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DETERMINANTS OF EXTERNAL AUDIT QUALITY: EVIDENCE FROM MANUFACTURING SHARE COMPANIES IN ADDIS ABABA, ETHIOPIA.

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Abstract
The purpose of this study was to investigate the determinants of external audit quality proxied by discretionary (abnormal) accrual based on audit firm specific and company related attributes that are considered vital by regulatory and professional bodies to properly monitor the external audit profession and to maintain trust among the various stakeholders in Ethiopian manufacturing share companies. In light of this objective the study adopted quantitative method of research approaches to test a series of research hypotheses. Specifically, the study used documentary analysis of companies audited financial statements and personal inquiry with audit directors/officials of audit firms and company managers. Then companies were selected based on simple random sampling method to avoid biases and represent firms within manufacturing share companies under consideration. Consequently, the study selected a sample of eighteen (18) companies with the total of 90 observations. The results of panel least square regression analysis showed that certified audit professionals 'and joint provision of audit and non-audit services have statistically significant and positive relationship with manufacturing share companies' external audit quality. On the other hand, size of independent non-executive board members and duality of chief executive officers had a negative and statistically significant relationship with large manufacturing shares' external audit quality. However, the relationship for audit firm size, audit firm industry specialization and audit firm tenure were found to be statistically insignificant. Therefore, this is clear that large manufacturing share companies in Ethiopia should maintain board independence and keep in mind audit firm characteristics while hiring of an audit firm for their audit services.

Keywords: External Audit Quality, Audit-Firm Specific Attributes, Corporate Governance Attributes, Earning Management, Discretionary (Abnormal) Accrual.

Introduction

Background of the Study

In developing countries like Ethiopia, the efficient practices of the auditors in their responsibilities have not yet developed very well (Muluneh 2007). World Bank (2007) also reported that most of the external auditors in Ethiopia complain audit quality in the country was very low. This raises the question of what audit quality is and the determinant factors affecting it.

However, the concept of audit quality has proved difficult to define with certainty. It is not immediately or directly observable and is difficult to measure (Power, 1997). Moreover, audit markets' participants have conflicting roles and different expectations that lead to different interpretations of audit quality (Sutton, 1993). As a result, different people tend to have different definitions and ways of measuring it (Rasmussen & Jensen, 1998; Watkins et al., 2004), which suggests ambiguity and subjectivity in the term audit quality. The most used definition of audit quality was De Angelo's (1981) which expresses the quality in terms of auditor's competence and independence. The quality is then dependent on the probability that the auditor will both discover a breach and report that breach (De Angelo, 1981.p.186).

Audit market environment in Ethiopia was characterized by stiff competition triggered by the bidding system to obtain audit clients among auditors, absence of international Big auditors in the country and there is no strong professional body in charge of regulating the accounting and auditing profession and consistent rules applicable in discharging professional responsibilities (World Bank 2007).

This unique feature of the audit market entails many concerns on the external audit practice in the country. World Bank (2007) also reported that most of the external auditors in Ethiopia complain audit quality in the country was very low. Hence, the purpose of this study is to examine factors determine the audit quality service provided by external auditors for manufacturing share companies in Ethiopia.

Having this unique feature of audit market environment, over the years, various researchers like Mihret (2010), Muluneh (2007),Adane (2014), Bethlehem (2009), Bethitina (2015), and Tamirat (2014) in their different capacities have taken a closer look at auditing practice in Ethiopian with respect to internal and external auditors. However, most of prior studies of external audit quality concentrates on audit firm specific factors (Bethitina, 2015; Adane (2014), and Amisalu (2011) and less considered have given forcorporate governance attributes in manufacturing share companies. Therefore, the aim of this study was to fill this gap by identifying the determinants of external audit quality in Ethiopian manufacturing share companies.

Statement of the Problem

The production of a quality audit report is perceived to foster engendered confidence in financial reports by the users of those reports. Investors in particular tend to place better trust in financial statements that are audited; as the expected independence of the auditor boosts the assurance that important investment decisions can be made on the thrust of those statements. The increased confidence of these set of financial statement users tend to attract the inflow of capital which has the long-run effect of creating growth and development in the business environment (Adeyemi&Fagbemi, 2010). Financial statement users make long-term decisions based on financial statement and desire to have fairly presented figures. This implies that, credible financial statements those free from fraud and errors are crucial for smooth capital flow and wealthy economic development.

Audit quality in previous research has been given a big emphasis, in developed countries especially in Western context, while has been ignored in less developed countries (Fawzi, A. S., 2014). To date, more studies are well come for audit quality on developing countries especially issues on audit quality determinants.

Since this is among the few researches conducted in external audit quality determinants those considered audit firm-specific factors and the first investigation that include client related determinant factors in Ethiopian context as per the researchers knowledge concern, the purpose of this study is to develop some preliminary groundwork that a more detailed evaluation could be based and to fill the stated gap by analyzing the external audit quality of manufacturing share companies in Addis Ababa Ethiopia, given that these companies as they collectively form the major chunk of the economy of the country and their financial transparency has a paramount importance to various stakeholders.

Therefore, the study attempted to address the following research questions.

1. What are audit firm- related factors those enhance or impair audit quality services of manufacturing share companies in Addis Ababa, Ethiopia?

2. What are the corporate governance attributes that affect external audit quality of manufacturing share companies in Addis Ababa Ethiopia?
3. What factors are the most important for the study area?

Objective of the Study

The main objective of the study was to investigate audit quality determinants of manufacturing share companies in Addis Ababa Ethiopia. Based on the audit firm specific and corporate governance attribute factors that are found to significantly influence audit quality in prior studies, the study assessed the factors that have significant impact on audit quality of manufacturing share companies in Addis Ababa Ethiopian.

Specifically, the study evaluated whether audit quality is influenced by audit firm industry specialization, audit firm size, the length of audit firm tenure in providing auditing services, auditors' qualification and proficiency, provision of both audit and non audit services for the same client board leadership structure, and size of independent non-executive board members.

Specific Objectives

To conveniently achieve the above overall objective the study focused on the following specific objectives:

I. Investigate audit firm factors that may affect the audit quality of manufacturing share companies in Addis Ababa Ethiopia.
II. Examine the corporate governance attributes that impair or enhance external audit qualities' of manufacturing share companies in Addis Ababa Ethiopia.
III. Determine the most important factors affecting external audit quality of manufacturing share companies in Addis Ababa Ethiopia.

Significant of the Study

First, since the study was among the fewest studies of audit quality it had a contribution towards other researchers as a source of reference and as a stepping stone for those who want to furnish further insights into prevailing determinant factors that affect external audit quality in developing countries context, particularly in manufacturing share companies' sectors in Ethiopia.

Second, knowledge of determinants of audit quality should be of interest and importance to suppliers and users of the audit services (Lam and Chang 1998). So, by identifying the most important determinants of audit quality, it helps manufacturing share companies.

Third, as Shellac and Thorpe (1995) stated gaining an understanding of factors that affect audit quality is important because it can help regulators and the accounting profession to formulate policy based on empirical evidence rather than on a priori assumptions. Accordingly, the study would provide a base for regulators and accountancy body to formulate policy.

Literature Review

Even though, audit quality determinants issue has a critical research area in developed economy, like other emerging economy, research in the area factors that enhance or impair auditing quality in Ethiopia is still under investigated and only few countable studies are conducted in Ethiopia. As per the

researchers' access and knowledge, the researchers conducted on determinants of auditing quality in Ethiopian case are: AmsaluGelaneh (2011), AdaneWudu (2014) and BethitinaLeilina (2015).

AmsaluGelaneh (2011) examined the impact of extended audit tenure on auditors' independence and audit quality in Addis Ababa. The researcher considered impact of both extended and short audit tenure on audit quality. In order to conveniently achieve the study objective primary data were gathered from sample of six audit firms which includes a total of 50 auditors in Addis Ababa through questionnaire. The researcher also used stratified random sampling technique to select samples. The collected data were analyzed using a quantitative and qualitative approach with the help of SPSS.

The analysis result revealed that, extended audit tenure negatively affects the audit quality by impairing the auditor independence, due to increased familiarity, closeness and loyalty to the client, which in turn would impair the auditor's objectivity and professional judgments.

In other words, long audit tenure greatly reduces the auditors' independence and audit quality when it is compared with the short audit tenure. However, limitation of this study was it considered only one firm-specific factor, i.e. audit tenure. This study fills this gap through inclusion of more variables.

On the other hand, Dane Wudu (2014) examined roles and responsibilities of external auditors in fraud detection in Ethiopia including the factors that influence external auditors' responsibility and expert performance in detecting fraud. The study adopts a mixed methods research approach by combining data gathering instruments of research questions, in-depth interviews and document analysis. The necessary data were gathered from 15 selected samples of external auditors. The questionnaire data were analyzed using descriptive statistics, correlations, and logistic regression analysis and data from interview and document reviews were interpreted qualitatively. The findings of the study show that, auditors are responsible for detection and uncovering fraud, and are legally liable for subsequently discovered misstatement in audited financial statements.

Auditors economic dependency, too much trust placed on the audited, management and employees, auditor not giving enough emphasis to audit quality, management not having fraud policy; and, failure to focus on high-risk fraud areas, fraudsters collusion, absence of clear interpretation of tax law /proclamation, absence of well-organized professional body in Ethiopia were listed among the most important challenges of auditors fail to detect fraud. This implies that quality of audit service in Ethiopia was under question mark. The study also finds that the five variables which are certification, practical experience, training, audit fee, and independence significantly influence the auditor's expert performance to fraud detection.

Furthermore, BethitinaLeilina (2015) investigated audit quality determinants in terms of manufacturing share companies in Addis Ababa. The researcher considered firm specific attributes (audit firm size, auditors' independence, auditors' industry specification, auditors' certification, audit firm tenure, and joint provision of audit and non-audit services) as explanatory variables. In the study discretionary accrual was audit quality proxy.

To achieve the desired objective the study adopted quantitative method of research approaches to test a series research hypothesis. Specifically, the study used documentary analysis of companies audited financial statements and personal inquiry with audit directors/officials of audit firms. Then companies were selected based on simple random sampling method to avoid biases and represent firms within

manufacturing companies. Consequently, the study selected a sample of twelve (12) companies for the period of five years (2009-2013) with the total of 60 observations.

The results of panel least square regression analysis showed that audit firm industry specialization and certified audit professionals' ratio have statistically significant and positive relationship with manufacturing share companies' external audit quality. On the other hand, the joint provision of audit and non-audit service has a negative and statistically significant relationship with manufacturing share companies' external audit quality. However, the relationship for audit firm size and audit firm tenure was found to be statistically insignificant.

Research Design and Methods

It focuses on description of research design and method employed in the study. Detail description of research approach, sampling design, sources of data, and data analysis techniques were presented below:

Research Approach

According to Yesgat (2009) the quantitative research approach translated the research problem in to specific variables and hypothesis to be tested (Yesgat, 2009, p.70). Thus, it enables the researcher to get a deep understanding about the area being investigated. In investigating the determinants of audit quality in large manufacturing share companies, the researcher tested the relationship between audit quality, which is a dependent variable, and seven determinant factors.

Yesgat (2009) further stated that, quantitative research approaches test the theoretically established relationship between variables using sample data with the intention of statistically generalizing for the population under investigation. Thus, this study conducted to test which determinant can best explain the variation on audit quality of the companies by taking large manufacturing share companies as a case. Therefore, based on the nature of the study the researcher adopted quantitative research approach to understand and analyze the possible determinants of external audit quality in manufacturing share companies.

Sampling Design

As noted by Cohen et al. (2005) the questions of sampling arise directly out of the issue of defining the population on which the researches focused on. Further, they stated that factors such as expense, time and accessibility frequently prevent researchers from gaining information from the whole population. Therefore, they often need to be able to obtain data from a smaller group or subset of the total population in such a way that the knowledge gained is representative of the total population under study (Cohen et al. 2005 P.92). The target population of the study is manufacturing share companies in Ethiopia.

Ethiopia's manufacturing sector is among the key productive sectors of the economy identified under growth and transformation plan (GTP I) which can spur economic growth and development because of its immense potential for wealth creation, employment generation and poverty alleviation (MoFED 2010). As per Ministry of Finance and Economic Development (MoFED 2014) annual progress report the manufacturing sector contribution to the gross domestic product (GDP) in 2012/2013 was 4.8% and increased to 14% in 2013/2014. Manufacturing companies in Ethiopia increase from time to time both in numbers and share of contribution to gross domestic products.

Despite this fact based on survey analysis Addis Ababa Chamber of Commerce and Sectoral Association (AACCSA) conclude that, limited access to finance to fund manufacturing projects and shortage of foreign currency to import raw material and intermediary goods are the main problems of the manufacturing firms in Ethiopia (AACCSA, 2015).

As per the record held by Ethiopian Revenue and Custom Authority (2015) there were 34large tax payer manufacturing share companies with audited financial statements in Addis Ababa. Firms with at least six consecutive years (2010-2015) of audited balance sheet and income statement were included in the researcher analysis; to allow the researcher to obtain sufficient data for calculating the representative data from each firm.

In addition, the researchers used simple random sampling technique to give equal chance to each manufacturing share companies and the observations can be used for inferential purpose. Therefore, out of the 34manufacturing share companies the researcher randomly selected 18manufacturing companies as sample size.

Sources of Data

To meet the objectives of this study, the researcher highly relayed on secondary source of data. A structured record review was made to collect a panel data, which comprises both time series and cross-sectional elements, i.e., it embodies information across both time and space. Audited annual financial reports of 18large manufacturing share companies, covering the period from 2010 to 2015 were collected from the sample of manufacturing share companies. Regarding the use of panel data, Paula &Zelia (2007 P.552) mentioned two basic benefits. The first benefit of working with panel data is, understanding the development overtime of the relationship between explained variables and explanatory variables. The other benefit of using panel data is allowing the researcher to measure the difference between companies which are not observable and these differences having the name of individual effect. Furthermore, Shah& Khan (2007) noted that panel data usually provides the researcher a large number of data points, increasing the degree of freedom and reducing the co linearity among explanatory variables and therefore, it improves the efficiency of econometric estimates.

Audited financial statements of sampled companies were collected from each sampled large tax payer manufacturing share companies and used to provide information relevant for estimation of discretionary accrual i.e., proxy of earning management which in turn proxy of audit quality level and to identify for how many years they are audited by the same external auditor. Data for audit firm size was collected from Office of Federal Auditor General (OFAG). Relevant information related to audit firm industry specialization, certified professional auditors percentage and joint provision of both audit and non audit services gathered from each audit firms engaged in audit services of manufacturing share companies during the study period using personal inquiry guiding questions as data collection instrument. Similarly, data for CEO duality and size of independent non-executive board members collected from each manufacturing company's board performance report.

Data Analysis and Discussion of Results

This part focuses on the analysis, and discussion of findings. Relevant data for dependent and independent variables were collected from both sampled manufacturing share companies and their respective external auditors for the period from 2010 to 2015. The collected data were analyzed using various statistical tools. Basically, regression analysis was conducted using Eview 8 and inferences were taken from it. In order to the reliability of the study the researcher conducted Haussmann test to know

whether the model is fixed or random effect and diagnostic test to test basic linear regression assumptions. Descriptive statistics and regression results from the Eview output were presented in a tabular form, from where detailed analysis and discussion of the result was given.

Descriptive Statistics

Descriptive statistics summary of the dependent and independent variables included in the study for the sample manufacturing share company in table 4.1, below. In the study dependent variable was external audit quality measured by a proxy of discretionary accruals for each company. On the other hand, seven independent variables (audit firm size, audit firm industry specialization, audit firm tenure, joint provision of audit and non-audit services, size of independent non-executive board members and CEO duality) were considered in this particular study. The total observation for each dependent and independent variable was 90.

Table 1: Summary of descriptive statistics for the variables

	DACC	AFS	AFIS	AFT	CAPR	PROVNOS	SINED	CEOSHIP
Mean	0.054366	0.800000	0.181611	2.609756	0.256167	0.480467	0.508889	0.966667
Median	0.017310	1.000000	0.168500	2.000000	0.243000	0.477500	0.635000	1.000000
Max.	0.769551	1.000000	0.356000	5.000000	0.471000	0.820000	0.800000	1.000000
Min.	-0.378400	0.000000	0.021000	1.000000	0.100000	0.174000	0.000000	0.000000
Std.Dev.	0.227304	0.402241	0.077326	1.262498	0.083872	0.156216	0.272151	0.180511

Source: Computation using Eview 8

Mean, median, standard deviation, minimum and maximum values for the dependent and independent variables were key figures, included in the table above.

Summary of descriptive statistics in table 1, above disclosed that, average discretionary accrual of the sampled manufacturing share companies for study period was 0.054 which is positively skewed with 0.017 median and with moderate range from a minimum DACC value of -0.378 to a maximum of 0.769. Discretionary accrual has standard deviation of 0.227 that, indicating the variation in this variable with in manufacturing share companies under consideration was 23%.

In terms of audit firm size table 1, indicates mean, median, maximum, minimum and standard deviation when it was measured as dictonomus variable by assigning one if it is big firm and zero otherwise. Audit firm Size in this particular study shows the audit firm grade given by OFAG to classify audit firm's size in to Big (as represented by one) versus non-Big (as represented by zero) while providing external audit service. The mean, maximum and minimum to this variable were 0.800, 1.000 and 0.000 respectively for sampled manufacturing share companies. The standard deviation was 0.402 (0.40%) which indicating moderate variation of audit quality level among sampled manufacturing share companies as they were audited by big audit firms and non-big audit firms and assumed that Big audit firms provide high audit quality services than non-Big audit firms.

Regarding to audit firm industry specialization, the summary statistics tells us it attains a mean value of 0.182. Minimum and maximum statistical value for this particular explanatory variable were 0.021 and

0.356 respectively with standard deviation of approximately 8%, which means that, there was relatively low variations in level external auditors' industry specialization during the study period.

Descriptive statistics information for another interesting variable i.e., audit firm tenure shows significant variation in the number of years that the same auditor audits the same company consecutively range from 1.000 up to 5.000 with average of 2.609. The standard deviation to the number of years that audit firm stay in audit client was 1.262. This highly deviated audit firm tenure in manufacturing share companies may have significant impact on audit quality of the companies.

Above also indicates average value, for certified audit professional ratio (as measured by the ratio of total number of certified professionals' auditors to total number of employees in audit service for each audit firm) was 0.256 with minimum 0.100 and maximum value of 0.471, in the companies. The standard deviation of this variable was 0.082 for companies. From these figures what we conclude is those external auditors that audit manufacturing share companies have somewhat high number of certified audit professional ratio 26% to each firm and have relatively low variation among external auditors provide audit services for share companies under consideration within the study period.

Joint provision of audit and non-audit services, measured as, the ratio non-audit services fee and total audit fee of external auditors' had an average 0.480, with 0.174, 0.82, minimum and maximum values respectively for the period of investigation. This clearly tells us that, below half of external auditors' income were generated from provision of non-audit services for manufacturing share companies. On the other hand standard deviation of this explanatory variable (i.e. 0.156) indicates that, level of non-audit service fee varies between external auditors' of manufacturing share companies and may significantly affect external audit quality.

Regarding to independency of board of directors (i.e. measured by dividing total number of board members by number of independent non-executive external board members for each company) has mean value of 0.509 with standard deviation of 0.272. Maximum and minimum values are 0.800 and 0.000 respectively. This indicates that, on average (i.e. 51%) of board of directors in manufacturing share companies were independent non-executive external board members with a moderate variation (27%) among the companies.

Finally, as it presented in table.1, duality of chief executive managers as measured by assigning 1 if chief executive manager is not the member of board of directors and 0 otherwise, table 1, shows manufacturing share companies have 0.967, 0.000, and 1.000 for average, minimum and maximum respectively. The table also indicates that, standard deviation for this particular variable was 0.181 i.e. this independent determinant factor deviate by 18% within sampled manufacturing share companies

Correlation Test

The correlation between two variables measures the degree of linear association between them. If it is stated that dependent variable and independent variables are correlated, it means that dependent variable and independent variables are being treated in a completely symmetrical way. Thus, it is not implied that changes in explanatory variables cause changes in explained and vice versa. Rather, it is simply stated that there is evidence for a linear relationship between the two variables, and that movements in the two are on average related to an extent given by the correlation coefficient.

The value for this correlation coefficient ranged between negative one and positive one. Negative one correlation coefficient indicates perfect negative relationship between dependent variable and independent variables; and positive one correlation coefficient tells us perfect positive relation; while zero correlation coefficient implies that there is no relationship between the two variables.

The purpose of correlation test in this particular study was to analyze the relationship between audit quality and its determinant factors considered in the model, and table 2, below show the correlation coefficient of these variables.

Table 2: Correlation matrix of dependent and independent variables.

	DACC	AFS	AFIS	AFT	CAPR	PROVNOS	SINED	CEOSHIP
DACC	1.000000	-0.048755	0.006349	0.007259	0.640871	0.208957	-0.152364	-0.170917
AFS	-0.048755	1.000000	0.132937	-0.046642	0.073271	-0.052321	-0.183724	0.216645
AFIS	0.06349	0.132937	1.000000	0.025160	-0.112802	0.029222	-0.126741	-0.012209
AFT	0.07259	-0.046642	0.025160	1.000000	0.032966	0.126754	0.008985	-0.057297
CAPR	-0.640871	0.073271	-0.112802	0.032966	1.000000	0.004151	0.015740	0.139153
PROVNOS	0.208957	-0.052321	0.029222	0.126754	0.004151	1.000000	-0.062502	-0.065586
SINED	-0.152364	-0.183724	-0.126741	0.008985	0.015740	-0.062502	1.000000	-0.005337
CEOSHP	0.170917	0.216645	-0.012209	-0.057297	0.139153	-0.065586	-0.005337	1.000000

Source: *Output of Eview 8*

As indicated in above table 2, correlation coefficient of audit firm size, audit firm industry specialization and audit firm tenure -0.04, 0.06 and 0.07 respectively implies weak correlation of these explanatory variables with explained variable, while, the remaining three independent variables have correlation with dependent variable highest positive correlation coefficient with certified professional auditors' ratio, i.e., CAPR (ρ=-0.641).

This correlation coefficient suggests that, number of certified professional auditors was dominant factors of external audit quality; and this clearly show increase number of professional auditors enhances clients' external audit quality. In spite of their magnitude and direction all independent variables have correlation with dependent variable.

Diagnostics Tests

Diagnostics in this context are characteristics of classical linear regression model which are required to show that the estimation technique, ordinary least squares (OLS), had a number of desirable properties those should be fulfilled, and also so that hypothesis tests regarding the coefficient estimates could validly be conducted (Brooks, 2008). These characteristics are termed as assumptions of classical linear regression mode land include the following five assumptions.

I. The errors have zero mean or E (u_t) = 0
II. The variance of the errors is constant and finite over all values of independent variables *or* var(u_t) = $\sigma 2 < \infty$
III. The errors are linearly independent of one another or cov(u_i , u_j) = 0, when i≠j
IV. The error terms are normally distributed oru_t~N(0, σ2)

v. There is no relationship between independent variables or cov(X_1,X_2, X_3,……,X_n) = 0

Detail Statistical diagnostic tests for these basic assumptions of classical regression model are presented below.

Assumption 1: Errors Have Zero Mean or *E* (*ut*) = 0

The first assumption required is that the average value of the errors is zero. According to Chris Brooks, (2008), if a constant term is included in the regression equation, this assumption will never be violated. Since the regression model used in this study includes a constant term, this assumption cannot be violated.

Assumption 2: Homoscedasticity (Variance of the Errors are Constant var (ut) = σ2 < ∞)

It has been assumed that the variance of the errors is constant; this is known as the assumption of homoscedasticity. If the errors do not have a constant variance, they are said to be heteroscedastic. The presence of heteroscedasticity makes ordinary least square estimators not efficient because the estimated variances of the coefficients (βi) are biased and inconsistent. Thus, the tests of hypotheses are no longer valid. As per Chris Brooks (2008), there are many methods used to test the existence of heteroscedasticity, in this study the researcher used Breusch-Pagan-Godfrey test. Table 3 bellow presents the test statistics.

Table 3: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.296264	Prob. F(7,82)	0.9535
Obs*R-squared	2.220027	Prob. Chi-Square(7)	0.9467
Scaled explained SS	1.486102	Prob. Chi-Square(7)	0.9828

***Source: Output** of Eview 8*

The test result of Breusch-Pagan-Godfrey above, reveals the absence of hetroscedasticity since the p-value of both the test-statistics i.e. F-and $\chi 2$ are considerably more than 5% significant level. As it is shown in the table above, there is no evidence for hetroscedasticity and the null hypothesis that variances disturbances are homoscedastic was not be rejected.

Assumption 3: Covariance between the Error Terms Over time is Zero (Autocorrelation)

It is assumed that the errors are uncorrelated with one another. If the errors are not uncorrelated with one another, it would be stated that they are 'auto correlated' or that they are serially correlated'. The most popular test to detect the existence of autocorrelation is Durbin-Watson (DW).According to Chris Brooks, (2008), DW has two critical values: an upper critical value (d_U) and a lower critical value (d_L), and there is also an intermediate region where the null hypothesis of no autocorrelation can neither be rejected nor not rejected. These critical values and rejection and not rejections can be presented as follows:

Figure: rejection and non-rejection region for DW test

Reject Ho: positive Autocorrelation	inconclusive	do not reject Ho: no evidence of Autocorrelation	inconclusive	reject Ho: negative autocorrelation
0	d_L d_U	4-d_U	4-d_L	4

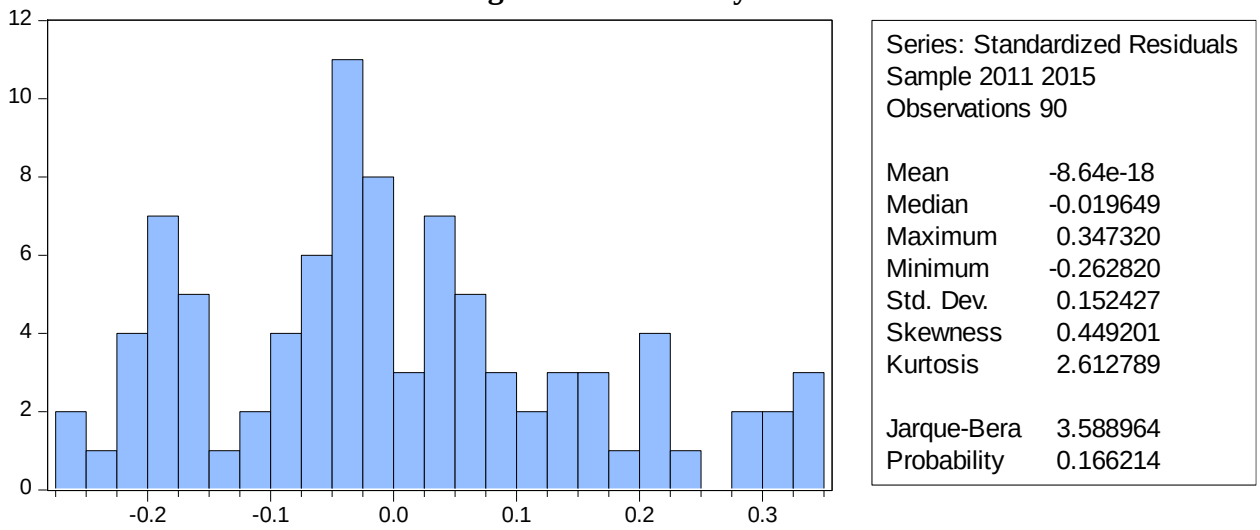
Source: Chris Brooks, (2008) p.147

From the figure above, the null hypothesis is rejected and the existence of positive autocorrelation presumed if DW is less than the lower critical value; the null hypothesis is rejected and the existence of negative autocorrelation presumed if DW is greater than 4 minus the lower critical value; the null hypothesis is not rejected and no significant residual autocorrelation is presumed if DW is between the upper and 4 minus the upper limits.

Assumption 4: Normality Test

The normality assumption is about the mean of the residuals is zero. According to (Brooks 2008) in order to conduct hypothesis test about the model parameter, the normality assumption must be fulfilled. One of the most commonly applied tests for normality is the Bera—Jarque (BJ) test. BJ uses the property of a normally distributed random variable that the entire distribution is characterized by the first two moments the mean and the variance. Bera and Jarque (1981), formalize these ideas by testing whether the coefficient of skewness and the coefficient of excess kurtosis are jointly zero. A normal distribution is not skewed and is defined to have a coefficient of kurtosis nearest to 3 with the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant. In Bera-Jarque normality test, p-value should exceed 0.05 not to reject the null of normality at the 5% level. The following Figure presents the BJ test result for normality.

Figure: BJ normality test



Source: Output of Eview 8

Based on the test result above, the kurtosis was approximately close to 3 and its Jargue-Bera is insignificant at 5%, significant levels. Therefore, the residuals were normally distributed and the null hypothesis is that states residuals follow a normal distribution would not be rejected.

Assumption 5: Multi collinearity Test

An implicit assumption that is made when using the OLS estimation method is that the explanatory variables are not correlated with one another.

According to Chris Brooks, in any practical context, the correlation between explanatory variables will be non-zero, although this will generally be relatively benign in the sense that a small degree of

association between explanatory variables will almost always occur but will not cause too much loss of precision. However, a problem occurs when the explanatory variables are very highly correlated with each other, and this problem is known as multicollinearity. This poses problems in interpreting regression coefficients. And it also results in large standard errors of the estimated regression coefficients and leads to instability of regression estimates. This is not a problem of model specification, but of data (Hair et al., 2006).

The conventional measures for multicollinearity are tolerance and the variance inflation factor (VIF). In this study only tolerance value is used as a measure of multicollinearity. The tolerance value is the amount of an independent variable‘s predictive ability that is not predicted by the other independent variables in the equation (Hair et al, 2006). As a rule of thumb, the inter-correlation among the independents above 0.80 signals a possible multicollinearity problem (Gujatati, 2003). In order to examine the possible degree of multicollinearity among the explanatory variables, correlation matrixes of the variables were presented in table below.

Table 4: Pearson correlation Coefficient matrix

	AFS	AFIS	AFT	CAPR	PROVNOS	SINED	CEOSHIP
AFS	1.000000	0.132937	-0.046642	0.073271	-0.052321	-0.183724	0.216645
AFIS	0.132937	1.000000	0.025160	-0.112802	0.029222	-0.126741	-0.012209
AFT	-0.046642	0.025160	1.000000	0.032966	0.126754	0.008985	-0.057297
CAPR	0.073271	-0.112802	0.032966	1.000000	0.004151	0.015740	0.139153
PROVNOS	-0.052321	0.029222	0.126754	0.004151	1.000000	-0.062502	-0.065586
SINED	-0.183724	-0.126741	0.008985	0.015740	-0.062502	1.000000	-0.005337
CEOSHIP	0.216645	-0.012209	-0.057297	0.139153	-0.065586	-0.005337	1.000000

***Source**: Regression output of Eview 8*

As indicated in the table.4 above, almost all variables have low correlation power that are considerably lower than 0.80 and this implies no multicollinearity problem in the explanatory variables included in this model.

Conclusions and Recommendations

Conclusions

Audit is playing an important role in developing and enhancing the global economy and business firms. The need for external auditors may be seen as a response to the agency problem and the audit functions as a mechanism to attest to the accountability and stewardship of company management to reduce the possibility of innocent mistakes and deliberate misstatements such as fraud and management manipulation.

Different stakeholders such as, shareholders, regulators, brokers, financial analysts, and potential investors are in need of reliable and accurate financial information to make sound resource allocation decision. Mostly qualities of financial information prepared by the management are assured by external

auditors. Auditors express an opinion on the fairness of financial statements and it gives assurance for financial statement users that, the data being reported are properly measured and fairly presented. The confidence and trust place on financial statement by users increase, when high quality external audit service is performed. In other words, high audit quality is viewed as one of the main factors that affect the credibility of financial information and the higher the audit quality is, results in the information being more accurate.

The basic question is that, what high audit quality is and what factors influence it. Numerous researches were conducted and have attempted to identify factors affect audit quality; however, the findings of prior empirical studies have provided varying evidence related to the impact of these factors on audit quality. Furthermore, the majority of these studies have been conducted in developed countries that have many companies' similarities.

In light of the above notation, the main objective of this study was to examine the determinants of external audit quality in the Ethiopian large tax payer manufacturing share companies. Both audit firm-specific factors (audit firm size, audit firm industry specialization, audit firm tenure, percentage ratio of certified public accountant and joint provision of audit and non-audit services) and client-related factors (proportion of independent external non-executive board members and duality of chief executive officer) those commonly influence external audit quality was considered in the study. The study examined whether the selected variables significantly affect audit quality or not. To achieve the overall objective the study used quantitative data collected through structured reviews of documents as well as data collected through personal inquiry guiding questions from the sample of eighteen manufacturing share companies and their corresponding external auditors over the period of 2010-2015. The collected data were analyzed by employing panel least square regression analysis model using statistical package 'EVIEW 8'.

The correlation analysis in table 4.1 revealed that, almost all independent variables were correlated with dependent variable despite their magnitude and direction. The tests for the classical linear regression model also showed as the data fit the basic desired characteristics of classical linear regression model (CLRMs).

The adjusted R square of 0.511929 indicates that external audit quality in case of large tax payer manufacturing share companies explained on average 51% by audit firm-specific factors; i.e. audit firm size, audit firm industry specialization, audit firm tenure, certification percentage ratio, provision of both audit and non-audit services and company related explanatory variables; i.e. duality of chief executive officers and board independence (as measured the percentage of independent non-executive board members). This implies that, theses explanatory variables are important determinants of external audit quality for Ethiopia manufacturing share companies.

The impact of audit firm size on audit quality in large tax payer manufacturing share companies was insignificant. This was consistent with previous studies those found insignificant impact of audit firm size and audit quality and suggested audit firm size alone is not prime determinant factor of audit quality.

The relationship between audit firm industry specialization and audit quality in large tax payer manufacturing share companies was positive but insignificant. In line with the study hypothesis, random

effect mode regression results disclosed that, audit firm tenure have positive relationship with audit quality of large tax payer manufacturing share companies in Ethiopia although it was insignificant.

Result from panel regression analysis revealed that, external audit quality has positively significant relations with certified professional auditors' percentage ratio, but negative and significant relation with joint provision of audit and non-audit services. Positive relationship of certified professional auditors and external audit quality of manufacturing share companies was significant at 1%, whereas it was at 5% for joint provision of audit and non-audit services. In addition, large manufacturing share companies' external audit quality has statistically significant positive relation with one of corporate governance attribute i.e. size of independent non-executive board members and negative significant relationship with duality of chief executive officer.

Therefore, four determinant factors included in the model of this study (certified professional auditors' percentage ratio, joint provision of audit and non-audit services, size of independent non-executive board members and duality of chief executive officers) out of the seven independent variables; have statistically significant influence on external audit quality of large tax payer manufacturing share companies. Out of variable those have significant influence on audit quality in large manufacturing share companies certified professional auditors' percentage ratio was the major determinant factor with the highest coefficient followed by joint provision of audit and non-audit services for manufacturing share companies.

Recommendations

The following recommendations are made based on findings of the research

Statistical analysis of the study indicates that certified professional auditors' percentage ratio was the major determinant factor of external audit quality in manufacturing share companies. Therefore, the researchers recommend that manufacturing share companies to enhance financial information credibility and transparency through audited by audit firms with large number of certified professional auditors.

Based on the analysis it is concluded that, there was positive significant relationship between joint provision of audit and non-audit services and discretionary accrual which means this explanatory variable has significant negative impact on audit quality of manufacturing share companies. Thus, it is recommended to regulatory bodies to prevent external auditors from engagement in joint provision of audit and non-audit services to their client.

The study also found that, size of independent non-executive board members and CEO duality significantly influence audit quality in large manufacturing share companies. So, it is recommended to regulatory body of manufacturing share companies should consider board independence as vital factor to determine misbehavior of management and keep high audit quality.

The study indicates that, large manufacturing share companies faced the problem of earning management and external auditors failed to detect such activity. To avoid such opportunistic management behavior researcher recommends manufacturing share companies to hire audit firms with higher number of certified professional auditors to conduct intensive audit.

Finally, suggestion for future research, although the study included most important determinant factors that influence external audit quality for the study period 2010 – 2015 but at the same time it needs

further research to update it from 2016 – 2021 as there were many changes have come in the country like establishment of Accounting and Audit Board of Ethiopia, adoption of IFRS, IPSAS and ISA.

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