

Research Article

Audit Firm Factors, and External Environment Audit Factors: Effects on Audit Quality in Libya

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Abstract: *Purpose* – This paper investigates in the relationship between the audit firm factors; i.e., planning, supervision, specialization in the industry, and audit firm size and audit quality. This study examines the moderating effect of the external environment audit i.e., professional bodies, laws and regulations, and recognized standards in the relationship between audit firm factors and audit quality. *Design/methodology/approach* – The sample comprises the external auditors from Libyan Association of Accountants and Auditors (LAAA). Data was collected 253 auditors by personally administered questionnaire. Multiple regression analysis is applied to examine the association between audit office factors and external environment audit, and audit quality. *Findings* – The regression analysis supported a postulate that the audit firm factors have significant positive relationship with the audit quality. But the results indicate that the external environment audit factors cannot moderate the relationship between the audit firm factors and audit quality. *Originality/value* – This is the first study examining the impact of external environmental factors moderating between audit firm factors and audit quality.

Keywords: Audit firm factors, External environment audit factors, Audit quality, Libya.

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INTRODUCTION

The question of whether auditors adequately play this role in safeguarding financial information by ensuring credible reporting has recently received much attention from customers, creditors, business relationships-shareholders, employees, public authorities, etc. (Johl *et al.*, 2007). At the beginning of the new millennium, high profile corporate collapses worldwide (e.g, Enron Corp and World Com in USA; HIH Insurance Group in Australia; Sanyo, Nikko Cordial in Japan) are linked to the collapse of Arthur Andersen in 2002. It has captured the attention of regulators, auditors, academics, and investors not only in countries that suffered from such corporate collapses, but also in other countries that have not experienced such crises and problems (Carlin *et al.*, 2008). Consequently, more attention is given to improve audit quality in order to block or at least reduce the probability of fraud and errors resulting in financial failures and to restore confidence in financial markets after they were shocked by the collapse of big firms. Audit quality is viewed as one of the factors that affect the credibility of financial information. Higher audit quality is assumed to result in more accurate information (Davidson, 1993). This study investigates audit quality by exploring the factors that help to

enhance external audit quality in Libya. This paper investigates in the relationship between the audit firm factors; i.e., planning, supervision, specialization in the industry, and audit office size and audit quality. This study examines the moderating effect of the external environment audit i.e., professional bodies, laws and regulations, and recognized standards in the relationship between audit firm factors and audit quality. The following sections provide the literature review and hypotheses development, methodology, variable measurement and testing goodness of data, followed by empirical results, discussion of findings and conclusion.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This section displays the hypotheses of study based on the literature and the arguments provided by this paper as the following.

AUDIT FIRM FACTORS

Audit firm factors play a major role in improving audit quality. Among the tasks of the audit firm are; selection and appointment auditors, appropriation of auditors to clients the audit process, supervision of assistants' actions, setting up plans prior to auditing, following up works of its assistants and

discussing any problems that may be faced, which will be discussed in detail in the next section.

Planning of Audit Processes

The planning of the audit process is one of the important elements required for the success of auditor performance and for the achievement of sufficient level of audit quality. Some researches have shown that the audit planning has been rated among the most important of audit quality attributes (e.g. Sutton, 1993). Effective audit quality requires effective audit planning. The standard of fieldwork requires that the plan of action is appropriate and adequate. Planning is not a discrete phase of the audit, but rather an iterative process that begins with engagement acceptance and continues throughout the audit as the auditor performs audit procedures and collects evidence to support sufficient appropriate audit procedures for the audit report (AICPA, SAS 108, 2006). The AICPA explained in SAS 108 (2006) what should include the audit plan, also the IFAC (2010) explained in text ISA 300; 800; 805 considerations to be taken into account and to adhere to when planning the audit.

Supervision of Auditors

Supervising the work of assistants is one of the main requirements to ensure audit quality. The Commission of Cohen (1978) mentions lack of supervision as one of the primary factors leading to the failure of the audit and the low performance of auditors (Jaenickeand & McConnell, 1978). Supervising the work of assistants is one of the main requirements to assure audit quality. This view has been supported by IFAC (ISQC 1; ISA 220, 2010) which states the significance of supervising assistants, the need for the auditors to oversee the skill level and efficiency of their assistants and the establishment of a set of components for guidance, supervision and performance of each assistant. Gupta *et al.*, (1999) argue that auditing standards currently require the supervision of audit team members in order to achieve the aims of the audit process, as influenced by the nature of the audit expressed in its complexity.

Specialization in the Industry of External Auditor

Specialization in the industry provide a higher audit quality than do non-specialists, because have a deeper knowledge than non-experts due to greater experience in the industry which enables them to make more accurate audit judgments (Solomon *et al.*,1999; DeFond *et al.*, 2000; Carcello & Nagy,2002). Low (2004) claims that the auditors' knowledge of the customer's industry enhances their audit risk assessments and directly influences the nature and perceived quality of his/her audit-planning decisions. Some researchers find that, industry specialist auditors provide higher audit quality process than non-specialist auditors (e.g., Abbott & Parker 2000; Schauer, 2002; Cenker & Nagy, 2008; Lim & Tan, 2008; Reichelt & Wang, 2010). Reichelt & Wang (2010) say that there is

recent evidence presenting that audited financial statements are of higher quality when audited by industry specialists.

Audit Firm Size

A growing body of audit research emphasizes the importance of audit firm size in audit quality. This view has been supported by many researchers (e.g., DeAngelo, 1981; Davidson, 1993; Lennox, 1999; Colbert, *et al.*, 1999; Sori *et al.*, 2006; Choi, *et al.*, 2007). Davidson (1993) argues that the difficulty in measuring audit quality has led many researchers to use audit firm size as a surrogate. DeAngelo (1981) finds that the audit firms distinguish themselves on quality and that larger audit firms are expected to provide higher quality audit process. Colbert & Murray (1999) argue that larger firms have a range of incentives other than to deliver high audit quality, and they add, partners' human capital is highly dependent on the firm retaining its reputation. Sori *et al.* (2006) state that large audit firms have superior technology, training capacity, best financial resources, and research facilities, and more qualified employees to undertake audit process accurate than smaller audit firms. DeAngelo (1981) finds that the audit firms distinguish themselves on quality and that larger audit firms are expected to provide higher quality audit process.

From the preceding discussion, we can recognize easily the importance of audit firm factors that enhances audit quality support. Experience allows seasoned auditors to perform tasks superior to auditors having low experience. This is consistent with prior studies on experience (e.g., Libby & Frederick, 1990; Choo & Trotman, 1991; Brown, 2003; Shoosmuangpak, 2007). Given the intense focus on the increasing complexity of accounting and auditing rules, it is imperative for external auditors to possess very specific skills. Bedard (1991) indicates that knowledge and skills are acquired through education and years of audit experience. Shoosmuangpak (2007) indicate that, auditor's experience is of great important and it impacts audit quality. This study proposes the following hypothesis:

H1: There is a positive relationship between audit office factors and audit quality.

H1a: Each dimension of audit team characteristics i.e., planning, supervision, specialization in the industry, and audit office size and development is positively related to audit quality.

THE EXTERNAL ENVIRONMENT AUDIT FACTORS AS A MODERATOR

Previous studies did not shed light on the external environment factors, that aiding auditors in strengthening audit quality. These factors are laws and regulations, standards that govern the profession and determine responsibilities and duties. Laws and

regulations also require a professional body to sponsor the profession.

Professional Body

Most countries have established an independent body to oversee the audit profession, which would be governed mainly by non-practitioners, and establish an effective system of investigations and sanctions. The objective of these bodies is development and enhancement of accountancy and audit profession across the world with harmonized standards. Grant, *et al.*, (1996) provide evidence that professional bodies can achieve more than just restriction of entry and monopolization of the auditing function, they can improve audit quality by the provision of economical and effective regulation using monitoring and sanctioning. GAO (1993) notes that the government’s auditing standards require each body to have an appropriate quality system in place.

Laws and Legislation

Laws and legislation play an important role in promoting the audit profession and thus improve the audit quality. Marchesi (2000) suggests that the legal environment in which external auditors implement audit process may impact audit quality. Some find that the better way of enhancing audit quality is through the legislation or regulation of the market for audit services (e.g, Ramsay Report 2001). Schwartz (1997) argues that higher audit quality provides better information to investors and the legal regime that induces the highest audit quality also generates the most efficient

investment. Hillegeist (1999) points out the legal regime that leads to the highest rate of audit quality will always lead to the lowest audit failure level.

Recognized Standards

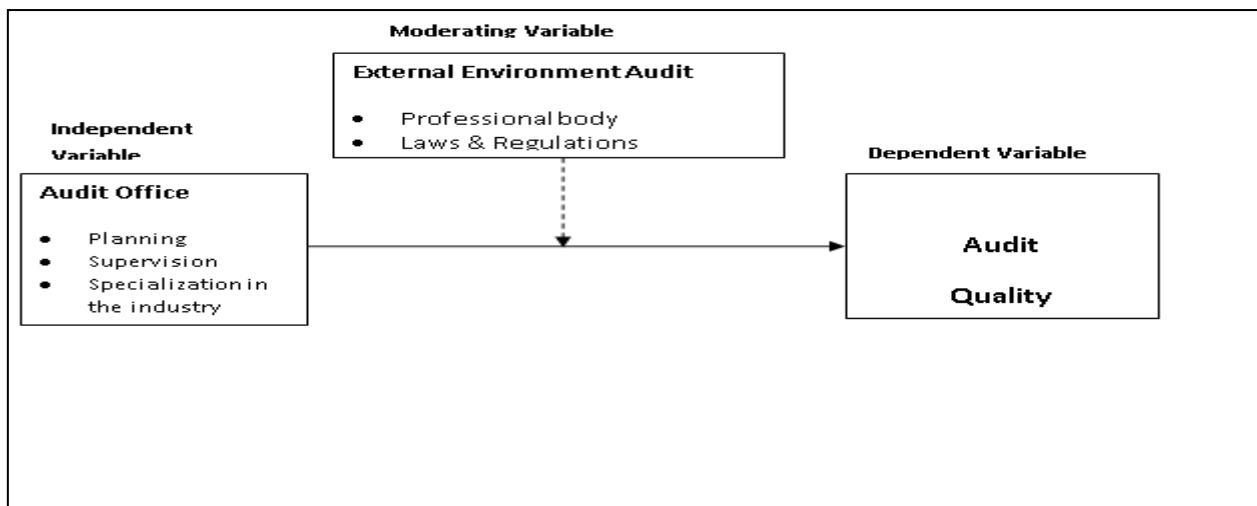
Quality is the most fundamental characteristic of international auditing standards (IFAC, 2007). Carcello *et al.*, (1992) found that most important elements that identify the audit quality are the following; audit team and firm experience with the client, industry expertise, responsiveness to client needs, and compliance with the general standards of generally accepted auditing standards (GAAS). IFAC (2007) points to the quick growth of worldwide markets that have placed a renewed focus on the development of and need for international standards on auditing.

In light of the above we can recognize easily the importance of audit external environment factors and its effect upon audit quality. Also, it impacts audit firm factors. The following hypothesis is developed:

H2: External environment audit factors moderates the relationship among audit firm factors and audit quality.

H2a: Each dimension of external environment audit factors i.e. professional bodies, laws and regulations, and recognized standards, moderates the relationship between audit firm factors and audit quality.

According to the previous discussion on this point, it can clearly visualize the theoretical framework of this study as presented in the following figure.



METHODOLOGY

POPULATION SAMPING THE STUDY

The population of the current study is external auditors from members Libyan Association of Accountants and Auditors (LAAA). LAAA is the regulatory body of the accounting profession in Libya which was established by the Libyan government Law No. 116/1973. The total number of the population that

collected in August 2012 was 1206. The sample size obtained for the study was selected randomly from the reality of record LAAA, which was appropriate that according to the rules of proposed by Roscoe (1975, cited in Sekaran, 2003). The questionnaires were delivered to the person in charge in office, which express an interest to participate are given as Maximum 7 copies.

DATA COLLECTION

From 530 questionnaires were distributed to the Libyan Auditors. A total of 288 questionnaires were returned. However, 18 questionnaires were returned blank or incompletely. An effort was made to contact the respondents but no response was received from them. Therefore, the 18 questionnaires were discarded. Also, 15 were excluded from the study by outliers' analysis. Only 253 questionnaires are finally useable for the study resulting in a response rate of 47.74 %. The current study's response rate is considered satisfactory

when compared to other study Khorwatt (2006) reported a response rate of 41 %.

Demography of Participants

Participants include 190 males and 63 females. So, 75.10% of the participants were males while just 24.90 % was females. The majority of the respondents were auditors (51.0%), audit supervisor (19.0%), managing partner (18.5%), and the remaining participants (11.5%) were partners. Table 1 displays details of the respondents' profiles according to the occupation, size of audit office and experience.

Table 1: Respondents Profile

Member	Frequency	Percentage
Occupation		
Managing Partner	47	18.5
Partner	29	11.5
Audit Supervisor	48	19.0
Auditor	129	51.0
Total	253	100.0
Size of audit office		
Less than 3 auditors	54	21.3
4 – 10 auditors	134	53.0
More than 10 auditors	65	25.7
Total	253	100.0
Experience as auditor		
Less than 3 years	14	5.5
3 - 5 years	63	24.9
6 - 10 years	85	33.6
More than 10 years	91	36.0
Total	253	100.0

In this study conducts the T test (Independent Samples Test) to test whether there is any statistically difference between; (1) respondents gender difference, and (2) early respondents and late respondents. There is no significant difference between the groups in gender, and respondent. The test was conducted the ANOVA to

test whether there is any statistically difference, among occupation, experience and size in table 1. From the ANOVA results, it shows that there is no statistically significance at the $p > .05$ for all groups.

Descriptive Statistics

Table 2: Display the results of descriptive statistics for audit office factors

Items	Mean	Std dev	Min	Max
Planning of Audit's Processes				
There is plan for each audit process describes the procedures that should be followed by audit team.	3.92	0.827	2	5
Participation of audit team in set the audit plan	3.91	0.835	1	5
The audit team documents procedures for each audit process, lead to reduce the audit risk.	3.90	0.738	1	5
Discuss the plan with the audit commission for the existence of an annual plan for the audit office	3.87	0.740	2	5
	3.79	0.873	1	5
Supervision of Auditors				
The chief executive officer in the audit office discusses the results of the audit with the audit team.	3.88	0.846	2	5
The chief of audit team discusses the results of the audit with his assistants.	3.85	0.804	2	5

The chief of audit team directly supervises the work of his assistants.	3.85	0.789	2	5
The chief executive officer in the audit office directly supervises the policy of the audit teams.	3.81	0.841	1	5
<u>Specialization in the Industry</u>				
The chief of audit team is very knowledgeable about the industry.	3.97	0.761	2	5
The evaluation of the auditor to the audit risk related to customer.	3.94	0.785	2	5
Auditor industry specialists are more likely to resist client management pressures than auditor industry non specialists.	3.84	0.725	2	5
Cost reduction.	3.71	0.836	1	5
<u>Audit Office Size</u>				
The number of branches.	3.71	0.882	1	5
Audit team size.	3.70	0.861	1	5
Number of partners in the audit firm.	3.70	0.865	1	5
The number of operations carried out by the audit team.	3.68	0.844	2	5

Table 3: display the results of descriptive statistics for moderating variable - Environment Audit Factors

Items	Mean	Std dev	Min	Max
<u>Professional Bodies</u>				
The professional body followed up the application of guideline principles and standards from its members.	4.08	0.757	2	5
Regulators provide the auditing and accounting standard issued and enforcement mechanism reliably.	4.07	0.709	2	5
Regulators are quite forceful for continuing training and education requirements.	3.96	0.786	2	5
The existence of strong professional body overseeing the profession.	3.92	0.841	2	5
<u>Laws and Regulations</u>				
The audit team committed with laws and regulations.	4.07	0.678	2	5
The laws and regulations have penalties which urge on its implementation.	4.06	0.710	2	5
Sanction imposed for ethics violations are strictly enforced in auditing professional.	4.03	0.816	2	5
The audit team has sufficient knowledge about laws and regulations governing the profession.	4.04	0.750	2	5
The existence of appropriate laws and regulations.	3.94	0.819	2	5
<u>Recognized Standards</u>				
Retain in the office of standards and regulations pertaining to the profession to return to it when needed.	4.23	0.675	2	5
The audit staff assigned to the engagement have very high ethical standards	4.21	0.676	2	5
Audit client's financial statements conform to generally accepted accounting principles.	4.18	0.627	2	5
Audit team uses its knowledge about the international standards for auditing.	4.11	0.611	2	5
The extent of audit team's knowledge about the international standards for auditing.	4.08	0.712	2	5

Table 4: Descriptive statistics for Dependent Variable - Audit Quality

Items	Mean	Std dev	Min	Max
Detects and reports the material weakness of internal control system of the audit client.	4.00	0.718	2	5
Detects and reports a material fraud of audit client's financial statement.	3.98	0.722	2	5
Detects and reports that the audit clients don't follow regulations.	3.98	0.704	2	5
Detects and reports the errors of accounting system of the audit client.	3.95	0.780	1	5

TESTING GOODNESS OF DATA

The reliability of the measurements was evaluated by Cronbach’s alpha coefficients and in the scale reliability, Cronbach alpha coefficients are greater than 0.70 (Hair et al, 2010). Generally, the reliability coefficients indicated that there was a high level of

consistency in the responses given by the respondents. Table 5 displays the factor loadings and Cronbach's Alpha of all variables. These constructs accepted reliability level with Cronbach's Alpha between 0.732-0.861.

Table 5: Reliability Statistics- Summary

Variables and Dimension	Number of Item	Cronbach's Alpha
Audit office factors	17	.861
Planning of Audit's Processes	5	.771
Supervision of Auditors	4	.763
Specialization in the industry	4	.734
Audit office size	4	.732
Environment Audit Factors	14	.818
Recognized Standards	4	.767
Laws and Regulations	5	.753
Professional Bodies	5	.740
Audit Quality	4	.717

Tabachnick & Fidell (2007) refers to factor analysis are statistical techniques applied to a single set of variables when the researcher is interested in discovering that the subsets of variables form coherent whole that are relatively independent of each other. Factor analysis for each individual variable indicated that the items of each variable are unidimensional as

they loaded satisfactory on a single factor (above 0.50). Factor loadings ranged for study by external auditors from 0.623 to 0.789, and the MSA is above 0.70. The eigenvalues of all the variables are greater than 1.0 for study, and it is considered as statistically significant based on the guidelines (Tabachnick & Fidell, 2007; Hair et al, 2010).

Tables 6: Summary of Eigenvalues Percentage of Variance Explained, and MSA for all variables and dimensions.

Variables and Dimension	Eigenvalue	Percentage of variance explained	MSA
Audit Office Factors	1.112	56.131	0.888
Planning of Audit's Processes	2.617	52.348	0.824
Supervision of Auditors	2.338	58.458	0.757
Specialization in the industry	2.233	55.827	0.760
Audit office size	2.220	55.498	0.733
Environment Audit Factors	1.078	53.430	0.844
Recognized Standards	2.594	51.875	0.785
Laws and Regulations	2.238	50.508	0.795
Professional Bodies	2.260	56.490	0.762
Audit Quality	2.165	54.127	0.756

EMPIRICAL RESULTS

Correlation analysis according to Pallant (2005) describes the strength and direction of the linear relationship between two variables. This study used correlation analysis to determine the strength and direction of the linear relationship among all variables

and dimension. The results of correlation analysis have a positive and significant correlation at the 0.01 level with audit quality. From Table 7, the highest correlation coefficient is .712. Therefore, there is no sign of multicollinearity problem.

Table 7: The Correlation Analysis- All Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1) Planning of Audit's Processes	1							
2) Supervision of Auditors	.466**	1						
3) Specialization in the industry	.318**	.470**	1					
4) Audit Office Size	.416**	.487**	.336**	1				
5) Professional Bodies	.448**	.510**	.393**	.391**	1			
6) Laws & Regulations	.291**	.303**	.308**	.179**	.246**	1		
7) Recognized Standards	.466**	.461**	.386**	.415**	.578**	.261**	1	
8) Audit Quality	.598**	.660**	.552**	.521**	.712**	.412**	.681**	1

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

Multiple regression according to, Tabachnick & Fidell (2007), is used to predict the score on the dependent variable from scores on several independent variable's. Multiple regressions are based on correlation but allow a more sophisticated exploration of the interrelationship among a set of variables (Pallant, 2005).

Hypothesis 1: There is a positive relationship between audit office factors and the audit quality.

The results of multiple regression analysis as summarized in Table 8 indicates a significant positive relationship between audit firm factors and audit quality, ($R^2 = .605$, $F(1,251) = 383.672$, $p < .001$). The audit firm factors explained 60.5 % ($R^2 = .605$), of the variance in audit quality. In addition, the audit firm factors has a greater beta coefficient ($b = .778$) than, it has positive relationship with audit quality.

Table 8: The Regression Models of Audit Firm Factors with Audit Quality

Variable	Coeff. (B)	Std. Error	Beta
Constant	.460	.181	
Audit firm factors	.920	.047	.778***
R^2	.605		
Adj. R^2	.603		
F	383.672***		
Df	(1,251)		

*** Significant at the 0.001 level; ** significant at the 0.01 level; *significant at the 0.05 level; +significant at the 0.10 level.

The results of the regression model in Table 9 indicate a positive and significant relationship between overall audit firm factors and audit quality ($R^2 = .614$, $F(4,248) = 98.6734$, $p < .001$). Also, demonstrate the results of the regression analysis between planning, supervision, industry, and size with audit quality. Here the purpose is to examine and compare the contribution of each independent variable of dependent variable. All

dimensions of audit firm factors explained 61.4% of the variance in audit quality. Among these variables the planning of audit's processes ($b = .303$, $p < .001$), supervision of auditors ($b = .327$, $p < .001$), specialization in the industry ($b = .251$, $p < .001$), and audit firm size ($b = .151$, $p < .01$) have unique and significant impact on audit quality.

Table 9: The Regression Models of each Dimension of Audit Firm Factors with Audit Quality

Variable	Coeff. (B)	Std. Error	Beta
Constant	.444	.183	
Planning	.280	.043	.303***
Supervision	.281	.043	.327***
Specialization in the industry	.233	.042	.251***
Audit firm size	.127	.039	.151**
R^2	.614		
Adj. R^2	.608		
F	98.673***		
Df	(4,248)		

*** Significant at the 0.001 level; ** significant at the 0.01 level; *significant at the 0.05 level; +significant at the 0.10 level.

Moderating Model- Hypothesis 2: External environment audit factors of bodies, laws and regulations, and recognized standards moderates the relationship between audit firm factors, and audit quality.

Table 10, shows that the R square of the models changed with the interaction of moderator (from $R^2 = .737$ to $.734$), however, the change was too small and insignificant. The interaction coefficient (standardized beta) of the external environment audit factors was not significant (R^2 change= $.002$, $b=$

$.602$; $p>0.10$). The analysis were replicated to test the each dimension of external environment audit factors such as; professional bodies, laws and regulations, and recognized standards, moderates the relationship between audit firm factors and audit quality. The results suggest that do not support the hypothesis; H2a that proposed the moderating relationship between audit firm factors and audit quality. However, the change was too small and insignificant for all dimensions of environment audit factors.

Table 10: Results of hierarchical regression analyses for main and moderation effect: the external environment audit factors of moderates the relationship between audit firm factors and audit quality.

Model DV Variable	1 Audit Quality			2 Audit Quality		
	Coeff. (B)	Std. Error	Beta	Coeff. (B)	Std. Error	Beta
Constant	-.750	.184		.852	1.355	
Main Effect audit office factors	.541	.051	.457***	.109	.366	.092
external environment audit factors Moderator	.654	.059	.483***	.258	.337	.191
audit office factors * external environment factors				.106	.089	.602
R^2	.737			.734		
Adj. R^2	.736			.733		
Change in R^2	.736			.002		
F	347.669***			323.647***		
F change	347.669***			1.424		
Df	(2.250)			(3.249)		

DISCUSSION OF FINDINGS

Hypothesis 1: There is a positive relationship between audit office factors and audit quality.

The results show that audit firm factors which consists of planning of audit's processes, supervision of auditors, specialization in the industry, and audit firm size has a significant relationship with audit quality ($p<.001$) (see Table 8). In terms of correlations (see Table 7), the association between audit office factors of dimension i.e. planning, supervision, industry ,and size and audit quality are positive with high significance (0.521 to 0.660). Thus, audit firm factors can be explained via its relation to audit quality. Audit firm should develop an annual plan, and plan for each client and supervise the work of assistants to carry out high audit quality. This is in line with the ISA 300; 800; 805, ISQC 1; ISA 220 (2010) by IFAC, and AICPA, SAS 108 (2007), which point out that planning of audit processes and supervision of auditors lead to enhancement of audit quality. Whenever audit firm specializes in a particular industry, this leads to enhancement of audit quality. Auditing specialists in a particular industry provides higher quality audit than do non-specialists. This is consistent with previous studies such as; Solomon et al, (1999), DeFond *et al*, (2000),

Low (2004). Also, among the factors affecting audit firm is the size of the firm. DeAngelo (1981) argues that audit firms differentiate themselves on quality and that larger audit firms are expected to provide higher quality audits.

A significant positive relationship exists between planning of audit processes and the audit quality ($b=.303$, $p<.001$, in Table 9). Our results show that the planning of the audit processes is one of the significant things for the success of auditor performance and achieves level of sufficient audit quality. Some studies have shown that planning is rated as among the most important audit quality attributes (e.g. Sutton, 1993). Audit office should form an annual plan, enable the participation of audit team in the set audit plan, and discuss the plan with the audit commission and audit team. This is in line with the ISA 300; 800; 805, ISQC 1; ISA 220 (2010) by IFAC. According that IFAC (2010) paragraph ISA 300, planning helping the external auditor to identify and resolve problems, properly organize and manage the audit engagement, select an audit team and appropriate proper work to them, and facilitate the direction and supervision of audit team and assist them.

From the above discussion, it is clear that planning plays a key role in the success of the audit process. This in turn, will reflect positively on the audit quality if the planning process is participated by the members audit team, and the plan is at the firm level of or the level of each audit process.

One of the main factors leading to low performance of auditors and to the failure of the audit if lack supervision (the Commission of Cohen, 1978). The results indicate that supervision of auditors has a unique and significant impact on audit quality ($b=0.327$, $p<.001$). Supervising the work of assistants is one of the basic requirements to assure audit quality. In this context, Gupta *et al.*, (1999) argue that, auditing standards currently require the supervision of audit team members in order to enhance the audit quality and achieve the objectives of the audit process. The supervision of the director of audit firm is required to directly supervise the work of his assistants, the policy of the audit teams, and the results of the audit and any problems with the audit team. This is in line with the suggestions according to AICPA (SAS No.108) (2006) wherein elements of supervision include; instructing assistants, keeping informed of significant issues encountered, reviewing the work performed, and dealing with differences of opinion among firm personnel. According to ISA 220 (2010) paragraphs A13, audit office involves informing the members of the audit team of matters such as: their responsibilities, objectives of the work, the nature of the entity's institution, risk, and problems. Discussion between members of the audit team allows less experienced team members to raise questions with more experienced team members and take advantage of their expertise so that appropriate communication can occur within the audit team.

From the above discussion and comments, it confirms that supervision is an important factor of audit office factors, which enhances audit quality.

A significant positive relationship between specialization in the industry of audit firm and the audit quality ($b=0.251$, $p<.001$) (see Table 9) is revealed. Most previous research suggests the existence of the positive relationship between specialization in the industry and the audit quality (e.g. Solomon *et al.*, 1999; DeFond *et al.*, 2000; Carcello & Nagy 2002; Schauer, 2002; Low, 2004; Cenker & Nagy, 2008; Lim & Tan, 2008; Reichelt & Wang, 2010). The audit firm of industry specialists is more likely to resist client management pressures than auditor industry of non specialists. The specialization in the industry plays an important role in enhancing the evaluation of the auditor of the audit risk related to customer, and leads to cost reduction. This is in line with Low's (2004) study whereby the results indicate that the auditors' knowledge of the client's industry improves their audit

risk assessments and directly influences the nature and quality of audit.

Cenker & Nagy (2008) found that industry specialization lessens the auditor's litigation and clientele mismatch risk. Beasley & Petroni (2001) points out the industry specialists have the best audit technologies at lower costs. Reichelt & Wang (2010) stated that there is recent evidence that audited financial statements are of higher quality when audited by industry specialists. The specialization in the industry of audit firm enhances the performance of external audit function that will lead to enhanced audit quality.

It was predicted that the auditor with greater audit firm size is more likely to perform higher audit quality. The results indicate that audit firm size has a unique and significant impact on audit quality ($b=0.151$, $p<.01$, in Table 9). Specifically, this study adopts the view that the audit firm size has very influential and significant impact on audit quality. This is consistent with previous studies advocating that larger audit firm size provide higher audit quality (e.g. DeAngelo, 1981; Davidson, 1993; Lennox, 1999; Colbert & Murray; Sori et al, 2006; Choi et al, 2007). Sori et al. (2006) found that large audit firms have better financial resources and research facilities, superior technology and more talented employees to undertake big company audits. Similarly, Colbert & Murray (1999) argued that a big firm has technical expertise, enjoy better reputation, has higher brand equity, and it can enjoy economies of scale. Moreover, big audit firms have been viewed as being more independent than small firms (DeAngelo, 1981; Lennox, 1999; Colbert & Murray, 1999).

The regression analysis supported a postulate that the audit firm size is related with audit quality. Our results supported this view. In any case, the firm size has the least mean from all dimensions (Mean= 3.70). Perhaps this is due to the fact that majority of audit firms in Libya is small size owing to the absence of Big 4 in the country as previously explained.

Through the preceding discussion, we can see clearly that the audit firm factors lead to enhancement of audit quality. This is in line with recognized standards and many previous studies. The regression analysis supported a postulate that the audit firm factors have significant positive relationship with the audit quality.

Hypothesis 2: External environment factors of audit moderates the relationship between the audit firm factors and the audit quality.

It is predicted that the external environment audit factors of professional bodies, laws and regulations, and recognized standards moderate the relationship among the audit office factors and the audit quality. The results indicate that the moderating effect

of external environment factors are insignificant (R^2 change= .001, $b = .602$; $p > 0.10$ in the relationship between audit office factors and the audit quality (see Table 10).

The analysis was replicated to test each dimension of external environment factors of audit. The results do not support all external environment elements as professional bodies (R^2 change= .002, $b = 0.571$; $p > 0.10$), laws and regulations (R^2 change= .000, $b = 0.233$; $p > 0.10$), and recognized standards (R^2 change= .002, $b = 0.695$; $p > 0.10$) are insignificant. However, the change was too small and insignificant for all dimensions of environment audit factors.

To our knowledge there are no studies that examined external environment factors of audit moderating the relationship between the audit office factors and the audit quality. But there are some studies and the criteria clarified the presence of external environment factors of audit moderates the relationship between audit office and audit quality, for instance, Cenker & Nagy (2008) found that industry specialization lessens the auditor's litigation while Reichelt & Wang (2010) argue that industry specialists have developed a reputation for higher audit quality, so they have a greater incentive to protect their reputation against possible litigation in the event of a client's business failure. Palmrose (1988) findings reveal quality differences between Big firm and non-Big firms, specifically that Big firm auditors were less likely to be involved as defendants in audit litigation based on the assumption that a higher (lower) quality auditor is involved in less (more) audit litigation.

Our results above are not consistent with the suggestion by IFAC and AICPA where they state that quality is the most fundamental characteristic of international auditing standards (IFAC, 2007). For example, text ISA 800; 805 (2010) by IFAC states that considerations are taken into account and complied with when planning the audit. IFAC, ISA 300 (2010) indicates that planning benefits the audit. The AICPA, SAS 108 (2006) mandates what should be included in the audit plan while IFAC, ISQC 1, paragraphs A34 (2010) lays down what the supervision includes. According to ISA 220 (2010), engagement performance elements include direction, supervision and performance. SAS No. 108 refers to auditor's supervision of the work of assistants. AICPA (1998) claimed that specialization in the audit market is critical for the future survival of the audit firms, and specialization is one of the five top issues impacting the CPA profession.

The results suggest that with or without interaction between the audit office factors, and the external environment factors, audit quality would not

change much. In other words, external environment factors of professional body, laws and regulations, and recognized standards are unable to enhance the audit office factors for the refinement of audit quality.

CONTRIBUTIONS AND FUTURE RESEARCH FUTURE DIRECTIONS

Firstly, the study could be replicated to include the opinions of people in different industrial sectors in an attempt to gain a wider picture of the perception of audit quality, and the factors influencing it.

Secondly, the study could be replicated in advanced countries to determine whether these factors affect audit quality, particularly the Big 4 firms and a comparison of the results can be conducted to see whether there are differences between small and big firms and to establish whether cultural influences in different countries influence perceptions of audit quality. Such a study might highlight the existence of new and additional factors that might come into play.

Third, future research can extend this model by looking at audit team factors' impact upon audit quality.

Finally, the proposed model can be tested by applying this model to measure audit quality of practice.

CONCLUSION

The study found that the adoption of multi-dimensional audit firm factors that consist of planning, supervision, specialization in the industry, and audit firm size is positively and significantly related to audit quality. The results show that auditor commitment to the audit firm factors effectively reflects high audit quality. The results are consistent with past literature claiming that the measures in the audit firm factors are important measures that can be critical factors of audit quality enhancement. The organizations can use these multi-dimensional measures to measure audit quality.

The external environment factors are important for the audit firm factors because they regulate, issue and oversee the work of the auditors through standards, laws and regulations, and professional bodies that underpin audit quality.

The results indicate that the interaction coefficient of the external environment audit factors is not significant, and thus do not support the hypothesis 2.

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