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The impact of financial management practices and competitive advantage on the loan performance of MFIs

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Abstract

Purpose – The purpose of this paper is to study the impact of financial management practices and competitive advantage on loan performance of microfinance institutions (MFIs).

Design/methodology/approach – In this cross-sectional study, the authors surveyed 70 MFIs in Kampala, Uganda. The authors applied principal component analysis to reduce the number of factors and identify the important elements that capture financial management practices, competitive advantage and loan performance of MFIs. The authors put forward and tested three hypotheses relating to the significance of the relationship between these three variables of MFIs using the statistical software package, SPSS and also apply the normal theory approach developed by Sobel (1982) and Baron and Kenny (1986) in testing the mediation by competitive advantage.

Findings – Robust financial management practices are associated with better loan performance of MFIs. Results also reveal a significant positive relationship between the competitive advantage of the MFIs and their loan performance. Furthermore, a significant positive relationship between competitive advantage and loan performance is found. Moreover results also show a full mediation effect of competitive advantage on the association of financial management practices and loan performance, implying that the association of financial management practices of the MFIs on their loan performance is entirely through their competitive advantage.

Research limitations/implications – Although there is plenty of literature on loan performance, financial management practices and competitive advantage, there is scarce literature on their effective conceptualization. This together with the imprecise definition of competitive advantage may have affected conceptualization of the authors study. Thus, in this study, the authors do not claim highly refined measurement concepts. Moreover, many of the extant studies for instance have measured loan performance quantitatively, yet process factors which are inherently qualitative in nature can better explain variances in loan performance concept. More research is therefore needed to better refine qualitative concepts used in this study.

Practical implications – Efforts by the MFIs management to improve loan performance must be matched with adoption of financial management practices that provide MFIs with sustained competitive advantage over their rivals.

Originality/value – In order to explain loan performance of MFIs, and drawing from social economics, management and accounting strands, this study shows that assessing the role of competitive advantage in the relationship between financial management practices and loan performance is imperative. Also, many of the extant studies have measured loan performance quantitatively, yet process factors or antecedents which are inherently qualitative in nature can better explain variances in loan performance concept. Thus this study calls for the refinement of loan performance concept and accounting for endogeneity.

Keywords Competitive advantage, Social impact, Uganda, Financial management practices, Loan performance, MFIs

Paper type Research paper

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Introduction

In this paper we report the results of studying the impact of financial management practices and competitive advantage on loan performance of microfinance institutions (MFIs). In developing countries, MFIs serve as better avenues for providing microfinance services to the disadvantaged members of society as well as to small- and medium-enterprises, than the well-established financial institutions (Parikh *et al.*, 2006; Kumar and Golait, 2009; Collier *et al.*, 2011; Moti *et al.*, 2012) and have been celebrated for their social impact on poverty eradication (Schicks, 2010). In continuing with this service, Biekpe and Kiweu (2009) find that portfolio quality of MFIs is critical and with issues of over-indebtedness emerging among microfinance customers, MFIs achievements are at risk (Schicks, 2010). As early as 2005, Kalyango (2005) noted poor loan performance of MFIs in Uganda. More evidence suggests that loan performance of Ugandan MFIs has continued to deteriorate despite the increased effort to boost the firms' competitive advantage through improved investment in competitive advantage assets (Adongo, 2012). Back in the 1990s, a number of researchers had suggested a framework, based on the dual concepts of outreach and sustainability, for the assessment of MFIs performance (Kereta, 2007).

Frequently, however, loan performance (Keiding and Hansen, 2004; De Crombrugghe *et al.*, 2008), outreach and efficiency (Chua and Llanto, 1996; Hermes and Lensink, 2011) have featured as performance indicators of MFIs. Chua and Llanto (1996) used two parameters to measure outreach. That is "average loan size" and "total loans released to loans outstanding." Hermes and Lensink (2011) also considered average loan balance per borrowers and percentage of female borrowers to assess outreach performance of MFIs. Some authors concentrate on financial efficiency and productivity other than outreach (Ejigu, 2009). Ejigu (2009) for instance measured depth and breadth of outreach by average loan size. In addition, loan performance has also been used as a surrogate for financial sustainability. For example, a study by the Consultative Group to Assist the Poor pointed out in 1996 that loan repayment (measured by default rate) could be used as an indicator for financial sustainability of MFIs, because low default rate would sustain its lending business (Roy and Goswami, 2013). All these suggest that loan performance has already attracted a growing interest by a number of commentators and researchers. It seems this growing interest is because of its ability to represent MFIs performance from the two angles: outreach and sustainability.

While there are many measures of loan performance of MFIs, for purposes of this study we define loan performance as the ratio of non-performing advances (loans) to the total portfolio and this is operationalized in this study by cost efficiency, propensity/proclivity for loan repayment and loan cost. Thus we define loan performance from the antecedents' point of view. These proxies are plausible because, for instance, the basic theoretical prediction that cost efficiency is better observed relative to loan performance depends on the assumption that lending costs are efficient (Berger and Udell, 2004). Moreover, these antecedents partly account for endogeneity of loan performance, a methodological concern frequently cited in literature (see Nkundabanyanga *et al.*, 2014; Bascle, 2008).

Well, while literature is replete with the measurement of MFI performance, less empirical studies can be noted that have explained loan performance. This lack of knowledge on efficient predictors of loan performance restrains our understanding of why loan performance (cost efficiency, propensity/proclivity for loan repayment and loan cost) remains a critical concern. Moreover, available literature suggests that MFIs lending in Uganda reduced to lower levels for the period 2011/2012 as compared 2010/2011 (World Bank, 2012; Bank of Uganda, 2012). From this literature, it can be argued that reduced MFIs lending can be due to cost inefficiency, the high propensity for loan default on the part of borrowers and high loan cost which may have caused existing customers to default, thus leaving MFIs with less to lend. Similarly, data from MFIs in the East African region show

that the average rate of annual growth of private sector credit was lower in June 2012 at a regional average of 22.4 percent compared to 28.6 percent in June 2011. Moreover, although domestic macroeconomic conditions weakened during the first half of 2011/2012, with higher inflation, exchange rate depreciation and lower aggregate demand affecting loan performance, it is reported that the fall in asset growth was mainly due to a decline in the loan growth rate from 43.6 percent in 2010/2011 and to 10.8 percent in 2011/2012. Thus loan performance challenges exist particularly in MFIs where default risk is highest (Mutesasira, 2012; Noor and Ahmad, 2012).

This study shows that financial management practices and competitive advantage are important predictors of loan performance of MFIs. Again, literature is replete with definitions of financial management practices (see Hunjra *et al.*, 2011; Gitman, 2010; Kautz, 2007; Moti *et al.*, 2012). In this paper we follow closely the definitions and understanding of this stream of literature and oprationalize financial management practices as budgeting, risk management and working capital management. Hunjra *et al.* (2011), for instance, describe financial management practices as financial planning and control, financial analysis, risk management, accounting information, management accounting (pricing and costing), capital budgeting and working capital management. From this description, we can predict that proper financial management of MFIs is positively related to loan performance. This argument finds credence since failure to monitor portfolio quality closely (Mulumba, 2011; Adongo, 2012) and take action when necessary is thought to account for the poor loan performance of microfinance institutions (Kalyango, 2005). Indeed one of the critical factors of MFIs success is availability of appropriate and experienced management team (Biekpe and Kiweu, 2009). This experienced management should be appropriate in so far as it is able to create a competitive advantage through proper financial management practices such as budgeting. Thus we define financial management practices as the ability of management to manage credit risk, carry out proper budgeting and manage working capital of the MFI. We also define competitive advantage as the ability of an MFI to differentiate itself and be a cost leader than the average competition MFI. Experienced managers can for instance notice the importance of unique lending terms to loan performance.

Thus, once credit risk remains prominent manifested by cost inefficiency, propensity/proclivity for loan default and high loan cost, this can be a pointer to poor financial management. Moreover, some theoretical assertions confirm that competitive advantage is associated with better loan performance (Barney and Hansen, 1994), but empirical evidence in the existing literature is limited (Barney, 2001). Thus there are reasonable theoretical underpinnings relating financial management practices and competitive advantage to the loan performance of MFIs, yet limited empirical evidence supports the connection. Thus, this paper seeks to provide a modest bridge to this knowledge gap.

The results reported in this paper are particularly significant as they are expected to add on the body of existing knowledge on financial management practices, competitive advantage and loan performance of MFIs. Ugandan MFIs and possibly other developing nations facing MFI loan performance challenges, can improve loan performance whilst still enabling MFIs to achieve financial and operational sustainability. These include government incentives for MFIs to increase their outreach beyond urban limits, capacity building of MFIs to foster suitable products, policies and procedures, and the publication of interest rates and product fees charged by MFIs so as to motivate competition and efficiency in the sector.

The rest of the paper proceeds as follows: the next section is literature review where we examine the concepts of financial management practices, competitive advantage and loan performance. In this section, we then develop hypotheses using extant literature. The third section is dubbed methodology. This section reveals the way the study is designed, variables'

measurement and the way the data is managed. The results obtained using this methodology then follow in another section called results and discussion. This penultimate section discusses the results in light of literature and theory. The final section is conclusion, implications and future directions of research. This study generates policy and academic implications and these are to be found in this section.

Literature review

Financial management practices

Gitman (2010) defines financial management as the area of business management, devoted to a judicious use of capital and a careful selection of sources of capital, in order to enable an organization to move in the direction of reaching its goals. By extension, Hunjra *et al.* (2011) identify financial management practices as financial planning and control, financial analysis, risk management, accounting information, management accounting (pricing and costing), capital budgeting and working capital management. Kautz (2007) views financial management practices as the process of managing the financial resources, including budgeting, accounting and financial reporting and risk management. Moti *et al.* (2012) reveal that a key requirement for effective credit management is the ability to intelligently and efficiently manage customer credit lines. In order to minimize exposure to bad debt, over-reserving and bankruptcies, companies must have greater insight into customer financial strength, credit score history and changing payment patterns. The ability to penetrate new markets and customers hinges on the ability to quickly and easily make well-informed credit decisions and set appropriate lines of credit. A synthesis of the available literature suggests that we define financial management practices as the ability of management to manage credit risk, budget and manage working capital of the MFI.

Competitive advantage

Literature has extensively identified the sources or determinants of competitive advantage but it does not provide any clear definition of competitive advantage (Sigalas *et al.*, 2013). Sigalas and Pekka Economou (2013) find multiple meanings of competitive advantage and categorize them into two streams: the first stream defining competitive advantage in terms of performance and the second in terms of its sources or determinants. Hence, even though statements about competitive advantage abound in literature, its conceptually precise definition is still elusive and has thus remained tautological in propositions that employ it. Well, Porter and Millar (1985) identify three generic strategies that offer fundamentally different routes to competitive advantage, combining a choice about the type of competitive advantage sought with the scope of the strategic target in which competitive advantage is to be achieved: differentiation and cost leadership strategies aim at competitive advantage in a broad range of industry segments, while focus strategies target cost advantage (cost focus) or differentiation (differentiation focus) in a narrow segment. Cost leadership aims at offering products or services at the lowest cost in the industry and differentiation aims to provide a variety of products, services or features to clients that competitors are not yet offering or are unable to offer. This gives a direct advantage to the firm which is capable of providing the unique product or service that none of its competitors is capable of offering. Because MFIs serve a broad range of poor customers we define competitive advantage as the ability of an MFI to differentiate itself and be a cost leader than the average competition MFI consistent with the taxonomy provided by Porter and Millar (1985). This definition is closer to the stipulative definition of competitive advantage introduced by Peteraf and Barney (2003) and Newbert (2008). According to Peteraf and Barney (2003), "An enterprise has a competitive advantage if it is able to create more economic value than the marginal (breakeven) competitor in its product market" (p. 314). Sigalas *et al.* (2013) coin this stipulative definition as "[…] the capability of a firm to create more economic value than the

least efficient competitions" (p. 324). Newbert's (2008) stipulative definition which is based on Barney's (1991) statements regarding competitive advantage is "the degree to which a firm has exploited opportunities, neutralized threats and reduced costs" (p. 752). This definition is paraphrased and enhanced in Sigalas *et al.* (2013) as "[…] the above industry average manifested exploitation of market opportunities, neutralization of competitive threats and reduction of costs" (p. 324).

Loan performance

The concept of loan performance can refer to the ratio of non-performing advances (loans) to the total portfolio. According to Mugoya (2012), a non-performing loan is that part of loan whereby interest and principal installment are still outstanding for at least six months after they are due. To Bank of Uganda, a ratio of 10 percent is accepted to be non-performing and the higher the ratio, the worse the loan performance. However, performance of loan portfolio may be measured using proxies for loan interest rates, cost efficiency and default rates. A high proportion of loans to total assets and rapid growth of the loan portfolio are potential early warning signals of loan quality problems which indicate potential failure (Blasko and Sinkey, 2006). As noted by Berkovec *et al.* (1994) simple comparisons of average loan performance between two groups of borrowers can be misleading if the groups do not exhibit similar distributions of expected returns. If, for example, the proportion of highly qualified non-minority borrowers is substantially higher than that of highly qualified minority borrowers, default rates of non-minority borrowers – observed without controlling for other determinants of credit quality would be lower than those associated with minority borrowers. This, however, simply reflects the differences in average creditworthiness for the two groups of borrowers and would not necessarily indicate differential underwriting standards (Ferguson and Peters, 1995; Ferguson and Peters, 1997). Simple bivariate correlations suggest that default probabilities differ significantly by loan, borrower and location characteristics. For example, higher default rates appear to be related with higher loan-to-value ratios, lower incomes and smaller loan amounts. Another stipulation is that the basic theoretical prediction that cost efficiency is better observed relative to loan performance depends on the assumption that lending costs are efficient (Berger and Udell, 2004). Based on this we define loan performance as the ratio of non-performing advances (loans) to the total portfolio and this is operationalized in this study by cost efficiency, propensity/proclivity for loan repayment and loan cost.

Financial management practices and loan performance

Establishing the effect of financial management practices on loan performance is instrumental to understanding the channels through which internal practices affect the lending process. Rahman (2010) and Rehman and Mahmood (2010) suggest that optimal application and commitment toward financial management practices result in an increased company's performance. This suggests that the financially well-managed MFIs are operationally efficient. The MFIs that are considered operationally efficient signify better loan performance; most of the loans default arises from poor management procedures. Thus better loan performance serves as a positive signal for increasing the volume of credit availability to various sectors of the economy (Acquah and Addo, 2011; Heiat and Sah, 2013). In examining loan performance in India, Deininger and Liu (2009) find that loan monitoring increase repayment performance. Other studies (e.g. Tuyon and Alfonso, 2009) have reported the positive effects of using selected financial management practices on loan performance. For example, in assessing credit risk, both pre-loan and post-loan, has been identified by Casey *et al.* (2009) as a critical step in reducing both loan delinquencies and loan defaults. According to Stanton (2001), with advances in technology, lending institutions are able to predict problems with greater accuracy by building more robust credit subsidy models. In banks, the bank's management

are responsible for results and have to find ways to "reduce the probability and cost of error" (Argyris, 1977, p. 115) in loan assessments. One approach Nilsson and Öhman (2012) suggest is to devise control and support systems that indicate when a loan application deviates from desired tolerances. Even, loan offers engaged in transactional lending use quantitative measures when assessing loan risk. For example, a typical transactional lending technology is credit scoring and guides loan officers on decisions on whether to approve and extend credit, how much credit to extend and when action is needed against clients with repayment problems (Rosenberg and Gleit, 1994). Indeed, studies show that financial management practices have a significant effect on the loan performance of MFIs, and these practices have included financial planning and control, financial analysis, risk management, accounting information, management accounting (pricing and costing), capital budgeting and working capital management (e.g. Nguyen, 2001; Agyei-Mensah, 2011; Maseko and Manyani, 2011). In the Pakistani corporate sector, Butt *et al.* (2010) find a positive and significant relationship between financial management practices and organization performance. In small businesses weak financial management – particularly poor working capital management is one of the causes of failure (Berry *et al.*, 2002; Lazaridis and Tryfonidis, 2006). Therefore an MFI that follows sound financial management practices such as proper budgeting, risk management and working capital management would have better loan performance. A rejection of this hypothesis would mean that loan performance in a given MFI is poor. As such, the following hypothesis will be stated:

H1. There is a positive relationship between financial management practices and loan performance.

Financial management practices and competitive advantage

Financial management practices promote a more strategic consideration of risk and its effective implementation can create a long-term competitive advantage (Nocco and Stulz, 2006). Luhmann (2005) argues that risk unlike danger and uncertainty, implies a realm for decision making about the future. Therefore, risk management arising from financial management practice creates an expectation of decidability and management of uncertainty and opportunity (Power, 2007). This opportunity can be utilized with exploitation of more market opportunities than competitors (Sigalas *et al.*, 2013) through proper planning quantified in a proper budget and its execution by management. Indeed, it is possible to conjecture that certain financial management practices provide strategies that can influence a large number of customers to have a lasting preference for an MFI's products. Thompson *et al.* (2009) suggest that the adoption of financial management techniques may provide an organization with a sustainable competitive advantage over its rivals. According to Porter (1985), there are two principal ways in which a competitive advantage can be achieved: cost advantage (having a lower cost base than the competition) and differentiation (creating additional value for customers). Financial risk management, for example, can be used to achieve either objective and budgeting can influence cost advantage of firm. Differentiation can be permitted by providing the ability to deliver an enhanced customer experience through a more stable pricing environment, or an ability to offer more beneficial business terms (e.g. regular introduction of new loan products or unique services or lending terms). In Banks, Koch and MacDonald (2006) have outlined important bank management issues that may enhance competitiveness to include managing the cost of funds. We argue that these issues could also be important for an MFI management. In addition, the budgeting function can provide strategies that enhance the management of differentiation and costs that lead to the creation of a competitive advantage. Accordingly, the following hypothesis will be stated:

H2. There is a significant relationship between financial management practices and competitive advantage.

Competitive advantage and loan performance

MFIs may compete with one another in the market for loans by offering diverse loan contracts to a population of borrowers (Navajas *et al.*, 2003). This suggests that there is a competitive advantage to be gained from offering innovative loan contracts where the focus is on the connection between the MFI and its customers through loan customization. Navajas *et al.* (2003) studied competition in the Bolivian microfinance market by focusing on two major MFIs – Casa Los Andes and BancoSol – which collectively had about 40 percent market share. The results suggest that the outcome of competition is ambiguous since competition leads to innovation thereby expanding outreach, but reduces the ability of lenders to cross-subsidize less profitable smaller loans. In a similar study, Vogelgesang (2003) examines how competition affects loan repayment performance for Caja Los Andes. The analysis indicates competition is related with multiple loan taking and higher levels of borrower indebtedness. It can be argued that through proper differentiation and cost leadership by an MFI, borrowers' switching costs become high. Borrowers can be locked onto an MFI if that MFI provides value to customers through unique terms of lending and loan customization. By striving for efficient operations by an MFI and conducting a cost-benefit analysis for loans, multiple loans taking by borrowers is diminished. Thus a combination of differentiation and cost leadership can then be predicted to improve cost efficiency of the MFI, increase propensity/proclivity for loan repayment and keep loan cost within acceptable levels; suggesting better loan performance. The foregoing discourse suggests that:

H3. There is a positive relationship between competitive advantage and loan performance.

Methodology

Research design and study sample

We employ a cross-sectional research design in this study covering a population of 84 legally registered MFIs in Uganda (Bank of Uganda, 2012 report) and use a sample size of 70 MFIs in Kampala consistent with Krejcie and Morgan (1970) sample size selection guidelines. We randomly select the firms; procedure involves generating random numbers to MFI from the first to last until 70 MFIs are represented. Our units of enquiry are heads of credit section, loans officers and risk managers. A list of these officers is obtained from the human resource officers where random numbers were assigned to each officer. According to Field's (2009) guidelines, the study covers a minimum of three officers per MFI. We thus enlist 210 respondents from 70 registered MFIs under Tier 4 of MFIs. Overall, the complete and usable responses are from 185 respondents (or about 86 percent). Most of the respondents are female (54.1 percent), however, this does not affect the results since it is not gender sensitive. The education level of the respondents is such that most of them (67.0 percent) have at least a bachelor's degree, followed by (23.2 percent) with a diploma. This implies that the respondents are reasonably educated to comprehend the questions and hence provide relevant responses which in turn render the information provided in the study relevant. Concerning the position of the respondents, most of them (38.4 percent) are loan officers, followed by the head of credit (34.6 percent). This implies that most of them are better positioned to be well acquainted with the MFIs and hence in position to provide informed responses to the study questions. Regarding the experience of the respondents in the MFIs, most of them (63.8 percent), have spent two to five years in the MFIs, this duration is long enough for the respondents to be well conversant with the business in the MFIs and hence in position to provide informed responses to the study questions. Regarding the legal status of the MFIs, the majority of the respondents (42.7 percent) are companies limited by guarantee, followed by Savings and Credit Cooperatives which comprise of 22.7 percent. The duration of operation of the MFIs is such that majority (54.6 percent) have been in operation for 11-15 years, which is long enough for the organization to be in position to avail appropriate information for the study.

Questionnaire and variables' measurement

Questionnaire. Data are obtained from the selected MFIs using a questionnaire. The questionnaire has two sections: sections A and B. The respondents are requested to indicate the extent of their agreement with a series of questions on a five-point Likert scale (Raaijmakers *et al.*, 2000). Validity of the questionnaire is established using content validity index to determine the relevance of the questions in measuring the variables. The reliability of the questionnaire is tested using Cronbach's α coefficient as recommended by Nunnally (1978). The computed Cronbach's α coefficient results above 0.6 are accepted. Cronbach's α test returns financial management practices ($\alpha = 0.718$), competitive advantage ($\alpha = 0.816$) and loan performance ($\alpha = 0.742$). As the Cronbach's α coefficients for all the items are above 0.70, it concludes that the items elicited internal consistency on multiple administrations.

Variables' measurement. We operationalize financial management practices by measures as risk management, budgeting and working capital management (Hunjra *et al.*, 2011; Kautz, 2007). Competitive advantage is measured as differentiation and cost leadership (Porter, 1985) reinforced by Sigalas *et al.* (2013), Newbert (2008) and Peteraf and Barney (2003). The loan performance has constructs which mainly summarize loan performance indicators that are measured in three ways – cost efficiency, propensity/proclivity for loan repayment and loan cost consistent with Berger and Udell (2005). Using SPSS the factor structures and items resulting from principle component analysis with varimax rotation are presented in tables that immediately follow. More than one component is derived from each rotated component matrix which is essential in establishing a convergent validity. Essentially, results in Table I reveal three factors that capture financial management practices: budgeting, risk management and working capital management. The factor structure of the competitive advantage of the MFIs (see Table II) is differentiation and cost leadership. The factor structure of the loan performance of the MFIs (see Table III) is cost efficiency of providing the loans, customers' propensity for loan repayment default and loan cost.

In terms of testing for normality to establish whether the regression model would provide reliable coefficients and standard errors, the results in Table IV show that all the

Item/factor	Budgeting	Risk management	Working capital management
Our institution carries out periodical reviews	0.814		
We usually compare the actual results with the planned	0.628		
We usually set targets for all staff	0.537		
In this institution debtors' credit period is reviewed	0.513		
We're always in touch with our customers about their businesses		0.725	
We always assess our customers before giving them a credit		0.719	
We constantly update our customer's record		0.661	
Proper loan assessment is done before approval		0.551	
We usually acquire enough knowledge before assessing loan applicants		0.543	
We usually have alternative cash sources if we forecast a deficit			0.678
There is enough liquidity to meet our obligation to disburse loans to our borrowers			0.592
The credit manager establishes all credit limits			0.571
Eigenvalue	5.553	2.787	2.635
Variance (%)	22.21	11.15	10.54
Cummulative variance (%)	22.21	33.36	43.9

Table I.
Factor structure of financial management practices

Item/Factor	Differentiation	Cost leadership
We provide value to customers through unique terms of our lending services	0.802	
Our focus is always on the relationship between us and our customers through loan customization	0.719	
Our services are perceived industry-wide as being unique	0.645	
We regularly introduce new products and services	0.694	
We have been able to be creative in finding new ways to differentiate our services	0.673	
Our staffs have unique combination of skills because of exposure	0.599	
We ensure cost-benefit analysis for loans		0.783
In this institution, we always strive for efficiencies in our operations		0.765
Our strong capital base has enabled us to charge lower fees		0.736
We charge the lowest fees on our borrowers compared to other industry players		0.654
Eigenvalue	2.324	2.32
Variance (%)	13.67	13.64
Cummulative variance (%)	13.67	27.31

Table II.
Factor structure of competitive advantage

Item	Component Cost efficiency	Propensity for repayment	Loan cost
Our institutional cost of delivering loan and other services is low	0.782		
Our MFI controls its administrative costs	0.734		
We use credit policies to approve the clients	0.714		
Our MFI is very labor intensive	0.711		
The percentage of loan income is higher than loan operating expense	0.691		
Our rates of efficiency are much higher than those of our bench marks	0.670		
Our delinquency rates are high (*R*)	0.551		
Our charges are lower compared to the industry bench marks		0.801	
We receive fewer complaints about our interest rates		0.733	
As a result of our charges, we have been able to receive more loan applicants		0.667	
We have healthy repayment rates		0.643	
Our borrowers pay back within speculated time		0.614	
Our interest rates are flexible		0.506	
The cost per client is usually very low			0.629
The interest rate that is in effect at the time the loan is made remains in effect until the loan is paid in full			0.609
Our charges depend on the loan amount applied for			0.588
Eigenvalue	28.7	15.3	11.8
Variance (%)	23.1	19.3	13.3
Cumulative (%)	23.1	42.4	55.7

Note: Extraction method: principal component analysis; rotation method: varimax with Kaiser Normalization

Table III.
Factor structure for loan performance

variables are normally distributed. The p values for the Kolmogorov-Smirnov statistic ($df > 50$) for all the variables is over 5 percent which is a criterion for failure to reject the hypothesis that the variable (s) is/are normally distributed.

Results and discussion

We generate means and standard deviations to summarize the observed data. For simplicity we report the means of global variables. We report the means because according to Field

(2009), means represent a summary of the data while standard deviations show how well the means represent the data. The main purpose is to establish whether the statistical means are a good fit of the observed data (Field, 2009). The means and standard deviations of all the items are summarized in Table V. All mean scores of the items range from 3.57 to 4.15 with the standard deviations from 0.519 to 0.612. Because of small standard deviations compared to mean values, it is clear that the data points are close to the means and hence calculated means highly represented the observed data (Field, 2009). To establish the relationship between the pair of the variables under study, correlation analysis is conducted. Table VI shows the results.

Correlation findings in Table VI reveal a significant positive relationship between the financial management practices of the MFIs and their loan performance and this suggests that robust financial management practices are associated with better loan performance of MFIs. On the basis of this finding, our *H1* is substantiated. Correlation results further reveal a significant positive relationship between the competitive advantage of the MFIs and their loan performance and this also substantiates our *H2*. The results also show a significant positive relationship between competitive advantage and loan performance which provides support for our *H3*.

However, the problem with univariate analyses is that they do not control for other factors, thus making the interpretation of the results difficult. We, therefore, extend the analysis to a multivariate setting. We first examine the correlations among our independent variables to

	Kolmogorov-Smirnov[a]		
Variable	Statistic	df	Sig.
Financial management practices	0.082	68	0.200*
Competitive advantage	0.058	68	0.200*
Loan performance	0.101	68	0.083

Notes: [a]Lilliefors significance correction. *This is a lower bound of the true significance

Table IV. Tests of normality

	n	Min	Max	Mean		SD	Variance
Variable	Statistic	Statistic	Statistic	Statistic	SE	Statistic	Statistic
Loan performance	185	2.39	5.00	3.5721	0.03820	0.51952	0.270
Financial management practices	185	2.58	5.00	4.1486	0.04480	0.60939	0.371
Competitive advantage	185	2.30	5.00	3.8254	0.04497	0.61162	0.374

Table V. Descriptive statistics

Variable ($n = 68$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Financial management practices (1)	1							
Risk management (2)	0.702**	1						
Working capital (3)	0.768**	0.487**	1					
Budgeting (4)	0.797**	0.295*	0.336**	1				
Competitive advantage (5)	0.691**	0.404**	0.491**	0.629**	1			
Cost leadership (6)	0.625**	0.390**	0.421**	0.571**	0.910**	1		
Differentiation (7)	0.620**	0.335**	0.464**	0.562**	0.891**	0.622**	1	
Loan performance (8)	0.491**	0.194	0.298*	0.541**	0.670**	0.689**	0.510**	1

Note: *,**Correlation is significant at the 0.05, 0.01 level (two tailed), respectively

Table VI. Correlation analysis

determine whether multicollinearity problems exist. Field (2009) suggests that multicollinearity becomes a problem only when the correlations exceed 0.80 or 0.90. As Table VI shows, none of the correlations between independent variables is close to these threshold values. Nevertheless, according to Myers (1990), a certain degree of multicollinearity can still exist even when none of the correlation coefficients is very large. Therefore, in Table VII we also examine the variance inflation factors (VIFs) as a further check for multicollinearity. The VIFs are well below the threshold value of 10 suggested by Field (2009) indicating that multicollinearity does not pose a problem to the regressions. In terms of the robustness of model, the $F = 26.618$ is significant at the 0.0001 level and it is unlikely that the F ratio this large would occur by chance. Thus the regression model is found to be robust implying that the independent variables are appropriate determinants of the MFIs' loan performance. The regression model as presented in Table VII shows that financial management practices and competitive advantage predict up to 43.3 percent on the variation in loan performance.

Competitive advantage has a significant effect on loan performance and financial management practices, is not. As financial management practices have a significant relationship with loan performance of MFIs, and so too is competitive advantage, this should lead us to examine the possible mediating effect of competitive advantage on the relationship between financial management practices and loan performance. We apply the normal theory approach developed by Sobel (1982) and Baron and Kenny (1986). Table VIII and Figure 1 show the results and suggest that the association of financial management practices of the MFIs on their loan performance is entirely through competitive advantage of the MFIs; a finding further supported by the Sobel test ($Z = 4.182$, $p < 0.01$).

Accessing financial services, especially credit, has played an increasingly important role in development economics theory and applications in the past few decades. Many households have gained access to microcredit. Nevertheless, many challenges remain to providing microcredit to the poor. One such challenge is loan performance. Available literature already suggests an existence of a relation between financial management practices and loan

	Unstandardized coefficients		Standardized coefficients			Collinearity statistics	
	B	SE	*β*	*t*	Sig.	Tolerance	VIF
(Constant)	1.203	0.381		3.155	0.002		
Financial management practices	0.054	0.129	0.053	0.419	0.676	0.522	1.914
Competitive advantage	0.565	0.114	0.633	4.975	0.000	0.522	1.914
Dependent variable: loan performance							
R^2	0.45		*F* statistic	26.618			
Adjusted R^2	0.433		Sig.	0.000			

Table VII.
Regression model of loan performance

Equation	Regression	Coeff.	SE	*t*	Sig.
I	b(YX)	0.449	0.109	4.577	0.000
II	b(MX)	0.787	0.101	7.768	0.000
III	b(YM.X)	0.565	0.114	7.768	0.000
IV	b(YX.M)	0.054	0.129	0.419	0.676
	Sobel	4.1819	0.106		0.000

Table VIII.
Regressions for partial test of mediation

Notes: *Y*, loan performance; *X*, financial management practices; *M*, competitive advantage. Indirect effect = 0.054, direct effect = 0.395, total effect = 0.449

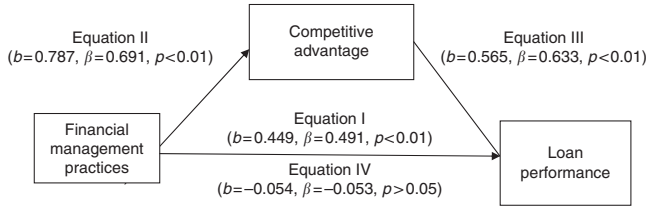
performance of MFIs. Yet, in order to understand the relationship between financial management practices and loan performance of MFIs, this study shows that assessing the role of competitive advantage in this relationship is critical. While Deininger and Liu (2009) find that financial management practices in form of loan monitoring increase repayment performance and others (e.g. Tuyon and Alfonso, 2009) report the positive effects of using selected financial management practices on loan performance, the results of this study show that financial management practices is not a significant predictor of loan performance of MFIs. A closer scrutiny of these studies indicates that most of them overlooked the issue of mediation. Yet, a relationship study that does not address the mediating mechanism ends up with facts but with incomplete understanding (Rosenberg, 1968) and that which fails to consider the possibility of a mediator effect in the data may miss more explanation for an outcome (Bennett, 2000). Thus the results of this study suggest that we can draw useful insights and have a meaningful interpretation of the results showing relationships between study variables by assessing the role of a third variable, in this case, competitive advantage. By assessing the role of competitive advantage in the relationship between financial management practices and loan performance of MFIs, it is insightful to note the association of financial management practices of the MFIs on their loan performance is entirely through competitive advantage of the MFIs.

The positive relationship between financial management practices and loan performance suggests that risk management, budgeting and working capital management of MFIs positively associate with cost efficiency, propensity for loan repayment and appropriate loan cost. As Acquah and Addo (2011) have urged most of the loans defaults are due to poor financial management procedures. Moreover, financial management practices and competitive advantage of MFIS are significantly positively associated. When risk management, budgeting and working capital management improves, an MFI will be highly differentiated and a cost leader. As with Thompson *et al.*'s (2009) study, our findings reveal that the adoption of financial management techniques may provide an MFI with a sustainable competitive advantage over its rivals. Our findings also support those of Koch and MacDonald (2006) on important bank management issues that may enhance competitiveness. According to Koch and MacDonald (2006) these management issues have included analysis of bank performance and establishment of profitability and risks, management of interest rate risks, management of cost of funds and management of credit given to customers. This study's results then suggest that once competitive advantage is elevated, better loan performance ensues. As such, cost advantages of the MFI and a differentiation focus have a significant relationship with loan performance.

Conclusion, implications and future directions of research

Conclusion

Financial management practices and competitive advantage are true drivers of loan performance of MFIs. These factors can drive an MFI in achieving cost efficiency, enlisting customer's high proclivity for loan repayment and obtaining low-cost clients for the MFI.



Source: Primary data

Figure 1.
Medigram of the test for mediation effect of competitive advantage on financial management practices and loan performance of MFIs

This study examines the relationship between financial management practices and loan performance of MFIs and finds that the two are significantly associated. However this relationship is fully mediated by competitive advantage of MFIs. According to this study, the outstanding factors for financial management practices are risk management, budgeting and working capital management. Therefore, financial management elements (risk management, budgeting and working capital management) and competitive advantage (cost advantage and differentiation) are significant predictors of loan performance in the MFI in Uganda operationalized in this study as cost efficiency, clients' propensity/proclivity for loan repayment and loan cost and defining loan performance from the antecedents' point of view. However, while the direct relationship between financial management practices and loan performance of MFIs without the mediation effect of competitive advantage was found to be significant, this relationship becomes insignificant when mediation of competitive advantage is allowed. This concludes that the entire effect does not only go through the main hypothesized predictor variable (financial management practices) but mostly also, through competitive advantage. Accordingly, the specific way by which a relationship occurs between financial management practices and loan performance of MFIs is insignificantly direct – competitive advantage significantly fully mediates the connection between financial management practices and loan performance of MFIs. Moreover, the results of this study provide the reason why the relationship between financial management practices and loan performance of MFIs exists. In particular, the significant mediation effects of competitive advantage explain how financial management practices translate into loan performance of MFIs. As such competitive advantage explains the relationship between financial management practices and loan performance of MFIs in Uganda.

Implications and future directions of research

The results of this study imply that a number of issues call for the attention of researchers, MFIs managers and practitioners and policy makers. On the academic front, examination of the role of a third variable in the relationship can enable meaningful conclusions. The results of this study demonstrate that the intervention of competitive advantage in the model influences change and is therefore effective; researchers are thus advised not to underplay its role in the loan performance of MFIs, especially when dealing with financial management practices' predictive potential of MFIs loan performance. Invoking the observation of Rosenberg (1968) and Friedrich (1982) that a relationship study that does not address the mediating mechanism ends with facts although with incomplete understanding supports this claim. For this reason, researchers are cautioned not to underestimate the intervention of a third variable in research if more explanation for an outcome is desired. In considering the results of this study an integrative framework for financial management practices is much needed as a starting point, followed by examining competitive advantage in MFIs whose mediating effect should formally be accounted for in the financial management practices – loan performance equation.

A notable policy implication is that since financial management practices has proven to be significantly and positively related to the loan performance of MFI, it is imperative for all those charged with the policy direction of those MFIs to give it the weight it deserves. Financial management skills gaps for existing managers within these MFIs need be identified and closed. In particular, budgeting, risk management and working capital management skills' set of MFI managers should be uplifted through, for example, training and/or hiring appropriately to strengthen the application of those practices. Moreover, this suggests that the effort to improve competitiveness among MFIs through differentiation and cost leadership must be in line with strengthening their financial management practices. The management of an MFI must apply sound financial management practices in order for the focal MFI to remain competitive in the industry. It can create a cost advantage

by ensuring cost-benefit analyses for all loans and striving for efficient operations thereby reducing on the cost of the loans. It can also enable differentiation, by providing the ability to deliver superior customer experience through more unique lending terms and loan customization, or an ability to offer other more advantageous business terms.

As with any study, there are a number of limitations with the present study. The questionnaire was self-administered and we did not undertake follow up interviews which would have informed us of the reasons why the respondents held certain views. Additionally, the present study was limited to the MFIs operating in Kampala, Uganda and it is possible that the results are only applicable to this sector in Uganda. More so, the present study is cross-sectional; it is possible that the views held by individuals may change over the years. This study also uses only two predictor variables explaining a diminutive variance of about 43 percent and it is possible that our model is miss-specified.

Drawing from the fact that financial management practices and competitive advantage explain about 43.3 percent of the variance in the loan performance of MFIs in Kampala region, it is important that more future studies are done to establish the other factors that explain 57 percent of the variance in loan performance of MFIs. Additional research that replicates these analyses in another context would be highly valuable for comparison across countries and financial institutions. Although there is plenty of literature on loan performance, financial management practices and competitive advantage, there is scarce literature on their effective conceptualization. This together with the imprecise definition of competitive advantage may have affected conceptualization of our study. Many of the extant studies for instance have measured loan performance quantitatively, yet process factors which are inherently qualitative in nature can better explain variances in loan performance concept. More research is therefore needed to better refine qualitative concepts used in this study.

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