Determinants of adoption of International Financial Reporting Standards in Ugandan micro finance institutions

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Determinants of adoption of International Financial Reporting Standards in Ugandan micro finance institutions

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Abstract

Purpose – The purpose of this paper is to report on the results of a study carried out to establish the contribution of board of directors' effectiveness, intellectual capital (IC) and managerial attitude to the adoption of International Financial Reporting Standards (IFRSs) in microfinance institutions (MFIs).

Design/methodology/approach – This study is cross-sectional and correlational. Data were collected through a questionnaire survey of 67 MFIs that are members of the Association of Microfinance Institutions of Uganda. The data were analyzed using statistical package for social sciences.

Findings – Both board of director's effectiveness and IC positively and significantly contribute to the adoption of IFRSs. Managerial attitude is positively and significantly associated with the adoption of IFRSs, but its explanatory power is subsumed in IC.

Originality/value – To the authors' knowledge, this is the first study to investigate the contribution of board of director's effectiveness, IC and managerial attitude to the adoption of IFRSs in MFIs using evidence from a developing African country like Uganda.

Keywords Adoption of IFRSs, Board of director's effectiveness, Intellectual capital, Managerial attitude, Microfinance institutions, Uganda

Paper type Research paper

1. Introduction

The purpose of this paper is to report on the results of a study carried out to investigate the contribution of board of directors' effectiveness, intellectual capital (IC) and managerial attitude to the adoption of International Financial Reporting Standards (IFRSs) using evidence from Uganda's microfinance institutions (MFIs). According to IFRS Website (2018), 166 jurisdictions have been profiled, with Africa having 38 jurisdictions. In Uganda, the Institute of Certified Public Accountants (ICPAU) adopted the use of IFRSs in 1998 and subsequently adopted the IFRSs for small and medium enterprises in 2010 (ICPAU, 2016). According to IFRS Foundation (2017), all listed entities, banks, insurance companies and publicly accountable entities are required to apply IFRSs and in Uganda, MFIs are listed by ICPAU as publicly accountable entities, and thus must apply full IFRSs in their financial reporting processes. Despite the adoption of IFRSs in Uganda, there is evidence that MFIs are not yet applying IFRSs in their financial reporting processes. According to World Bank (2014), compliance with IFRSs in Uganda is still low in many sectors, especially in entities registered under the Companies Act and the Cooperative Societies Act. Further, according to the World Bank (2014) report , a number of audit reports show that the financial statements of savings and credit cooperative societies (SACCOs) in Uganda did not disclose all the information as per the relevant IFRSs. Thus, questions continue to overflow about the exact mechanism through which MFIs can prepare financial statements that comply with IFRSs.

According to Phan *et al.* (2018), the willingness to adopt IFRSs is possible if the perceived benefits of IFRSs usage are made clear to the intended adopters and knowledge of IFRSs is critical to their adoption. The adoption of IFRSs is important to both developed and

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developing countries, since IFRSs bring about transparency by enhancing the international comparability and quality of financial information, strengthen accountability by reducing information gap between management and the resource providers and contribute to economic efficiency by helping investors to identify opportunities and risks across the world, and this lowers the cost of capital and also reduces international reporting costs (IFRS Website, 2018). To enjoy the benefits of adopting IFRSs, there is need for proper implementation of such standards in firms, especially MFIs. The adoption of IFRSs can be possible as a result of isomorphic pressures (Samaha and Khlif, 2016), the proportion of the population that is educated, the country's economic growth and the degree of external economic openness (Zeghal and Mhedhbi, 2006). Further, Nurunnabi (2017) found that the factors for implementation of IFRSs in developing countries range from auditors charging low audit fees, availability of qualified accountants, interest of managers of some firms in IFRSs, organizational culture, the influence of professional accountancy bodies and other regulators to family-based private sector. Whereas there are a number of studies on IFRSs adoption, to the researchers' knowledge, no study has investigated the contribution of board of directors' effectiveness, managerial attitude and IC to the adoption of IFRSs using evidence from developing African countries such as Uganda. According to the theory of *Diffusion of Innovation*, as proposed by Rogers (1995), heads of institutions, for example, the board of directors, are responsible for the adoption of an innovation. Rogers (2003) further note that there must be individuals to spearhead innovations and these individuals are also called change agents. Individuals may be the human resources and human resources may not alone work without the structural and relational capital. The attitude of the change agent is, thus, critical to the adoption of an innovation (Rogers, 2003).

Given that a number of studies call for further studies on the adoption of and compliance with IFRSs (see Samaha and Khlif, 2016; Alzeban, 2016; Joshi *et al.*, 2016; Uzma, 2016), we respond to such calls by investigating the contribution of board of directors effectiveness, IC and managerial attitude to the adoption of IFRSs in Uganda's MFIs. We enlist responses from 67 Association of Microfinance Institutions of Uganda (AMFIU) member MFIs using a questionnaire designed on a six-point Likert scale. The results suggest that board of directors' effectiveness and IC significantly contribute to the adoption of IFRSs. Although managerial attitude is significantly and positively associated with adoption of IFRSs, its explanatory power is subsumed in IC.

This study results add knowledge to the existing literature on adoption of IFRSs by providing an initial empirical evidence on the contribution of board of directors' effectiveness, IC and managerial attitude to the adoption of IFRSs in MFIs. The study is important to regulators, given that MFIs in Uganda are in the process of being regulated by the newly created Uganda Microfinance Regulatory Authority (UMRA). Thus, government must speed up the process of fully operationalizing UMRA. UMRA may initially start off by ensuring that MFIs have qualified employees with the necessary expertise and a full-fledged effective board of directors. Given that there have been a number of MFIs surprise collapses and clients of such MFIs have consistently been abandoned (Kyazze, 2010), it is important that UMRA encourages transparency through requiring MFIs to prepare reports that are IFRSs complaint.

The remainder of the paper is structured as follows. The next section is literature review and hypothesis development, which is followed by methodology. Section 4 is results, followed by discussion. The last section is summary and conclusion.

2. Literature review and hypothesis development

Study setting

Uganda is a landlocked country located in East Africa. Uganda got independence in I962 and it immediately faced a number of civil wars and political unrest. Given such situations, there has been no time to enact various laws to govern various sectors of the country.

Previously, Tier IV financial institutions, which include MFIs and SACCOs, were governed under the Companies Act of 1961, NGO (Amendment) Act of 2006, Cooperative societies Act of 1991 and Money lenders Act of 1952. In 2016, the Tier IV microfinance and money lenders act of 2016 was enacted into law and subsequently in 2017, the UMRA board was inaugurated. Uganda's financial institutions are categorized into Tiers. Tier I is comprised of commercial banks, II is comprised of credit institutions and III is comprised of microdeposit taking institutions (AMFIU Directory, 2017/2018). Financial institutions in Tier I and II are governed under the Financial Institutions Act of 2004, whereas Tier III financial institutions are governed under the MDI Act of 2003. Institutions under Tier I, II and III are regulated by Bank of Uganda. Given this interesting unique setting, it is a worthwhile endeavor to conduct such a study in MFIs that are unregulated (Tier IV) but operating under the mercy of their umbrella associations such as Association of Microfinance Institutions (AMFIU) and Uganda Cooperative Savings and Credit Union. The licensing of the unregulated MFIs is done by commercial officers under the Ministry of Trade, Industry and Cooperatives where in each district, there is an officer for licensing businesses including MFIs.

Board of directors' effectiveness and adoption of IFRSs

There are hardly any studies that have investigated directly the relationship between board of directors' effectiveness and adoption of IFRSs. Studies such as Bin-Ghanem and Ariff (2016) have investigated the relationship between board of directors' effectiveness and internet financial reporting using evidence from the gulf cooperation council countries and have found a significant association between board of director's effectiveness and internet financial reporting. Board of directors' effectiveness was understood by Bin-Ghanem and Ariff (2016) to mean board size, independence, meetings and board committees. Board size is positively associated with mandatory disclosure compliance (Alfraih, 2016). Also, Nasr and Ntim (2018) conducted a study on corporate governance mechanisms and accounting conservatism using evidence from Egypt and found that board independence is positively associated with accounting conservatism. Nasr and Ntim (2018) further document that board size and auditor type are negatively associated with accounting conservatism. However, in another study by Chithambo and Tauringana (2017), on corporate governance and greenhouse gas disclosure, regression results suggest that board size and proportion of non-executive directors are not significant predictors of greenhouse gas disclosure.

In their study, Hashim and Amrah (2016) found a negative association between board of directors' effectiveness and the cost of debt. Further, while studying accountability in the public healthcare systems using evidence from a developing country, Bakalikwira *et al.* (2017) found that governing boards were not significantly associated with accountability and in their conceptualization, governing boards were operationalized using board composition, structure and independence. In respect to Bakalikwira *et al.* (2017), board composition was significantly associated with accountability, whereas board structure and independence were not. This implies that while we talk about board size, it is apparent that we are mindful of what is constituted in that size; it is not a matter of having a size beyond average, but a well-constituted board. If the board size is above average and well constituted, then we are likely to achieve adoption of IFRSs. In another study on corporate governance and internal controls over financial reporting in Ugandan MFIs, Nalukenge *et al.* (2017) found that although board independence is not a significant predictor of internal controls over financial reporting, correlation results indicated a positive association between board independence and internal controls over financial reporting. Given the foregoing discussion, we hypothesize:

H1. Board of directors' effectiveness is related to the adoption of IFRSs.

Intellectual capital and adoption of IFRSs

Nkundabanyanga (2016) defined IC as an aggregate expression of intangible assets possessed by an organization. This implies that IC means assets possessed by the firm that are intangible and not quantified, thus excluded from firm's financial statements due to the challenge of attaching value to them. Bontis *et al.* (2000) views IC in terms of human capital, structural capital and customer capital. Rezaei and Mousavi (2015) defines human capital as availability of the skills, talents and knowhow of employees that are required to perform the everyday tasks that are needed for the firm's strategy. Clarke *et al.* (2011) and Bontis (2001) indicate that relational capital includes the relationships of an entity with third parties such as customers and suppliers. Chu *et al.* (2006) view structural capital as a general system and procedures for solving problems and innovation in terms of organizational and technological capital. Bontis *et al.* (2000) define structural capital to include all the non-human storehouses of knowledge in organizations, which include the data bases, organizational charts, process manuals, strategies, routines and anything whose value to the company is higher than its material value.

IC has been linked to financial reporting (Graaf, 2013; Darabi *et al.*, 2012), innovation generation and adoption (Dost *et al.*, 2016), firm performance (Tiwari and Vidyarthi, 2018; Nkundabanyanga, 2016; Kamukama, *et al.*, 2011) and competitive advantage (Kamukama and Tumwine, 2017). Graaf (2013) carried out a study on coloring the numbers – on the role of IC in financial reporting – and found that IC is highly dependent on financial indicators and can therefore not be treated as the opposite of financial capital. Also, Darabi *et al.* (2012) examined the impact of IC on financial reporting quality and noted a significant association between IC and financial reporting quality. Dost *et al.* (2016) found that there is a positive impact of IC elements of human capital, relational capital and organizational capital on innovation generation and adoption. Further, Kamukama and Tumwine (2017) found IC elements of human, structural and relational capital to be positively and significantly associated with competitive advantage using evidence from Uganda's microfinance industry. In the context of this study, IC can be believed to influence the adoption of IFRSs. In his study, Nkundabanyanga (2016) found that IC significantly contributes to firm performance. Given that previous studies have found positive associations of IC with financial reporting, innovation generation and adoption as well as firm performance, it is likely that IC will predict adoption of IFRSs among MFIs. It can, thus, be hypothesized:

H2. There is a positive relationship between IC and adoption of IFRSs.

Managerial attitude and adoption of IFRSs

de Villiers *et al.* (2017) identifies managerial attitude as one of the determinants of integrated reporting adoption. Managerial attitude is defined by Bhattacharyya (2014) in terms of pragmatic attitude and moral propriety while Suchman (1995) in his study of managing legitimacy defined pragmatic attitude, cognitive legitimacy and moral propriety. Suchman (1995) argued that cognitive legitimacy is created when an organization pursues goals that society deems to be proper and desirable. In this study, if the organisation sees that society deems the preparation of financial statements that are IFRSs compliant to be proper and desirable, then such financial statements will be prepared. Suchman (1995) further explains pragmatic attitude using terms like pragmatic legitimacy, which means that an organization will continue to do what it feels is the best. Managers will continue to pass those decisions that favor them and will therefore have an attitude of doing what they perceive to be the best according to their interests. In this context, if managers perceive the adoption of IFRSs as the best practice, they will pass those decisions that permit their adoption. For moral propriety, Suchman (1995) posits that managers of organizations will pass those decisions that favor the many, implying that if society and regulators demand financial statements that are IFRSs compliant, manager's decisions may favor the adoption of IFRSs. To and Ngai (2007) noted that managerial attitudes play an important role in facilitating the championship of innovation adoption. Leonard-Barton and Deschamps (1988) also argued that managerial influence is critical in adoption of new technology among subordinates, but they quickly added that some subordinates may not be affected by managerial influences. Further, Bananuka *et al.* (2018) found that managerial attitude is important in the adoption of internet financial reporting in Uganda's financial services firms.

In his comparative study on India and Australia, in terms of managerial attitudes toward sustainability reporting, Bhattacharyya (2014) found that managers decisions about sustainability reporting were positive, implying that managers passed decisions that supported sustainability reporting. Further, Singh *et al.* (2010) found that managerial attitude is positively associated with localizing local content on a company's website. In the adoption studies, managerial attitude has been found to be the foundation for adoption of a given innovation or behavior. Whereas there is a general definition of managerial attitude, in this study, managerial attitude has been understood as the attitude of people in responsible position in an organization, for example, members of management. Therefore, in the adoption of an innovation or behavior, attitude is a critical determinant, for example, Kaawaase and Nalukwago found that attitude is critical in the adoption of Islamic banking in Uganda. Further, Cavane (2016) found that farmer's attitude is important in the adoption of improved maize varieties and chemical fertilisers in Mozambique. In line with the above findings, attitudes of people are critical in the adoption of an innovation or practice. In the adoption of IFRSs literature, to the researchers' knowledge, no study has tested the influence of managerial attitude in the adoption of IFRSs. However, given that managerial attitude has been found critical in the adoption of new accounting developments like integrated reporting, and also in other fields like information technology adoption and agricultural initiatives, it can be expected that managerial attitude is significantly associated with the adoption of IFRSs. From the foregoing discussion, it can be hypothesized:

H3. Managerial attitude is positively associated with adoption of IFRSs.

3. Methodology

Design, population and sample

This study utilizes a cross-sectional and correlational research design. The study population is 85 AMFIU member MFIs (AMFIU Directory, 2017/2018). Given the small population, all MFIs were studied. Of the 85 AMFIU member MFIs, usable questionnaires were received from 67 MFIs, representing a response of rate of 79 percent. The high response rate was due to the adequate time provided to the respondents to fill the questionnaires. Data collection started in March and ended in June, 2018 given that the AMFIU member MFIs are spread throughout the country – Uganda. We enlisted responses from either the chief finance officer (CFO) or manager of the MFI. We chose the CFO or manager on condition that he or she was knowledgeable in IFRSs and operations of the Board. Of the 67 usable questionnaires received from respondents, 43 questionnaires were received from male respondents, whereas 24 were received from female respondents. Majority of the respondents were aged below 30 years (37 respondents), implying that MFIs were largely managed by the youth. 64 respondents had a work experience of 10 years and below, and majority of these had CPA (Certified Public Accountants) qualifications. 50 respondents had a bachelor's degree and only one respondent had a PhD degree (Table I).

The questionnaire and variables measurement

We utilized a six-point Likert scale questionnaire ranging from completely disagree to completely agree with closed-ended questions. We used a questionnaire, because, first, the data supplied in it did not pass through any ones hand other than the data gatherers, thus retaining the confidentiality of the information. Second, the questionnaire is also appropriate for data collection from firms in multiple locations and for this study, data were collected from MFIs spread across the entire country – Uganda. Third, when using data that are presented as part of a report, one

Background information	Frequency	Percentage
Gender		
Male	43	64
Female	24	36
Total	67	100
Age of the respondent		
Less than 30 years	37	55
30–39 years	30	45
40 years and above	0	0
Total	67	100
Experience		
Less than 5 years	32	48
5–10 years	32	48
10–15 years	3	4
Total	67	100
Professional qualification		
CPA	41	61
ACCA	6	9
Others	20	30
Total	67	100
Education		
Diploma	14	20
Bachelor's degree	50	74
Master's degree	1	2
PhD	1	2
Others	1	2
Total	67	100

Source: Primary data

Table I.
Respondents' profile

also needs to be aware of the purpose of that report and its impact on the way the data are presented. This is especially so for internal organizational documents and external documents such as published company reports and newspaper reports. Secondary sources that appear relevant at first may not, on closer examination, seem appropriate to certain research question(s) or objectives. It is therefore important to evaluate the suitability of secondary data sources for a given research. Fourth, a questionnaire is best suited for descriptive and explanatory research (Saunders *et al.*, 2007). Finally and most importantly, the information provision culture in Uganda is far from desirable (Nkundabanyanga, 2016) and as such, it is difficult to access financial statements of MFIs in Uganda. MFIs in Uganda have no law that requires them to publish their financial statements in any media or online and there is no central repository for financial statements of MFIs that is publicly accessible. In this study, we thus relied on responses obtained through a questionnaire survey. Studies that have employed questionnaire surveys rather than financial statements are evident in the adoption of IFRSs studies, for example, Phan *et al.* (2018), Alzeban (2016), Phan *et al.* (2014), Phan and Mascitelli (2014) and Josh *et al.* (2016). As we constructed the questionnaire, a careful review of literature was made. A review of literature on board of directors' effectiveness, IC, managerial attitude and adoption of IFRSs was done.

The dependent variable for this study is adoption of IFRSs, which is operationalized in terms of knowledge level of IFRSs and perceived benefits of preparing financial statements that are IFRSs compliant (Phan *et al.*, 2018; Phan *et al.*, 2014; Appiah *et al.*, 2016). We sought the perceptions of Chief Finance Officers (CFOs) and managers of various MFIs on the knowledge level of IFRSs and what they perceive as benefits of preparing financial statements that are IFRSs compliant by requiring the respondents to indicate their degree of agreement on a six-point Likert scale on statements such as "Financial statements of MFIs that are prepared in accordance with IFRSs requirements are reliable," Financial statements of MFIs that are prepared in accordance with IFRSs are comparable', "IFRSs complied financial statements increases investor's confidence," "I am aware of the requirements of various IFRSs", among others. We reason that for IFRSs to be adopted, *ceteris paribus*, the adopters have to first understand the IFRSs and appreciate the benefits of adopting IFRSs. Whereas some scholars may suggest adoption studies to be measured using a binary scale (1 for adopted and 0 for not adopted), in this study, we suggest that once the intended adopters are knowledgeable in IFRSs and are aware of the benefits of adopting IFRSs, then adoption has taken place. We define adoption as a process through which an individual or firm chooses to take up an innovation by having full knowledge of what is being adopted and by being aware of the benefits of taking on such an innovation. From this definition of adoption, it then follows that adoption of a given innovation is knowing the benefits of an innovation and having knowledge of a given innovation that enables the adopter to continue using such an innovation. Our reasoning is in line with that of Hessayri and Saihi (2018) who documented that the adoption of IFRSs may depend on whether the said benefits of IFRSs adoption will accrue to the adopting entity (of course including the users of financial statements that are IFRSs compliant) or not. In assessing the knowledge level of IFRSs in the preparation of financial statements in MFIs, some IFRSs, such as IAS 11: Construction contracts, IAS 31: interests in joint ventures, IAS 21: The effects of changes in foreign exchange rates, IAS 28: Investments in Associates and joint ventures, IAS 41: Agriculture, IFRS 6: Exploration for and evaluation of mineral resources, IFRS 10: Consolidated financial statements, IFRS11: Joint arrangements, IFRS 14: Regulatory deferral accounts, IAS 26: Accounting and reporting by retired benefit plans, IAS 27: Separate financial statements and IAS 29: Financial reporting in hyperinflationary economies, were not included, since they seemed to be inappropriate for MFIs. For example, IAS 11 construction contracts is ideal for those firms that generate their revenues from construction of buildings, roads, among others, yet MFIs in Uganda are established for provision of credit facilities to their members. For IAS 31: interests in joint ventures, there was no evidence that there are MFIs with joint ventures, subsidiaries or even joint arrangements (IFRS 11). Uganda is not an inflationary economy and as such, IAS 29 seemed inappropriate in the current study. Therefore, those standards that were excluded from this study were mainly because of their scope, given that MFIs in Uganda are largely small and medium-sized enterprises and purely provide access to credit to their members.

The independent variables for this study are Board of directors' effectiveness, managerial attitude and IC. Board of directors' effectiveness was operationalized in terms of board size, board independence, board meetings and board committees and this is in accordance with previous studies (see Bin-Ghanem and Ariff, 2016). IC was operationalised in line with earlier scholars (Bontis *et al.*, 2000; Kamukama *et al.*, 2011; Kamukama, 2013; Kalkan *et al.*, 2014; Nkundabanyanga, 2016; Kamukama and Tumwine, 2017). It includes human capital, relational capital and structural capital. Managerial attitude was operationalized in terms of cognitive legitimacy and moral propriety, and these measures were adopted from the works of Suchman (1995).

We also controlled for ownership and capital structure of a Microfinance Institution since according to Bartov *et al.* (2000), failure to control for confounding variables could lead to falsely rejecting the hypothesis when, in fact, it should be accepted. Tusiime *et al.* (2011) found that ownership structure is positively associated with performance of firms. Further, Nkundabanyanga *et al.* (2018) found that ownership is positively associated with competitive advantage of a firm. For capital structure, increased debts in a firm increase monitoring costs (Bekiaris *et al.*, 2014; Jensen and Meckling, 1976) since shareholders desire to remain informed on how debt finances have been utilized or invested.

Validity and reliability

The validity of the instrument is assessed using a content validity index. The instrument was given to three academicians and three practitioners. The overall content validity index was 0.87, which is acceptable. We further tested for reliability of the questionnaire using Cronbach's α coefficient, and the Cronbach's α values for board of directors' effectiveness, IC, managerial attitude and adoption of IFRSs were 0.891, 0.948, 0.881 and 0.941, respectively. Cronbach (1951) requires a Cronbach's α coefficient of at least 0.7 and above and for this study, the instrument was reliable. To establish convergent validity, the principal components for each variable were extracted by running principal component analysis using varimax rotation method and factor loadings below 0.5 coefficients were suppressed to avoid extracting factors with weak loadings. Before performing the principal component analysis for scales, we assessed the suitability of the data for factor analysis based on sample size adequacy, the Kaiser–Meyer–Olkin (KMO) and Bartlett tests. The KMO values for board of directors' effectiveness, IC and managerial attitude were 0.675, 0.765 and 0.756, respectively, and this is acceptable according to Field (2009). Bartlett's test of sphericity in all scales reached statistical significance ($p < 0.05$) (significant value was 0.00 for each scale). The main reason for conducting a factor analysis was to reduce the data to a manageable size (Field, 2009). Factor analysis results are presented in Tables II–IV.

Model

The study utilizes a hierarchical regression model in investigating the contribution of board of directors' effectiveness, IC and managerial attitude to adoption of IFRSs. To examine the contribution of board of directors' effectiveness, IC and managerial attitude to the adoption of IFRSs, we specify the following regression models (see Table V):

$$IFRSs = \beta 0 + \beta_1 OWNP + \beta_2 CAP + \varepsilon_j \tag{1}$$

$$IFRSs = \beta_0 + \beta_1 MATT + \beta_2 OWNP + \beta_3 CAP + \varepsilon_j \tag{2}$$

$$IFRSs = \beta_0 + \beta_1 BODE + \beta_2 MATT + \beta_3 OWNP + \beta_4 CAP + \varepsilon_j \tag{3}$$

$$IFRSs = \beta_0 + \beta_1 IC + \beta_2 BODE + \beta_3 MATT + \beta_4 OWNP + \beta_5 CAP + \varepsilon_j \tag{4}$$

where; IFRSs is Adoption of IFRSs CAP is Capital structure OWNP is Ownership MATT is Managerial Attitude BODE is Board of directors' effectiveness IC is Intellectual capital β_0 is a constant ε_j is the error term.

4. Results

Descriptive statistics

Table VI presents a summary descriptive statistics for the adoption of IFRSs, board of directors' effectiveness, IC and managerial attitude, as well as control variables included in the analyses. The mean for adoption of IFRSs is 4.62, with a minimum score of 3.05, a maximum score of 6 and a standard deviation of 0.77. This means that CFOs and managers of MFIs have knowledge of IFRSs and they appreciate the benefits of preparing financial statements that are IFRSs compliant. The minimum score of 3.05 means that there are some managers and CFOs who are not knowledgeable in IFRSs and who are not aware of the benefits of preparing financial statements that are IFRSs compliant. The results also show that for board of directors' effectiveness, the mean is 4.29 with a standard deviation of 0.76. For IC, the mean is 4.68 and the standard

Item	Board meetings	Board committees	Board independence	Board size
	Component			
Board meeting resolutions are implemented by management	0.848			
Board meetings are always chaired by the board chairman	0.820			
During the meetings, all reports from management are discussed thoroughly and decisions taken	0.817			
The board secretary is always present in the board meetings	0.804			
Board members' meeting allowances are paid immediately after or during the meeting	0.752			
All board meetings are held at the institution's premises	0.683			
Minutes of the previous meetings are always available before the next meeting	0.657			
Our board is comprised of more than one committee	0.656			
Our board conducts meetings quarterly	0.655			
Board members arrive on time for the meeting	0.611			
The national politics does not interfere with the appointment and operations of the institution's board	0.591			
There is a schedule for board meetings, which is known by all board members	0.546			
Our compensating committee members have been members of such committees in other institutions		0.917		
Our nominating committee members have been members of such committees in other institutions		0.904		
Our audit committee members have been members of the same committee elsewhere		0.854		
Our nominating committee members have been board members elsewhere		0.788		
Our nominating committee is comprised of only non-executive directors who are independent of one another		0.717		
Our compensation committee is comprised of human resource experts		0.677		
None of our board members currently has any outstanding loan amount			0.737	
We have a dominating board chairman			0.720	
Our board chairman does not hold substantial shares in this institution			0.682	
Our board members are appointed on a contract basis			0.681	
The tenure of our board members is well defined			0.598	
Our board can be split into three committees, with no members appearing on more than one committee			0.510	
Our board is constituted by both executive and non-executive directors				0.861
Majority of our board members are non-executive directors				0.812
Our board has a minimum of three non-executive directors				0.799
Our board has a minimum of two executive directors				0.664
Eigenvalues	7.41	5.39	2.44	2.14
Percentage of variance	22.36	15.65	11.86	10.06
Cumulative percentage	22.36	38.01	49.87	59.93

Notes: KMO = 0.675; Bartlett's test of sphericity: approx. χ^2 = 1,394.13, df = 406, sig. = 0.000; extraction method: principal component analysis; rotation method: varimax with Kaiser normalization
Source: Primary data

Table II. Rotated component matrix for board of director's effectiveness

deviation is 0.72, whereas the mean for managerial attitude is 4.43 and the standard deviation is 0.82. The standard deviations for all variables are small as compared to the means, implying that the calculated means are a good representation of the data (Field, 2009).

Item	Component Relational capital	Human capital	Structural capital
We have a well-defined organizational structure	0.788		
Our networks with our customers have made this firm what it is	0.777		
Our firm displays its services nearer to our customers	0.770		
This firm has many clear openings to its customers	0.765		
We have good network systems with our customers	0.762		
Our customers help us to enroll or get new customers	0.755		
Our employees have good relationship with the customers	0.750		
This firm promotes a culture of team work	0.739		
This firm has clear values that guide its employees	0.733		
Customers help this firm to improve or update its services	0.730		
We work as a team in this firm	0.681		
We usually get new ideas on compliance through our customers	0.615		
Our customers appreciate the use of IFRSs	0.608		
Employees in this firm are result oriented	0.598		
Our systems make it easy to access relevant information	0.520		
Level of commitment of our staff to work is high		0.848	
Our employees provide technical skills to our customers		0.755	
Our employees can withstand pressure of work		0.717	
When an employee leaves the firm, we do have a succession training		0.717	
The employees of this firm are knowledgeable about their work		0.693	
We have self-driven employees		0.688	
Our employees are always a source of new ideas		0.677	
This firm usually employs staff members who are highly qualified		0.647	
Most of our employees are more creative		0.618	
Most of business ideas are initiated by our employees		0.609	
Our employees have the required competences to prepare financial statements that comply with IFRSs		0.596	
Our employees are experts in their jobs and functions		0.590	
Employees in this firm are socially competent		0.577	
Employees in this firm always search for knowledge		0.515	
There are available materials that guide us on the application of IFRSs			0.856
This firm updates us on the new developments of IFRSs			0.842
Our transaction processes are usually fast			0.813
Eigenvalues	11.96	4.38	2.47
Percentage of variance	25.50	21.79	11.51
Cumulative percentage	25.50	47.30	58.81

Notes: KMO = 0.765; Bartlett's test of sphericity: approx. χ^2 = 1,880.35, df = 496, sig. = 0.000; extraction method: principal component analysis; rotation method: varimax with Kaiser normalization
Source: Primary data

Table III.
Rotated component matrix intellectual capital

Correlation analysis

In this study, we use the zero-order correlations to establish whether or not there are relationships between the study variables. The zero-order correlation results are presented in Table VII. From Table VII results, board of directors' effectiveness is positively and significantly related to the adoption of IFRSs ($r = 0.594$, $p < 0.01$), and this implies that a positive change in board of directors' effectiveness brings about a positive change in the adoption of IFRSs. Results further indicate a positive significant relationship between IC and adoption of IFRSs ($r = 0.699$, $p < 0.01$), signifying that a positive change in IC leads to a positive change in the adoption of IFRSs. Finally, managerial attitude is positively and significantly associated with the adoption of IFRSs ($r = 0.451$, $p < 0.01$), implying that a unit positive change in managerial attitude will lead to 0.451 change in adoption of IFRSs.

Item	Component: Moral propriety	Component: Cognitive legitimacy
Our management is responsive to industry pressures	0.806	
Our management respects our client's demand	0.802	
Our management supports efforts by society to transform this institution through means of ensuring quality financial reporting	0.798	
Our management supports the changes proposed by the community with respect to the quality of financial statements	0.780	
Our management consults other institutions to improve its operations	0.777	
Our management respects decisions made by our board that are directed to satisfy society demands	0.723	
This entity's decisions are aimed at improving society's welfare	0.671	
Our management responds to societal demands on time, especially when it comes to adoption of IFRSs	0.639	
Our management is committed to serve in the best interests of society in terms of financial reporting	0.535	
Our financial reporting practices are so far the best in the industry		0.901
We are comfortable with what we are as of now in terms of financial reporting practices		0.850
We believe that no MFI has better financial reports than ours		0.814
It is a matter of time, everything will be well		0.786
We are not under pressure to adopt to new trends in financial reporting		0.776
Activities of this institution are the best in the industry		0.527
Eigenvalues	6.12	3.69
Percentage of variance	30.85	30.47
Cumulative percentage	30.85	61.31

Notes: KMO = 0.756; Bartlett's test of sphericity: approx. $\chi^2 = 812.05$, df = 120, sig. = 0.000; extraction method: principal component analysis; rotation method: varimax with Kaiser normalization
Source: Primary data

Table IV. Rotated component matrix for managerial attitude

Variable	Acronym	Variable description
Dependent variable		
Adoption of IFRSs	IFRSs	Measured by average rating on a six-point Likert scale of questions on knowledge level and perceived benefit
Predictor variable		
Board of director's effectiveness	BODE	Measured by average score of questions on a six-point Likert scale on board size, board independence, board meetings and board committees
Intellectual capital	IC	Measured by average score of questions on a six-point Likert scale on human capital, structural capital and relational capital
Managerial attitude	MATT	Measured by average score of questions on a six-point Likert scale on moral propriety and cognitive legitimacy
Ownership	OWNP	A dummy variable coded as 0 if the firm is owned by indigenous Ugandans, 1 if the firm is owned by foreign investors, 2 if the firm is owned by both indigenous Ugandans and foreign investors, whereas 3 is for others
Capital structure	CAP	A dummy variable coded as 0 if the firm employs only equity funding, 1 if the firm employs equity and loans financing, 2 if the firm employs donations financing, whereas 3 if the firm employs debt financing
	β_0	Constant
	ε_j	Error term

Table V. Description of the model

Variable	*n* Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	SD Statistic	Skewness Statistic	Skewness SE	Kurtosis Statistic	Kurtosis SE
Adoption of IFRSs	67	3.05	6.00	4.62	0.77	−0.23	0.29	−0.95	0.58
Knowledge level	67	2.24	6.00	4.34	0.87	−0.41	0.29	−0.55	0.58
Perceived benefit	67	2.89	6.00	4.89	0.90	−0.54	0.29	−0.83	0.58
Board of director's effectiveness	67	1.33	5.93	4.29	0.76	−0.58	0.29	2.24	0.58
Board size	67	1.00	6.00	3.89	1.37	−0.36	0.29	−0.70	0.58
Board independence	67	1.00	6.00	4.02	1.02	−0.36	0.29	0.12	0.58
Board meetings	67	1.27	6.00	4.82	0.94	−1.00	0.29	1.86	0.58
Board committees	67	1.57	6.00	3.96	1.21	−0.19	0.29	−0.82	0.58
Intellectual capital	67	3.00	6.00	4.68	0.72	−0.23	0.29	−0.77	0.58
Human capital	67	3.00	6.00	4.71	0.82	−0.25	0.29	−0.91	0.58
Structural capital	67	3.00	6.00	4.68	0.86	−0.29	0.29	−1.08	0.58
Relational capital	67	2.30	6.00	4.62	0.93	−0.34	0.29	−0.86	0.58
Managerial attitude	67	1.80	5.98	4.43	0.82	−0.53	0.29	0.75	0.58
Moral propriety	67	1.56	6.00	4.69	0.91	−0.81	0.29	1.03	0.58
Cognitive legitimacy	67	1.64	6.00	4.17	1.15	−0.35	0.29	−0.51	0.58
Ownership	67	0.00	3.00	0.37	0.71	2.14	0.29	4.46	0.58
Capital structure	67	0.00	4.00	0.76	0.78	2.03	0.29	7.29	0.58

Source: Primary data

Table VI.
Descriptive statistics

Therefore, preliminarily, *H1–H3* are supported. In terms of control variables, ownership and capital structure are not significantly associated with the adoption of IFRSs, and this implies that the relationship between the board of director's effectiveness, IC, managerial attitude and the adoption of IFRSs is not affected by the control variables.

Regression analysis

After obtaining preliminary results from the bivariate correlations between the independent and the dependent variable, we ran a hierarchical regression analysis to further substantiate our hypotheses. We employed a hierarchical regression as compared to the stepwise regression, because the hierarchical regression analysis is powerful in testing which independent variable contributes more to the variances in the dependent variable and it also indicates the incremental power of an additional independent variable to the already existing variable(s) in explaining the dependent variable (Sekaran, 2003; Field, 2009). Field (2009, p. 212) argues that in hierarchical regression, predictors are selected based on past work and the experimenter decides the order in which the predictors should be entered into the model. As a general rule, the known predictors (from other research) should be entered into the model first, in order of their importance, in predicting the outcome. After known predictors have been entered, the experimenter can add any new predictors into the model. New predictors can be entered either all in one go, in a stepwise manner, or hierarchically (such that the new predictor suspected to be the most important is entered first). Field (2009, p. 212) further notes that in stepwise regressions, decisions about the order in which predictors are entered into the model are based on a purely mathematical criterion. In the forward method, for example, an initial model is defined that contains only the constant (b_0). The computer then searches for the predictor (out of the ones available) that best predicts the outcome variable – it does this by selecting the predictor that has the highest simple correlation with the outcome. If this predictor significantly improves the ability of the model to predict the outcome, then this predictor is retained in the model and the computer searches for a second predictor. The criterion used for selecting this second predictor is that it is the variable that has the largest semi-partial correlation with the outcome variable.

Table VII. Zero-order correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Adoption of IFRSs (1)	1																
Knowledge level (2)	0.864**	1															
Perceived benefit (3)	0.872**	0.508**	1														
Board of director's effectiveness (4)	0.594**	0.586**	0.449**	1													
Board size (5)	0.407**	0.459**	0.251*	0.704**	1												
Board independence (6)	0.503**	0.544**	0.333**	0.812**	0.607**	1											
Board meetings (7)	0.437**	0.332**	0.425**	0.686**	0.296*	0.351**	1										
Board committees (8)	0.336**	0.370**	0.216	0.653**	0.405**	0.397**	0.119	1									
Intellectual capital (9)	0.699**	0.633**	0.581**	0.593**	0.387**	0.403**	0.521**	0.349**	1								
Human capital (10)	0.531**	0.479**	0.445**	0.304*	0.134	0.162	0.378**	0.125	0.757**	1							
Structural capital (11)	0.694**	0.661**	0.546**	0.645**	0.392**	0.412**	0.529**	0.467**	0.903**	0.574**	1						
Relational capital (12)	0.521**	0.445**	0.460**	0.519**	0.423**	0.416**	0.394**	0.273*	0.832**	0.357**	0.676**	1					
Managerial attitude (13)	0.451**	0.383**	0.400**	0.419**	0.258*	0.398**	0.289*	0.229	0.401**	0.212	0.437**	0.345**	1				
Moral propriety (14)	0.323**	0.123	0.433**	0.187	−0.023	0.153	0.240	0.061	0.305*	0.262*	0.325**	0.179	0.733**	1			
Cognitive legitimacy (15)	0.384**	0.447**	0.224	0.448**	0.385**	0.444**	0.220	0.278*	0.328**	0.092	0.363**	0.348**	0.840**	0.246*	1		
Ownership (16)	0.175	0.267*	0.040	0.131	0.241*	0.035	0.009	0.190	0.167	0.160	0.211	0.055	−0.035	−0.053	−0.008	1	
Capital structure (17)	0.004	0.179	−0.167	0.043	0.201	−0.044	−0.038	0.112	0.117	0.154	0.150	0.000	−0.160	−0.216	−0.056	0.407**	1

Notes: *,**Significant at the 0.05 and 0.01 level (two-tailed), respectively
Source: Primary data

Therefore, given that the researchers controlled for ownership and capital structure, intended to establish the incremental power of additional independent variables to the already existing variables in predicting the dependent variable, and had information regarding the independent variable that was more important in predicting the dependent variable, the hierarchical regression analysis was seen as a better option than the stepwise regression, *ceteris paribus*. The hierarchical regression analysis has been used to confirm hypotheses by previous accounting scholars such as Musimenta *et al.* (2017), Bananuka *et al.* (2018), Kabuye *et al.* (2017). Hierarchical regression results, as presented in Table VIII, indicate that board of directors' effectiveness, IC and managerial attitude contribute to the variance in the adoption of IFRSs in Uganda's MFIs to the extent of 53 percent (Adjusted $R^2 = 0.531$). However, only board of directors' effectiveness and IC are the significant predictors of adoption of IFRSs in Uganda's MFIs while managerial attitude predictive potential is subsumed in intellectual capital. We perform a hierarchical regression analysis to establish the contribution of each independent variable to the dependent variable. In model 1, we enter control variables (ownership and capital structure) and find that they are not significant predictors of adoption of IFRSs. In Model 2, we introduce managerial attitude to establish its contribution to the adoption of IFRSs and find that managerial attitude significantly predicts adoption of IFRSs (standardized $\beta = 0.458$). Managerial attitude is one of the main study variables and it is introduced first because of its importance in influencing adoption of innovations. An innovation is an idea, practice or project that is perceived as new by an individual or other unit of adoption (Rogers, 2003, p. 12). An innovation may have been invented long time but if individuals perceive it as new, then the innovation is new (Sahin, 2006), for example, the concept of IFRSs is uncommon in many MFIs and may be seen as new. In model 3, we introduce board of directors' effectiveness and find that both managerial attitude (standardized $\beta = 0.253$) and board of directors' effectiveness (standardized $\beta = 0.472$) are significant predictors of adoption of IFRSs. In model 4, we introduce IC and find that managerial attitude ceases to be a significant predictor, whereas board of directors' effectiveness (standardized $\beta = 0.228$) and IC (standardized $\beta = 0.498$) remain significant. Based on the final model (model 4), *H1* and *H2* are fully supported, whereas *H3* is not supported.

5. Discussion

The present study results suggest the exact mechanism through which board of directors' effectiveness, IC and managerial attitude contribute to the adoption of IFRSs in MFIs in developing countries, especially Uganda. Whereas a number of studies have concentrated on

Item	Model 1	Model 2	Model 3	Model 4	Tolerance	VIF
Constant	4.593	2.636	1.504	1.180	na	na
Managerial attitude		0.458**	0.253**	0.146	0.973	1.027
Board of director's effectiveness			0.472**	0.228**	0.800	1.251
Intellectual capital				0.498**	0.600	1.666
Control variables						
Ownership	0.208	0.192	0.135	0.100		
Capital structure	−0.080	−0.000	−0.030	−0.081		
Model F	1.199	6.628**	11.132**	15.953**		
R^2	0.036	0.240	0.418	0.567		
Adjusted R^2	0.006	0.204	0.380	0.531		
F change	1.199	16.890**	18.970**	20.927**		
R^2 change	0.036	0.204	0.178	0.149		

Note: **Significant at the 0.01 level
Source: Primary data

Table VIII. Hierarchical regression analysis the adoption of IFRSs at national level, this study provides evidence on the adoption of IFRSs at the industry or even firm level, and the exact mechanism for adoption of IFRSs is as follows:

- Both board of directors' effectiveness, IC and managerial attitude contribute to positive variances in the adoption of IFRSs, but the contribution made by managerial attitude will not be significant when IC is present. However, in the absence of IC, managerial attitude will significantly influence positive variances in adoption of IFRSs. Therefore, the predictive power of managerial attitude is subsumed by IC.
- The contribution of board of directors' effectiveness to the adoption of IFRSs is better observed when the board size is above average; the board is independent from management and is not influenced by any forces in the performance of its duties, but it rather conducts its activities in the best interests of its appointing authority, holds at least meetings every quarter of the year, and there are various board committees such as audit committees, nominating committees and compensating committees among others.
- The contribution of IC to the adoption of IFRSs is visible when there is presence of human capital, structural capital and relational capital. Structural capital is more critical for the adoption of IFRSs as compared to other forms of capital.
- The contribution of managerial attitude to the adoption of IFRSs is observed through moral propriety and cognitive legitimacy.

It can be noted that the adoption of IFRSs in Uganda among MFIs lacks an enforcement mechanism, given that a number of CFOs and Managers are knowledgeable in IFRSs and are aware of the benefits that accrue from preparing reports that are IFRSs compliant. This is because the Uganda Microfinance Regulatory Authority (the regulator) has just been inaugurated i.e 2017 and thus its operationalisation is still in infancy. In the absence or presence of the regulator, it is then important that the board of directors should enforce the adoption of IFRSs. On average, Managers and CFOs of MFIs are knowledgeable regarding IFRSs and are aware of the benefits of preparing financial statements that are IFRSs compliant, but as there is no enforcement mechanism in place, they tend to relax. Other than the board of directors, managers may consider to prepare financial statements that are IFRSs compliant. Those managers who are not knowledgeable about IFRSs and are not sure of the benefits of preparing financial statements that are IFRSs compliant need training if the MFIs have to graduate from one tier to another. The trainings can be arranged by both the district commercial officers (A district is a decentralized arm of government) and possibly their umbrella associations.

The present study findings are in line with those of Bin-Ghanem and Ariff (2016) who investigated the relationship between board of directors' effectiveness and internet financial reporting using evidence from gulf cooperation council countries and found a significant association between board of director's effectiveness and internet financial reporting. In terms of IC, it is important that MFIs pay particular attention to it, given that it has a strong positive association with the adoption of IFRSs than board of directors' effectiveness. The structural capital of MFIs is more critical as compared to other forms of IC. The finding that IC is a significant predictor of the adoption of IFRSs is consistent with the findings of Kamukama and Tumwine (2017) who found that IC is significantly associated with competitive advantage of a microfinance institution. Kamukama and Tumwine also found that structural capital was more associated with competitive advantage of a microfinance institution as compared to human and relational capital. For managerial attitude, it can be argued that once management's attitude toward adoption of IFRSs is positive, then it will be expected that IFRSs in MFIs will be adopted and this is consistent with the findings of Singh *et al.* (2010) who found that managerial attitude is positively associated with localizing local content on a company's website.

The issue of adoption of IFRSs in MFIs explored in this study highlights that the nature of African MFIs, especially in Uganda where MFIs work without a regulator, is such that board of directors effectiveness and IC have a big impact on the adoption of IFRSs, explaining that failure to prepare financial statements in MFIs that are compliant with IFRSs is due to the ineffectiveness of the board of directors and low levels of IC in various MFIs. The results highlight the need to adopt IFRSs and this will be achieved if the board of directors become effective and if the intellectual capital of MFIs is improved. Given that the CFOs and managers are knowledgeable in IFRSs, then there is a need for little force to see IFRSs are adopted by individual MFIs.

6. Summary and conclusion

The objective of this study was to investigate the contribution of board of directors' effectiveness, IC and managerial attitude to the adoption of IFRSs in MFIs. Through cross-sectional and correlational study design and use of a questionnaire survey of 67 MFIs in Uganda, the study found that board of directors' effectiveness and IC significantly contributes to the adoption of IFRSs in Uganda, but the contribution made by managerial attitude will not be significant when IC is present in such MFIs, implying that the predictive power of managerial attitude is subsumed in IC.

Overall, the findings of this study have important implications for academics and policymakers regarding MFIs. For academics, our results suggest that IC and board of director' effectiveness are more important for the adoption of IFRSs as compared to managerial attitude. For policymakers like Government of Uganda, it should speed up the operationalization of UMRA and empower it to perform its supervisory functions. Government must ensure that through its supervisory board of UMRA, MFIs should have well-constituted boards with the necessary quality of members and at the same time, there should be the necessary resources in MFIs. UMRA must ensure that MFIs have the right human resources, right facilities and should be open to client demands. Government needs to speed up the operationalization of UMRA such that MFIs are regulated. Whether in the presence or absence of UMRA, the district commercial officers and the Association of Microfinance Institutions may organize trainings for managers and CFOs regarding the IFRSs and possibly indicate to them the benefits of using IFRSs while preparing their financial statements. MFIs are publicly interested entities and they handle members' deposits, which must be protected at all times. MFIs are known to assist small and medium businesses to grow through provision of credit facilities. Thus, practitioners must note that it is important to prepare financial statements that are IFRSs compliant so that they enjoy the benefits of adopting IFRSs such as attraction of investors.

Like any other study, this study also has limitations, which will be discussed along with suggestions for future research. The study utilizes a questionnaire survey that is strong in eliciting responses from a larger population (Sekaran, 2003), but it does not allow the full expression of the respondent on the subject matter. Future studies may utilize a mixed method design or even utilize an interview guide to confirm the results of this study. Although the use of hierarchical regression is prone to problems associated with sampling error, this is minimized by our rigorous interface with the data. The study variables of this study predict only 53 percent of the variance in the adoption of IFRSs, implying that there are other predictors of adoption of IFRSs. Future studies may be conducted to establish other predictors of IFRSs adoption in Uganda and other national settings. It should be noted that this study was conducted at a time when the UMRA had just been inaugurated and this calls for further studies in Uganda after some years when UMRA is operational. Well, the results of this study possibly provide an initial empirical evidence of the exact mechanism through which board of directors effectiveness, IC and managerial attitude contribute to the adoption of IFRSs.

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