Original Research Article

The Current Status of Responsibility Accounting in Ugandan Public Universities

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The purpose of this paper is to examine the mediating effect of the agency relation on the relationship between the hierarchical structure and responsibility accounting at academic departments in Ugandan public universities. This study was based on a cross-sectional survey research design that was limited to academic departments from public universities in Uganda. The main focus is to establish the role of the agency in the relationship between hierarchical structure and responsibility accounting. The paper adopted the Boran and Kenny approach, hierarchical regression analysis, and bootstrapping to test for mediation effects. Agency relation is a significant mediator in the association between the hierarchical structure and responsibility accounting. It also boosts the relationship between the two by 25.6 percent in the academic departments of public universities. Further, the finding confirmed a partial type of mediation between hierarchical structure and responsibility accounting. In order to have a meaningful and viable interpretation of the results of the relationship between the hierarchical structure and responsibility accounting practices, it is important to assess the role of the third variable (agency relation) in the relationship. This enables practitioners and scholars to explain and recommend agency relation as viable means that foster transparency and efficiency in an organization. This is study focused on testing the mediating effect of agency relation on the relationship between hierarchical structure and responsibility accounting at academic departments in Ugandan public universities.

Keywords: Agency relations, Hierarchical structure, Responsibility accounting, Public universities, Uganda.

INTRODUCTION

Responsibility accounting is an information system that classifies data according to areas of responsibility and reports each area's activities. The reports include only the revenues, costs and resource categories that the assigned managers can control. (Drury, 1996, 2004). The costs or revenues are accumulated and reported by levels of responsibility upwards within the organization (Garrison, 1991) depicting vertical relation that demonstrates agency relation from one supervisory level to another upwards.

Subsequently, the economic units are divided into different administrative units which need control systems to monitor and evaluate their managers' performance and accounting them and ensuring valid exercise of their delegated authorities (Talal-Alkawi, 2013). Kamukama (2006) notes that as an organization grows in size, structuring it into hierarchy of responsibility centres, a manager is held responsible to its activities according to financial information needed under his or her controls.

This paper contributes to the ordering of responsibility accounting that follows hierarchical patterns in an organization. We therefore, can argue that we cannot have structure without agency relation. Agency theory attempts to describe the

relationship between principal and agent by using the metaphor of a contract. You cannot have agency without a structure (Eisenhardt 1989). Eccles (1985) says that agency relation can be applied in employment relationship and vertical workflow integration relationship. For instance, managers are agents who are responsible for the performance of their units because they are the representatives of their organizations on behalf of Management (principals) while implementing activities based on budgeted funds under their control (Jones and Thompson, 2000). Management also has a responsibility based on the authority delegated as agents on behalf of public (principals). These suggest that agency relation has mediating role within structures that requires further investigations.

In Uganda, Public universities governance structures are departments, faculties, schools, or colleges. These are major administrative areas where financial performance measures are conducted within a university control hierarchy based on budget. To increase managerial and operational efficiency, budget at each administrative area, is prepared after a long and widely participatory process. The objective of the consultation process is to seek the views of all the stakeholders in order to ensure that the institutional budget

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reflects the views, aspiration and priorities of all the stakeholders (MOFPED, 2009). The aim of the study was to establish the mediating effect of agency relation on the relationship between hierarchical structure and responsibility accounting at academic departments in Ugandan public universities.

This study is expected to enable scholars and practitioners to have clear and insightful explanations of the implication of agency relation in the association between hierarchical structure and responsibility accounting in collective agency situation that follows hierarchical arrangements in public sector organizations. In addition, more explanations are needed on how agency relation transmits the effect of hierarchical structure to responsibility accounting.

LITERATURE REVIEW

Hierarchical structure defines each employee's role and the nature of their relationship with other employees (Schein, 1971, 1988). It basically lays out who is in charge of whom and who makes the decisions inside an organization (Fontaine, 2007). In a centralized structure, the decision-making power is concentrated in the top layer of management and tight control is exercised over departments and divisions. On the other hand, in a decentralized structure, the decision-making process is distributed over the departments and divisions which have varying degrees of autonomy (Katz and Kahn, 2006).

However, for a group of agents to act in an organized way, that is, to be able to manage their collective endeavors, specific structures between their roles are necessary in order to guarantee the effectiveness of organizational activities (Grossi, Royakkers & Dignum, 2007). This implies a hierarchical relationship, in which an agent serves the purpose of a principal (Jones and Thompson, 2000). Grossi, Royakkers & Dignum (2007) argues that the way obligations and knowledge flow within groups of agents is in turn related with the organizational structure those groups display. The possibility to delegate tasks to subordinated agents, or to successfully inform other agents about the actual state of the organization, or recovery mechanisms in place are all aspects influencing the assessment of responsibilities within organizations.

But, a normal functional agency relationship exists when one party (the principal) depends on the actions of another (the agent) to achieve the aims of the firm (Jensen and Meckling, 1976). Any employment relationship is an agency relationship. The hiring organization, or a manager representing the owner's interest, is the principal and the employee is the agent (Bergen, Dutta & Walker, 2001). Given that most formal hierarchical structures consist of multi-employees at various hierarchical levels, exercising authority necessarily involves managing agency relationship. The problem lies in the fact that once the agent has been appointed he or she is able to act in his or her own selfish interests rather than pursuing the objectives of the principal.

However, the key issue is how to evaluate and reward the agent's performance so that he or she will be motivated to behave in a manner consistent with the shareholders' goal and what information strategy should be employed to make such evaluation (Bergen, Dutta & Walker 2001). Nikkinen and Sahlstrom (2004) observe that various mechanisms may be used to align the interests of the agent with those of the principal. In employment, employers (principal) may use: piece rate or commission, profit sharing, efficiency wages, performance measurements (including financial statements), or

agency relation. These as incentive structures and in particular agency relation are intended to motivate managers to strive to achieve the organizational objectives and as a measure to build a strong bond between employer and employee for control and information flow (Kagaari, 2010) as a way tailoring controls to needs for efficiency (Koontz and Weihrich, 1988).

Agency relation, as an aspect of a hierarchical structure, serves as a nexus for a set of contracting relationships among individuals, the principal (employer) and agent (employee) (Jensen and Meckling, 1976). According to Jensen and Meckling (1976), Jensen and Smith (1985), the agency theory is concerned with exchanges in which one party (the principal) delegates responsibilities for a specific set of actions to another party (the agent). Responsibility accounting involves breaking an organization down into a series of "control centres" (Needhama and Drasfield, 1997). Managers take the responsibility for managing the budget relating to their particular control centre, acting as agents. They become accountable to the principal who exists in a hierarchical structure. As all organizations have a structure of control, it is important that the responsibility accounting fits around this.

Responsibility accounting is a method of accounting that collects and reports revenues and costs data by areas of responsibility. The method is based on the assumption that managers should be accountable for their own actions, the actions of their subordinates, and any activities performed in their responsibility centre. People inside the organization should also be held accountable and responsible for their own actions and the actions of those under their charge (Safa, 2012). This is a reflection of an agency relation depicting principal-agent relation. Costs, and or revenues are traced to the organizational units and individual managers with related responsibility for controlling them, as performance measures to evaluate their costs, and or revenues performance (Jiambalvo, 2004) based on budgeted costs, and or revenues estimates.

Accordingly, managerial performance evaluation should be designed to reflect the different levels within the organization and the responsibilities of each of the managers concerned. In this way hierarchical structure relates to agency relation and agency relation relates to responsibility accounting. Therefore hierarchical structure relates to responsibility accounting. Drury (1996, 2004) asserts that responsibility accounting system breaks down if individuals who lack authority to control expenditure are incorrectly charged with the responsibility for its occurrence. Chandan (2007) argues that in a hierarchical setting, a subordinate is accountable to his or her supervisor for their own decisions and actions and the decisions and actions of his or her subordinates in turn. Therefore, it can be hypothesized that:

H_1"Hierarchical structure and agency relation is positively related"

H_2"Agency relation and responsibility accounting is positively related"

In Uganda, public universities' budget process is consultative and participatory so as to promote transparency, ownership, and accountability of the processes for the approval of the budget estimates. Discussions of the budget proposals follow a hierarchical pattern from departmental budget committee, faculty budget committee, finance management committee, finance committee of council to council. Heads of department and faculty deans are responsible for organizing, coordinating, and presenting their sector budget proposals to during the various stages of the budgeting process. Revenue and

expenditure estimates are clearly defined in the budget preamble with measurable targets that are directly linked to the accompanying work plans and procurement plans (KYU financial management manual, 2013). This promotes mutual understanding from academic departments and faculties to the university authority. Therefore, it can be hypothesized that:

H_3 "Hierarchical structure and responsibility accounting is positively related"

H_4 "Agency relation mediates the relationship between hierarchical structure and responsibility accounting."

METHODOLOGY

The study employed a cross-sectional survey design using both quantitative and qualitative approaches to assess the mediating effect of agency relation on the relationship hierarchical structure and responsibility accounting. The cross-sectional design was preferred to avoid the use of control that would be required in a longitudinal design (Creswell, 2009; Sekaran, 2008). The population consisted of 256 heads of academic departments out of which 202 were sampled, from five public universities in conformity with Krejcie and Morgan (1970) published table.

The public universities were Makerere, Kyambogo, Mbarara, Gulu, and Busitema. The unit of analysis and unit of inquiry were academic department and heads of academic department respectively. The reason for their choice is that they occupy position of responsibility within university administrative structure where performance measures are conducted. A systematic sampling procedure was applied for sample selection. The selection procedure involved picking from a sampling frame obtained from a list of academic departments obtained from human resource department.

Responsibility accounting variables were measured using 20 items adapted from an instrument developed by Hofstede (1967) supplemented with items from Simon et al. (1954) for harmonizing in the context of the study. The items were anchored into a 6-point Likert scale ranging from 6 (extremely true) to 1 (extremely untrue). Respondents were asked to indicate their opinions on the costs or revenues items s/he controls or has authority to influence at the academic departments Hierarchical structures were measured using 20 items of the scale developed by Aston group.

The selection of items, some were modified from Inkson et al. (1970); Ghoshal and Nohria (1989); and Govorindarajan (1988). Each respondent was asked to indicate the extent to which financial decision-making authority on operational costs or revenues vested was vested at academic department. It was based on the 6-point Likert scale ranging from 6 (always without fail-100%) to 1 (never to less than a quarter of the time). For instance, decentralized authority permits this university unit to make operating financial decisions. For agency relation was measured using 10 items adapted from an instrument developed by Martinez and Kennerley (2005) cited in Kagaari (2010).

Each respondent was asked to indicate the extent of agreement or disagreement on the items provided on the questionnaire on the relationship between academic departments and university higher level units on operational costs and or revenues The 6-point Likert scale ranged from 6 (agree completely without any doubt) to 1 (disagree completely without any doubt). The rating scale was a six-point likert scale. All values had discrete values of 1, 2, 3, 4, 5, or 6. This scale is practical and interesting, does not have a midpoint and

in that sense forces a choice (Worthen, White, Fan & Sudweeks cited in Kagaari, 2010). The six-point Likert scale was adopted in anticipation of respondents' Likelihood to score the midpoint Munene (personal communication, March 3, 2013) claimed that this was a common problem in Uganda.

The questionnaire was validated through expert interviews and a panel of practitioners. All the variables registered content validity index of greater than 0.80.Furthermore, it was tested for the reliability of the instrument using internal consistency approach to find out whether it consistently measured the study variables on the scales used (Anastasi, 1982; Nunnally, 1978). Item total reliability, that is, a measure of internal consistency and Cronbach alpha coefficient results of responsibility accounting, agency relation and hierarchical structure computed.

Control for common methods bias was addressed in order to reduce the measurement error (random and systematic errors) which normally threatens the validity and conclusions about the relationships between measures (Podsakoff et al., 2003). Measurement error caused by consistency motif (Johns, 1994; Podsakoff and Organ, 1986) or consistency effect (Salancik and Pfeffer, 1997) was addressed by collecting data from at least five heads of academic department from different faculties in each public university. Most of the data sourced were relating to the dependent variable (responsibility accounting) from faculty deans.

This approach is supported by Podsakoff *et al.* (2003) who argue that one way of controlling common methods variance is, to collect the measures of both predictor and criterion variables from different sources. In addition, the potential effects of response pattern biases were reduced by incorporating negatively worded, reversed, or reversed-coded items on the questionnaires. The logic is that reversed-coded items are like cognitive "speed bumps" that require respondents to engage in a more controlled, as opposed to automatically cognitive processing (Hinkin, 1995).

Data collected were checked, coded and entered into SPSS version nineteen (19). Data for this study was checked for data entry errors, out- of range values, missing values, presence of outliers and assumptions of parametric data. Little's MCAR (1988) test and multiple imputations were conducted to establish the presence and the extent of missing values.

These tests further revealed that there were no missing values. The data screening exercise aimed at establishing the distribution of data to assess whether the assumption of parametric data were tenable. Specific assumptions tested were normality of the distribution of data; homogeneity of variance; linearity of the data and multicollinearity.

For qualitative data, analysis began at the data collection stage and continues up to the time of writing this article. As Qu and Dumay (2011) observe, open-ended questionnaire involves questioning guided by identified themes in a consistent and systematic manner interposed with probes to elicit more elaborate responses. Miles and Huberman, 1994 cited by Laura et al. (2013) assert that this approach enables the generation of descriptions grounded in reality. The questionnaires were developed after a comprehensive review of the literature with respect to responsibility accounting. Descriptive information was transcribed according to different respondents and faculties from which themes and sub-themes were developed and other emerging issues noted for discussion.

The transcribed data were analyzed to capture the major themes which were organized in line with the study objectives (Carson, et al., 2001). This involved summarizing all the

qualitative data thematically in line with the objectives and hypotheses. Qualitative responses were used as complementary information to the findings established in the statistical analysis. Qualitative data were analyzed using content analysis technique with the aid of vignette.

Tests for mediation were conducted in order to establish mediation effect of agency relation on the relationship between hierarchical structure and responsibility accounting. The tests for mediation were carried out using Boran and Kenny approach, hierarchical regression analysis, and bootstrapping.

RESULTS

Data were collected from 202 heads of academic department in the five (5) public universities 74 from Makerere, 41 Kyambogo, 30 Gulu, 26 Mbarara, and 31 Busitema. The majority of departments was from Makerere with 33.7%; followed by Kyambogo with 22.5%, Gulu with 16.9%; Mbarara with 14.6% and Busitema with the least 12.4%. Since, all public universities were well represented it gives a wide coverage of responses. Their office experiences as head of academic department in years: less than 2 years was 57 (28.2%), 2-5years 95 (47%), 6-10 years 47 (24.3%) and above10 years 1(5%). The majority of the respondents 145 (71.8%) were male while the rest 57 (28.2%) were female.

Correlation Analysis

A Pearson correlation coefficient (r) was used to establish the relationship between study variables. The study variables were all positive and significantly correlated. Table 1 reveals a significant positive correlation between hierarchical structure and agency relation (r=0.531, p≤0.01) thereby supporting H_1, *that hierarchical structure and agency relation is positively related.* Similarly, consistent with H_3 *that hierarchical structure and responsibility accounting is positively related.* Hierarchical structure and responsibility accounting were significantly and positively correlated (r=0.396, p≤0.01).*" There was a significant and positive correlation between agency relations and responsibility accounting (r=0.429, p≤0.01) supporting H_2 that. *Agency relation and responsibility accounting is positively related*

Regression of Responsibility Accounting on Hierarchical Structure and Agency Relation

Hierarchical regressions were used because ordering of responsibility accounting follows hierarchical structure. Hierarchical structure relates to agency relation and agency relation relates to responsibility accounting (Drury; 1996, 2004). Hierarchical regressions evaluated the contribution of predictors above and beyond previously entered predictors, and as a mean of statistical control, and examined incremental validity. It is an appropriate tool for analysis when variance on criterion variable is be explained by predictor variables that are correlated with each other (Pendhazur, 1997)

The hierarchical regression analysis was used to determine the contribution of each predictor variable in the regression (Field, 2006; Garson, 2010) see table 2. The regression coefficients were used as indicators whether or not the contribution of each variable is significant, which further tests the validity of the hypotheses. The overall contribution of the variables is indicated by variance explained (R^2). The hierarchical regression was used to test for the extent to which hierarchical structure and agency relation explain the variance in responsibility accounting in a bid to get further evidence for

support of the hypotheses. The results of the hierarchical regression are shown in the table below.

The regression results indicate that 32.5 percent of the variance in responsibility accounting is explained by hierarchical structure and agency relation. (R^2=.325,p<.05). In analysing the model results, model 1, the control variable of experience as a head of academic department contribute an insignificant explanatory power of0.1 per cent (R^2= 0.001, p>.05) of 32.5 per cent total variance explained. Experience as a control variable was used as an important factor in this study to determine whether or not it had an effect on responsibility accounting. The regression results also indicate that experience as control variable does not statistically have significant relationship with responsibility accounting. This, therefore, imply that experience in public universities in Uganda does not have an effect on responsibility accounting. This seems to suggest that responsibility accounting in public universities is applied, regardless of experience as a head of academic department.

In model 2, hierarchical structure contributes the predictive power of 28. Per cent (change in R^2=.280, p<.05) of 32.5 per cent total variance explained. Model 2 also reveals a statistical significant relationship between hierarchical structure and responsibility accounting. (β=.263, p<.05), providing evidence that hierarchical structure and responsibility accounting are positively and significantly related. This finding further supports H_3, that there is a significant relationship between hierarchical structure and responsibility accounting. It can be stated that hierarchical structure, among other factors, can explain to a certain extent the variance that may occur in responsibility accounting in public universities. This is supported by qualitative evidence.

In model 3, when agency relation was entered in the regression, it added predictive power of 4.4 per cent (change in R^2= 04.4, p<.05). Besides the contribution of agency relation to the variance explained in responsibility accounting, the results also indicates a significant relationship between agency relation and responsibility accounting (β=.263, p<.05). This finding lends further support for H_2, which propounded that there is significant relationship between agency relation and responsibility accounting.

In this case, and in as far as this study is concerned the relationship between agency relation and responsibility accounting is significant although the zero order results indicate a significant relationship (r=.429, p<.05). This supported by Field (2006) argument that correlation analysis cannot be relied on compared to regression results.

TESTING OF MEDIATION

According to Baron and Kenny (1986), there are three steps to testing mediation. First, the independent variables should be related to the dependent variable. Second, the independent variables should be related to the mediator variable. Third, the mediator should be related to the dependent variable. Finally, there is full mediation when the inclusion of mediator completely eliminates the effects of the independent variable on the dependent variable. Partial mediation exists when the inclusion of the mediator weakens the effect of the independent variables on the dependent variable. Structural equation modeling was used to confirm the proposed mediation model.

Table 1: Showing zero order correlation between hierarchical structure, agency relation, and responsibility accounting

	Mean	SD	HS	AR	RA
Hierarchical structure (HS)	3.68	0 .941	1		
Agency relation (AR)	3.70	1.108	0.531**	1	
Responsibility accounting (RA)	4.98	0.980	0.396*	0.429**	1

Source: Primary data

Table 2: Results of hierarchical Regression analysis on responsibility accounting by independent constructs

Predictor variable	Model 1	Model 2	Model 3
Constant	4.068	2.265	1.958
Experience	-.024	-.096	-.093
Hierarchical structure		.534**	.377**
Agency relation			.263**
R^2	.001	.281	.325
Change in R^2	.001	.280	.044
F	.119	27.469	21.198

Source: primary data

Table 3: Showing Standardized Total, Direct and Indirect Effects

	EXP	HS	AR
Std Total AR	0.000	.531***	0.000
Effect RA	-0.024	.396*	0.429
Std Direct AR	0.000	0.531	0.000
Effect RA	-0.024	0.261	0.429
Std AR	0.000	0.000	0.000
Indirect Effects RA	0.000	0.135	0.000

Bootstrap results

Parameter	Point estimates	SE	Lower boundary	Upper boundary	p-value	z-value
RA ⟵ AR	0.016	0.008	0.02	0.062	0.03	2.015

 Key
 RA: Responsibility Accounting
 AR: Agency Relation
 EXP: Experience

Agency Relation Mediates the Relationship between Hierarchical Structure and Responsibility Accounting

First step was to determine if Baron and Kenny (1986) conditions for mediation were fulfilled, regression results revealed that:

- There was a significant direct effect of hierarchical structure on responsibility accounting (beta = .396, SE=.068, t=6.099***)
- There was a significant direct effect of hierarchical structure on agency relation (beta = .531, SE=.070, t=8.878***)
- There was a significant direct effect of agency relation on responsibility accounting (beta = .429, SE = .057, t = 6.711***)

Having controlled for agency relation, the direct effect of hierarchical structure on responsibility accounting reduced from beta = .534*** to beta = .396***, but remained significant, thus confirming a partial mediation effect. This implies that variations in hierarchical structure affect variation in agency relations, which in turn cause variation in responsibility accounting.

The second step, tested for whether mediation exists, using SEM, tested for the hypothesis that "values for agency relation mediation effects of a predictor variable onto the criterion variable are different" if values are the same, and then there is no mediation (Hair et al., 2006). Table 3 results indicate (standardized total effect=0.531**; standardized direct effect=0.396**; and standardized indirect effect=0.135**). Total and direct effect values for hierarchical structure on responsibility accounting, that is, total effect and direct effect observed are different. This implies that a sizable part of the contribution of hierarchical structure towards responsibility accounting passes through agency relation, implying that mediation effect exists hence supporting.

The bootstrap results indicate significant mediation effect of agency relation on the relationship between hierarchical structure and responsibility accounting (z=2.015, p<.05). Further, the standardized indirect to standardized total effect is 135/534x100 =.26. This implies that responsibility accounting receives 26% of indirect effect from hierarchical structure through agency relation, while the remaining 74% is a direct

effect. This indicates that hierarchical structure can directly cause variations in responsibility accounting without indirect effect through agency relation.

In their study Zack et al (2009) found that in cases of full mediation, the predictor variable loses the power to influence the criterion variable except through mediator. Based on Zack's argument, the findings of this study imply that since the predictor variable did not lose all its predictive power on criterion variable, but remained with a significant predictor, the conclusion is that a partial mediation exists of agency on the relationship between hierarchical structure and responsibility accounting. In addition, qualitative data results reveal that evaluation of financial performance from department to faculty level is conducted through performance report or responsibility report (periodic budget report). The aim is not to place blame. Instead it is to evaluate the performance and provide feedback so that future operations can be improved through prioritizing.

DISCUSSION AND CONCLUSION

This study investigated and tested the mediating effect of agency relation on the relationship between hierarchical structure and responsibility accounting at academic departments in public universities in Uganda. The essence of the study was to test specific causal theories about hierarchical relationship among variables and in particular the role of agency in structure. There cannot be agency with a structure. In this study, the findings from the previous section, indicate specific drivers to responsibility accounting in their casual chain relationships. Accordingly, the findings indicate that agency relation partly mediates the relation between the relationship between hierarchical structure and responsibility accounting. This means that the entire effect on responsibility accounting does not only go through the main predictor (hierarchical structure) but also through agency relation.

This signifies that the connection between hierarchical structure and responsibility accounting is weakened by the presence of agency relation partly acts as a conduit in the association between hierarchical structure and responsibility accounting. Thus, hierarchical structure and agency relation are drivers of responsibility accounting. This satisfies the conditions of mediation as pointed out by Baron and Kenny (1986) and hierarchical regression. This is true because hierarchical structure relates to agency relation. Agency relation, as an aspect of a hierarchical structure in turn relates to responsibility accounting. Evidence from qualitative data reveals that:

"Heads of academic *departments submit their budgets to the faculty for discussion and eventually merged into faculty budget for presentation, discussion, and merging as university budget at university finance committee recommends for presentation to university council for approval. The aim is to promote transparency and efficiency from academic departments, faculties to finance management committee of the university".*

This findings links well with agency theory which suggests that agency relation can be applied in employment relationship and vertical workflow integration relation (Eccles, 1985). Agency theory has been widely applied in different disciplines ranging from economic, finance, and strategic management to organizational behavior (Eisendhart, 1989). Ahmed, Farley, & Naidoo (2012) argue that Agency theory is based on the study of the basic principles of delegating a task to an independent agency in achieving desired objectives.

Agency theory provides a useful framework to examine this question by locating goal conflicts and/ or information asymmetries in the process of delegating such tasks. Agency theory offers clear and insightful explanations for problems arising from the government agent's relationship when the principal is unable to adequately monitor the agents' activities and one party lacks information through hierarchy of authority and responsibility that follows hierarchical structure for control.

For instance, managers are agents who are responsible for the performance of their units because they are the representatives of their organizations on behalf of management (principals) while implementing activities based on budget estimates under their respective control (Jones and Thompson, 2000). This confirms the presence of agency relation in mediating hierarchical structure and responsibility accounting. Furthermore, mediation effect of agency relation on relationship between hierarchical structure and responsibility is further confirmed by 4.5 percent contribution in hierarchical regression model. These signify that agency relation partly augments the relationship between hierarchical structure and responsibility accounting.

IMPLICATIONS FOR MANAGEMENT AND RESEARCHERS

On the basis of the results of this study, the findings suggest issues that need to be examined by practitioners and researchers seriously. Although hierarchical structure is very much emphasized as a function of responsibility accounting in public universities in Uganda, managers should realize that it cannot be completely divorced from agency relation.

Accordingly, hierarchical structure defines role, who make decision and who is responsibility for what within hierarchy of authority. In essence, hierarchical structure as a structure cannot exist without agency. Since agency relation is found to be a causal chain in the relation between hierarchical structure and responsibility accounting in this study, managers in public universities should endeavor to reinforce agents of agency relation (discussions and consultations), since structure cannot exist without agency.

More so, leads to informed community especially in the changing paradigm of funding higher education institutions, particularly in situations where public institutions in co-operation with the market (Kasozi,2009) has increased the need for managing public funds at different hierarchical levels of control at public universities. Agency theory has proven to be a fundamental theory for research in agent-principal dynamic (Hoskisson, Castleton, & Wither, 2009 cited in Ahmed, Farley, & Naidoo, 2012) and may also be applied to study the relationship between principal and higher education institutions. Lane and Kivisto (2008) as cited by Ahmed, Farley & Naidoo (2012) indicate that there is rapid adoption of this theory in research pertaining to higher education because universities are driven by both economics and political motives.

Lane and Kivisto (2008) argue that since the government and university operate and exist in public bureaucracies, this type of operation requires political-economic based theoretical framework which is provided by agency theory. They point out three reasons for the suitability of agency theory to the government higher education institutions context. First, universities are provided funds by the government using resources obtained from the tax payer. Second, Universities produce products that can be considered as public goods for social good whose outcomes are difficult to measure; therefore, agency theory is required to ensure that the performance of the agent is continually measured to align with government. Third, the government does not operate as a

single principal as universities usually operate under explicit and implicit contracts with many funding bodies and government agencies; therefore, a comprehensive framework like agency theory is required to monitor and understand the dynamics of multiple principal-single agent relationship.

In spite of the growing popularity of agency theory (Ahmad, Farley, & Naidoo, 2012) studies on agency theory in higher education need to be further investigated and widely explored (Kivisto, 2005). Indeed, some areas need further explanation and clarification of the theory as a framework for fostering new ideas in examining hierarchical structure-responsibility accounting relationship as mediated by agency relations. Control is necessarily a hierarchical exercise. It is not practical for single person to control all the activities in organization from strategic to operational issues.

LIMITATIONS OF THE STUDY

This study examined whether agency relations provide full or partial mediation in the relationship between hierarchical structure and responsibility accounting. The focus was mainly on the mediating effect of agency relations on the relationship between hierarchical structure and responsibility accounting within public university. However, thorough agency relations need to be conducted in accordance with agreed rules and standards for efficient control and legitimacy claim. This means that agency relation should involve institutions that promote agency legitimacy both within and outside the university. Institutions are created to instruct and manage agents with the inevitable imperfections.

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