

Factors Contributing to External Auditors' Independence: Subject-Based Theoretical Framework

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Abstract

The aim of this study was to identify the determinants of external auditors' independence in Ethiopia. To achieve this objective, the researcher used a mix of quantitative and qualitative research approaches with the explanatory research design where the effect caused by explanatory variables was predicted through regression analysis. A simple random sampling technique was used to select respondents. The primary data was collected through a structured questionnaire. The ordered logistic regression analysis showed that ethical awareness of auditors, training, and learning, audits firm size, the competition level of audit service, the existence of an audit committee, audit tenure, the performance of non-audit service, and professional audit standards were statistically significant. However, the size of audit fees and information technology utilization were not statistically significant. Therefore, the researchers forwarded possible recommendations to private audit firms in Ethiopia based on statistically significant variables to improve the auditors' independence.

Keywords: 1. Auditors' independence, 2. individual auditors' characteristics, 3. Audit Company Environment Related factors, 4. Legal environment & institutional related factors

1. Introduction

External Auditors' independence refers to the independence of the external auditor from parties that may have a financial interest in the business being audited. So, the auditor's opinion should be impartial, unbiased, and free from conflict of interest to override the professional judgment of auditors (Munoko et al., 2020). Auditors' independence is about "independent in mental attitude" and "independent of appearance" (Tepalagul & Lin, 2015). Independence in mental attitude means the ability auditor to remain unbiased during an audit of financial statements. Independence in appearance means auditors' should avoid financial and managerial relationships with clients.

It is very important to conduct a study on determinants of auditors' independence in developing countries like Ethiopia where the audit profession is at the development stage. Ethiopia is among developing countries where the independent auditing profession has not yet developed due to different factors (Fashami, (2020). So the aim of this study was set out to explore determinants of external auditor independence and explore its constraints concerning private audit firms in Ethiopia using a subject-based theoretical framework model of Doan Minh Duc et al., 2020) to explore the factors that affect auditor independence.

Auditor independence is part of the foundation of the auditing profession. An independent, reliable, and ethically sound auditee gives the company credibility and allows the public to trust in the accuracy of the results and the integrity of the accounting profession. Auditor independence is questionable upon the failure of audit role in various corporate scandals such as Enron, WorldCom, and Tyco International which gained the attention of the statutory body to enforce the law for improved governance of auditors. This is why of the topic auditors' independence is gained the attention of researchers across the world.

Different researchers studied the topic outside Ethiopia and suggested different points. For instance, the study conducted by Le Doan Minh Duc et al., (2020) in Vietnam using descriptive statistics showed that the main factors affecting auditor independence are the personal characteristics of the auditor, the audit firm's environment, and the legal environment in the audit using subject-based theoretical framework model. The current study is different from the study of Le Doan Minh Duc et al., (2020) by employing a mixed research approach and ordered econometric model for data analysis while the aforementioned research focused on descriptive analysis which is less reliable in predicting factors affecting auditors' independence.

Also, different research works have been done in Ethiopia and suggested their view. For instance, the researchers like Dessalegn and Mengistu (2011) and Asmamaw (2018) auditors and out that auditors' independence was influenced by audit fees, audit tenure, and competition in the audit market without employing any theoretical framework. But, this study was different from other studies by Dessalegn and Mengistu (2011) and Asmamaw (2018) by using the subject-based explore model to explore the different factors related to individual auditors (ethical awareness, learning, and training), audit firm environment (audit firm size, audit fee, audit tenure, provision of non-audit service, competition in audit market), legal factors like the existence of audit committee, information technology utilization and professional audit standard about privates in Ethiopia.

Besides, Deyganto (2021) examined determining factors of auditors' independence of 80 private audit firms in Ethiopia using a mixed research approach with an explanatory research design where the effect caused by the independent variable on the dependent variable is observed through regression analysis.

The regression result of Deyganto's (2021) study showed that the size of the audit firm, size of audit fee, professional audit standard, competition, audit committee, and information technology has a positive and statistically significant effect on external auditors' independence. The current study is different from the aforementioned study by adding three additional variables like awareness of ethics, education, and training, and audit tenure to improve understanding of factors affecting auditors' independence and use 110 respondents. Besides, a study by Deyganto (2021) measured auditors' independence through a five-point Likert scale and considered it as a data ratio scale analyzed through the OLS regression model even if the true scale of measurement five-point Likert scale is an ordinal scale that needs ordered logistic regression model. There is a wrong measurement of auditors' independence.

There is no theoretical model employed in the research except by Deyganto (2021). When it comes to the model specification of the current study, auditors' independence is measured through five point-Likert scales which are ordinal response variables hence, the researcher used is ordered logistic regression model to examine factors affecting external auditors' independence across Ethiopia. Therefore, this study was designed to conduct extensive research and address the literature, and knowledge methodology gaps in the empirical studies on the determinant of external auditors' independence regarding Ethiopian private audit firms.

Objectives of the study

The general objective of the study is to assess the determinants of auditor's independence evidence informative audit firm in Ethiopia by emphasizing the following specific objectives. In line with the objective, the study has been planned to achieve the following general objectives:

- a) To investigate individual auditors' characteristic related factors such as ethical awareness of auditors and learning and training of external auditors on auditors' independence in a private audit firm in Ethiopia
- b) To identify the audit firm's environment-related factors such as the size of the audit firm, size of audit fee, audit tenures, provisions of non-audit service, and competition of audit market of external auditors on auditors' independence in a private audit firm in Ethiopia.
- c) To investigate the legal and institutional related factors of auditors such as audit committees, information technology, and professional audit standard on auditors' independence of private audit firms in Ethiopia.

2. Literature Review & Research Hypothesis

The study adopted the new approach of by Le Doan Minh Duc et al., (2020) and added independent variables like information technology facility and the existence of regulatory framework (follow audit standard) as additional variables and effectiveness of audit firm as dependent variable: Let review one by one by developing the tentative statement that the current study will going test.

i. Individual auditor Character Related factors

A. Ethical awareness of auditor

The role of ethical climate has an important influence in bringing ethical decision-making for a public accounting firm (Apriliani et al., 2014). The ethical audit is a vital first step in building a culture of strong ethics and a reputation for fairness, both as an employer and as a business. The findings from an ethical audit can help you to detect and quash any behavioral issues before they result in serious financial or reputational damage. Albeksh (2017); Ratna & Anisykurlillah (2020). Le Doan Minh Duc et al., (2020) evidenced that ethical awareness of auditors has a positive influence on auditors' independence. So it can be hypothesized that:

H1: Ethical awareness of auditors has a positive influence on auditors' independence.

B. Learning and training of Auditor

According to the Public Company Accounting Oversight Board (PCAOB, 2022), the audit is to be performed by a person or persons having adequate technical training and proficiency as an auditor. The statement in the preceding paragraph recognizes that however capable a person may be in other fields, including business and finance, he cannot meet the requirements of the auditing standards without proper education and experience in the field of auditing. In the course of his day-to-day practice, the independent auditor encounters a wide range of judgment on the part of management, varying from true objective judgment to the occasional extreme of deliberate misstatement. He is retained to audit and report on the financial statements of a business because, through his training and experience, he has become skilled in accounting and auditing and has acquired the ability to consider objectively and exercise independent judgment concerning the information recorded in books of account or otherwise disclosed by his audit. Empirical studies by Le Doan Minh Duc et al., (2020); Albeksh (2017); Ratna & Anisykurlillah (2020) suggested that the learning and training of auditors have a positive influence on auditors' independence.

H2: The learning and training of auditors have a positive influence on auditors' independence.

II. Audit Company Environment Related factors

A. Audit firm size

The size of the audit firm is one of the critical factors that affect an auditor's independence in performing audit work. To this end, (Asmara, 2018) and (John And Tasje, 2012) found out that the size of the audit firm has a positive and significant influence on audit effectiveness by private audit firms in the Amhara region. Besides, the descriptive statistics of studies by Albeksh (2017); Carren, 2013; Stephen et. al., (2015); Adane wudu. (2014); Deyganto (2021) also found that the size of an audit firm has a positive influence on the effectiveness of audit

activity. In another way, private audit firms were influenced by the factors such as audit firm size, audit firm tenure, audit fees, and audit committee's commitment in a significant and positive way. The effect of the size of the audit firm and the study concludes that the size of the company will affect the audit effectiveness (Chepkorir, 2013). So, the researcher was forced to develop the hypothesis:

H3: The size of the audit firm has a positive and significant impact on audit effectiveness.

B. Size of Audit fee

The audit activity must have sufficient funding relative to the size of its audit responsibilities. This is an important element that should not be left under the control of the organization being audited because the budget impacts the audit activity's capacity to perform its responsibilities. The empirical findings of Albeksh, 2017; Carren, 2013 Stephen et. al, 2015; Deyganto (2021) increase in audit fee payments to external auditors has a positive consequence on the effectiveness of audit work. Followed by international statistics findings of studies (Adane, 2014; John and Tasie, 2012 Asmamaw, 2018); Deyganto (2021) increase in the size of audit fees has a positive and statistically significant impact on audit effectiveness by auditors. Therefore, the student researcher has developed the researcher hypotheses:

H4: An increase in audit fee payments to the audit firm has a positive and statistically significant effect on auditor independence

C. Audit Tenure

Auditor tenure is measured as the length of the auditor-client relationship. Audit quality is measured by the propensity of auditors to issue a going-concern opinion (Deyganto, 2021). Long audit tenure by the firms as well as by members of the engagement team may also create potential threats, real or perceived, to independence and pose a risk to audit quality. Globally regulators expressed concerns that the desire to retain clients and the familiarity created between auditors and management might over time impair auditor independence, which in turn could adversely affect audit quality. This resulted in a global debate on how best to address the issue. Emperical findings of Aschauer and Quick 2018; Tepalagul and Lin (2015).; Causholli et al. (2015); Albeksh (2017); Tesema (2018) suggested that audit tenure harms auditors' independence.

H5: Increase in Auditor tenure has a negative and statistically significant impact on auditor independence

D. Non-audit service

Audit regulators suggest that the provision to clients of non-audit services by audit firms may compromise auditor independence. Many studies have investigated the effect the provision of non-audit services has on audit independence. (John And Tasie,2012; Barizah et. al., 2005; Kang et. al., 2018; Salehi, 2019); and Deyganto (2021) providing Non-Audit Service by external auditors to the same clients strongly negatively affect audit independence. Therefore, the student researcher has forced to develop a tentative statement:

H6: Provision of non-audit service has a negative influence on auditor's independence

E. Competition in the audit market

When market competition for audit clients is higher, audit firms are more likely to retain their audit clients by pleasing their clients, which results in impaired independence and lower audit quality (John And Tasie,2012; Barizah et. al., 2005). In opposite direction, a study by (Xie, 2016), and Deyganto (2021) find that greater audit market competition significantly increases audit quality and that it has significant moderation effects on audit quality through auditor independence. In addition, in explaining this, Gul (2007) argued that the existence of competition caused auditors to be more independent and create a favorable image to maintain their clientele. So, it can be the hypothesis that:

H7: Increase level of competition in the audit market has a positive influence on the independence of auditors.

III. Legal environment & institutional related factors

A. Audit Committee

An audit committee is a selected number of members of a company's board of directors whose responsibilities include helping the auditors remain independent of management. For that reason, there is much support to suggest a positive relationship between audit committees and auditor independence, which means that the existence of an audit committee will enhance an auditor's independence. Teoh & Lim (1996) and Carren, C. (2013) in their study found that the formation of audit committees has a strong positive effect on enhancing auditor independence. The variable will be measured through the Likert scale since it focused on the response of respondents. Therefore, the study developed the tentative statement as;

H8: The existence of an audit committee has a positive influence on the independence of auditors.

B. Information technology Utilization

Information technology facilities are base for conducting audit activities in any organization. It was considered a continuous variable and measured through 5 points Likert scale. Recent changes in the audit environment the business environment is always changing and accounting and auditing practices have to keep pace. Standard-setting bodies and market regulators must therefore monitor and update standards. Several important events have characterized the audit environment in recent years. The spread of audits corresponds to a fundamental shift in patterns of governance in advanced capital market economies. An additional change in the audit environment that has affected auditing practices is the advance in information technologies. The acceleration of these developments in recent years has been so significant that its path is not comparable with any preceding period. Not surprisingly, the audit market and scope of audit services have been significantly influenced by such developments in information technology (Soltan 2007). Hence, the researcher has planned to hypothesize:

H9: Information technology utilization has a positive influence on auditor independence.

C. Professional audit standards:

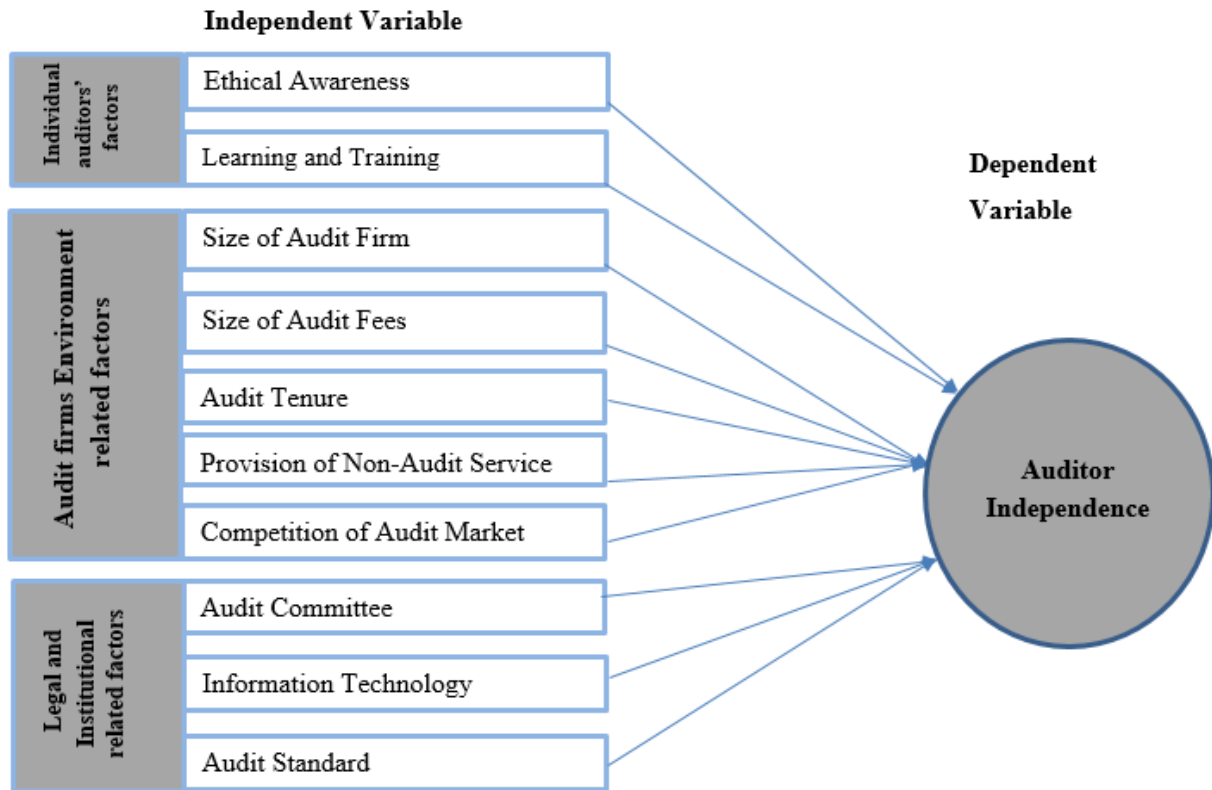
Professional audit standards support the implementation of the previous elements and provide a framework to promote quality audit work that is systematic, objective, and based on evidence. Audit activities should conduct their work following recognized standards. Conformance with the standards is seen as a key factor for the internal audit activity to add value to the governance process. The study by (IIA, 2014) showed that internal audit activity conforms to some or all of the standards, verification of compliance with other standards or codes, and verification of compliance with other standards or codes respectively. According to research conducted by (Shewamene, 2014); Albeksh (2017); (Tesema, 2018); Deyganto (2021) availability of professional audit standards has a positive and significant influence on public sector governance. So, the researcher has been motivated to guess those following audit standards have a positive and statistically significant influence on auditor independence.

H10: Following professional audit standards has a positive effect on auditor independence

Conceptual framework of the study

The study is conceptualized based on the variables that would be used in the study. The subject-based theoretical framework explores the different factors related to individual auditors: the external auditor independence is influenced by ten factors such as ethical awareness, learning and training, audit firm size, size of audit fee, audit tenure, provision of non-audit service, competition audit market, existence of audit committee and information technology utilization and the existence of professional audit standard, The focus would be on the private audit firm those were central independent variables of the study.

Figure 1: Conceptual Framework



Source: developed based on literature review (2022)

3. Materials & Methods

Research Design: The researchers have used an explanatory research design to achieve the desired objective. The explanatory research design enables the researchers to explain the cause and effect relationship between dependent and independent variables

Research Approach: The researcher used a mixed research approach due to the quantitative nature of the data.

Data Sources: The researchers used primary data sources to achieve the purpose of the study.

Data Collection methods: The researchers used questionnaires and interview

Data Analysis Methods: The researchers used both descriptive and inferential statistics using SPS

Sampling Design: this involves the target population, sampling method, and sample size of the study.

Table 1: The target population, sampling method, and sample size of the study.

Target Population	Formula	Sampling Techniques	Sample size
159 audit firms in Ethiopia	$n = \frac{N}{1 + Ne^2}$ $114 = 359 / (1 + 159 * 0.05^2)$ Source: Yemane (1967)	Simple random sampling	114 external auditors in Ethiopia

Source: Accounting Board of Ethiopia, 2022

Econometric Model Specification

In statistics, the ordered logit model is an ordinal regression model that is, a regression model for ordinal dependent variables first considered by (McCullagh, 1980). In this study, the perception of auditors’ independence has been categorized as five-point-Likert scales (level of agreement for each item using the following scales: 5=strongly agree, 4=agree, 3=neutral, 2= disagree, and 1= strongly disagree respectively. Hence the equation of the ordered logit model has developed as follows:

$$y^* = \sum_{k=1}^k \beta_k X_k + U \dots \dots \dots (1)$$

Y^* = is unobserved and thus can be thought of as the underlying tendency of an observed phenomenon and the researcher has assumed it follows a certain symmetric distribution with zero mean such as logistic distribution. What can be observed is that:

$$\begin{aligned} y &= 1 \text{ if } y^* \leq \mu_0 \\ y &= 2 \text{ if } \mu_1 < y^* \leq \mu_2 \\ y &= 3 \text{ if } \mu_2 < y^* \leq \mu_3 \\ y &= 4 \text{ if } \mu_3 < y^* \leq \mu_4 \\ y &= 5 \text{ if } \mu_4 < y^* \leq \mu_5 \end{aligned} \dots \dots \dots (2)$$

Where y is observed in j number of ordered categories, μ_s are unknown threshold parameters separating the adjacent categories to be estimated with β_s . The overall form for the probability that the observed y falls into category j and the μ_s and the β_s are to be estimated with an ordinal logit model is that:

$$prob(y = j) = \frac{1 - l(\mu_j - \sum_{k=1}^k \beta_k X_k + U)}{\dots \dots \dots} (3)$$

Finally, the equation is expressed as follows:

The probability of auditors’ independence has been categorized as (5= strongly agree, 4 = agree, 3= neutral, 2= disagree, and 1= strongly disagree respectively) can be = $\beta_0 + \beta_1$ *Ethical Awareness + β_2 * Learning and Training + β_3 * Audit Firm Size + β_4 * Size audit fee + β_5 * Audit tenure + β_6 * provision of non-audit service + β_7 * Competition of audit market + β_8 * Audit committee + β_9 * Information Technology + β_{10} * Professional Audit Standard + error term(4)

β_0 = Constant Term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9,$ and β_{10} refers to coefficients of independent variables

Results

The analysis and discussion were data collected from one hundred ten (100) respondents out of one hundred thirteen (114) sample respondents. So the response rate is 87.30 % which implies that all respondents have participated in the process of data collection.

Reliability Test

Compared with the minimum value of alpha 0.70 advocated by Cronbach (1951), then the responses generated for all of the variables ‘used in this research were reliable enough for data analysis.

Table 2: Reliability Test of the variables

Cronbach's Alpha	N of Items
.884	38

Sources: Survey data, 2022

Compared with the minimum value of alpha 0.70 advocated by Cronbach (1951), then the responses generated for all of the variables ‘used in this research were reliable enough for data analysis.

Descriptive Statistics Analysis

The descriptive statistics of the variables measured through the five-point Likert scale were analyzed and interpreted as follows:

Table 3 Summary of Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Independence of Auditors	100	1.00	5.00	2.65	1.238
Ethical awareness	100	1.00	5.00	2.82	1.258
Learning and Training	100	1.00	5.00	3.13	1.307
The sizes of audit Firm	100	1.00	5.00	2.89	.980
Size of Audit fee	100	1.00	5.00	3.10	.834
Audit tenure	100	1.00	5.00	2.97	1.230
Non-audit service	100	1.00	5.00	2.88	1.163
Competition in the audit market	100	1.00	5.00	2.60	1.110
Audit Committee	100	1.00	5.00	2.89	1.120
Information technology	100	1.00	5.00	3.07	.916
Professional Audit standard	100	1.00	5.00	2.53	1.179

Sources: Survey data, (2022)

The maximum and minimum values of all variables were measured through a five-point Likert scale of 5 and 1 respectively. The mean value of variables indicates the average response of participant’s out of 5 maximum and 1 minimum value range of response. The standard deviation response of variables implies the variation of average response between 5 maximum and 1 minimum value range of response. The auditors’ independence has a mean value of 2.65 with an SD of 1.238. The mean value of auditors’ independence is fall within 2.5-3.00 which is the neutral response. Ethical awareness of auditor has a mean value of 2.82 falls within 2.5-3.00 which is a neutral response and SD of 1.258. Concerning the learning and training of auditors’ the mean value of 3.13 and standard deviation of 1.307. Concerning the sizes of the audit firm, the overall mean was 2.89 and std. deviation of .980. The mean of the size of the audit fee was 3.10 which falls within 3.1 - 4.49 which tells us the response value on the variable is agree. The response was slowly dispersed from its mean value with a standard deviation of .834. Audit tenure has a mean value of 2.97 and falls within 2.5-3.00 which is a neutral response and a standard deviation of 1.230. The outputs of the descriptive statistics of the performance of non-audit service have a mean of 2.88 mean value was fall within 2.5-3.00 which is a neutral response and standard deviation of 1.163. In addition, the mean of the examination process was 2.7125 falling within 2.5-3.00 which is the neutral response. The standard deviation value was 1.14950. Competition in the audit market has to mean value of 2.60 mean value was fall within 2.5-3.00 which is a neutral response and SD of 1.110. The average value of the audit committee was 2.60 mean value falling within 2.5-3.00 which is a neutral response followed by a standard deviation value of 1.110. The outputs of the descriptive statistics of information technology have a mean of 3.07 and a standard deviation of .916. The average value for professional audit standards as measured by five point-Likert was 2.53 which falls within 2.5-3.00 which is the neutral response. The standard deviation is 1.179 which tells us the variation of the mean response from the actual response.

Correlation Analysis

In ordinal data Spearman's rho correlation is recommended so the Spearman's rho correlation matrix for this study was computed as follows:

Table 4 correlation matrix of variables

Variables	1	2	3	4	5	6	7	8	9	10	11
Spearman's rho	Auditors' Independence (1)	1									
	Ethical awareness of auditors (2)	.324*	1								
	Learning and training(3)	.209*	.444*	1							
	Firm size (4)	.472*	.381*	.096	1						
	Audit fee size (5)	.140	.029	-.093	-.036	1					
	Audit tenure (6)	.053	.100	.158	.188*	.151	1				
	Non-audit service (7)	-.094	.042	.045	.041	.021	.089	1			
	Competition (8)	.375*	.139	.212*	-.144	.043	.560*	.075	1		
	Audit committee(9)	.164	.051	.042	.084	.008	.121	.035	.007	1	
	IT utilization(10)	.048	.062	.204*	.122	.666*	.005	.008	.059	.003	1
	Audit standard(11)	.260*	.123	.007	.009	.163	.000	.033	.098	.092	.173
** . Correlation is significant at the 0.01 level (2-tailed).											
* . Correlation is significant at the 0.05 level (2-tailed).											

Source: Survey data, 2022

Table 4 shows the relationship between the dependent variable which is auditors' independence and independent variables with a coefficient of correlation 1 indicating that each variable is perfectly correlated with the other. The result shows that ethical awareness of auditors, firm size, competition in the audit market, and professional audit standards were positively correlated at a 1% significance level (as $P < 0.01$) with the auditors' independence. Whereas, variables such as Size of audit fee, audit tenure, audit committee, and information technology utilization were a positive relationship with auditors' independence but were statistically insignificant respectively since the p-value is more than 1% and 5% levels of significance. Learning and training were positively correlated with auditors' independence and statistically significant at a 5% level of significance for the reason their $P < 0.05$. The performance of non-audit service has negatively correlated with auditors' independence and is statistically insignificant respectively since the p-value is more than 1% and 5% levels of significance. The assumptions of the ordinal logistic regression are as follow and should be tested in order for multicollinearity. The result shows the acceptable reliability of the research variables in which, the maximum correlation coefficient (0.666) was among predictors like information technology and audit fee size which is not high and more than 0.90. This indicates there are no multicollinearity problems among variables which are best for analysis of the data for this study.

The Regression Analysis (Inferential Statistics)

Model Fitting Information

The model fitting hypothesis baseline model is the model without explanatory variables but the final model is the model with explanatory variables. Hence, the hypothesis can be developed as follow:

H0: There is no significant difference between the baseline model and the final model

H1: There is significance e between the baseline model and the final model

Table 5 Model Fitting Information

Model	-2 Log-Likelihood	Chi-Square	Df	Sig.
Intercept only	337.428			
Final	232.858	104.570	10	.000

Source: Survey data, 2022

If the p-value is greater than 5 Percent, the null hypothesis should be accepted otherwise alternative hypothesis. Based on the model fitting test in the model, the null hypothesis is rejected. But the alternative hypothesis stated that there is a significant difference between the baseline model and the final model since the p-value of the model is less than 5 percent. Hence, using the estimated value of Z and the assumed logistic distribution of the disturbance term, the ordered logit model can be used to estimate the probability that the unobserved variable Y* falls within the various threshold limits.

Table 6: Test of Goodness-of-Fit

	Chi-Square	Df	Sig.
Pearson	479.094	426	0.388
Deviance	232.858	426	1.000

Source: Survey data, 2022

The goodness of fit of a statistical model describes how well it fits a set of observations. Measures of goodness of fit typically summarize the discrepancy between observed values and the values expected under the model in question. The Pearson and deviance sig values are insignificant at 5% which indicates that the model fits the data analysis.

Table 7 Pseudo R-Square

Pseudo R-Square	
Cox and Snell	0.614
Nagelkerke	0.643
McFadden	0.310

Source: Survey data, 2022

Pseudo R-Square indicates the proportion of variance explained by independent variables incorporated in the model on the dependent variable. The Nagelkerke is similar to the OLS Adjusted-R-squared statistics. In the current study Pseudo R-Square, 0.643 indicates the 64.3% proportion of variance in auditors' independence was explained by ethical awareness of auditors, learning and training, size of the audit firm, size of audit fee, audit tenure, the profession of non-audit service, completion of the audit market, audit committee, Information technology utilization, and professional audit standard, jointly explain about 64.3 percent of the variation in the auditor's independence.

Table 8: Regression Results (Auditors Independence)

Parameter Estimates								
		Estimate (β)	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Lo cat io n	Ethical awareness of auditors	.888	.211	17.706	1	.000 ***	.475	1.302
	Learning and training	.523	.188	7.725	1	.005 ***	.154	.891
	Size of audit firm	1.214	.267	20.728	1	.000 ***	.691	1.736

Size of audit fee	.146	.321	.207	1	.649	-.483	.775
Audit tenure	-.367	.212	2.981	1	.008 4***	-.783	.050
The profession of non-audit service	-.164	.167	.970	1	.032 **	-.491	.163
Completion of the audit market	1.572	.272	33.317	1	.000 ***	1.038	2.106
Audit Committee	.441	.180	6.006	1	.014 **	.088	.794
Information technology utilization	.355	.308	1.330	1	.249	-.248	.958
Professional audit standard	.402	.173	5.396	1	.020 **	.063	.742
***= regression result is significant at 1%, **= regression result is significant at 5%							

Source: Survey data, 2022

The coefficients of ethical awareness of auditors 0.888, learning and training 0.523, size of audit firm 1.214, size of audit fee 0.146, completion of audit market 1.572, audit committee 0.441, information technology utilization 0.355, and professional audit standard 0.402, lead to positive direction-dependent variable respectively. On the other hand, audit tenure (-0.367), and profession of non-audit service (-0.164) lead to a negative direction-dependent variable respectively.

Discussions of Results

The ethical principle is a vital first step in building a culture of strong ethics and a reputation for fairness in the audit environment. The result of this study shows that the ethical awareness of auditors has a regression coefficient of [Estimate (β) = 0.888] which is a positive and statistically significant effect on auditors’ independence at a 1% level of significance since the p-value (sig) of 0.000 < 0.01). Hence, hypothesis H1 is accepted. The regression result is consistent with the empirical findings of Adane wudu. (2014); Albeksh (2017); Ratna, & Anisykurlillah, (2020); Le Doan Minh Duc et al., (2020) evidenced that ethical awareness of auditors has a positive influence on auditors’ independence.

Concerning learning and training, continuous skill development through learning and training improves the work performance of auditors. The empirical review of this study shows that the learning and training of auditors have a regression coefficient of [β=0.523] which is a positive and statistically significant effect on auditors’ independence at a 1% level of significance since the p-value (sig) of 0.005 < 0.01). Hence, hypothesis H2 is accepted. The regression result is consistent with empirical studies by Adane (2014); Le Doan Minh Duc et al., (2020); Albeksh (2017); Ratna & Anisykurlillah (2020) were suggests that the learning and training of auditors have a positive influence on auditors’ independence.

The size of the audit firm is one of the critical factors that affect an auditor’s independence in performing audit work. The result of this study shows that size of the audit firm has a regression coefficient of [β=1.214] which is a positive and statistically significant effect on auditors’ independence at a 1% level of significance since the p-value (sig) of 0.000 < 0.01). Hence, hypothesis H3 is accepted. The regression result is consistent with empirical findings of studies by Albeksh (2017); Carren (2013); Stephen et. al., (2015); Adane (2014); and Deyagnto (2021)also found that the size of an audit firm has a positive influence on the effectiveness of audit activity.

The size of the audit fee is the critical element that should not be left under the control of the organization being audited because the budget impacts the audit activity’s capacity to perform its responsibilities. An increase in audit

fee payments to external auditors has a positive consequence on the effectiveness of audit work. The result of this study with regards to the size of audit fee unstandardized coefficient of regression [$\beta=0.146$] has positive but statistically insignificant at above 5% level of significance since (p-value of 0.649>0.05). Therefore the researcher's hypothesis H4 is rejected. The regression result is inconsistent due to the data collection result with other researchers' empirical findings of studies of Albeksh (2017); Carren (2013); Stephen et. al, (2015); Kanbiro (2021); Adane, (2014); John and Tasie, (2012); and Asmamaw (2018) who found out the positive and significant relationship between the size of audit fee and auditor's independence.

Auditor tenure is measured as the length of the auditor-client relationship. The result of this study shows that audit tenure has a regression coefficient of [$\beta=-0.367$] which is a negative and statistically insignificant effect on auditors' independence at a 5% level of significance since the p-value (sig) of 0.0084< 0.05). Hence, hypothesis H5 is accepted. The regression result is not consistent with the empirical findings of Albeksh (2017); and Nasution&Östermark (2013). suggested that audit tenure harms auditors' independence.

Audit regulators suggest that the provision to clients of non-audit services by audit firms may compromise auditor independence. The result of this study shows that the provision of non-audit services has a regression coefficient of [$\beta=-0.164$] which is a Negative and statistically insignificant effect on auditors' independence at above 5% level of significance since the p-value (sig) of 0.032<0.05). Hence, hypothesis H6 is accepted. The regression result is not consistent with empirical findings Deyganto (2021) providing non-audit Services by external auditors to the same clients strongly negatively affects audit independence.

The effect of audit market competition on audit independence is central to the concern we find that, on average, competitive bidding is associated with improved audit quality. The result of this study shows that the competition audit market has a regression coefficient of [$\beta=1.572$] which is a positive and statistically significant effect on auditors' independence at a 1% level of significance since the p-value (sig) of 0.000>0.01). Hence, research hypothesis H7 is accepted. The regression result is consistent with empirical findings of Deyganto (2021) regarding audit market competition's positive effect on audit independence.

An audit committee is a selected number of members of a company's board of directors whose responsibilities include helping the auditors remain independent of management. The result of this study shows that the audit committee has a regression coefficient of [$\beta=0.441$] which is a positive and statistically significant effect on auditors' independence at a 5% level of significance since the p-value (sig) of 0.014< 0.05). Hence, hypothesis H8 is accepted. The regression result is consistent with the empirical findings of Albeksh (2017); and, Deyagnto (2021) suggested that the audit committee has a positive effect on auditors' independence.

Information technology facilities are base for conducting audit activities in any organization. The result of this study shows that Information technology utility has a regression coefficient of [$\beta=0.355$] which is a positive and statistically insignificant effect on auditors' independence at above 5% level of insignificance since the p-value (sig) of 0.249 >0.05). Hence, hypothesis H9 is rejected. This finding is consistent with the research finding of Al-Refae and Ahmad (2013); Deyganto (2021); Nasution&Östermark (2013) were suggested that information technology has positive and statistically insignificant effect independence of external auditors. The finding implies that an increase in information technology facilities has a positive but statistically insignificant impact on the independence of auditors.

Professional audit standards support the implementation of the previous elements and provide a framework to promote quality audit work that is systematic, objective, and based on evidence. The result of this study shows that Professional audit standards have a regression coefficient of [$\beta=0.402$] which is a positive and statistically significant effect on auditors' independence at a 5% level of significance since the p-value (sig) of .0020< 0.05).

Hence, hypothesis H10 is accepted. The regression result is consistent with the empirical findings of Agmas & Mekonnen (2018); Dilie (2021); and, Albeksh (2017) suggested following the professional audit standards has a positive effect on auditors' independence.

Conclusion

The conclusion that can be drawn from the findings in the second hypothesis was confirmed that learning and training have a positive effect on an auditor's independence. The conclusions that can be drawn from the findings in the third hypothesis tell us the size of an audit firm has a positive and significant effect on auditors' independence. The fourth hypothesis testing result suggested that the size of the audit fee has a positive but statistically insignificant effect on the independence of auditors so; hypothesis four was rejected by the researcher. Concerning hypothesis five the regression result evidenced that audit tenure hurts an auditor's independence. The result of the 6th hypothesis showed that the performance of non-audit services has a negative and significant effect on auditors' independence. Also, under the summary of the findings, hypothesis H7 evidenced competition in the audit market has a positive and significant effect on auditors' independence. As well, the hypothesis regression result on hypothesis 8 evidenced that the existence of an audit committee has a positive and significant effect on auditors' independence. Based on the findings related to the ninth hypothesis the regression analysis tells us there is a positive relationship and insignificant between information technology & auditors' independence. The conclusion that can be drawn from the findings in the tenth hypothesis is that hypothesis H10 stated as "professional audit standard has positive on auditors independence" was accepted by the researchers. In light of the findings above, the researchers recommended that private firms and policymakers in Ethiopia work on statistically significant variables to improve auditors' in Ethiopia.

Limitations of the current study for future Improvement

In the beginning, it focused only on identifying the determinants of auditors' independence of private audit firms in Ethiopia. The explanatory variables incorporated in the model have only explained 64.3 % of the model. The remaining 35.7 % of changes in the independence of external auditors were explained by other explanatory variables that were not included in the model. The other researcher should incorporate more variables to improve adjusted R2 with the same topic in the same study area. In another way, the findings of this study may be difficult to generalize about all nations in the world. In another way, another researcher should take a sample from both private and public auditors to improve the implication of this research.

Statements and Declaration

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Availability of data: data is included in the manuscript.

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Author's Contributions: the author carried out all the whole works of the study. I designed the study research design and carried out the fieldwork, document analysis, literature work, manuscript draft, and editorial. The authors

also read and approved the final manuscript.

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