THE JOINT EFFECT OF ACCOUNTING RISK MANAGEMENT, FIRM CHARACTERISTICS AND INTERNAL CONTROLS ON PERFORMANCE OF STATE ENTERPRISES IN UGANDA

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Abstract

The main purpose was to examine the effects of accounting risk management, firm characteristics and internal controls on performance of state enterprises in Uganda. The specific objectives were; to examine the relationship between accounting risk management and performance of state enterprises in Uganda; to determine the moderating effect of firm characteristics on the relationship between accounting risk management and performances of state enterprises in Uganda, the intervening influence of internal controls on performance of state enterprises in Uganda. and to assess the joint effect of accounting risk management, firm characteristics and internal controls on performance of state enterprises in Uganda. This study adapted the positivist model since it is coherent and objective, generally considered by the formulation and to test the hypotheses. The population covered 34 state enterprises, however, only 32 responded, indicating 94 percent response rate. Primary data used semi-structured

questionnaires while secondary data used annual audited financial accounts of state enterprises, and corruption perception indices were from annual table from Transparent International Uganda. The unit of analysis were state enterprises whereas unit of inquiry were, Chief Executive Officers, Finance Managers, Chief internal auditors, Human Resource Managers and Procurement Managers. Methodology adapted descriptive and cross-sectional survey design. Cronbach coefficient assessed the internal consistency and items with α ≥ 0.7 were considered. Similarly, items whose contend validity index with ≥ 0.7 were also considered. The diagnostic tests, tested the relationship between the variables; normality was tested using P-P Plots, histogram and Shapiro-Wilk test; multicollinearity, were tested using Variance Inflation Factor (VIF) of < 10, tolerence statistics between 0-10 and Conditional Index Number <30. Homoscedasticity were tested by plot of residuals and Levene test-the equality of variances tested the null hypothesis. The findings showed accounting risk management had significant influence on performance of state enterprises; there was significant intervening effect of internal controls on this relationship; there was no moderating effect of firms' characteristics on the relationship between accounting risk management on performance and there was a joint effect of accounting risk management, internal controls and firm characteristics on performance of state enterprises. Through this study, it is recommended that managers of state enterprises should consider adapting aggressive accounting risk management practices and stringent internal controls to maximize profitability, improve liquidity and enhance budgetary controls. Age, size and ownership structure as firm characteristics should be considered as leverage to state enterprises to improve performance.

Keywords: Accounting risk management, firm characteristics, internal controls and firm performance, state enterprises

INTRODUCTION

State enterprises worldwide, account for twenty five percent of investment, five percent of employment, and up to forty percent of productivity in some nations (Harelimana, 2017; Arwinge, 2013; COSO, 2013;). This shows that performance of state enterprises has become an important means for economies to improve competitiveness, and gradually become an important force to lead the economic future propensities (Kaplan & Norton, 2015). Zhao, Qu and Huang (2016) highlight that given the sustainable development of economic globalisation, performance of state enterprises has become a substantial approach for rapid development of economies, expansion of markets and brand outcome. Accounting risk management (ARM), firm characteristics and internal controls have been articulated as significant attributes for

progressive improvement of performance of state enterprises. Nahar, Azim and Jubb (2020) postulate that risk disclosure and management have been of collective importance to performance of firms and raised significant interest around the globe since major corporate collapse in 2001 to date. Subsequently, numerous logical and theoretical studies have demonstrated that national economic growth and improved performance of state enterprises is determined by accounting risk management, internal controls and firm characteristics (Romer, 1990; Westmore, 2013; Galindo & Méndez, 2014).

This study was supported and guided by theories namely; institutional theory, stewardship theory, agency theory and risk management theory. The institutional theory explains and focuses on the design and implementation of core control procedures and practices in organizations (Fox & Hamilton, 1994). It is also a social, political and economic system that operate and make organizations gain their legitimacy (Meyer and Rowan,1977; DiMaggio and Powell (1991). Similarly, agency theory (Jensen & Meckling, 1976) creates contractual agreement between agent and principal and a principle that explains and resolve issues between them (David & Slyke, 2007). It further eexamines the information asymmetry between principals and agents (Donaldson & Davis, 1991; Selznick, 1994). Likewise, the theory, covers the analysis of the organization to include managerial motivation to separate ownership and control in organizational governance (David & Sylke, 2007). Consequently, shareholders delegate daily operational responsibilities to management henceforth the need for strong internal controls to safeguard stockholder interests (Yasuda, 2005: David; Sylke,2007). Steward Theory (Donaldson & Davis, 1991) is argues that the stewardship behaviour of managers results in exemplary corporate management practices when the espoused values of the firm are aligned with the ratified values (Nyakundi, Nyamita & Tinega, 2014). Unlike the agency theory, it does not only examine individualism (Donaldson, Davis & Preston, 1991), but the top management's role as stewards to strive and attain organizational goals. Donaldson and Davis (1991), Selznick, 1994) state that stewards are satisfied when organizational goals are achieved in order to increase the shareholders' returns. The theory also advocates for collaboration between the board, management and staff as activists of internal controls and accounting risk management   tools to improve performance (Cohen, Krishnamoorthy & Wright, 2015). Risk Management Theory (Mehr & Hedges, 1963) is a comprehensive, integrated and coordinated processes within the organization that manages all kinds of risks that its faces for survival and improved performance over time (Coleman, 2009). The risks have either direct or indirect effects on organization's survival (Coleman, 2009). The theory further identifies the major source of loss risk and liquidity risk that affects the net-value of assets. The requirements of risk management are a combination of risk factors associated with decisions in investment portfolio

as pointed out by Markowitz theory (1970) that has impact on returns. Therefore, adopts two major perspectives to measure risk, situation analysis and value at risk. It adapts all variables, accounting risk management, firm characteristics, internal controls to improve performance

Accounting risk management is analysis of multidimensional accounting matters, preparation of accounting policies, correct identified internal control weaknesses, remediate IT systems failures, evaluate the risks within the financial accounts (Arwinge, 2013; COSO, 2013). Accounting risk management is the process of assessing risk involved with a firm's accounting practices which analyses and clarify multidimensional accounting matters, support in groundwork of accounting guidelines (Ongore & Kusa, 2013). According to the COSO (2013), accounting risk management is the integrated framework that proides complex accounting analysis and reporting as it provides management of financial reporting processes for fostering improvements and transition as part of the central government requirements (Anas & Fanziah, 2014).

Firm characteristics are qualities perceived as accelerators of corporate practices that intend to achieve the firm's objectives (Eriotis, Vasiliou & Neokosmidi, 2007) and are associated with stewardship theory. Donaldson and Davis (1991) appreciates, firm characteristics comprising constructs, size and age of organization and ownership structure have influence decisions on performance. This theory arises as a significant counterbalance to agency theory. The steward theory holds that as overseers they safeguard and maximizes shareholder's wealth through firm performance. Gupta, Sahu and Manna (2006) and Ramanujan and Varadarajan (2006) postulate that firm characteristics (age, size of organization and ownership) play a critical role in mitigating agency conflicts and information gap.

Internal controls refer to internal controls as systems and procedures implemented by managers to support them realize organizational aims (Amudo & Inanga (2009). Institute of Internal Auditors (IIA) (2009) uphold that internal controls play significant role in safeguarding organisational resources, correctness and comprehensiveness of accounting records, appropriate preparation of reliable financial statements, fraud prevention and detection of errors (Adeyemi & Fagbemi, 2013). Duncan, Flesher and Stock (2009) assert internal controls are coordinated methods and measures adopted by enterprises to protect and check the reliability and accuracy of the financial information. This should also be in compliance with the Institute of Standards on Auditing (ISA) (315; 42, 2000) and GAAPs. The indicators for this process were access controls, documentation, physical audits, approval of authority, and separation of duties to post improved positive performance.

Firm performance refer is how organizational set objectives are achieved in a precise period by utilizing its resources effectively to generate profits (Bauwhede, Barney &Tyler,1991).

Kinyua (2016) post performance as benefits accrued through efficient use to realize more income together with profits. Ural and Acaravic (2015) denote performance as monetary values signifying the relationship amongst attributes, actions and the age, size and ownership of the organization. Accordingly, performance was measured using financial indicators that comprised, profits, liquidity, budget variances and non-financial parameters of management efficiency and corruption.

The COSO (2013) integrated internal control framework (2013) and Erickson, Delgadillo and Lown (2006) point that eminent frauds such as in Enron (2001), WorldCom (2002), Gupta Bank of Baroda (2018), Danske Bank (2018), and Punjab National Bank (2018) involved financial and accounting scandals that have given rise to the concept of ARM. Findings by Obalola, Thomsas, Akpan and Abas (2014) point that embracing of accounting risk management has value implications on the performance of organizations. However, Rae et al. (2015) observe that accounting risk management and internal controls do not create value on firm performance in state enterprises. These conflicting results thus create the need for this study. Moreover, Harelimana (2017) studied how risk management and internal controls affect performance and found a negative relationship. This study will however embrace firm characteristics that the above study did not consider. A study by Epstein and McFarlan (2015) in Denmark established that efficiency and productivity of a non-profit organizations was hinged on budgetary control as a vital tool in achieving positive performance which this study has adopted.

State enterprises universally have had the wave of corporate scandals of assertions on financial and accounting scandals, corruption and management inefficiency. This saw, Enron 2001, WorldCom, 2002, Gupta Bank of Baroda (SA),2018 and Punjab National Bank, $1.77bn 2018).

In Uganda, the government under the Public Enterprise Reform and Divesture Act (PERDA) 1993, privatized most of the parastatals but retained some as state enterprises because of poor performance. The governance structure of state enterprises generally revolves around the board of directors (BOD) chaired by an executive director answerable to BOD, and support staff answerable to CEO. The accounts of the state enterprises are audited annually by the office of Auditor General (OAG) whose report is presented to the Parliament. The Parliamentary Accounts Committee (PAC) then scrutinizes the Auditor General's report and calls on CEO and other officials of the state enterprise to respond to any queries and provide information regarding accountability. The law governing each state enterprise generally stipulates that appointments to the Board is formed by the line Minister. In practice, the appointments are politically influenced and are regarded as patronage to motivate those favoured but lost in elections (Auditors General Reports - 2009-2018).

The trend therefore has in the past two decades witnessed state enterprises face many organizational challenges (Auditor General's reports 2009 -2018). The major threats are principle of management duality and managerial entrenchment; managers put own interest ahead of those of the firm (Keay,2014; Moore, 2013). Furthermore, the Corruption Perception Index (CPI) Table 2019 by Transparent International, internationally ranked Uganda from 127 to 149 position from 2010-2018. Equally, weak or non- compliance of internal controls (ICs) has been registered in the State enterprises (SEs) (Wanyama et al., 2013)   contribute to management inefficiency.   In Uganda according to Auditor General's reports, (2010-2018) notable scandals involved, CHOGM Funds, Temangalo NSSF Land saga, Bank of Uganda $ 94.59 un-authorized transfer of cash printed, bicycle scam. This similarly saw unexplained deficit of revenue Shs.760.3 billion and budget variance of Shs.78.3 billion in salaries & wages (Background to the Budget-2018/19). The above scandals have involved key top government personalities some of whom have been censured whereas in others commissions of enquiries were set up and gave recommendations but little impact was realized. There has also been a shortfall in corruption perception index (CPI) from 127 to 149 for the period 2010 to 2019. The above have greatly contributed to declining performance of state enterprises in Uganda. Therefore, accounting risk management, internal controls and firm characteristics are significant intermediation factors to performance (Bogodistov & Wohlgemuth, 2017). Wanyama, Burton and Helliar (2013) carried cross-sectional survey investigating stakeholders' judgements on corporate governance in Uganda, with prominence on responsibility and management efficiency. The findings showed that concerns relating to corruption depart from conventional legal framework practices. Generally, studies carried on in Uganda have focused on various dynamics and adopted varied methodologies but have not embraced accounting risk management, firm characteristics and internal controls on performance of state enterprises.

Research Objectives

The purpose of this study is to examine the relationship among accounting risk management, firm characteristics, internal controls on performance of state enterprises in Uganda. The specific objectives were to:

(i)   Examine the relationship between accounting risk management and performance of state enterprises in Uganda.

(ii)   Determine the effect of firm characteristics on the relationship between accounting risk management and performances of state enterprises in Uganda.

(iii)   Determine the effect of internal controls on the relationship between accounting risk management and performance of state enterprises in Uganda

(iv)   Assess the joint effect of accounting risk management, firm characteristics and internal controls on performance of state enterprises in Uganda.

LITERATURE

Theoretical Review

Scholars and researchers of accounting risk management practitioners agree, there is a more diverse and complex association among the internal controls and firm characteristics on performance than can be dealt with in each individual theory (Cohen, Krishnamoorthy & Wright, 2015; Nicholson & Kiel, 2007). It is noted that neither the general model nor the links between these variables can be fully explained by a single theory. The conceptualization in this study is supported by the institutional, theory, agency, stewardship theory and risk management theory to link up the model with the variables of the study.

Institutional Theory

The institutional theory, as asserted by DiMaggio and Powell, (1991) is a theoretical perspective that explains and focuses on the design and implementation of core control procedures and practices in organizations (Fox & Hamilton, 1994). Meyer and Rowan (1977) and DiMaggio and Powell (1991) posit that it is a social, political and economic system that operate and gain their legitimacy. Arwinge (2013) contends that the theory eexamines the management attitudes, firm traditions, and industry standards embracing strategies for new control practices Arwinge (2013). Hogan, Rezaee, Riley and Velury (2008), affirms it guides the conceptualization of size, age and ownership tenure as exhibiting a probable significant impact on board structure and organizational performance (Hogan, Rezaee, Riley & Velury, 2008). According to Arwinge (2013), the management is not only concerned with risks and rewards and cost-benefits, but also examines the management attitudes, firm traditions, and industry standards embracing strategies for new control practices. The theory thus argues that state enterprises embrace a holistic institutional model as a system that predicts how accounting risk management, firm characteristics affect performance.

Agency Theory

Agency theory (Jensen and Meckling (1976) advocates and views organizations as complex series of connections of contracts between different situations. The theory creates contractual agreement between agent and principal and a principle that explains and resolve issues between them (David & Slyke, 2007). The Institute of Chartered Accountants (ICA) (2005) explains that agency problem arises due to lack of information, self-interest, lack of trust,

and temptation to pursue personal goals by agents and examines the information asymmetry between principals and agents (Donaldson & Davis, 1991; Selznick, 1994). David and Sylke (2007) asserts, the theory covers the analysis of the organization to include managerial motivation to separate ownership and control in organizational governance (David & Sylke, 2007). It is a situation where shareholders delegate daily operational responsibilities to management henceforth the need for strong internal controls to safeguard stockholder interests (Yasuda, 2005: David; Sylke, 2007). Agency theory also covers the analysis of the organization to include managerial motivation to separate ownership and control in organizational governance (David & Sylke, 2007). According to Morck, Shleifer and Vishny (1988) agency relationship influences major decisions which may affect the interest of principals as they are not involved in financing decisions (leverage) and employment of staff to implement strategies being pursued. The theory was therefore useful for this study because shareholders delegated daily operational responsibilities to management henceforth the need for strong internal controls to safeguard stockholder interests (Yasuda, 2005). In addition, the capital structure under agency theory enhances, performance (Okiro, Aduda & Omoro, 2015). This founded on the agency theory, this study builds a complete framework and supports that firm characteristics affects firm performance by integrating internal controls and compliance corporate governance structure into the accounting risk management model. The theory therefore supports the existence of firm characteristics, and internal controls on performance of state enterprises.

Stewardship Theory

As developers of stewardship theory, Donaldson and Davis (1991) advance that stockholders' wealth is protected and maximized by the steward. The stewards protect and maximize shareholders' wealth through organizational performance thus maximizing the usefulness functions of stewards. Nyakundi, Nyamita & Tinega, 2014) argue that the stewardship behaviour of managers results in exemplary corporate management practices when the espoused values of the firm are aligned with the ratified values (Unlike the agency theory as not only examines individualism (Donaldson, Davis & Preston, 1991), but the top management's role as stewards to strive and attain organizational goals. Nyakundi, Nyamita and Tinega (2014) opine that stewards are satisfied when organizational goals are achieved in order to increase the shareholders' returns (Donaldson & Davis, 1991; Selznick, 1994). However, Cohen, Krishnamoorthy and Wright (2015) advocate that it is for collaboration between the board, management and staff as activists of internal controls and accounting risk management tools to improve performance. The stewardship theory contrasts from the agency

theory in that it not only examines individualism (Donaldson, Davis & Preston, 1991), but the top management's role as stewards is to strive and attain organizational goals. Gupta et. al. (2016) assert that executives and other employees act more autonomously in order to increase the shareholders' returns. From the above, it can be argued that the theory highlights the need for monitoring costs and establishment of an internal audit function to enhance performance (Ondigo, 2016). Consequently, the stewardship advocates for collaboration between the board, management and staff as major attributes of internal controls and accounting risk management tools to increase performance (Cohen, Krishnamoorthy & Wright, 2015).

Risk Management Theory

This integrated perspective to risk management was developed in the 1960's and propounded in the 1970's and 1990's (Mehr & Hedges, 1963; Ehrlich & Becker, 1972; Miller, 1992). It was formalized and integrated and adopted by COSO (2004) in its framework on risk management. Coleman (2009)   avert that it is a comprehensive, integrated and coordinated process within the organization to manage all kind of risks that its faces for survival and improved performance over time. The risks have either direct or indirect effects on organization's survival and identifies the major source of loss or profitability risk that affects the net-value of assets and liquidity risk being the inability to meet obligations when they fall due, affects productivity (Ngugi, 2015). The requirements of risk management are a combination of risk factors associated with some type of investment decision in portfolio pointed out by Markowitz theory (1970) that has impact on performance. Kotler (2014) posits that risk management model adopts two major perspectives to measure risk, situation analysis and value at stake (situation analysis method does not need distribution risk assumption. The requirements of total risk is a combination of risk factors associated with some type of investment decision in portfolio pointed out by Markowitz theory (1970) that has impact on performance. Computation is highly subjective and presumes that impending outcomes will be similar to the prior ones (Anas & Fauziah, 2014). Probable losses are evaluated using asset return distribution in the value-at-risk (VAR) approach. According to Harelimana (2017) analytical VAR method and Monte-Carlo simulation are the two common approaches of computing VAR as they allow the management to forecast and measure the financial risk within the firm portfolio over pre-determined time span.   The theory consequently looks at firm characteristics and internal controls as a gateway for enhancing performance.

Empirical Review

Researchers have carried out various studies on variables direct and indirect relationships and there are reported inconclusive results, for instance the works of Noor and Abdalla (2017) examined the impact of financial risks in 120 corporations in Malaysia on how credit risk and liquidity risk affect performance, using ROE and ROA and findings showed positive relations amongst the variables. Similarly, Palmrose and Scholz (2004) explored the impact of financial reporting and financial restatements on financial performance in 492 manufacturing firms in Pakistan and found that only 19% of the cases were involved fraudulent activities that led to the closure of thirty of them a year later. Research was carried out by Cohen et al. (2014) on 160 business entities in Norway to establish the association between enterprises risk management and firm performance. Using composite index to analyse financial statements, the study found out that exposure to risk measurement, assessment, response and monitoring have an effect on budget performance. A similar study conducted by Gordon, Loeb and Tseng (2016) using regression analysis model was conducted on 95 public enterprises in Thailand, results revealed a significant association between risk management and budget control on performance. However, in a divergent view, Fadun (2017), in his survey on corporate governance in both developed and developing economies, observed corporate governance as a risk management instrument for improving organizations' performance and guard of shareholders' interest. The research explored how corporate governance affects performance, using survey data of thirty Nigeria Stock Exchange quoted corporations. The focus was on corporate governance concepts which included, board size, board independence, and CEO duality or tenure as ROA and ROE measured performance. Findings showed positive correlation between board size, independence of directors, and performance concepts; however, it alternate findings revealed negative correlation between CEO term and performance. Odalo, Achoki and Njuguna (2016) evaluated firm size may affect firm performance of 20 registered agricultural companies in Kenya. The objective was to assess gains derived using firm size and management efficiency on firm productivity. The study used Ordinary Least Squares (OLS) model and firm size indicator used total assets (log of assets) as a measure while financial performance indicators used earnings per share (EPS), ROA and ROE. Findings revealed positive relations between firm size and firm performance of agricultural corporations listed on the Nairobi securities exchange using the three indicators, ROA, ROE and EPS was positively significant. Likewise, firm size indicated positive relationship on all the parameters on performance, indicating that larger companies had a competitive advantage over small firms. Yasuda (2005), carried a study on 80 public entities in Japan, found that, ownership distinguishes the best performing entities in their growth and also established that organizations with ownership participation survived in businesses. However, the results would have been different if he used firm

age and size as moderating indicators and alongside accounting risk management indicators (these are; risk-based financial statement reviews, compliance and corporate governance, operationalization of accounting policy, financial reinstatement support, complex accounting analysis and reporting, close transformation and firm realignment) to enhance performance. Amato and Wilder (2012) in their survey on 120 public enterprises in Indonesia established that enterprise risk management indicators and firm size contribute to higher performance as a result of organized internal control structures. The study could have improved if they had also used ARM as a predictor variable and firm age and ownership for different results on performance.
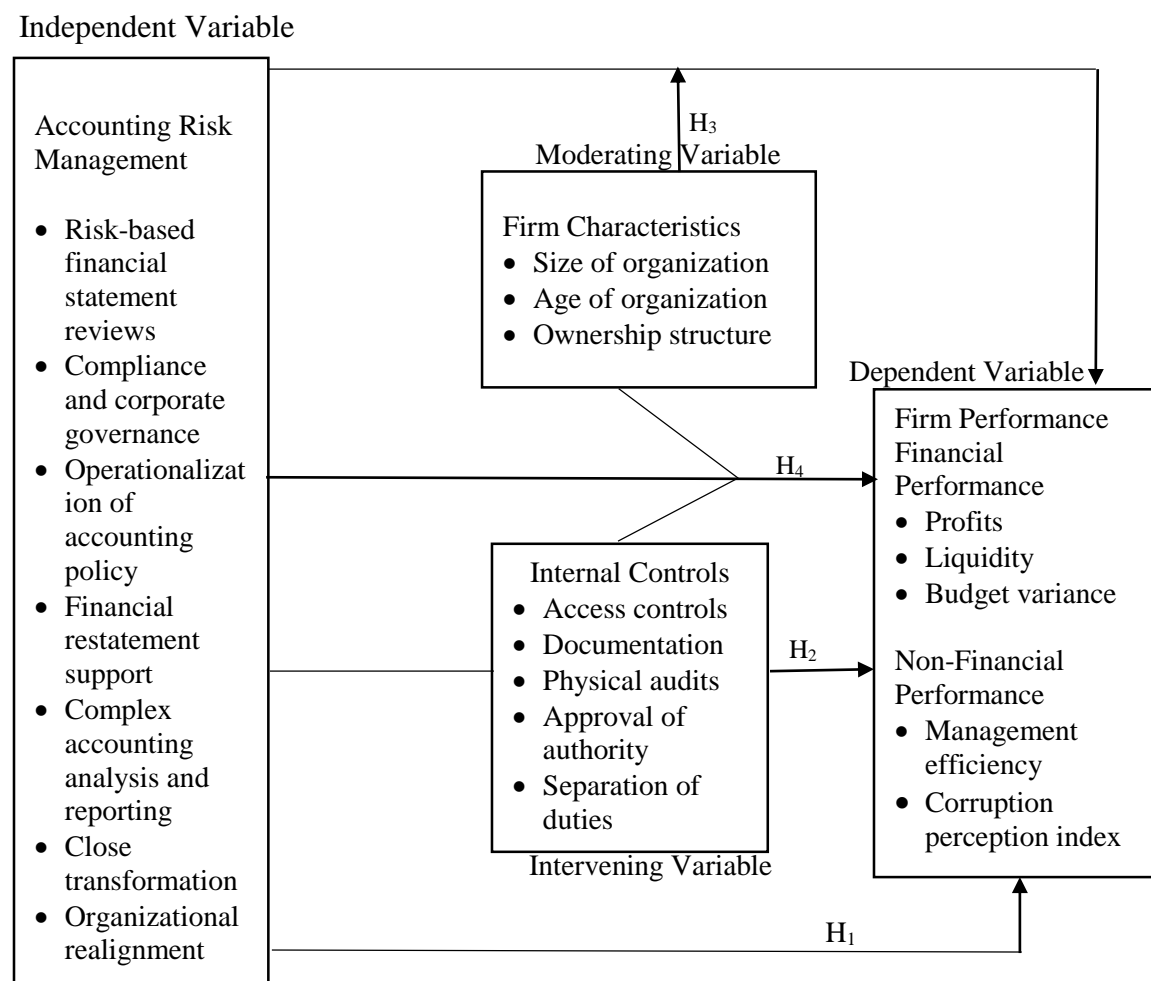
Research Gaps

The review of existing literature linking accounting risk management, firm characteristics, and internal controls on performance of state enterprises is narrow. Wakaisuka, et.al., (2016) focused on internal controls in financial institutions in Uganda but did not use accounting risk management and internal controls effect on performance. Th study used firm characteristics but on different parameters. Nabukeera et al. (2014) on privatization of parastatals in Uganda, focused on the effect of internal control systems on performance but did not apply accounting risk management and firm characteristics. Evidence by various studies indicate different variables used to measure performance, but none has investigated, ARM, firm characteristics, and internal controls on performance of state enterprises in Uganda. Fadun (2017) in his observation of significance of organizational governance in particular reference to developed and developing economies, established that corporate governance as a risk management instrument, improves firm performance and protects stakeholders' interests. Adeyemi and Adenugba (2013) studied influence of corporate governance on performance of 30 Nigeria Stocks Exchange listed business firms. They focused on three corporate governance variables, size of the board, independence of the board, CEO tenure and their effect on performance. ROA and ROE were measurement used as indicators for measurement of performance. Further research should introduce a consolidative concept model among accounting risk management and its performance with firm characteristics as a moderating variable in other sectors. Epstein and McFarlan (2016) discussed ARM in state enterprises in the public sector but did not embrace internal controls and firm characteristics in their study which this study has addressed. Elbama (2017) studied ARM on performance with no focus on the influence of access controls, documentation, approval of authority, and separation of duties to improve performance. Desouza et al. (2012) focused on performance of internal controls but did not apply ARM and firm characteristics affect performance. Krishnan and Visvanathan (2014) studied internal control deficiencies on performance in banks but did not include ARM and firm characteristics.

Conceptual Framework

The conceptual model (figure 1) integrated the theories, institutional theory, agency, stewardship and risk management theory to present a conceptualised interaction among accounting risk management (independent variables) and firm performance (dependent variables). The model further conceptualized internal controls as a mediating, while firms' characteristics a moderating in the relationship. This position is depicted in hypothesis two and three in the diagram. Finally, the model tested the joint effect of the three variables on performance in hypothesis four. This proposition has not been previously tested to the best knowledge of the researcher. The model postulates that since the ownership is separated from control, the agent could be motivated by selfish reasons. The internal and its effectiveness provides an essential controlling function in an effort to address the agency conflict that exists among the management and equity holders.

Figure 1 Conceptual framework

Hypotheses of the Study

From the above conceptual model, the following four hypotheses were formulated and tested:

H_1: Accounting risk management does not influence performance of state enterprises in Uganda.

H_2: Internal controls do not have an intervening effect on the relationship between accounting risk management and performance of state enterprises in Uganda.

H_3: Firm characteristics do not have a moderating effect on the association between accounting risk management and performance of state enterprises in Uganda.

H_4: There was no joint effect among accounting risk management, firm characteristics and internal controls on performance of state enterprise's in Uganda.

METHODOLOGY

Research Design and Population

A cross-sectional survey study was used because it observed and analysed data from a population at a specific point in time (Field, 20009). Ssendagire (2018), Wakaisuka (2017) and Ondigo (2016) used a similar design for similar studies. The study population comprised of 34 state enterprises from sectors; energy four; education two; information and communication five; trade and tourism six; lands and housing one; gender one; agriculture one; water and environment one; accountability three; security six; and public works and transport four, but only 32 responded representing 94% response rate.

The Data

Data for this research was collected using questionnaire for primary data while audited financial accounts for five years (2015-2018) for secondary data. Reliability of instruments were tested for consistent output or data after subsequent trials (Field, 2009; Cooper & Schindler, 2011). The Cronbach's alpha (α) was used to estimate the instrument's reliability value and 0.7 and treated as strong (Sheldon, 1978). Nunnally (1978). Validity was also tested to ascertain whether the research instrument truly measured the anticipated phenomenon with precision and the content validity index ≥ 0.7 was considered (Sekaran, 2009; Zikmund & Saunders, 2006). The diagnostic tests, tested the relationship between the variables; normality was tested using P-P Plots, histogram; Shapiro-Wilk test; multicollinearity, was tested using Variance Inflation Factor (VIF), Tolerence statistics and Conditional Index Number; homoscedasticity was tested by plot of residuals and Levene test-the equality of variances tested the null hypothesis.

Operationalization of Variables

The study used profitability, liquidity, budget variances, management efficiency and corruption perception index to measure performance. Consistent with Odalo, Achoki and Njuguna (2016), the research used Ordinary Least Squares (OLS) model to analyse data. Firm size indicator used total assets (log of assets) as a measure while financial performance indicators used earnings per share (EPS), ROA and ROE. On the other hand, regression model presented goodness of fit to determine the regression between log of total assets, ROE and earnings per share respectively. It was observed that overall regression model of ROA, ROE and earnings per share (EPS) was significant. This study looked at accounting risk management and used indicators; risk-based financial statement reviews, Compliance and corporate governance, operationalization of accounting policy, financial restatement support, complex accounting analysis and reporting, close transformation and organizational realignment to ensure final statements are free from misrepresentation (Cohen et al. (2014). The internal control's used multi-variables comprising; access controls, documentation, physical audits, approval of authority and separation of duties to safeguard assets from misuse and waste (Kobia, Vanessa, Wieble and Ayukut, 2017).

Table 1 Operationalization of the Variables

Type of Variable	Variable Name	Indicator	Operational Definition	Data Type	Measurement
Independent variable	Accounting Risk Management	Risk based financial statement reviews	Regular detailed reviews of financial statement to recognize major risks or extremely informative accounting matters so as to circumvent having a matter raised subsequent to the new financial year through pre-clearance with the auditor general.	Likert scale	Interval
		Compliance and corporate governance	Implementation of enhanced accounting internal controls and progression standardization within the shared-services; implementation of restitution strategy to solve auditor material weakness findings for the organization,	Likert scale	Interval

		assessed and documented.		
	Operationali-zation of accounting policy	Preparation of detailed accounting guidelines and procedures; Operationalization of all established accounting guidelines and procedures for key technical areas in the organization; developing consistent and dependable guidelines and procedures to avoid accounting risks from emerging.	Likert scale	Interval
	Financial restatement support	Preparation of restated financial statements and regulatory filings; holding consistent communications with the organization's audit committee concerning improvement in preparation of financial statements in government.	Likert scale	Interval
	Complex accounting analysis and reporting	Providing leadership in financial reporting processes aimed at making improvement and transition as part of central government accounting requirements.	Likert scale	Interval
	Close transformation	Rationalisation and standardizing risk management progressions; improving risk diagnostic and reporting tools; improving information technology support systems in management of risks.	Likert scale	
	Organization realignment	Evaluation of the finance and accounting firm design, reviewing current resources, recommending supplementary resource requirements in important areas; strengthening of operational effectiveness; designing a road map that aligns the risk management objectives and workflows throughout the organization.	Likert scale	Interval

Intervening variable	Internal Controls	Access controls	Security technique used to regulate use of organization resources and physical access assets.	Likert scale	Interval
		Documentation	Use of enterprise standard documents to indicate financial transactions, ensure regulated storage and retrieval.	Likert scale	Interval
		Physical audits	Physical verification is the procedure that normally performs by the auditor to confirm the existence of certain physical assets that records in the client's' financial statements.	Likert scale	Interval
		Approval of authority	Approval authority needs specific line managers to authorize particular transactions. This adds a layer of responsibility to accounting records.	Likert scale	Interval
		Separation of duties	Concept of not allowing one staff to handle a task alone from origin to completion. This is done by separation of duties to prevent fraud and error.	Likert scale	Interval
Moderating variable	Firm characteristics	Size of organization	This may refer to the number of subordinates below the supervisor's direct control or market share of the firm in the industry.	Real value	Ratio
		Age	Determined by the existence of the organization since inception and the period of operations in business.	Real value - Likert scale	Ratio
		Ownership structure	Regulates the control of management and operations of the organization. It is the legal shareholding of share capital.	Likert scale	Interval

		Profits	Profit is a financial gain attained as revenues collected exceed expenses incurred. Profit is calculated as total revenue minus total expenses.	Real value- Likert scale	Ratio
Dependent variable	Firm performance	Liquidity	Measures the extent of availability of cash to meet instantaneous short-term dues, or current resources that are rapidly converted to handle the obligations.	Real value- Likert scale	Ratio
		Budget variance	Variance is the difference between the budgeted and baseline amount of expenditure or revenue and the actual amount. If the budgeted value is higher than the actual, the results are adverse and vice versa. Is also measurement of actual against its expected outputs or goals (Goodwin, 2003.	Real value- Likert scale	Ratio
		Management efficiency	The management's performance is qualitatively evaluation of management's output, systems, firm discipline, quality of staff among others.	Likert scale	Interval
		Corruption perception index	The implementation of prevention strategies and initiatives to curtail corruption in enterprises.	Indices	Ratio

Data Analysis Approach

The study adopted multivariate analysis to establish the relationship among accounting risk management and firm performance; firm characteristics as a moderator on the relationship between accounting risk management and firm performance; internal controls as a mediating variable between accounting risk management and firm performance and joint effect of accounting risk management, firm characteristics, and internal controls on financial performance of state enterprises in Uganda. Primary data was collected using semi-structured questionnaires on accounting risk management, firm characteristics and internal controls while secondary data was derived from final accounts of SEs and annual reports from Transparent International, Uganda for Corruption Perception Indices. The unit of analysis were state enterprises and unit of inquiry were, Chief Executive Officer, Finance Managers, Chief internal auditor, HRM and

Procurement Manager Data was received from 32 state enterprises indicating a response rate of 94%.

Table 2 Analytical Model, Analysis Techniques and Interpretation

Objective	Hypothesis	Analytical Model	Analysis Techniques	Interpretation
Examine the effect of ARM and performance of state enterprises in Uganda	H_1: ARM does not influence the performance of state enterprises in Uganda	$FP = \beta_0 + \beta_1 ARM + \varepsilon$ $NFP = \beta_0 + \beta_1 ARM + \varepsilon$ where FP is final performance, NFP is non-financial performance, ARM is accounting risk management, ε is error term.	Simple linear regression and factor analysis.	R^2 for goodness-of-fit, F-test -overall significance, T-test- individual significance and marginal changes.
Determine the effect of internal controls on the association between ARM and performance if state enterprises in Uganda.	H_2: Internal controls do not have an intervening effect on the association between ARM and performance of state enterprises in Uganda.	Financial Performance Measures Step (i) $FP = \beta_0 + \beta_1 ARM_+ \varepsilon$ Step (ii) $IC = \beta_0 + \beta_1 ARM + \varepsilon$ Step (iii) $FP = \beta_0 + \beta_1 ICs + \varepsilon$ Step (iv) $FP = \beta_0 + \beta_1 ARM + \beta_2 IC + \varepsilon$ Non-Financial Performance Measures Step (i) $NFP = \beta_0 + \beta_1 ARM_+ \varepsilon$ Step (ii) $IC = \beta_0 + \beta_1 ARM + \varepsilon$ Step (iii) $NFP = \beta_0 + \beta_1 ARM + \beta_2 ICs +$ Step (iv) $FP = \beta_0 + \beta_1 ARM + \beta_2 ICs + \varepsilon$ where, ICs is internal controls.	Multiple linear regression, Baron and Kenny test, and factor analysis.	R^2 for goodness-of-fit, F-test -overall significance, T-test - individual significance, and marginal changes.
	H_3: Firm characteristics do not have a moderating effect between ARM and performance of state enterprises Uganda.	$FP = \beta_0 + \beta_1 ARM + \beta_2 FC + \beta_3 ARM^* FC_+ \varepsilon$ $NFP = \beta_0 + \beta_1 ARM + \beta_2 FC + \beta_3 ARM^* FC_+ \varepsilon$ where FC is firm characteristics.	Multiple linear regression and factor analysis.	R^2 for goodness-of-fit, F-test - overall significance, T-test - individual significance, and marginal changes.
Assess the joint effect of ARM, Internal controls and firm characteristics on performance of state enterprises in Uganda.	H_4 There was no joint effect among ARM internal controls and firm characteristics on performance of state enterprises.	$FP = \beta_0 + \beta_1 ARM_+ \beta_2 IC + \beta_3 FC + \varepsilon$ $NFP = \beta_0 + \beta_1 ARM_+ \beta_2 ICs + \beta_3 FC + \varepsilon$	Multiple linear regression and factor analysis.	R^2 for goodness-of-fit, F-test -overall significance, T-test - individual significance, and marginal changes.

FINDINGS AND DISCUSSIONS

Table 3 revealed that state enterprises were performing better in firm characteristics with a 4.03 mean and 0.65 standard deviation, followed by internal controls, mean of 3.89 with standard deviation of 0.69, ARM, mean 3.79 with standard deviation of 0.59 and firm performance, mean of 3.25 with standard deviation of 0.50, implying that state enterprises were not sure of their performance.

Table 3 Descriptive Statistics for Study Variables

Study Variables	Mean	Standard Deviation
Accounting risk management	3.7924	0.58686
Firm characteristics	4.0274	0.64833
Internal controls	3.8861	0.68631
Firm performance	3.2523	0.49597

The composite variable was created by combining the four variables of ARM, firm characteristics, internal controls and firm performance into a single variable as in table 4.3 above. To get the composite variable, items were aggregated and loaded on each component and aggregated to make up a composite variable.

In Table 4 below, the outcomes presented by most of the respondents agreed on all aspects under investigation given that the means were above 3.5 on the Likert scale, except for restructuring of personnel in departments every year within the organization and there were changes in operations or activities in departments every year with means of 2.45 and 2.32, respectively. This indicated that restructuring of personnel in departments was not done every year and there were no changes in operations or activities in the departments of the variable ARM under study.

Table 4 Descriptive Statistics for Accounting Risk Management

Accounting Risk Management	Mean	Standard Deviation
All procedures on financial transactions are fully followed	4.0474	.46413
Enterprise regularly trains staff to improve their skills in ARM	3.4813	.74414
Management ensures that all comments on the review of financial statements are adopted and adjusted in the financial statements	4.1849	.44972
Accounting operating rules and procedures are displayed on organization's official website and are accessible	2.9393	.78572
Board of Directors meet regularly to monitor the conduct of business in line with rules and procedures	4.0682	.56455
Organization has an audit committee	4.3594	.54329
Audit committee and Board of Directors review significant elements	4.1237	.49816

of the enterprise's financial statements		
Financial performance is communicated to stakeholders and employees immediately after the financial statements have been audited	3.7172	.53926
Errors discovered by external auditors in the final accounts are communicated and rectified before they are passed by the directors	4.0563	.68612
Audit committee is vigilant in scrutinizing all financial transactions, including revision regarding evaluation of reports by external auditors	3.9578	.63786
Staff understand the operations and activities the business/organization is doing	4.1451	.38611
Management understand the operations and activities carried out in the organization	4.3737	.46058
Financial reports are understood by all management staff	3.7870	.71413
Board of Directors checks management's performance on activities, present alternative views on findings and act on any wrongdoing	4.0729	.47073
Accounting system analyses the financial reports in detail (profit and loss, statement of financial position, budgets, cash flow statements)	3.5260	.84579
Budgets are prepared each year	4.3852	.88971
Budgets are implemented and monitored promptly	4.1581	.65063
Chart of accounts is available and clear to follow and understand	4.0815	.65990
Restructuring of personnel in departments is done every year within the organization	2.4531	.77192
There are changes in operations or activities in departments every year	2.3229	.73809
There is improvement in managerial supervision in the organization	3.7164	.52432

Given the distribution of the means in Table 5 below, most of the responses were above 3 on the Likert scale. This implies most respondents agreed that their enterprises performed well under firm characteristics.

Table 5 Descriptive Statistics for Firm Characteristics

Firm Characteristics	Mean	Standard Deviation
Organization chart is not complex	4.2164	.55675
Supervisor is available any time you need him	4.2273	.54195
Work-related problems are solved instantly when they happen	3.8107	.60169
Enterprise has a well-elaborated organizational structure	4.2026	.60307
Number of employees is adequate to the enterprise requirements	3.6049	.62664
All employees who work in the enterprise are qualified	3.8310	.54309

The results in Table 6 below display the descriptive statistics on firm performance. The findings show, highest mean for management efficiency (3.92); followed by liquidity (3.03). This

implied that the state enterprises were performing well in the two areas with means above 3. While profits with a mean of 2.78 and budgets with a mean of 1.30 were not properly handled and were, therefore, not contributing to enhance performance of the state enterprises.

Table 6 Descriptive Statistics for Firm Performance

Firm Performance	Mean	Standard Deviation
Profits	2.7813	1.75489
Budgetary deviations	1.3031	0.77355
Liquidity	3.0250	1.59657
Management efficiency	3.9161	0.40471

Table 7 below indicates Cronbach's α values for ARM, 0.964; firm characteristics, 0.850; internal controls, 0.918 and firm performance, 0.738 respectively. The conclusion is all variables qualified for further analysis since scores were > 0.7, indicating a moderate internal consistency.

Table 7 Composite Reliability

Study Variables	Number of Items	Cronbach's Alpha
Accounting risk management	70	.964
Firm characteristics	8	.850
Internal control	22	.918
Firm performance	4	.738

Table 8 below presents the outcome run by KMO and Bartlett's model whose results are presented. The KMO and Bartlett's measure assessed the suitability of factor analysis. Findings were, chi-square, 2266.034 with 231 degrees of freedom at significant at 0.05 level of significance, implying data was suitable for EFA and further examination to be performed. After this, items loading 0.5 and above were considered to have sufficient variation with the component of ARM as presented in the communalities.

Table 8 Kaiser-Meyer-Olkin and Bartlett's Test on Accounting Risk Management

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.837
Bartlett's Test of Sphericity	Approx. Chi-Square	2266.034
	df	231
	Sig.	.000

Table 9 presents the Pearson correlation coefficient (is the measure of the strength of the association between the two variables) findings that determined the strength of the relationship between variables. Results indicate ARM moderately positively correlated with firm

characteristics. The table also indicates a relatively strong positive correlation amid internal controls and ARM. Furthermore, there was moderately positive correlation between ARM and firm performance. However, there was relatively negative correlation between firm characteristics and firm performance. Therefore, results reveal, there is a linear association among the study relations.

Table 9 Bivariate Correlations

	Accounting risk management	Firm characteristics	Internal control	Firm performance
Accounting risk management	1.000			
Firm characteristics	0.424**	1.000		
Internal control	0.567**	0.310**	1.000	
Firm performance	0.228**	-0.157*	0.287**	1.000

N= 32, **. Correlation is significant at the 0.01 level (2-tailed).
    *. Correlation is significant at the 0.05 level (2-tailed).

Table 10 below shows tests for normality using Shapiro-Wilk test. The *Shapiro-Wilk test* evaluates whether a variable is normally distributed within the population and is determined by the p-value. If p-value $\geq$ 0.05, data is considered as normal but if p-value < 0.05, then data significantly deviates from the normal distribution. Normality test to establishes whether the sampled data was drawn from a normally distributed population within some tolerance (Field, 2009). Therefore, the results in Table below show Shapiro-Wilk value and p-value of firm performance, 0.977; ARM 0.949; firm characteristics 0.889; and internal controls 0.883. Since all p-values were >0.05 the conclusion indicates survey variables are normally.

Table 10 Tests of Normality of the Study Variables Using Shapiro-Wilk Test

Study Variables	Statistic	Degrees of Freedom	P-Value
Firm performance	.977	32	.059
Accounting risk management	.949	32	.070
Firm characteristics	.889	32	.350
Internal controls	.883	32	.460

Table 11 below shows multi-collinearity among study variables. This refers to a situation where exists a high linear relationship among more than two predictor variables in a multi-regression assumption. The variance inflation factor (VIF) is a measure of the amount of multi-collinearity in a set of multi regression variables and CIN shows the degree of multicollinearity in a regression design matrix. They are used to assess multi-collinearity in a multi-regression model. Tolerance measurement is between 0 and 1, VIF measurement is less than 10 and

condition index number (CIN) measurement is less than 30. From Table below tolerance was less than 1, VIF was less than 10 and CIN was less than 30 for all the variable, which means multicollinearity was not violated.

Table 11 Multi-Collinearity Among Study Variables

Study Variables	Collinearity Statistics		
	Tolerance	Variance Inflation Factor	Condition Index Number
Accounting risk management	0.610	1.638	14.14
Firm characteristics	0.813	1.229	18.26
Internal controls	0.672	1.487	19.50

Table 12 shows homogeneity tests and results indicate p-value of the Levene test statistics < 0.05, therefore, indicates the assumption of homogeneity was violated.

Table 12 Test of Homogeneity of Variances of the Study Variables

Study Variables	Levene Statistic	Degrees of freedom 1	Degree of freedom 2	Sig.
Accounting risk management	4.616	7	25	.000
Firm characteristics	7.776	7	25	.000
Internal controls	6.662	7	25	.000
Firm performance	6.955	7	25	.000

Based on Table 13 below, 12.2 percent of deviations in firm performance are described by ARM, which was a low explanatory power. Since the p-value = 0.000 is less than α-value = 0.05, conclusion is overall model and ARM were significant and hence ARM was significant in explaining firm performance. The linear regression analysis model of ARM and firm performance was FP =2.608 + 0.34 ARM. This implies that, if ARM is increased by one-unit, then firm performance will be also be increased by 0.34 units on average.

Table 13 Regression of Accounting Risk Management on Firm Performance

Variable	Coefficients	R^2	Adjusted R^2	Standard Error	T-Value	P-Value	F-Value
		0.122	0.116			0.000	21.701
Constant	2.608				9.317	0.000	
ARM	0.340			0.073	4.658	0.000	

According to the results in Table 14 below, 14.8 percent of variations of firm performance are explained by ARM and internal controls, which was low explanatory power. In

addition, the results were significant because the p-values for the constant, ARM, and internal control were less than α-value = 0.05, hence internal controls had mediating reaction on the linkage amid ARM and performance of state enterprises in Uganda. The predictive linear regression equation was, therefore, FP = 2.39 + 0.23ARM + 0.16IC meaning that if ARM had an increment of one-unit, firm performance on average would be increased by 0.23 units, and if internal control rose output by one-unit then firm performance, would on average rise by 0.16 units.

Table 14 Regression of Accounting Risk Management and
Internal Control on Firm Performance

		R^2	Adjusted R^2	Standard Error	T-value	P-Value	F-Value
Variable	Coefficients	0.148	0.137			0.000	13.42
Constant	2.387				8.088	0.000	
ARM	0.233			0.088	2.660	0.009	1.474
Internal control	0.161			0.075	2.153	0.033	1.474

Findings in Table 15 show R^2 change was significant but interaction term was not significant. Therefore, there was no moderation, since interaction term was not significant. This finding supports the hypothesis (H_3) which stated, firm characteristics had no moderating influence among ARM on performance of state enterprises. The composite variable was created by combining or aggregating data of indicators of ownership, age and size into a single variable. This was computed by aggregating data by summing up scores of raw data, getting the averages and were transformed into weighted averages. This implied that firm characteristics indicators; ownership structure, age and size of firm did not moderate ARM and performance of state enterprises in Uganda since the interaction term was insignificant (p-value > 0.05).

Table 15 Regression of Accounting Risk Management and
Firm Characteristics on Firm Performance

		R^2	Adjusted R^2	Standard Error	T-value	P-Value	F-Value
Variable	Coefficients	0..140	0.137			0.000	8.33
Constant	4.819				3.506	0.006	
ARM	-.210			0.397	-.529	.598	1.474
Firm Characteristics	-.705			0.3628	-1.943	.054	1.474
Interaction term	.134			0.102	1.312	.191	

As per the Table 16 below, 20.6 percent of variations of firm performance was expounded by ARM, firm characteristics, however, internal control revealed a low explanatory power. Similar, the p-values, the constant and the firm characteristics were significant as their p-values were less than α-value = 0.05. On the other hand, ARM and internal control variables were not significant because their p-values were more than α-value = 0.05. Hence, the conclusion was there was a joint effect of firm characteristics and performance of state enterprises in Uganda, but there was no joint effect of ARM and mediating variable on performance of state enterprises in Uganda. The predictive linear regression was FP = 2.04 + 0.22FC implying an increase in firm characteristics by one-unit, would result to an average increase of 0.22 units of firm performance.

Table 16 Joint of Effect of Accounting Risk Management, Firm Characteristics and Internal Controls on Firm Performance

Variable	Coefficients	R^2	Adjusted R^2	T-Value	P-Value	Change R^2
		0.206	0.190			0.206
Constant	2.040			6.708	0.000	
ARM	0.115			1.254	0.212	
Firm characteristics	0.223			3.355	0.001	
Internal control	0.145			2.026	2.026	

CONCLUSION

The hypothesis H_1 was rejected implying existence of significant association among ARM and performance of state enterprises in Uganda. Apparently, the presence of significance of association among ARM and firm performance, it implies that adherence to concepts of ARM will improve performance of state enterprises. Therefore, with indicators of ARM, the conclusion is, the better the risk-based financial statement reviews, compliance and corporate governance, operationalization of accounting policy, financial restatement support, complex accounting analysis and reporting, close transformation, and firm realignment, the better the firm performance of state enterprises.

Hypothesis H_2 assessed the effect of internal controls as a mediator between ARM and performance of state enterprises in Uganda. The findings disclosed internal controls has an intervening effect on the relationship between ARM and firm performance of state enterprises. It can, therefore, be confirmed that internal controls had an intervening effect on the association between ARM and performance of state enterprises in Uganda.

The rejection of hypothesis H_3 reveal that there was no moderating effect on the association between ARM and firm characteristics on firm performance of state enterprises in

Uganda. It can be concluded that size of organization, age of organization and ownership structure had no influence on performance of state enterprises in Uganda.

Hypothesis H_4 measured the joint impact of ARM, firm characteristics, internal controls on performance of state enterprises in Uganda. The study's findings revealed there was a joint effect of firm characteristics and performance of state enterprises in Uganda.

RECOMMENDATIONS

For meaningful and successful business decisions, firms should adopt ARM tools for implementation of stringent internal controls and FCs, to register tremendous improvement in firm performance

Considering complex environment, businesses are operating in, there is need for multidimensional approach to improve performance through ARM, ICs & FCs

Management should also keep track of and monitor budget variances to avoid unnecessary and wasteful expenditures through corruption tendencies

LIMITATIONS AND FURTHER RESEARCH

There were some confines of the study, however, the researcher brought in mitigations to counter the limitations. When the survey respondents expressed fear of filling in the questionnaire owing to its length and the technicality in some of the questions, the researcher took it upon himself to simplify the troublesome questions in terms that were easily understandable to the respondents. The researcher also engaged a research assistant to help distribute the questionnaires and to receive them back for timely analysis.

The study could adopt a qualitative approach using the same variables. For future research, triangulation of both the quantitative and qualitative approaches could be considered. Perceptions of respondents could be studied longitudinally. Findings of firm characteristics (age, size and ownership structure) could be carried out in other sectors

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