

Determinants of Internal Audit Effectiveness in South Gondar Administrative Zone: an Empirical Study

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Abstract:

*This paper focuses on the factors that affect the effectiveness of internal audit in the South Gondar Zone, with a particular focus on the internal audit department found in different woredas in the zone. **Methods**, The study uses a mixed research approach, by examined six factors: internal audit independence, internal audit competency, management support, the relationship between internal auditors and external auditors, the organizational setting, and the scope of internal audit work. The total population of the survey consisted of 144 internal auditors found in various woredas in the Southern Gondar Zone. The data were analysed using descriptive and inferential statistics such as Pearson correlation and multiple regression using Statistical Package for Social Science (SPSS) version 20. **Findings**: The results show that all six independent variables are positively correlated and make a positive contribution to the effectiveness of internal audit in public sector offices. **Conclusions**: All six independent variables account for 87.9% of the contribution to the effectiveness of internal audit in the South Gondar zone.*

Keywords: 1. internal audit; 2. effectiveness of internal audit; 3. Factors affectin the effectiveness of the internal audit.

1. Introduction

Internal audit is one of the fastest-growing but most misunderstood professions in the world. it has many definitions. For IIA (1999)"Internal Auditing is an independent, objective assurance and consulting activity

designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes. "

Due to economic globalization, technological advancements, business complexity, and allegations of fraudulent financial reporting, internal control, and internal audit have recently received increasing attention (Karagiorgos et al., 2009).

The establishment of an internal audit function is critical as a key internal assurance mechanism in public financial management, as well as a tool for monitoring and reviewing government agencies' financial management activities. Furthermore, government organizations promote accountability and integrity, improve program implementation, develop confidence with residents and stakeholders, lead to efficient use of public funds, and reduce misappropriation of public funds. Audit services can also assist businesses in the public sector in achieving improved financial management by playing an effective and efficient role in encouraging greater governance in the administration of public resources. To this end, auditing function is quite important in the management of local government funds. (Ayitenew&Lakch, 2019)

2. Literature Review

Examining the determinant factors that affect internal audit effectiveness is important because effective internal audit work can improve four important processes in the organization: learning (teaching employees how to do their jobs better), motivation (auditing also leads to improved performance), deterrence (knowing that an audit is discouraging anything that could lead to abuse), and process improvements (internal audit also ensures that the right procedures are followed). (Eden & Moriah, 1996; and Aaron & Gabriel 2010).

Internal audit is an important aspect of a company's financial structure. Despite the fact that there is a direct relationship between management perception, management support, organizational independence of internal auditors, adequate and competent internal auditor's staff, and the presence of an approved internal audit charter and internal audit effectiveness on public sector management (Shewamene, 2014), internal auditors face many challenges, as identified by the Ministry of Finance in its internal audit report.

Internal auditors face many challenges which include lack of expertise, lack of opportunity for professional development, repetitive audit routines which staffed members can predict, inability to insist on getting significant information because of fears of losing promotion opportunities and lack of independence, wrong perception of the audit function and auditors by the staff of the public body. Ethiopian studies are not addressed internal audit in local government administration, for example, Mihret and Yismaw (2007) study is about public sectors particularly higher educational institutions, and Belay (2007) study is about effective implementation of internal audit function to promote good governance in the public sector, Mihret (2010) studied the factors associated with attributes of internal audit departments. Hence, as far as the researcher's knowledge is concerned there is no study conducted a study about determinants that contribute to the effectiveness of internal audit in Ethiopian local governments, particularly in the South Gonder Administrative Zone.

3. Objectives of the Study

The objective of this study is to examine factors that affect the effectiveness of internal audit on governmental organizations in Southern Gonder Administrative zone Bureaus,

4. Methods of the Study:

The study uses explanatory research designs with a mixed research approach. In order to test the research questions theorized, Linear Regression the following model is used to examine determinants of internal audit

effectiveness. Most of the independent variables in this research have been tested in other studies (Mihret and Yismaw, 2007; Cohen & Sayag, 2010; Arena and Azzone).

5. Data Used:

The study covers all South Gonder Zone internal audit managers and internal audit staff that are found in 18 Woredas and four city administrations. The total population of the study is 144 Government Internal auditors that are found in south Gonder Administrative zone woredas. The researchers incorporate all the population as a sample. Primary data through a five-point Likert scale were collected.

6. Data analysis

Pearson’s Product Moment Correlation Coefficient

Table 1 presents the association between the independent variables and internal audit effectiveness for a sample of 144 respondents from South Gonder Zone Finance and Economic Development Office internal auditors. There is a strong positive relationship between Internal Auditor Independence and internal audit effectiveness ($r = .777, p < .01$), which is statistically significant at 99% confidence level. This implies that at a 1% level of significance it was discovered that the internal audit independence factor plays a significant role in determining the internal audit effectiveness, and it means that as internal audit independence increases the effectiveness of internal audit in public sector offices also increases. There is a strong statistically significant positive relationship between Internal Auditor Competence and internal audit effectiveness in public sector offices ($r = .783, p < .01$). This would imply that the more competent auditors’ better effectiveness of audit activities. There is strong statistically significant relationship between Management Support and internal audit effectiveness ($r = .719, p < .01$). This would imply that the more auditors supported by management better internal audit effectiveness would be. A statistically significant and strong positive association was also found between the relationship between internal and external auditors and internal audit effectiveness, ($r = .769, p < .01$) which implies that more both parties work cooperatively to get higher internal audit effectiveness in public sector offices. There is a strong statistically significant relationship between Organization setting and internal audit effectiveness ($r = .613, p < .01$), which implies that the more organizations are structured and set to achieve better internal audit effectiveness in public sector offices, there is a strong statistically significant relationship between Scope of Internal Audit and internal audit effectiveness in public sector offices ($r = .659, p < .01$). This would imply that the more determined the scope of the audit better internal audit effectiveness in public sector offices would be.

Table1: Correlation matrix

		IAE	IAI	IAC	MS	RBI&EA	OS	SIA
IAE	Pearson Correlation	1						
IAI	Pearson Correlation	.777**	1					
IAC	Pearson Correlation	.783**	.663**	1				
MS	Pearson Correlation	.719**	.651**	.667**	1			
RBI&EA	Pearson Correlation	.769**	.700**	.698**	.685**	1		
OS	Pearson Correlation	.613**	.752**	.748*	.707**	.866**	1	
SIA	Pearson Correlation	.659**	.739	.754	.042*	.627	.295	1
N		144	144	144	144	144	144	

** . Correlation is significant at the 0.01 level (2-tailed).

Where IAE= Internal Audit Effectiveness, IAI= Internal Auditor Independence, IAC= Internal Auditor Competence, MS=Management Support, RBI&EA=Relationship between external Auditors, OS= Organization setting, SIA=Scope of Internal Audit

Results of Regression Analysis

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.940 ^a	.884	.879	.443	.884	173.339	6	137	.000	1.538

As Table 2 shows that R-Squared statistics and adjusted R-squared statistics of the model is 88.4%, and 87.9% respectively. This result indicates that R Square value for the model showed that 88.4% of the dependent variable in the model can be predicted by the independent variables. The remaining 11.60% of the dependent variable is explained by other variables which are not included in the model. Moreover, adjusted R square values for the model show 87.90% of the goodness of fit of the model. This suggests that all the explanatory variables are collectively very good in explaining internal audit effectiveness.

In addition to the analysis of R- square the researcher also considers the model fit (“ANOVA”) table which is the separation of variance attributable to one cause from the variance attributable to others.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	203.665	6	33.944	173.339	.000 ^b
	Residual	26.828	137	.196		
	Total	230.493	143			

a. Dependent Variable: Internal Audit Effectiveness

b. Predictors: (Constant), Internal Auditor Independence, Internal Auditor Competency, Management Support, Relationship Internal and External Audit, Organizational Setting, Scope of internal audit work. The researcher results that the overall significance of the model in the above ANOVA table 3 is fit at ‘sig’ of 0.000. So that the researcher can conclude that the model could fit the data.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.630	.217		2.901	.004
	Internal Auditors Independence	.208	.069	.142	3.007	.003
	Internal Auditor Competency	.181	.056	.153	3.231	.002
	Management Support	.015	.042	.014	.345	.031
	Relationship Internal and External Auditors	.256	.064	.242	4.014	.000
	Organizational setting	.477	.069	.471	6.870	.000
	Scope of internal audit work	.039	.034	.034	1.120	.002

a. Dependent Variable: Internal Audit Effectiveness

b. Predictors: (Constant), Internal Auditor Independence, Internal Auditor Competency, Management Support, Relationship Internal and External Audit, Organizational Setting, Scope of internal audit work.

The unstandardized coefficients β column gives us the coefficients of the independent variables in the regression equation including all the predictor variables as indicated below:

$$IAE = 0.630 + 0.208 IAI + 0.181 IAC + 0.015 MS + 0.256 RBI\&EA + 0.477 OS + 0.039 SIA + ei$$

Where: IAE=Internal Audit Effectiveness, IAI = Internal of Audit Independence, IAC = Competency of Internal Auditors, OS = Organizational Setting, MS = Managements Support, RBI&EA= Relationship between internal and external auditors, SIA= Scope of internal audit and ei=error term

Discussion of the Regression Results

A. Independence of Internal Audit was measured by five items, these being: the level of independence, reporting level, direct contact to the officials and management, conflict of interest, interference, unrestricted access to all departments and employees, appointment, and performing non-audit activity. Based on the regression analysis implied that internal audit independence (IAI), is positively related with internal audit effectiveness. In addition strong correlated relationship, positive beta sign and a statistically significant with the internal audit effectiveness ($\beta = 0.208$, $P < 0.05$). Previous study supported that a positive and significant relationship between audit effectiveness and organizational independence (Alagan, 2014; Elias Ayalew, 2014; and Shewamen, 2014).

B. Internal Auditors Competency

Based on the regression analysis of the above model, internal audit competency has a positive and significant effect on the internal audit effectiveness in public sector offices ($\beta = 0.181$, $p < 0.05$) shows that having a competent internal audit staff significantly and positively impacted the internal audit effectiveness. This finding is the same as the finding of some previous studies (Arena and Azzone, 2009; Cohen and Sayag, 2010) and it is consistent with the finding of Shewamene, (2014) which was done on public sectors. Because being competent and having the required competency to conduct internal audit work is essential to improve the effectiveness of internal audit this is because competent and skilful employees can perform their activities on time and they can use new technologies and software which enhance internal audit effectiveness. Therefore, competent internal audit staff can positively impact the audit effectiveness by delivering quality audit work at the required time.

C. Management support (MS): for internal audit was measured by a number of indicators, these being: involvement in the audit plan, providing management with reports about the work the internal audit team performs, the management's response to audit reports, the resources of the internal audit department. The regression analysis implies a positive beta sign ($\beta = 0.015$, $p < 0.05$). It implies that there was a positive influence on internal audit effectiveness. Which is positively and significantly related. Hence, the hypothesis was supported by a previous study that positive influence and significant related to internal audit effectiveness (Elias Ayalew, 2014; and King Abdulaziz, 2014).

D. Relationship between internal and external auditors: cooperation of internal and external auditors on performing the auditing activity would have positive influence to undertake effective internal audit works to increase performance. In this regard, this item was assumed to affect the effectiveness of internal audit. The category was composed of 5 question items designed to level respondents to locate their response level towards the association of question items with effectiveness of internal audit. And significant association at ($\beta = 0.256$, $p < 0.05$) with the dependent variable. This implied that the overall average response for the internal audit effectiveness was agreed upon by the respondents. The researchers concluded that the relationship between internal and external auditors managing of resources, minimizing of time and errors that have a significant effect on the effectiveness of internal auditing.

E. Organizational setting: refers to the organizational profile, internal organization, and budgetary status of the internal audit office; and also the organizational policies and procedures that guide the operation of auditees. It provides the context in which internal audit operates. Thus, organizational setting

can exert influence on the level of effectiveness that internal audits could achieve. Based on the regression analysis of the above model, the organizational setting (OS) also has a positive effect or correlation on internal audit effectiveness ($\beta = 0.477$, $p < 0.05$).

F. Scope of internal audit Work variable which was taken as a determinant of internal audit effectiveness on this study is the existence of scope of internal audit which guides the internal audit works. On different pieces of literature having a well-organized scope of internal audit was taken as a prerequisite for the effectiveness of internal audit work basing this the last hypothesis of this study formulated as there is a significant and positive relationship between having approved internal audit charter and internal audit effectiveness and the Beta value ($\beta = 0.039$, $P < 0.05$) of the regression analysis support this hypothesis.

7. Conclusions

Based on the finding the researchers concluded the following results

- Based on the regression analysis implied that organizational independence (IAI), is positively related to internal audit effectiveness. In addition strong correlated relationship, a positive beta sign, and a statistically significant with the internal audit effectiveness ($\beta = 0.208$, $P < 0.05$).
- Internal Auditors Competency based on the regression analysis of the above model, internal audit competency has a positive and significant effect on the internal audit effectiveness in public sectors ($\beta = 0.181$, $p < 0.05$) shows that having a competent internal audit staff significantly and positively impacted the internal audit effectiveness.
- Management support (MS) for internal audit was measured by a number of indicators, these being: involvement in the audit plan, providing management with reports about the work the internal audit team performs, the management's response to audit reports, the resources of the internal audit department. The regression analysis implies a positive beta sign ($\beta = 0.015$, $p < 0.05$). It implies that there was a positive influence on internal audit effectiveness.
- Relationship between internal and external auditors cooperation of internal and external auditors on performing the auditing activity would have positive influence to undertake effective internal audit works to increase performance. In this regard, this item was assumed to affect the effectiveness of internal audit. The category was composed of 5 question items designed to level respondents to locate their response level towards the association of question items with effectiveness of internal audit. And significant association at ($\beta = 0.256$, $p < 0.05$) with the dependent variable.
- Based on the regression analysis of the above model, the organizational setting (OS) also has a positive effect or correlation on internal audit effectiveness ($\beta = 0.477$, $p < 0.05$).
- Scope of internal audit variable which was taken as a determinant of internal audit effectiveness on this study is the existence of scope of internal audit which guides the internal audit works. there is a significant and positive relationship between having a scope of internal audit and internal audit effectiveness and the Beta value ($\beta = 0.039$, $P < 0.05$).

8. Recommendations

Based on the findings of this research the following recommendations are forwarded.

- The study concludes that the independence of internal auditors is the most important determinant factor that affects the internal audit effectiveness in public sectors. The independence of internal auditors has a positive effect on internal audit effectiveness. It means the higher independence of internal auditors' the higher the audit effectiveness of public sector offices.

- As it is clearly articulated in the finding of this study auditor's competency have a positive and significant effect on internal audit effectiveness, but in South Gonder Zone Finance and Economic development office internal auditors didn't take sufficient and continuous professional development activities (such as professional association-sponsored programs and correspondence courses). Therefore, the organization should work to enhance the professional competency of its internal audit staff by letting them participate in short-term and long-term audit-related training like Financial Audit, Operational Audit, Information Technology Audit.
- In South Gonder Zone Finance and Economic Development office, internal audit departments are not assigned sufficient budget to examine the existence of sound established criteria in the auditees' practices. Therefore, the responsible government body should be assigned a sufficient budget to carry out the auditor's duty to achieve internal audit effectiveness.
- The relationship between internal and external auditors has a positive and significant influence to undertake effective internal audit activities. But in the public sector internal and external auditors didn't take sufficient and continuous professional training on information technology, report preparation, preparation of audit planning, and communication. Therefore, the responsible body should arrange the chance to update auditors.
- Management support to internal auditors implies that there was a positive and significant influence on the internal audit effectiveness of public sectors offices. But still, there is a gap between auditors and management. The responsible body should be support by an audit plan, providing management with reports about the work the internal audit team performs, the management's response to audit reports, the resources of the internal audit department.
- The study result indicated that internal auditors in the south Gonder zone use computer applications mostly Microsoft exile, we recommend using appropriate auditing software.

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