



ASSESSING THE RELATIONSHIP BETWEEN INTERNAL AUDIT INDEPENDENCE AND AUDIT QUALITY: THE ROLE OF INTERNAL AUDIT DETERMINANTS

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Abstract

The fact that there is greeter desire for consistency among researchers and practitioners, there is little consensus on how to assess internal auditor independence by relying on the determinants. Audit quality is a subject that is debatable both in the public and private sector of the economy. Therefore, this study aimed to investigate the relationship between internal auditor independence and audit quality. With the simple random sampling technique, 110 valid responses were received through a structured questionnaire. Amos version 21 was employed to validate the convergent validities. Moreover, SPSS version 23 was used to validate the discriminant validities as well as the correlations to support the hypotheses. Based on empirical data from Technical Universities in Ghana and drawing on agency theory, the results showed that the determinants of internal auditor competence correlated positively with the internal auditor competence. Also, internal auditor competence positively correlated with audit quality. These results indicate that with sound internal auditor competence, audit quality is assured. Limitations and policy recommendations are discussed.

Keywords: Audit quality, Internal auditor independence, Internal auditor competence, Professional standards adherence, Sector of activity

INTRODUCTION

The financial crises that have rocked the financial world have demonstrated the need for a strong internal audit function in combating fraud (Abbott, Daugherty, Parker, & Peters, 2016). This creates a confidence crisis, reinforcing the audit function's importance in the corporate world process, sometimes, in the educational institutions. Internal auditors are frequently used by managers/administrators to ensure that risks are identified and managed, that organizational processes are sufficiently regulated, and that organizational procedures are effective and efficient. The internal auditing literature as instigated by (Sawyer, 1973), characterized internal auditors as the "eyes and ears of managers" who can access and provide assurance on the effectiveness of the organization's internal control systems. This has heightened the need for a high-quality internal audit in order to make effective decisions. Owing to this, internal auditors can, thus, provide value to an organization by ensuring that its risk exposure is effectively recognized and managed (Williams, 1986). In this light, examining the quality of internal audits and auditors' independence becomes an intriguing topics for discussion.

Basically, the goal of this study is to explore how internal auditors view internal audit quality and to identify different internal auditor features based on how they think about internal audit quality determinants. Few studies have looked into the elements that influence the quality of internal audits. Several scholars have evaluated internal audit quality indirectly by examining the relationship between the performance and effectiveness of an organization's internal audit function and other variables such as the organization's industry (Goodwin, 2004), the qualities of the internal auditor (Roussy, Barbe, & Raimbault, 2020), and the cooperation between the internal and the external auditor (Endaya, 2014; Schneider, 2009a).

Relating to Ghana, Section 16 of the Internal Audit Agency Act 2003 (Act 658) and section 83 (1) of the Public Financial Management Act, 2016 (Act 921) requires the establishment of Internal Audit Directorate in Public Sector institutions including Technical Universities. Technically, the core mandate of the internal auditors is to provide objective and relevant assurance and consulting services that result in value addition and improvement in the Institution's Operations, Risk Management, Governance and Control processes. One of the key reasons, according to (Kinney Jr, 2000), is a paucity of data on internal audit and audit committee practices, particularly in emerging countries like Ghana. For these flaws, observing internal audit methods and evaluating their efficacy is challenging. Besides, our research context is also broad in that few studies have attempted to combine internal audit quality characteristics with internal auditor profiles based on their perceptions in an evolving context. Therefore, we urge broadening the scope of this research field's analysis in the Ghanaian Technical Universities perspective. Also, we asserted that the internal audit function has the

capacity to influence corporate control, financial reporting quality, and organizational performance. This study, thus, aims to strengthen the internal audit function's role as well as the internal auditor's obligations as a corporate governance tool. Consequently, our findings revealed that the internal auditor's independence, standard compliance, and internal auditors and external auditor relationship are the most important elements in evaluating internal audit quality in Technical Universities of Ghana. These findings should inspire administrators of educational institutions, audit committees, and external and internal auditors to develop the internal auditor–external auditor relationship, which should be built on mutual trust and frequent interactions. This is vital to guarantee that the internal auditor has strong management and board backing. This will enable for a more dynamic and adaptable internal audit function, which can be a valuable resource in ensuring good governance.

There are numerous studies that have examined the role of the external auditor in institutions using agency theory. However, this theory has only been applied to the internal audit role by a few scholars (Ismael & Roberts, 2018). It is assessed that the corporation, according to agency theory, is a node of contracts between the owners of economic resources and the managers, who are in charge of the use and control of these resources and hence have more information than the directors. This results in an information asymmetry, impairing managers' capacity to adequately assess whether their interests are being well served by agents (Adams, 1994; Jensen & Meckling, 1979). This can occur as a result from dilemma of moral hazard (the agent's selfishness) and adverse selection (Jensen & Meckling, 1979). In view of this, several procedures, such as internal audit, can be put in place to control agent conduct in order to deal with these challenges (Adams, 1994; Ettredge, Li, & Sun, 2006). Owing to this assertion, agency theory then becomes the theory based on to underpin the relationships in this study.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Relationship between external auditor and internal auditor

The importance of internal auditing and its contribution to the work of external auditors has been recognized by professional auditing organizations such as the International Federation of Accountants, the American Institute of Certified Public Accountants (AICPA), and The Institute of Internal Auditors (IIA). Body of research show that excellent cooperation and coordination between external and internal auditors is essential (Endaya, 2014; Hanif, 2020; Krichene & Baklouti, 2020). Professional bodies such as the AICPA (SAS No. 53, SAS No. 82, and SAS No. 99) and the IIA (IIA, 2012, Sec. 1210. A2) have emphasized the necessity of fraud detection to both internal and external auditors (Eke, 2020). Several studies have attempted to investigate the relationship between internal auditors and external auditors because of the

relevance of internal auditors' role in the overall audit process (Felix Jr, Gramling, & Maletta, 2005; Mat Zain, Zaman, & Mohamed, 2015; Schneider, 2009b). Furthermore, internal and external auditing operations may overlap in some areas, such as the examination of financial reporting quality. However, due to the varied objectives, the discrepancies between these two areas outnumber the similarities (Gamayuni, 2018). In an academic spectrum, a significant amount of research has attempted to investigate the elements that impact auditors' decisions to rely on internal audit work or not. Some of these research has been done in the United States, and it focused on the causal factors and effects of using external auditors in internal auditing. For instance, (Mustapha & Lee, 2020) discovered that while doing objective tasks rather than subjective activities, external auditors are more likely to depend on the work of internal auditors, which was supported by finding of (Munro & Stewart, 2010). Furthermore, with the establishment of audit committees, external auditors appear to have a new resource to assist them in evaluating the effectiveness of internal audit and coordinating with this structure in the gathering of audit evidence. As a result, it appears that the internal audit function has a lot of potential to help external auditors plan and execute their missions. According to several research, more emphases have been made that when external auditors work together with the internal audit function, the quality of reporting improves (Dzikrullah, Harymawan, & Ratri, 2020; Lin, Pizzini, Vargus, & Bardhan, 2011; Pizzini, Lin, & Ziegenfuss, 2015). Therefore, we hypothesized that;

H1: External auditor positively correlate with Internal auditor.

Internal auditor competence

The right assignment of competent employees to the internal audit department, as well as the proper management of these personnel, are critical to the internal audit's success. Internal audits necessitate a team of professionals with the necessary education, training, experience, and professional qualifications to conduct the complete range of audits mandated by their mandate. (Al-Twajiry, Brierley, & Gwilliam, 2004). Auditors must comply with the requirements and professional standards issued by their professional organizations (IIA, 2016), including standards relating to skills and conscientiousness, such as the IAA's standard 1200, which states that internal audit missions must be handled competently. Conferring from standard 1210 of the IAA: The complete audit team must have all of the knowledge, know-how, and skills required to carry out its obligations, including: application of norms, audit procedures and techniques, accounting principles and techniques, identifying fraud risks, risks and controls related to information technology, and understanding management principles. According to (Bou-Raad, 2000), auditors must have a high degree of education in order to be regarded a

human resource. (Bou-Raad, 2000), further opine that the diversity of abilities required is a big problem for professional bodies, institutions of higher learning, and management. According to studies that have looked into this issue, the more the professional qualifications of internal auditors in a given department are defined by the length of their professional training and their level of higher education, the more efficient and high-quality this department is (Nedyalkova, 2020). The auditor's experience, according to (Nanni, 1984), has a beneficial effect on the quality of the internal audit. Hence we hypothesized that;

H2: Internal auditor competence has a positive association with Audit quality

Professional standards adherence

The Institute of Internal Auditors (IIA) has established a set of standards known as Standards for the Professional Practice of Internal Auditing. The goal of these standards is to define the principles that must be followed in internal auditing, to provide a reference framework for the implementation and promotion of a wide range of internal audit activities that add value, and to establish criteria for evaluating internal audit performance and promoting the improvement of organizational processes and operations. Internal audit quality, according to (Alzeban, 2015), is determined by adherence to internal audit criteria that demand increasing complexity and disclosure in reporting. Companies that demonstrate higher internal audit compliance with standards have superior financial reporting quality, according to (Alzeban, 2019). This is crucial not just to comply with legal obligations, but also because the scope of the auditor's responsibilities may include risk assessments that demand a high level of judgment, and audit findings may have a direct impact on management decisions (Bou-Raad, 2000). Thus, it is hypothesized that;

H3: There is a positive association between professional standards adherence and audit quality

Internal auditor independence

Internal audit, according to IIA Standard 1110, must be independent and objective in its work. Nevertheless, when defining an internal auditor field of intervention, carrying out the work, and communicating the results, the internal auditor must be free of interference. The auditor's organizational independence is, in reality, a critical aspect in audit quality (Alia, Abdeljawad, & Yaaqbeh, 2020). As a result, the internal auditor must be at a suitable organizational level to enable the internal audit department to carry out its tasks. Internal auditors and management have a considerable possibility for misunderstanding, according to Van Peurseem (2005), internal auditors must help managers execute their jobs while also independently assessing management effectiveness. Internal auditors are accountable for preserving their employer's

best interests, nevertheless, they must be hesitant to obstruct competent management, regardless of the repercussions. Moreover, Bou-Raad (2000) posits that the strength of an internal audit department should be measured in terms of its independence from management and operational tasks (Schillemans, Van Twist, Van Der Steen, & de Jong, 2018). Likewise, it has been established by the IIA, the AICPA, and others that, organizational independence is also important for the internal audit function's survival (Brown, 1983; Hanif, 2020). Similarly, IIA Standard 1120 mandates the internal auditor to be objective, that is, to carry out his or her task in such a way that he or she has assurance in the outcome of his or her work and in the fact that no major quality improvements have been made. Internal auditors should not be faced with situations that would make it difficult for them to make impartial professional judgments. In view of this, we formulate a hypothesis that;

H4: Internal auditor independence is positively correlated to audit quality

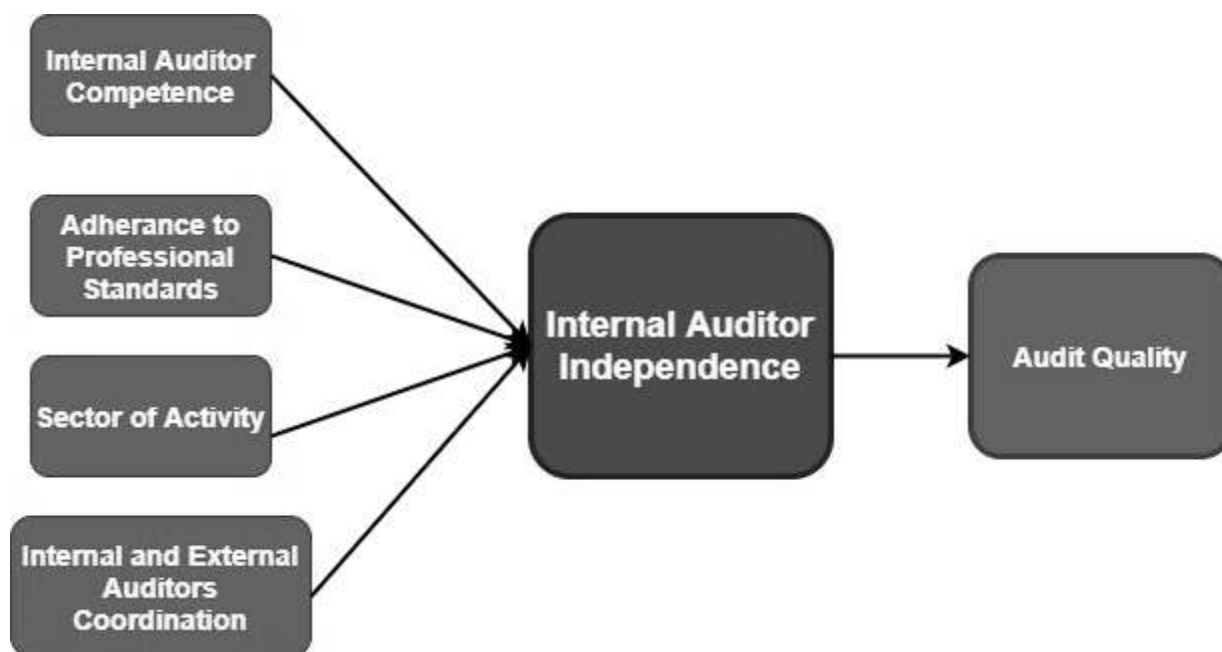


Figure 1: Conceptual Framework of the study

METHODS

Research Design

This study adopted the quantitative approach to collect data. We collected the data using a questionnaire survey approach. Before we collected the actual data, we interviewed the workers in the institutions. Also, we carried out an extensive literature review. The study's objectives were explained and we offered assurances of confidentiality and non-specific aggregation of data for purposes of analysis. We then design a selection procedure base upon

would the respondents be selected. The researchers then adopted the simple random sampling method to select the respondents who passed the criteria. The SPSS version 23 was the used to analyze the data retrieved from the respondents. This facilitated in the Exploratory Factor Analysis procedure (EFA) which generated the reliability of the data. Then again, AMOS version 21 was employed to undertake the Confirmatory Factor Analysis (CFA) to confirm the validity of the data.

Sample and Data Collection

This research relied on a questionnaire to collect data on how internal auditors of Technical Universities in Ghana relationship with external auditors' influence on internal auditors' quality. Participants of this study included employees from the various internal audit and finance departments in the Technical Universities of Ghana. The total accessible population of 10 Technical Universities finance department, internal audit department, procurement department, and general administration was 140 employees who met the selection procedure used. The procedure for the selection demands that: (a) a participant had worked with the institution for at least six months and (b) a participant was a permanent staff of the institution. The simple random sampling method was used to select participant samples from each institute, resulting in a sample size of 110. In sampling, Krejcie and Morgan (1970) sampling table and formula which uses a population proportion of 5% and a confidence level of 95% was used. The population members for each institution were assigned codes that were listed in IBM SPSS version 23. In the SPSS framework, the Random Sampling Function was used to select codes to make up the sample size for each Technical University. The survey was conducted within seven weeks. The results from the survey on the information of the respondents showed that the majority of the respondents totaling 60 (54.55%) were males while 50 (45.45%) were females. The study also revealed that respondents with master's degree qualification totaled 65 (59.1%), and bachelor's degree qualification totaled 45 (40.9%). It was observed that most of the respondents holds both master/bachelor degree and professional certificate (ICAG or ICA, UK). Information on the length of service of respondents also showed that 60 (54.55) of the respondents had been with their institution for 12 years and above, 25 (22.73%) of the respondents had worked with their institution for 8 – 11 years, 15(13.64%) of the respondents had worked for 4 – 7 years, and 10 (9.08%) of the respondents had worked for 1 – 3 years.

Measures

The items of the scale of measurement were adopted from the study of Krichene and Baklouti (2020) who proposed 22 items of a questionnaire in measuring all the variables under

investigation in this study. These items have been, on the other hand, used by several scholars (Al-Twaijry et al., 2004; Alzeban, 2019; Lin et al., 2011; Pizzini et al., 2015; Prawitt, Smith, & Wood, 2009; Van Peurse, 2005), and also used in international internal audit surveys (French Institute of Audit and Internal Control, 2013). The items are of five dimensions and includes: dimension concerns the independence of the internal auditor (09 items); the dimension of adherence to professional standards (02 items); the dimension of sector of activity (02 items); the dimension of competence of the internal auditor (05 items); the dimension of coordination of the external auditor with the internal auditor (04 items). The instruments used passed through psychometric properties checks to ensure that (Green, Dunn, & Hoonhout, 2008) suggestions in selecting scales for similar studies were met. For instance, we checked the reliabilities (e.g. Cronbach alpha) and validities (e.g. average variance extracted and discriminant validity) of the instruments. The data for the study did not suffer from common method biases since the coefficient of Cronbach alpha value for each of the scales was above the 0.70 threshold proposed by (Nunnally, 1978).

Data Analysis

The collected data was analyzed using SPSS version 23.0 and AMOS version 21.0 software. SPSS was used to perform the descriptive and inferential statistics. Principal Component Analysis (PCA) with varimax rotation (eigenvalue > 1 as cut off) was used to perform exploratory factor analysis (EFA) for all five scales. The Kaiser-Meyer-Olkin (KMO) of Sampling Adequacy was 0.881. The variables together explained 70.89% of the total variance at a total eigenvalue of 37.31, hence, indicating that the data did not suffer from common method biases. Confirmatory Factor Analysis (CFA) in AMOS version 23 software was utilized to further validate the reliability and validity of the scales employed in this investigation. The results of the CFA (Table 1) revealed that each of the survey questions had a standardized factor loading greater than 0.45 and that all of the t-values were significant. Cronbach alpha for the data ranges from 0.841 to 0.938 and composite reliability (ranging 0.862 to 0.940) for each of the variables and was greater than the suggested 0.70 threshold by (Nunnally, 1978) indicating high internal consistency. Also, the average variance extracted (AVE) ranging from 0.610 to 0.712 which was greater than the suggested 0.50 threshold (Fornell & Larcker, 1981; Hair Jr, Black, Babin, Anderson, & Tatham, 2010; Jöreskog & Sörbom, 1993) was recorded, therefore, indicating high convergent validity. The data had a good model fit with Chi-square (X^2) = 580.847, normed chi-square (X^2/df) = 3.174, standardized root mean square residual (SRMR) = 0.051, root mean square error of approximation (RMSEA) = 0.080, and comparative fit index (CFI) = 0.921.

Table 1. CFA factor loadings, reliability, and validity analysis

Variables	Code	β	t values	P	Cronbach alpha	Construct reliability	AVE
Internal Auditor Independence	IAI5	0.888			0.938	0.94	0.61
	IAI6	0.876	23.348	***			
	IAI8	0.789	19.033	***			
	IAI4	0.772	18.303	***			
	IAI9	0.784	18.813	***			
	IAI3	0.791	19.123	***			
	IAI7	0.739	16.993	***			
	IAI2	0.697	15.481	***			
	IAI1	0.702	15.668	***			
Internal Auditor competence	IAC5	0.749			0.893	0.899	0.691
	IAC2	0.963	17.383	***			
	IAC4	0.83	22.228	***			
	IAC1	0.787	19.964	***			
	IAC3	0.727	17.271	***			
Internal & External Auditors coordination	AC3	0.99			0.841	0.862	0.623
	AC1	0.859	24.15	***			
	AC2	0.738	17.902	***			
	AC4	0.479	9.698	***			
Sector of Activity	SA2	0.855			0.878	0.881	0.712
	SA1	0.918	19.213	***			
Adherence to Professional Standards	APS1	0.75			0.868	0.871	0.722
	APS2	0.82	15.871	***			

Note: β , Standardized estimate

Abbreviations: AVE, Average Variance Extracted; P, Significance Level

RESULTS

A Pearson's correlation analysis was carried out to examine the association among the variables i.e. Internal Auditor Independence, Internal Auditor competence, Internal & External Auditors coordination, Sector of Activity and, Adherence to Professional Standards Likewise, the

averages and standard deviations were estimated for the variables. The details are presented in Table 2.

Table 2. Mean, standard deviation, reliability, validity, and inter-factor correlation matrix

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
Gender	1.46	.499	-									
Age	1.97	.320	.058	-								
Edu.Qua.	1.59	.499	.176**	-.087	-							
position	2.20	.862	.085	-.002	.280**	-						
Yr. ser.	2.38	.794	-.013	-.007	-.082	-.218**	-					
IAI	3.695	.965	.088	-.133*	-.093	-.029	-.042	.831				
IAC	3.724	.918	-.07	-.146**	.220**	-.113*	-.102	.261**	.781			
AC	2.911	1.01	-.087	.104	-.029	-.223**	.081	.164**	.335**	.789		
SA	3.151	1.23	-.159**	.02	.061	-.056	-.078	.116*	.379**	.179**	.844	
APS	3.121	1.22	-.157*	.03	.050*	-.053*	.077	.114*	.388**	.189**	.179**	.845

Note: Edu.Qua=Educational qualification; Yr.Ser. =Years of service; IAI= Internal Auditor Independence; IAC= Internal Auditor competence; AC= Internal & External Auditors coordination; SA= Sector of Activity; APS=Adherence to Professional Standards; SD=Standard deviation; *p<0.05; **p<0.01.

DISCUSSION, CONCLUSION AND LIMITATIONS OF THE STUDY

Our research aims to highlight on reviewed literature and generally, it is acknowledged that a better standard of independence of internal auditors improves a robust audit efficiency. Drawing on the literature reviewed, the independence of the auditor has significant association with the internal auditor competence and quality of the audit. Nonetheless, this study investigates and evaluates the relationship between the auditor's independence and its agents on a theoretical level (i.e., professional standard adherence, external auditor's interference, and sector of activity) and internal audit competence (audit standards, audit accountability, internal control, and audit report). Furthermore, our research environment is broad in the sense that few studies have attempted to integrate the characteristics of internal audit quality and internal auditor profiles based on their perceptions in a developing context, such as Ghana Technical Universities. Indeed, the goal of this research is to provide answers for technical universities that want to increase the effectiveness of their internal audit function.

From Table 2, the correlations among the variables depict that the variables relate to each other and proofs that when these factors predicting internal auditor independence are adhered to internal auditors would be more effective in discharging their professional duties. As

a result, the quality of the information conveyed through internal audit reports is improved. This translates into a positive development in the performance of the company and its growth opportunities. Moreover, recognizing the importance of auditor independence in connection with audit competence would also enable various stakeholders, such as regulatory agencies and public sector managers, to develop policies, make suitable decisions, and put them into action. Finally, interested scholars in this research field should empirically conduct more research into the existing variables selected in this study and incorporate additional variables for future research such as audit market concentration, and others.

The key limitation of this study is its exploratory nature. Its second flaw is that the auditor classification was created based on the auditors' perceptions; it does not always reflect reality. A quantitative survey of a different sample should be used to confirm the findings. We also intend to conduct comparative analyses of internal auditors' actual procedures using the findings of this study. Other characteristics, such as the sector and the external auditor's accreditation, that are not addressed in this survey could be the focus of future research.

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