traditional M&M¹ capital structure theory sets the tone on corporate funding issues; it remains irrelevant in explaining funding of microfinance given the uniqueness of the microfinance industry. The conventional corporate assumed by the M&M theory does not dovetail with the double bottom lines prioritized in microfinance (Cohen 2003). The life cycle theory (LCT) and the profit incentive theory (PIT) remain the preferred basis for explaining microfinance funding.

3.1. Funding Theories

The LCT acknowledges funding transition evident in MFIs as they develop into financially sustainable institutions. The LCT connotes that funding transition depends on the initial charter assumed by an MFI (Kapper 2007). The Industry Perspective (Campion & White 1999) details the motive to transform by NGOs (donor financed) through shedding off donations and adopting commercial funding means as they seek financial sustainability. The Institutional Perspective (Campion & White 1999) further state that, MFIs would capitalize on cost efficient Information Technology (IT) as they transform. Whilst commercial MFIs use commercial funding from the onset, such meager sources are tight and cannot edify outreach and sustainability. Improved financial performance would further open more commercial funding sources, access capital markets and use of financial instruments.

On the other hand, the PIT emphasizes that commercial funding raises MFI cost consciousness hence advance MFI efficiency and sustainability (Kapper 2007, Bogan 2012, Sekabira 2013). Essentially, MFIs keen on remaining operational for a

long time need not use concessionary priced capital. The PIT upholds that, commercial MFIs seek to maximise revenue and limit operational costs hence accumulate surpluses that cover expenses. The surpluses are then used to further outreach, thus making development to pay for itself (Brau & Woller 2004). Donor funded MFIs do not respond to profit maximisation and cost minimisation pressures thus deliberately opt to choose outreach depth over efficiency by serving the poorest and rural clients which naturally have extra lending costs thereby limiting outreach efforts (see Bogan, 2012; Armanderitz de Aghion & Morduch, 2005).

3.2. MFI funding options and sources

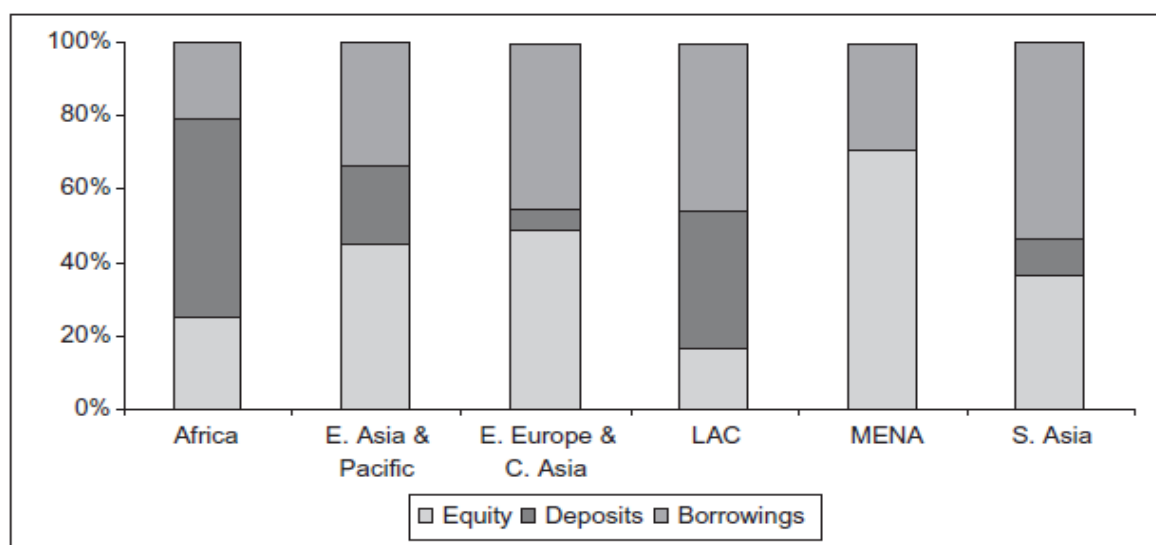
A lot has been written on donations signaling their popularity as a funding option for MFIs. Donations finance capital losses in the poverty camp and fund innovation and establishment costs under the financial systems approach. Once operations are viable, donations are relegated out of the financing structure of sustainability-seeking MFIs (Brau & Woller 2004). However, donations are slammed for harboring in-efficiency, corruption and limiting the attraction of savings. Morduch (2000) stated that, microfinance programs may evade the attraction of savings especially when it is costly to maintain them and when lending programs are not profitable. Rather they choose cheap donor funding leading to a subsidy trap² for MFIs. Governments, international donors, philanthropists and corporates are the major sources of donations (Buss 1999; Kapper 2007).

Savings occupy a significant role in the financing of MFIs in Africa (Lafourcade et al. 2006) as shown in fig 1.0 below. However, attraction of deposits requires observing regulatory and licensing provisions as set by supervisory authorities. Amongst other important issues is the hiring of experts in the handling of deposits as well as the necessary technology for secure record keeping, effecting payments and settlements (Tehulu 2013; Cull et al. 2011). Despite these costs, deposits are a stabilizing form of funding (Kapper 2007; Bredbeg & Ek 2011). Whilst the conventional accounting for financial institutions record deposits as liabilities, their distinguishing feature from debt is that they are attracted from clients at a lower rate (deposit rate) and used to churn-out loans at a higher rate (lending rate).

Where regulation limits MFIs to access deposits, then the most common commercial financing option besides equity is debt. Such can be from commercial banks and international financing organizations (Kapper 2007). Governments and individuals invest in MFIs through Microfinance Investment Vehicles (MIVs). MIVs are institutions designed to provide capital to MFIs by way of investing in microfinance on commercial basis (Isern & Porteous, 2006). They act as conduits of both public and private capital meant for microfinance programmes.

¹ The groundbreaking capital structure theory of the 1950s by Modigliani and Miller glued on the proposition that that firm value is independent of the manner it is capitalized.

² Failure to exist once subsidies stop to be availed

Figure 1. Global Distribution of MFI funding options

Source: Lafourcade et al. (2006)

Popular MIV investors include public funds in the name of International Finance Institutions (IFIs), institutional investors (pension funds) as well as foundations bent on social values, NGOs and philanthropic individuals. Unlike equity capital, debt capital has obligatory repayments meant to service the debt making it more expensive (Kinde 2012). In demonstrating the popularity of commercial funding for microfinance, Hermes & Lensink (2011) highlighted that private investment funds (MIVs) held portfolios constituting MFIs valued at \$2.3 billion.

However, where equity financing require issuing shares on stock markets, floatation costs raise the cost of equity. All the same, equity financing remain an inexpensive financing source for MFIs. Retained earnings are the cheapest since there is no cost of raising such since they are internally generated cash flows reserved for future investment. National and international non-profit organizations, private individuals, governments and banks are popular equity holders in MFIs (Hoque & Chishty 2011).

Table 1. Summary of mfi funding options and funding sources

| Funding option | Source of funding |
|-----------------------------|---|
| Donations/Subsidies/ Grants | Governments, International Donors, Philanthropists, Corporates (Buss 1999; Kapper 2007) |
| Debt/Borrowings/Leverage | Private Investors, Banks - Local & International, Multilateral Organizations, Governments (MIVs) (Isern & Porteous, 2005) |
| Equity | National & International non Profit Organizations; Private Individuals - IPOs, Governments, Banks (Isern & Porteous 2005; Hoque & Chishty 2011) |
| Savings/Deposits | Micro-savers |

Source: Author Compilation

3.3. Commercialization

Lensink (2011) underscored that, commercialisation of microfinance, competition, technology, financial liberalisation and regulation explain the change in financing structure of MFIs. In line with the industry perspective, there is a widespread belief that transformation commercializes microfinance and brings better returns (Campion & White 1999; Meehan 2004; Kapper 2007). This transformation is akin to institutionalists who adhere to the altering of '...management structure, operational efficiency, and sources of financing to resemble those more like a for-profit institution' (Johnson 2015: 122). The gist of commercialization is to make microfinance self-financing, being able to cover both operational and financial costs hence can survive without exterior support (de Sousa-Shields & Frankiewicz 2004). Commercialization is a reality we cannot afford to ignore since international donor agencies are now

embracing commercialization in all programs they fund (Hoque & Chishty 2011).

4. TRADE-OFF BETWEEN FINANCING STRUCTURE AND OUTREACH OF MICROFINANCE

Demystifying the tradeoff between MFI financing and outreach remain an epic task as limited evidence exist. This is because few studies focused on this area. Most of the evidence presented hereunder was implied in studies which pursued either outreach or sustainability.

Kumar (2012) explored the impact of capital structure on MFI performance noting the agency theory. GMM and IV inference on MIX panel data of 782 MFIs in 92 countries concluded that debt had a significant negative impact on outreach. Debt-servicing costs make the granting of loans to the poor more expensive. Outreach depth in this study was measured through average loan size, average loan size adjusted for GDP per capita as well as the

percentage for female clients served by an MFI. Chief amongst the findings was the fact that capital structure had no impact on either the breadth or depth of outreach.

Debate on microfinance trade-offs by Hartarska & Nadolnyak (2007) noted that deposit taking institutions attain broader outreach. The suspicion was that regulation (which allow MFIs to attract deposits) could be having an un-observed effect on outreach. However, an OLS empirical analysis by Cull et al. (2011) on whether regulation curtail profitability and outreach noted that supervision is connected to large average loan sizes and reduced lending to women - implying mission drift. Notable in the paper is that, cost linked to deposit attraction may limit outreach depth despite the fact that savings are a cheap financing option. Hermes et al. (2011) on outreach and efficiency of MFIs underscored the importance of commercial funds in expanding outreach to the poor for protracted periods. On the other hand, commercial funding invites competition amongst MFIs thereby leading to lower costs and interest rates - benefiting the poor.

By mere inference, financial sustainability by definition upholds commercial funding and disregard subsidies. Instinctively, where financial sustainability is linked to outreach, its almost like linking commercial funding and outreach. Assuming this manner of thinking, Quayes (2012) recorded a complimentary alliance between financial sustainability and depth of outreach. This position is explained by innovation in lending by MFIs which pursue financial sustainability. Conversely, Zerai & Rani (2012) showed that there is no link between financial sustainability and outreach. A weak relationship was identified between outreach depth and F.S whilst a strong positive correlation was observed between F.S and outreach breadth. Deductively, commercial funding optimises outreach breadth and limits outreach depth. This position is supported by Wagenaar (2012) and Millson (2013) whose studies concluded that commercial MFIs extent lumpier loans and have a limited proportion of female clients. These results thus portray the inconclusiveness of the perceived relationship between MFI funding and outreach.

5. STYLIZED FACTS ON MFI FUNDING AND OUTREACH IN SADC

This rundown notes funding challenges as well as low outreach chronicling the un-abated poverty in the region. An earlier survey on the state of outreach

in Africa by Lafourcade et al. (2006) spotted that, outreach in Southern Africa was spurred by Teba Bank (South Africa) whose gross loan portfolio accounted for 24% of the outstanding micro loans in Africa and 83% of the total Southern African micro loans. The outreach of the Southern African region is upped by the inclusion of micro-lending aligned commercial banks. As noted by Karim et. al., (2011) outreach in the region remains low hence poverty is unchallenged. Failure of MFIs including the curatorship of the biggest microfinance bank in region (African Bank) in 2014 explains the ailing outreach.

Capitalization of MFIs in SADC is via deposits, equity and retained earnings as well as wholesale priced funds from wholesale markets (Karim et al. 2011). These funding mixes imitate the ones assumed by commercial banks. Donations are provided by international donor societies, public institutions and philanthropic individuals. Regulatory provisions sanctioning the collection of deposits (to protect the public) have allowed MFIs to attract deposits. Lack of adequate financing for MFIs in the region raised the need of structuring financial rescue packages as a way of meeting outreach demands (Karim et. al., 2011).

6. METHODOLOGY

6.1. Data

The study uses Microfinance Information Exchange (MIX (Information is accessible on www.mixmarket.org)) data. Though marred with reporting inconsistencies and self selection bias, MIX data, according to Kumar (2012: 331) '.....is the most detailed publicly available data on financial, portfolio and outreach performance of MFIs on a global scale.' Commercialization informed the sample assumed in this study. Accordingly, commercial-oriented MFIs and NGOs in the process of evolving into full-commercial institutions are considered. Traces of commercial funding in the financing structure of NGOs pointed to funding transition.

MFIs with missing details required for the study were relegated. A sample of 60 MFIs was selected for the period 2005 - 2010 and is summarized in table 1.0 below. Unbalanced panel with a minimum of 4 and a maximum of 6 observations is assumed. Key MFI characteristics such as age, number of active borrowers, and number of outstanding loans, profit and regulation status, financing structure details and average loan sizes were provided in the data accessed.

Table 2. Sample description

| Characteristic | Number of MFIs | % of the Sample |
|------------------|----------------|-----------------|
| NGOs | 21 | 35% |
| Banks | 10 | 17% |
| Cooperatives | 11 | 18% |
| NBFIs | 17 | 28% |
| Rural Bank | 1 | 2% |
| New | 8 | 13.3% |
| Young | 15 | 25% |
| Mature | 37 | 61.7% |
| Regulated | 46 | 77% |
| Collect Deposits | 51 | 85% |
| Profit Motivated | 23 | 38% |

Source: Author's compilation

Reflecting on the theoretical underpinnings of commercialization, the sample comprise a blend of MFI charters (NGOs, banks, NBFIs and cooperatives) which naturally assume diverse financing structures good for the investigation being instituted. Notable is that, non-profit MFIs (NGOs) had commercial debt as well as savings in their funding structure. Interestingly, most MFIs (85%), regardless of charter attract deposits in line with findings by Lafourcade et al. (2006).

6.2. Model Specification

The study employs univariate multiple linear regression under panel framework. Panel methods were handy in broadening data points and degrees of freedom hence permit for novel data analysis

$$Out_{it} = C + \beta_1 Fin_{it} + \beta_2 MSC_{it} + \alpha_1 MEF_{it} + u_i + \varepsilon_{it} \quad (1)$$

Where Out_{it} stands for outreach measures, C is a constant, Fin_{it} are financing methods per MFI per time period, MSC_{it} represents MFI specific characteristics whilst MEF_{it} captures macro-economic fundamentals obtaining in the host country of an MFI. Unobserved effects are represented by U_i with the error term captured in ε_{it} .

Financing variables include: borrowings (BA), equity (EA), retained earnings (REA), donations (DA) and deposits (DTA). All these are scaled against assets as a way of smoothening results. MFI specific variables comprise MFI age (MFIs whose age range between 0 - 4 are classified as 'new'; age from 4 - 8 is classified as 'young' whilst age in excess of 8 is referred to as 'mature'. See Bogan 2012.), legal status (regulated or unregulated), profit status and whether an MFI attract deposits or not. Real yields (RY) control for macro economic factors since they are adjusted for inflation.

Using panel data require that an appropriate model is selected between fixed and random effect.

$$AvLoan = \alpha_1 + \beta_1 mature + \beta_2 new + \beta_3 EA + \beta_4 DA + \beta_5 BA + \beta_6 DTA + \beta_7 For_profit + \beta_8 Bank + \beta_9 regulated + \beta_{10} RY + \varepsilon_{it} \quad (2)$$

$$NOAB = \alpha_1 + \beta_1 mature + \beta_2 new + \beta_3 EA + \beta_4 DA + \beta_5 BA + \beta_6 DTA + \beta_7 For_profit + \beta_8 Bank + \beta_9 regulated + \beta_{10} RY + \varepsilon_{it} \quad (3)$$

7. EMPIRICAL RESULTS

7.1. Outreach Depth

Hausman test approved random effects model over the fixed effects model. The Breusch Pagan LM test for random effects accredited the random effects model over OLS. Treating the model to account for cluster effects and robust standard errors exempt of heteroskedasticity and autocorrelation gave results shown in table 3. below.

7.2. Outreach Depth

Equity, borrowings and deposits are the only significant funding options that have an effect on outreach depth. Equity being shareholder-provided comes at a low cost hence can further outreach depth thus explaining the significant positive link with outreach depth. Banerjee et. al. (2011) emphasized that, equity consolidates depth of

techniques to be assumed (Greene 2003; Greene 2002). Gujarati (2004: 637) noted that,

'By combining time series of cross-section observations, panel data give more informative data, more variability, less collinearity among variables, more degrees of freedom and more efficiency.'

Panel data captures time variant (random) and time invariant (fixed) effects making it superior to either cross section or time series data. These methods can capture unobserved effects in the data which cannot be detected by either time series or cross-sectional data individually. Multiple observations per MFI confer the heterogeneity which enriches results. In line with Hartarska & Nadolnyak (2007) and Kumar (2012) MFI specific characteristics, funding and macro-economic fundamentals are included in the general estimation equation 1 below.

Whilst fixed effects fail to account for the ever changing MFI business environment, random effects models might still be inferior to pooled OLS model in some instances. Lucky enough all this can be verified through Hausman and the Breusch-Pagan Lagrange Multiplier (LM) tests (Gujarati 2004). Though the study uses a micro-panel, contemporaneous correlation between panels is tested too. In-built STATA (A data analysis software package popular in economics) (vce options) commands which address panel weaknesses such as autocorrelation and heteroskedasticity are resorted to in making the selected model robust.

Noting the 'schism' in defining outreach, the study embraces both outreach depth and breadth as per welfarists and institutionalists positions. Siding with welfarists, the dependant variable in equation 2 is the average loan size. Literature labeled it as a good measure of outreach depth. Equation 3 is based on institutionalism, i.e. outreach is defined by number of active borrowers - NOAB).

outreach thus has a restricted impact on breadth. Also, equity remains a scarce resource to most MFIs given that in SADC, few if any MFIs have gone public. Borrowings recorded a significant negative relationship with outreach depth, cementing findings by Johnson (2015) and Kar (2012). Kinde (2012) noted that debt in Africa is costly thus in this case, it cannot be used to fund costly small loans required by the poor. Since MFIs place a margin on top of the cost of debt when lending in order to gunner for sustainability, costly debt make loans too expensive to the poor. Additional huge administrative costs attached to small loans meant for the poor imply that debt limits outreach depth.

Deposits too, being cheap sources of commercial financing present an opportunity for deepening outreach. Savings are then used to extent loans to the poor as written by Lafourcade et al. (2006) that, *'Southern Africa appears to be reaching lower-income clients when average savings and loan balances are compared with GNI per capita.'* Though

insignificant, donations showed their receding influence on depth of outreach owing to a barrage of weaknesses such as corruption, inefficiency and the dwindling flows of such during the period (2005 -

2010 characterized the global financial crisis and donations globally went plummeted) under study. Recent studies by Bogan (2012) verify this finding.

Table 3. Summary of regression results (depth and breadth)

| Variables | Outreach Depth | Robust Standard Errors | Outreach Breadth | Robust Standard Errors |
|-------------|----------------|------------------------|------------------|------------------------|
| Donations | -.0000346 | .000027 | -.1860664 | .1303978 |
| Equity | .0000206* | .000000085 | -.0288971* | .0050474 |
| Borrowings | -.0000356* | .000017 | -.1262593* | .0597128 |
| Deposits | .000104* | .0000000375 | .0020244* | .0000877 |
| Mature | .0000399 | .0000432 | .2167651 | .1184506 |
| New | .0001982* | .000089 | -.9150059* | .1406789 |
| Bank | -.0000972 | .0000875 | -.3373289 | .6191932 |
| For profit | -.0000552 | .0000611 | -.3811054 | .4177677 |
| Regulated | -.0000493 | .0000611 | -.5036514 | .4590551 |
| Real Yields | .00015 | .0002408 | .0001712 | .001028 |
| constant | -.0003381 | .0001212 | .64665 | .4536836 |

5% significance *, 10% significance **

New MFIs showed a significant positive relationship with outreach depth as they are mostly engrossed with the social mission given the limited financing which curtail their affinity to expand (Banerjee et. al (2011). Noting the life cycle theory, most MFIs are established on donor funding thus the inclination is to serve the poor (outreach depth). Outreach at this stage is limited mainly because of various operational challenges and competition from established MFIs and microfinance-oriented commercial banks.

7.3. Outreach Breadth

Random effects model proved its superiority over fixed effects and OLS models by way of running Hausman test and Breusch Pagan LM test for random effects. Results adjusted for robust standard errors and allowing for cluster effects are shown in table 2.

The same financing structure variables that affect the depth of outreach do affect the breadth of outreach but in a different manner. Only deposits have a positive effect on the breadth of outreach whilst equity and borrowings do negatively relate to outreach breadth. Hartaska & Nadolnyak (2011) found out that, deposit taking MFIs recorded extended breadth of outreach in line the current study. The explanation is linked to the volume of deposits attracted at low costs translating into huge outreach breadth (Lafourcade et. al. 2006). Debt being costly as testified by Kinde (2012) would make loans churned out to be costly thus clients are naturally deterred from accessing loans. Whilst the expectation was that, borrowings would further the breadth of outreach, the period under study (2000 - 2010) was characterized with the global financial crisis hence the cost of borrowings was prohibitive thereby affecting the breadth of outreach.

Equity for MFIs is a limited resource which cannot be stretched to fund broad outreach. In SADC, very few if any MFIs have gone public hence cannot maximise on equity financing in churning out loans to loans (Banerjee et. al. 2011). This explains the negative association between equity and outreach breadth. Also, equity in most MFIs is owned by NGOs who normally are aligned to the social mission. The only MFI characteristic with a significant influence on the breadth of outreach is the dummy for new MFIs. According to the LCT

(Bogan 2012; Sekabira 2013) and institutional metamorphosis of Campion & White (1999), new MFIs are usually unsustainable, have blunt business models and struggle with capitalization and competition. This holds back outreach breadth.

8. CONCLUSIONS

The study investigated the relationship between MFI financing structure and outreach for selected SADC MFIs in view of the commercialization trend. Unbalanced panel methods under fixed and random effects framework confirmed that, both outreach depth and breadth are affected by the same financing variables though in a different fashion. Deposits, equity and the dummy for new MFIs further outreach depth whilst borrowings have a damaging effect on outreach depth. Since outreach depth is affected by huge administration costs linked to small loans, cheap commercial funding sources further outreach depth (equity and savings). This substantiates why costly commercial funding sources, i.e. debt hinder outreach depth and breadth. Equity being a limited resource cannot exploit broad outreach compared deposits which significantly expand the breadth of outreach. In-adequate funding, competition, operational challenges and dull business models for 'new' MFIs limit outreach breadth. Cull et al, (2009) wrote that, 'Meaningful interventions in microfinance will require making deliberate choices—and thus embracing and weighing tradeoffs carefully.' Noting these trade-offs, the quest to reach poor and to exploit maximum outreach can be achieved by allowing MFIs to attract deposits. Regulatory authorities in the region must come up with a framework that provision deposit attraction if maximum poverty is to be arrested.

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