

The Impact of Internal Control Systems on Financial Performance: The Case of Health Institutions in Upper West Region of Ghana

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Abstract

The significance of upholding effective internal control system in organizations have been persistently and immensely emphasized, due to its positive effects on financial performance. Efficient internal control enables the prevention and detection of fraudulent activities in the institution. In line with this, persistent efforts by policy makers to pursue policies that would improve internal control system in the ministry of health have yielded abysmal results with regards to financial performance in health institutions in the Upper West Region of Ghana. This study sought to determine the impact of internal control variables on financial performance among five health institutions in the region using an ordered logistic regression model for a sample of fifty (50) respondents. We found a positive relationship between internal controls and financial performance. But only three of the control variables remained significant with p-values less than 5%. It is recommended that the governing body of the institutions, possibly supported by the audit reports implementation committee (ARIC), ensure that the appropriate internal control systems recommended by the auditors in health institutions are monitored periodically.

Key words: internal control, financial performance, health institutions, control environment, monitoring.

Introduction

Every firm, be it profit or non-profit making organization, will have some objectives which it deem attainable. For profit seeking organizations, their key goal is to maximize shareholder



value while the non-profit making organization goal is to satisfy the citizenry's social need. In order to achieve these purposes, supervision usually plays an important role in the organization. Sometimes it is hard for the management of these organizations to provide first hand and personal supervision of operation due to the size, nature and scope of the organization. The basic components of organizational governance are risk management and financial performance. Therefore, for an organization to achieve this it needs to ensure effective and efficient operations, reliable information (both financial and non-financial) and compliance of rules and regulations.

Relating to the Ghanaian health sector, the continued delayed reimbursement of health facilities by the nation health Insurance Scheme at all levels continues to adversely affect service delivery, particularly public health promotion and prevention activities across the country (Ghana Health Service, 2014). Following this, several efforts to collaborate with the National Health Insurance Authority has not yielded much improvement in the late reimbursement of all facilities. The Ministry of Health (MOH) as part of its efforts to enhance financial sustainability through internally generated funds to ensure adequate health delivery has resorted to some ad-hoc finance enhancing measures. Notable among these measures is to ensure quarterly regional financial data validation and consolidation in all ten regions in Ghana. Again, MOH established the internal audit division which is to take charge of financial control and compliance department in various health institutions nationwide. Specific mandates assigned to the department include verification whether expenditures conform to stated objectives and activities for which funds are released, to prepare periodic audit reports and a few others. However, many facilities are unable to sustain their drugs component of the health financing as a result of severe funding constraint. And the Upper West Region ranks among the most severely affected regions. The question at the heart of this research is whether such internal control measures seem ineffective, and they have no such positive effective effect anticipated. In this study, we seek to test the impact of internal controls on financial performance using an ordered logistic regression analysis.

Internal controls therefore are measures instituted by an organization so as to ensure attainment of the entity's objectives, goals and missions (Ogneva et al, 2007). In some instances, internal controls are check mechanisms to avoiding wastages, theft and mismanagement of the organization's assets.

In pursuit of organizational objectives regarding reliable financial reporting, effective and efficient operations, managers and boards of organizations resort to establishing internal control systems in ensuring effective outcomes Crawford (2011).

It is believed that properly designed and enforced internal control systems will normally lead to better financial reporting procedures as well as giving rise to a reliable report that improves management accountability function of an institution (Doyle, et al. 2007). However, the prospect of achievement is determined by limitations inherent in all internal control systems. In this respect, Emasu (2007) explains that internal control systems can only ensure reasonable



rather than complete guarantee to the achievement of the organization's objectives which are instituted by an institution's management and board of directors.

In this study, internal controls refer to procedures outlined by an institution to give reasonable assurance with respect to attaining efficient and effective operations, reliable financial reporting, and compliance with appropriate rules, regulations and laws (Ray & Kurt, 2001). financial performance on the other hand in is explained in terms of measures like profitability (using gross profit ratio, net profit ratio), liquidity (i.e. liquidity ratios like current ratios) and Accountability (in the form of financial accountability) (ACCA- Managerial Finance Paper 8; 1998; and Panday;1996).

According to Posthuma (2013), performance is considered as the ability to operate effectively and efficiently, generate profit, survives and react to the opportunities and threats in the environment. And it is no doubt health institutions rank among essential organizations that require effective controls due to their provision of critical access points for our health needs (Regenstein and Huang, 2005) and their special commitment to serving the citizenry (Bazzoli et al. 2003). In line with this, persistent efforts by policy makers to pursue policies that would improve internal control system in the ministry of health have yielded abysmal results. But according to the ROCASUR Africa Report (2012), poor control systems in institutions has led to huge investments lost through fraud and misuse of assets that are used to generate revenues while members and institutions have suffered big losses. Inadequate controls have also led to corruption and collusion of management and external auditors leading to institutions failing to achieve their set objectives. The ministry of health as part of its internal control systems has created internal audit department to ensure laydown rules, regulations and procedural compliance. This effort has been put in place in order to achieve positive performance of health institutions in Ghana. Nonetheless, health institutions in the Upper West Region still struggle with liquidity problems, untimely financial reports, and misuse of the institutions resources. We therefore determine the functionality of internal control mechanisms and their consequential impact on financial performance in health institutions in the upper west region of Ghana.

Brief Literature Review

The relationship between internal controls and financial performance has been extensively discussed in the literature. Notable theories regarding this relationship are the agency theory and the contingency theory. The agency theory explains the existence of mechanism in resolving problems that exist in principal-agent relationships. This theory contends that internal audit helps in maintaining cost-efficient contract between owners and management just like other intervention mechanisms such as financial reporting and external auditing. As suggested by Adams (1994), the agency theory provides richer and more meaningful research in the area of internal audit.

Internal control systems are predominantly operational tools institutions deploy in addressing the principal-agency problem (Jensen and Payne, 2003). The tools and organs used in



addressing agency issues include audit committees, external auditing, financial reporting, and budgeting. But studies have shown that agency costs can be reduced by effective internal controls (see; Abdel-khalik 1993; Barefield et al. 1993). Some studies further argue that institutions have an economic incentive to report on internal control, even without the Sarbanes-Oxley Act of 2002 (SOX) requirements, (Deumes & Knechel, 2008).

For the contingency theories, they are embodiments of the sociological functionalist theories of organizational structure which are the structural approaches to studies of organization (Woods, 2009). However, contingency theory focuses on the behavioral aspect of an organization in explaining how contingent factors such as culture, technology, and external environment have an influence in organizations designing and functioning. It is assumed by the contingency theory that no single type of organization's structure is equally applicable to all organizations. Rather, the effectiveness of an organization depends heavily on the type of technology, the size of the organization, environmental volatility, the features of the organization's structure and the system of information that it is using. The contingency theory in effect explains the relationship that exists in the effectiveness of internal control structure given varying contexts as well as organizational performance such as reliability. Simply put, the type and usage of control systems is contingent upon the context of the organizational setting in which these controls work (Fisher, 1998).

Internal control variables including control environment, risk assessment, control activities, information and communication and monitoring have remained operational tools through which organizations achieve varying organizational goals predominantly income generations and or survival (COSO1994). Cohen et al. (2000) emphasized on the relevance of control environment following findings from a survey which suggests that management's leadership and commitment towards integrity and ethical behaviour and their implications on employees behavior remains the most important element for effective control. In situations where the tone set by management is weak, fraudulent financial reporting tends to be frequent since the control environment begins with directors and management who implement organizational policies, behaviors and effective governance (Rittenberg et al. 2005)

The emergent need for effective monitoring system in organizations has arisen due to the growing body of evidence that suggest well placed monitoring mechanisms have influencing impact on performance measures (Weisbach 1988). Internal control systems require to be monitored in a bid to evaluate performance with the passage of time. Regular monitoring is imminent due to changing conditions, hence management seek to determine if current internal control mechanisms continue to be relevant and can address new risks (Roth, 1997). Information and communication systems instituted in organizations are intended to churn out reports encompassing operational, financial and compliance-related evidence, which in turn makes it possible for efficient management of business activities. Aside data which is internally generated and utilized, information concerning external events, activities and conditions essential to informing business decision-making (Sawyer et al. 2003). Gaskill (2000) asserts that, information and communication element of internal control allows timely



accomplishment of reporting via gathering and communicating significant information within stipulated time. Internal system risk control mechanisms such as identification, assessment and supervision are embodiment of risk assessment element of internal control. Basic risks may involve misstatement of financial data or unproductive utilization of assets which negatively affects organizational performance.

Some empirical studies have also been carried out in determining the impact of internal controls on performance variables. While many of such studies reaffirm the positive relationship between internal controls and performance, other studies depict relatively weak or no relationship whatsoever.

A study by Muraleetharan (2010) in determining the impact of internal control on financial performance found a very significant relationship between internal control and financial performance ($R^2 = 0.818$). This finding is similar to that of Mawanda (2008) who sought to find the effects of internal control systems on financial performance in institution of higher learning in Uganda. The research findings showed a significant impact of internal control systems on financial performance.

Eko and Hariyanto (2011) found out that internal control system, internal audit, as well as organization commitment have positive significant relationship with good governance among contacted thirty-five (35) districts in Central Java province of Indonesia. In a similar study carried out by Nilniyom and Chanthinok (2011) on accounting system innovation and stakeholder acceptance of Thai listed firms, it was revealed that internal control effectiveness has a positive correlation with stakeholder acceptance. Likewise, Feng et al (2009) also carried out a study on internal control and management guidance, and concluded that internal control quality has an economically significant effect on the accuracy of management guidance. However, Douglas (2011) discovered internal control has little relation with financial performance.

The framework for internal control for most companies is that of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Internal Control Integrated Framework, issued in 1992. The framework emphasizes on the need for effectiveness of controls, and they must be "built into" the institution's infrastructure (COSO 1992). Studies conducted on the effect of internal control on performance mostly focused on financial and governmental institutions. Investigating the internal control and performance relationship in health institutions rather brings a whole new insight to our study. More essentially, the waning financial performance in health institutions in the upper west region of Ghana makes it imperative to test the effectiveness of internal control systems in augmenting financial performance among these health facilities.



Methodology

Sampling and data

This study selected a sample of five (5) health institutions in the Upper West Region of Ghana; The Upper West Regional Health Administration, Upper West Regional Hospital, Nadowli District Hospital, Jirapa District Hospital, and Jirapa Community Health Nurses Training School. As Kothari (2004) recommends, a sample of 10% to 30% of the target population is a sufficient representation of the population. In line with this, sample of fifty (50) respondents were therefore selected using the purposive sampling technique.

Data for this research was solicited from primary source only for both internal control variables and financial performance measure. A subjective measure of performance was used in this study in order to deal with inconsistencies and varying financial reports and book keeping systems in different health institutions.

Respondents selected from a range of scores/ratings of answers for both internal controls and financial performance variables which were arranged and coded using point numeric rating scales (Saunders et al, 2007). Thus, "[SA] —Strongly Agree" corresponded to the highest score of 5 and "[SD] —Strongly Disagree" representing the lowest score of 1.

Model specification

Regarding data analysis, this research used the ordered logit model in our estimation process. An ordered logistic regression model is a statistical technique which can be used with an ordered (from low to high) dependent variable (in this case which is financial performance). Following Hamilton (2006), ologit (ordered logit) estimates a score, *Y*, as a linear function of the X's: Predicted probabilities;

 $Pr(Y=1 \mid X1, X2,...X5) = F(\beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5)$

Where,

Y – Financial Performance of health institutions

X₁ – Control Environment

X₂ - Risk Assessment

X₃ - Control Activities

X₄ – Information and Communication

X₅ –Monitoring

F - Cumulative standard logistic distribution

The above ologit model tests the following hypothesis;

H_A: Internal control has an impact on financial performance.

H₀: Internal control has no influence on Financial Performance



Table 1.0 Definition of Variables

Variables	Description/Operational definition	Scale of measurement	
Financial performance	Ability to operate efficiently, profitably, survives, grow and react to environmental opportunities and threats.	Will be measured using liquidity, accountability and reporting	
Control environment	Presence of integrity and ethical values, commitment to competence, human resource practices and organization structure	This will be measured by the level of integrity, ethical values, and competence of personnel tasked with creating, administering, and monitoring the controls	
Risk assessment	Entails risk identification, risk evaluation and risk response.	This will be measured by level of risk carefully to be accepted and maintained at determined levels	
Control activities	These are the policies, procedures and mechanisms put in place to ensure management directives are properly carried out.	Will be measured by the number of effective policies, procedures and mechanisms put in place to ensure directives of the management are properly carried out	
Information and Communication	This involves good identification of and proper capturing of pertinent information. Also entails proper flow of information across and up within all the sections of the organization.	This was measured in terms of how information is identified, captured, and communicated in the appropriate form and within stipulated time frame	



Monitoring	This is the process of assessing the quality of the internal control	Monitoring embraces how frequent the quality and effectiveness of internal
	structure over time.	controls are assessed and reviewed over time

Presentation of findings

Table 2.0 presents the results for the ordered logistic regression. The response variable in the ordered logistic regression is financial performance. The regression coefficients for the predictors (internal control variables) in the models are also presented with their respective standard error and p-value estimates. Customary interpretation of the ordered logit coefficient is that for a one unit increase in the predictor, the response variable level is expected to change by its corresponding regression coefficient, while the other variables in the model are held constant. The p-value is the test statistic for the null hypothesis that an individual predictor's regression coefficient is zero. For instance, for a p-value less than 0.05 (p-value <0.05), and setting the

Table 2.0: Ordered logistic result for the impacts of five internal control variables on financial performance.

Variables	coefficient	Standard error	p-value
Control Environment	.522987	.6582905	(0.427)
Internal Audit	.9867645	.4159051	(0.018)
Control Activities	1.267042	.611772	(0.038)
Information and Communication	.0581276	.5018119	(0.908)
Monitoring	1.430873	.5322468	(0.007)



alpha level to 0.05, we would reject the null hypothesis and conclude that the regression coefficient for a variable is statistically different from zero in estimating financial performance. For the control environment variable, its coefficient suggests a positive impact on financial performance. Thus for a one point increase in the control environment variable, the probability of the institution being in a higher financial performance category would increase by 0.522987 while the other variables in the model are held constant. However, the impact of control environment on achieving a higher financial performance remains insignificance given a p-value higher than 0.05 (p-value = 0.427). Simply put, control environment has no significant impact in enhancing financial performance among health institutions in the Upper West region. This finding is not different from a study by Mawanda (2008).

Health institutions with a higher score of internal audit controls tend to achieve significantly higher financial performance given a positive coefficient and with a p-value of 0.018. That is, for a one point increase in internal audit score, the ordered log-odds of being in a higher financial performance category would increase by 0.9867645. In other words, there is a positive relationship between maintaining internal audit and financial performance among health institutions in the Upper West region.

Similarly, the control activities and monitoring independent variables tend to have significantly positive coefficients with p-values of 0.038 and 0.007 respectively. Variables with positive significant coefficients are positive correlates of financial performance among the sampled health institutions. For a one point increase in control activities score among health institutions for this sample, the probability of being in a higher financial performance category would increase by 1.267042. Likewise, the tendency for a health institution in this sample to be in a higher financial performance category would increase by 1.430873 given a unit increase in a score of monitoring in health institutions. That is to say, health institutions with effective systems of control activities and monitoring tend to achieve higher financial performance.

With a positive coefficient of 0.0581276, health institutions with information and communication systems tend to record high financial performance. However, the positive effect of information and communication system on financial performance of health institutions remained insignificant given a p-value greater than 0.05 (p-value=0.908). In other words, information and communication system is a positive predictor of financial performance, but with insignificant impact. Other studies such as that of John J.M (2011) and Muraleetharan P. (2010) found similar results.

In conclusion all the internal control variables (i.e. control environment, internal audit, control activities, information and communication, and monitoring) met their expected signs. Thus, they all had positive coefficients which imply they are all positive correlates of financial performance. But only three of the control variables (i.e. internal audit, control activities, and monitoring) had significant impacts on financial performance. The logit regression has an overall p-value of 0.001, which implies that, the regression is statistically significant and that, at least one of the predictor variables is not equal to zero.



Conclusion and policy recommendations

The results of the ordered logistic regression model show that there is a positive relationship between internal controls and financial performance of health institutions. That is, financial performance is measured by the efficiency and effective implementation of internal controls. This implies that a single unit increase in any of the independent variables resulted in a corresponding increase in financial performance among the health institutions.

All five internal control variables had positive coefficients (i.e. positive relationship with financial performance). And out of the five elements of internal control, only three of them (control activities, internal audit and monitoring) had significant positive relationship with financial performance (i.e. p-values of less than 5%), while the other two (control environment, and information and communication) showed insignificant effects on financial performance. The study established that internal controls affect financial performance of health institutions in Ghana to a great extent.

From the findings of the study, it can be concluded that health institutions that had invested on effective internal control systems have more improved financial performance as compared to those health institutions that had a weak internal control system. The findings further revealed that those health institutions that observed integrity, ethical values, internal audit assessment, control activities and monitoring recorded high financial performance. Most of the health institutions that adhered to strong internal control systems were able to mitigate fraud.

Results from the study indicated that most of the health institutions faced challenges such as; management inability to discuss internal audit reports, insufficient internal audit staff and lack of investment in modern technologies for example information communication technology. The study also revealed that control activities, internal audit and monitoring had a significant positive relationship with financial performance indicators. Similarly the other variables for instance control environment, and information and communication was also found to have a positive relationship with financial performance but insignificant.

Finally, the study findings brought to the fore that periodic departmental budget reviews of most health institutions were not conducted and communication channels were not established for people to report suspected improprieties.

Health authorities must to intensify control measures in order to curb fraud and misappropriation of resources in the health sector. Management of health institutions should develop a mechanism to incorporate relevant feedback from the various stakeholders into their internal control system. A major issue of concern requires that authorities should develop and organize constant seminars and workshops to train and educate auditors, accountants and heads of departments on matters pertaining current trends of control measures as well as proper implementation of accounting policies and procedures. Both health accountants and internal auditors should be constantly updated and well-grounded on international financial



reporting standards (IFRS) and principles as well as the accounting, treasury and financial reporting manual (ATF). This will enhance their knowledge and skills in application of accounting practices and control measures to update them on the contemporary issues. The governing bodies following the guidelines defined the audit reports implementation committee (ARIC) should ensure that the internal control systems recommended by both internal and external auditors is periodically monitored and evaluated.

References

Abdel-Khalik, A. R. (1993). Why Do Private Companies Demand Auditing? A Case for Organizational Loss of Control. *Journal of Accounting, Auditing & Finance*, 8 (1), S. 31–52.

ACCA Text Books (1998). Managerial Finance. AT. Foulks Lynch.

Adams, M. B. (1994). "Agency Theory and the Internal Audit". *Managerial Auditing Journal*, Vol. 9 No. 8, pp. 8-12.

Barefield, R.M., Gaver, J.J., & O'Keefe, T. (1993). Additional evidence on the economics of attest: extending results from the audit market to the market for compilations and reviews. *Auditing: A Journal of Practice and Theory* 12, 76–88.

Bazzoli, G. J., L.M. Manhein, and T. M. Waters. (2003). U.S. hospital industry restructuring and the hospital safety net. *Inquiry-Excellus Health Plan*, 40 (Spring): 6-24

Cohen, J., Krishnamoorthy, G., Wright, A. (2000). *Corporate Governance and the Audit Process*. Midyear Auditing Conference. LA (January).

Colbert, J. L., & Bowen, P. L. (1996). A Comparison of Internal Controls: CobiT, SAC, COSO and SAS 55/78. *IS Audit and Control Journal*, 4, 26-35.

Committee of Sponsoring Organizations of the Treadway Commission (COSO). (1994), *Internal Control—Integrated Framework*. Two-Volume edition 1994, Pp 4-50

Crawford, R. L., & Weirich, T. R. (2011). Fraud guidance for corporate counsel reviewing financial statements and reports. *Journal of financial crime*, 18 (4), 347-360.

Deumes, R., and Knechel, R.W. (2008). Economic incentives for voluntary reporting on internal risk management and control systems. *Auditing: a Journal of Practice & Theory*, 27 (1), pp. 35-66.

Doyle, J., Ge, W., and S. McVay, S. (2007), Determinants of weaknesses in internal control over financial reporting. Working paper, Utah State University of Washington, and New York University.

Eko, S. & Hariyanto, E. (2011). Relationship between Internal Control, Internal Audit, and Organization Commitment with Good Governance: Indonesian Case. *Managerial Auditing Journal*, 32(5): 6-13

Feng, M., Li, C. & McVay, S. (2009). Internal control and management guidance. *Journal of Accounting and Economics*, 48, 190–209.

Fisher, J.G., (1998). Contingency theory, management control systems and firm outcomes: past results and future directions. *Behavioral Research in Accounting* 10 (Supplement), 47–57.



Gaskill, M. (2000). *Crime and Mentalities in Early Modern England*. Cambridge University Press, Cambridge

Internal Control—Integrated Framework: Executive Summary. The Committee of Sponsoring Organizations of the Treadway Commission (1992).

Sourced from http://www.coso.org/icintegratedframework.

Jensen, K. L. (2003). A basic study of agency cost source and municipal use of internal versus external control. *Accounting and Business Research*, vol. 35 no. 1, pp. 53-67.

John J.M (2011), The impact of Enterprise Resource Planning (ERP) Systems on the Effectiveness of Internal Controls over Financial reporting

Kothari, C. (2004). Research Methedology. New Age International Publishers, 235-256.

Lawrence Hamilton (2006), Statistics with Stata (updated for version 9). Thomson Books/Cole

Mawanda, S. P., (2008), Effects of internal control systems on financial performance in an institution of higher learning in Uganda: A case of Uganda Martyrs University, *Unpublished thesis*, Uganda Matyrs University.

Muraleetharan P. (2010), Internal control and its impact on financial performance of organization university of Jaffnan.

Ndamenenu K. D., (2011), Internal Control and its contributions to organizational efficiency and effectiveness: A case study of Ecobank Ghana Limited. Sourced from; http://ir.knust.edu.gh/handle/123456789/4210

Nilniyom, P. & Chanthinok, K. (2011). Accounting System Innovation and Stakeholder Acceptance of Thai listed Firms: Mediating Internal Control Effectiveness. *Review of Business Research*, 11, 26 – 37.

Whittington O. R., & Kurt P. (2001). Principles of auditing and other assurance services. Irwin/McGraw- Hill. New York.

Ogneva, M., Subramanyam, K. R., and Raghunandan, K. (2007). Internal control weakness and cost of equity: Evidence from SOX Section 404 disclosures. *The Accounting Review, Vol. 82, No. 5, pp. 1255-1297*

Pandey, I. M. (1996). *Financial Management: 7th Edition*. Vikas Publishing House Pvt Ltd. New Delhi, India

Posthuma R.A., Campion M.C., Masimova M., & Campion M.A. (2013). A high performance work practices taxonomy: Integrating the literature and directing future research. *Journal of Management*, 39, 1184–1220. doi: 10.1177/0149206313478184

PROCASUR (2012). An Overview of SACCOs in Kenya; In pursuit of ideas to develop Savings and Credit Cooperatives. Learning from Kenyan SACCOs March 2012. Kenya. http://www.africa.procasur.org

Regenstein, M. & Huang, J. (2005). *Stresses to the safety set: The public hospital perspective*. Washington, DC: Henry J. Kaiser Family Foundation.

Rittenberg, L.E, Schwieger, B. J. (2005). *Auditing –Concepts for a Changing Environment*. Mason: South-Western, Thomson Corporation.

Sarbanes-Oxley Act, enacted 23/1/2002 by Congress of USA 66 p {http://newsfindlaw.com/hdocs/docs/gwbush/sarbanesoxley 072302.pdf}



Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research methods for business students*. Harlow, England, Financial Times/Prentice Hall.

Sawyer, L.B., Dittenhofer, M. A., Scheiner, J. H. (2003). *Sawyer's Internal Auditing*. 5th Edition. USA: The Institute of Internal Auditors.

Stephen, Emasu. (2007). Public Financial management – Concepts & Practices. Weisbach, M. S., (1988). Outside directors and CEO turnover. *Journal of Financial Economics*, Vol. 20.

Woods, M. (2009). A contingency theory perspective on the risk management control system within Birmingham City Council. *Management Accounting Research*, 20, 69-81