

## **The Effect of Audit Tenure and Internal Audit Effectiveness on External Audit Quality: Evidence from Jordanian External Auditors**

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### **ABSTRACT**

The poor audit quality has become one of the phenomenal challenges facing the financial sector in Jordan, as has determining how to implement directives and policies that result in high-quality auditing. The study is motivated by available academic literature indicating the importance of examining audit attributes affecting audit quality in Jordanian auditors, which becomes the study's primary objective. This study is based on two variables used to understand and analyze the level of audit quality within Jordanian auditors. The two variables measured in this current study are audit tenure and internal audit effectiveness. The data were collected through the distribution of questionnaires to 200 respondents in Jordanian auditors and processed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) software for this study. The study's findings indicate positive and significant relationships between audit tenure and audit quality based on the descriptive analysis and a structural equation model. On the other hand, internal audit effectiveness indicates a negative and insignificant effect on audit quality. In addition, this study conducted further analysis by grouping the respondents based on Big 4 audit firms and non-big 4 audit firms. Based on the results, IAF indicates positive and significant results for auditors from the big 4 audit firms, but negative and significant results for auditors from non-big 4 audit firms. Furthermore, the demographic profile indicates that the majority of respondents are from non-Big 4 audit firms, which could result in a unique result. The findings suggest that the non-big 4 audit firms must improve the communication between the internal and external auditors to enhance audit quality in Jordan.

**Keywords:** Internal audit function, external audit, audit tenure, audit quality, Jourdan.

### **INTRODUCTION**

Businesses globally must agree to certain necessities with regards to the information they offer to third parties. Organizations meet this requirement by implementing a financial accounting process that embodies the identification, recording, cataloging, aggregation, and reporting of financial statements in accordance with Generally Accepted Accounting Principles (GAAP). In the manner of issuing the financial statements of the organization's to the public every year, the

auditor performs the responsibilities through giving an appropriate guarantee level that the financial statements are dependable, efficaciously provided, and in agreement with the GAAP that reflected in the report of audit (Persson, 2011).

The audit report is regarded as the most important information for financial statement users who place their trust in the financial report. The audit report has been helping the countries to promote the economy and run the business smoothly by protecting companies from collapse

and creating a good investment environment. The audit report also helps increase investors' confidence to invest in the companies through buying their shares. It is necessary to enhance the informational value of audit reports in order to offer investors better insight into the company and its potential (Oberleitner, 2017). Additionally, the audit report refines and adds value to the financial statement, assisting users in making business decisions (Suyono, 2012). In sum, an audit report provides necessary information about a wide variety of related subjects needed by different users such as investors, creditors, and the government to make an appropriate decision (Belfagira, 2015). There is an important role for auditors to be more vigilant in executing their responsibilities by ensuring that due diligence and care are at the forefront of their agenda so that fraud can be detected and exposed. This is critical if auditors wish to safeguard and maintain their professional reputation and integrity (Belfagira, 2015).

Given that the audit report is imperative, the audit firms are expected to deliver high-quality audits. The questions about audit quality have increased, and poorly conducted audits often contribute to increasing corporate failures such as Enron or United Way (Mgbame et al., 2012). The concern on the quality of audited financial reports has led regulators and other stakeholders to focus more on financial and compliance issues to accountability, monitoring, and governance effectiveness of organizations (Taylor, 2015). As a result, the funders and other stakeholders have required the management of the organizations to be more accountable, not only in using of funds but also concerning on effectiveness and efficiency of program administration (Taylor, 2015).

A number of researchers have presented comprehensive reviews of existing research on audit quality as well as presenting revised frameworks to facilitate future research in the field (Yan & Xie, 2016; Ball et al., 2015; Lamoreaux, 2016). In particular, Espinosa-Pike & Barrainkua (2016) described audit quality as the market-assessed possibility that an auditor will detect errors and irregularities and report them. The regulators can also understand a high-quality audit as one issue in the adaptability with

the professional standards. Similarly, a high-quality audit can be viewed as a factor in avoiding economic difficulties for an organization or market (Oberleitner, 2017).

On the other hand, Francis (2004) conducted a study to demonstrate audit quality by correlating audit quality and audit failures. Accordingly, audit quality may be hypothesized as a theoretical continuum starting from low to high audit quality. Audit failures glaringly happen due to the lesser level of audit quality. Consequently, to begin rationalizing audit quality, one should consider the degree of audit failure. The audit failure occurs when the Generally Accepted Accounting Principles are not enforced through the auditor (GAAP failure); or while an auditor fails to issue a fair audit report (audit report failure). In both cases, the audited financial statements are possibly deceptive users, which has reduced users' trust and resulted in an increase in accounting scandals (Francis, 2004).

Accounting scandals such as Enron, Arthur Anderson, and World Com have increased in the last decade, which affects the users who are losing their trust in financial statements (Al-khaddash et al., 2013). The demise of Arthur Anderson, one of the Big 5 accounting firms in the United States, has dispatched surprise waves throughout the world. This scandal and its subsequent results affect the auditor litigation levels and inadequacy of the audit report for many others. They are ongoing, escalating, and have a global reach at the moment, drawing attention to the financial statement's quality (Toh, 2016).

In addition, the aftermath of these scandals also has led to the emergence of an "expectation gap" in the audit quality between an auditor and the users of financial statements, as several users of audited financial statements have unique expectancies about the audit feature from what it provides (Toh, 2016). A few users think that the auditor must provide an audit opinion and interpret the financial statements in such a way that the user must assess the way of investing within the entity. Therefore, there was a call for comprehensive changes within the auditing profession to help in improving audit quality (Osomurie, 2013).

Furthermore, in Jordan, Al-Rai newspaper (2014) and Nawaiseh (2015) confirmed that attention was paid to the quality of the audit as early as 1961. Thus, the establishment of professional bodies is important to supervise and improve the auditing profession, such as Central Bank, Securities Commission, Corporate Control, etc. Moreover, in 1988, the Jordan Association of Certified Public Accountants (JACA) was established to improve and monitor the auditing profession. These bodies were established to improve the quality of the audit profession in order to raise the efficiency of the Jordanian market.

The users of financial statements have been exasperated due to auditor failure that led to global accounting scandals (Nawaiseh, 2015). According to a 2014 report by the Jordanian Association of Certified Public Accountants (JACA), Jordan has a low audit quality, which is evident in the growing tax evasion of many Jordanian companies.

The report highlighted the auditor's important role in providing a fair audit report that shows the client's financial situation and actual income, which contributes to increasing treasury revenues and reducing tax evasion. Since income taxes may reduce the quantity to half of a public company's net income, an auditor must examine the validity of accrued taxes and the related note disclosures so that it will offer adequate assurance to the investing public approximately the appropriateness of these items and disclosures (Kanagaretnam, Lee, Lim, & Lobo, 2017). Consequently, any information regarding questionable tax transactions has a tendency to be hidden in those accounts and disclosures. Hence, the auditors additionally have to examine whether their clients are involved in potentially abusive tax transactions, which could be challenged if this practice was exposed through the tax authority. Moreover, auditors could require clients to disclose the tax-related items effectively on the financial statements (Kanagaretnam et al., 2017). In particular, the weakness of auditing in Jordan provides opportunities to taxpayers to evade taxes through concealment of taxable income and non-examination of tax-related items on the financial statements (Alimat, 2013).

In addition, the Jordanian Economic and Social Council, in their 2014 report, shows the amount of tax evasion for 2010 and 2011 are 1,122,500 JD and 1,067,400 JD, respectively. Moreover, the JACA (2014) reported that they decided to punish a number of auditors by preventing them from practicing auditing services for two years, accused of violating international auditing standards and ethical rules. The same case had already occurred in 2013. The JACA decided to punish five auditors of the association by preventing them from practicing the profession; one of them was punished for one year, and the rest were punished for six months due to committing disciplinary offenses and non-compliance with ethical rules. They were impersonating as auditors and issued audit reports on the financial statement of some companies without having the license as an auditor. According to Article 21 (2014) of the Jordanian Profession Law, any person may not practice auditing unless they have a license.

Previous studies have been done to investigate audit tenure's influence on audit quality. To name a few, Ilaboya & Okoye (2015), Al-Thuneibat et al. (2011), and Al-khaddash et al. (2013) examined the relationship between audit tenure and audit quality. Long audit tenure leads to establishing a relationship between auditors and clients and gives auditors to focus on their audit position and be more relaxed (Knechel & Vanstraelen, 2007). Farther, long auditor-client relationships have the potential to create closeness between the auditor and the client, enough to deter the auditor's independence and reduce the audit quality (González-Díaz et al., 2015). The implication is that independent auditor behavior becomes more abrasive, increasing the likelihood of the auditor acceding to the client's stress in exchange for approving an accounting policy. This adversely influences the auditor's independence and capability to offer real and fair audit reports (Mgbame et al., 2012).

Conversely, auditor tenure is probably to contribute to the growth of the general domain knowledge, which can increase the extent of the auditor's competence. Understanding client-specific knowledge, e.g., in-depth expertise about the client's accounting

system and business field, allows the auditor to find and evaluate the potential risks properly, plot and carry out audit procedures, and explicit the precise audit opinion. Also, with the ongoing tenure, the accumulated client-specific knowledge may increase the level of the auditor's competence (Lee, 2015). In Jordan, it is widely observed that most firms retain the same audit firm for long periods (Al-Thuneibat et al., 2011). Thus, does the audit tenure affect the audit quality of Jordanian auditors?

Despite the fact that numerous audit attributes have been identified as having an effect on audit quality, the relationship between external and internal audits has received less attention (Cohen, 2008). Since the external auditors' reliance on the internal audit work during the audit process, the internal audit work impacts the external audit efficiency and effectiveness (Dezoort et al., 2001). As suggested by Cohen (2008), the role of internal auditor work in influencing external auditor evaluation and reliance on the internal audit work is a useful area for future research. This is because the internal audit's objectivity is critical to the organization and the external auditor. However, does the internal audit effectiveness affect the audit quality of Jordanian auditors?

In general, high-quality auditing will assist the Jordanian government in avoiding tax evasion, thereby increasing treasury revenues. Similar to most non-oil countries, taxes are considered the main source of government revenues in Jordan (Alasfour, 2017). Consequently, the momentum of this study stemmed from the arguable nature of the audit process and the value of the audit report. In addition, the Jordanian situation is very under-researched on audit quality, and accordingly, this study could doubtlessly make a significant contribution to specific auditing practices in Jordan.

The rest of the paper is organized as follows. Section two covers the literature review discussing the guidance from new trade, knowledge assets, and new growth theories regarding the sources of bilateral trade flows. Section three expands on the standard gravity model by incorporating knowledge assets as a new economic factor at the national level.

Section four presents the empirical results, and finally, section five offers conclusions remarks.

## **LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

This section provides the review of previous literatures and hypotheses development to investigate the effect of audit tenure and internal audit effectiveness on external audit quality, from the perspectives of Jordanian external auditors. This study applied agency theory as an underpinning theory in explaining the study framework. Two hypotheses were developed and explained in the next subsection.

### **Agency Theory**

The agency theory is a belief that explains and demonstrates the connection between principals (shareholders) and agents (manager). The theory aimed to resolve the problems that exist in agency relationships because of different goals or different aversion levels to risk. The common agency relationship in finance occurs between principal (shareholders) and company executives (agents) (Al-sraheen, 2014).

Agency theory is the contractual relationships which the principal engages the agent in providing services on their behalf. Within this agency relationship, agency problems between principal (shareholders) and agent (management) usually arise from a combination of asymmetric information. In other words, the agency problem is the knowledge gap, because the principal (shareholders) do not work within the organization and the shareholders basically do not know what is happening in the organization which creates the knowledge gap (Abdullah, 2016).

The management prepares financial statement to inform the principal (shareholders) about the company's financial status. Thus, the role of the external auditor is to assess the financial statement and give the shareholders their opinion about financial statement whether it gives true and fair view. The term agency theory came from the fact that principal (shareholders) who appoint external auditor do

so in order to have a clear knowledge about the financial statement of the company that in turn, reduce the agency conflict in the organization (Suhaib Aamir & Farooq, 2011). Hence, agency theory relates to the external auditor effectively resolved that agency problem.

The audit firm is charged to supervise, validate, and when necessary, offer corrections to the appropriate financial report of a corporation. Clearly, agency problem of the auditors' rises when auditors (the agents) are used by the firm and are then rewarded for their services by the same management they audit (the principals). The dilemma on the part of the auditor in such case is that they realize they are subject to class-action lawsuits by shareholders, but they would rather risk facing a judge than risk losing a client (Horne, 2015). Hence, this might lead to conflict of interest and reduced audit quality.

By having an attentive audit quality in a financial statement, this will response to reduce the conflict of interest between the owners and the mangers, therefore, this will redeem the agency problem. Agency theory suggest that auditors as a third part influence and interact the firm.

Previous studies like Taylor (2015) have examine the quality of auditing suggested that higher quality audits will increase the number of audit findings. According to agency theory, audit findings should make audit outcomes more useful for implementing contracts between agents and principals since the reporting of such discrepancies would provide "reasonable assurances" to funders that contract objectives were met. Hence, the principal and agent (management and auditors) would therefore place greater weight on certain attributes, such as auditor size, independence and specialization, in determining the auditors' ability to reduce incidences of non-compliance, and auditors that comply with audit ethical roles to increase audit report quality.

#### **Audit tenure and the audit quality of Jordanian auditors**

Adeniyi & Mieseigha (2013), Carey & Simnett (2004), Johnson et al. (2002), and Rahmina & Agoes (2014) conducted a study to investigate the impact of auditor tenure on audit quality.

They are consistent with the hypothesis that the auditor compromises his independence most often in a long-term auditor contract. Furthermore, the length of audit tenure is a critical factor influencing auditor independence, which in turn affects the audit quality (Liu & Habib, 2012). Additionally, after years of service, the auditor's independence will weaken due to the auditor's friendly relationship with the client. Additionally, it reduces audit quality, whereas long tenure is supposed to decrease the auditor's objectivity (Al-Thuneibat et al., 2011). According to Ebimobowei & Keretu (2011), a policy mandating auditor rotation could improve the quality of audit reports by allowing for a fresh perspective and reestablishing public confidence in the audit function. Therefore, audit tenure is expected to be negatively associated with audit quality.

On the other hand, Okolie (2014) suggests that the quality of auditor reporting improves over time because of the increasing of the auditor's knowledge of the client's specialization and the processes within the organization. In addition, Adeniyi & Mieseigha (2013) noted that some studies examine the relationship between long-term auditor-client relationships and the probability of audit failure. The results indicate that risk increases early in the auditor client relation and then declines over time, suggesting that longer audit tenure over time will smoothen out any initial challenges that may impair the quality of the auditor's performance. The results of the study do not support the hypothesis that short auditor tenure improves audit quality. This study can argue that the effects of auditor tenure on audit quality are controversial. Therefore, this study, motivated by the lack of consensus in the literature on the impact of audit tenure on audit quality, will contribute to the debate by examining the effect between auditor tenure and audit quality in Jordan. Hence, due to the inconsistency in the above studies, this study proposed the following non-directional hypothesis:

H1 - There is a significant effect between audit tenure and the audit quality of Jordanian auditors.

### **The internal audit effectiveness and the audit quality of Jordanian auditors**

The internal audit function mainly focused on ensuring proper governance by detecting internal control weaknesses within the organization (Burt, 2014). The objective of the internal audit is important not only to the organization but also to the external auditor because the external auditor depends on the internal auditor's work during the planning and collection of the evidence for the audit process. The Public Company Accounting Oversight Board's (PCAOB) Audit Standard 5 (AS5) (PCAOB, 2007) requires that the external auditors should use the internal audit work during an audit process. This consists of; (1) employing the direct assistance of internal auditors in performing the audit process and (2) relying on relevant work previously completed by the internal audit to reduce the amount of additional evidence the external auditor must obtain (Burt, 2014). Whereas the external auditor relies on the internal auditor to evaluate the organization's internal control, there is the possibility of a biased assessment caused by internal audit because of their strong connection with the organization. The internal function has been shown to be swayed by management (Burt, 2014). Logically, the weakness of internal audit affects the external audit quality.

Likewise, Prawitt et al. (2012) explained that the size of information acquired by the external auditor from the internal audit on the evaluation of the internal control system or any accounting information leads to improving the external audit quality. Therefore, the internal audit work quality and its bias with the management affect the external audit quality. In addition, Dezoort et al. (2001) confirmed that the poor internal audit work quality affects external audits by impacting the planning of the

audit process. Hence, the poor internal audit work quality affects the external audit quality. This leads to the following hypothesis:

H2- There is a significant effect between the internal audit effectiveness and the audit quality of Jordanian auditors.

### **DATA AND METHODOLOGY**

This study was carried out through a survey method by developing and distributing the questionnaire. The survey questionnaires were distributed during actual visits to participants' locations based on the list of population. The total population of registered Jordanian auditors is 419 in 42 audit firms. Based on Krejcie & Morgan's (1970) sampling size table, the initial sample for this study is 200 auditors in Jordan. This study measured audit quality from iterant perspectives, which refer to seven elements and four elements for the level of compliance toward ethical rules; further, this study measured the reliance on internal audit work by examining five elements. In summary, the following Table 1 explains the operational definition of the dependent variable and independent variables.

According to Sekaram (2003), it was suggested that the sample population for the pilot study should not be necessarily big. Therefore, 30 respondents were selected for the pilot test in this study. The respondents are Jordanian postgraduate students in University Malaysia Perlis and University Utara Malaysia, mostly in the accounting and finance department because of their knowledge in auditing. The pilot study result revealed that the Cronbach's Alpha obtained for the items under each variable is reliable. According to Hair et al. (2011), the acceptable threshold for the reliability of this kind of study is 0.60 and above. The study achieves acceptable seemingly because the items were adopted from previous related studies.

Table 1: Resume of variables measurement

Variables	Operational definition	Source
Audit quality	Compliance with auditing standards. A proper planning process. Commitment to ethical standards. Obtain sufficient evidence to support an audit opinion. Assessment of the risks associated with the client financial statements. They were completed in a timely manner.	(Sulaiman, 2011)
Audit tenure	Review the work before the audit is completed. Audit tenure is a threat to auditor independence. Consider the duration of the client's relationship with its auditor prior to the auditor requesting to audit the client. The rotation will enhance auditor independence. The rotation would add more costs to audit firms and audit clients. The benefits of audit firm rotation exceed the likely benefits of audit partner rotation.	(Ahmad & A, 2012)
The internal audit effectiveness	Internal auditor independence. The internal auditor performs his professional duties diligently, in line with the ethics and standards. Experience as an internal auditor. Management response to the internal auditor's recommendations. Use the plans and work papers of the internal auditor when planning the audit process.	(Madhoun, 2014)

## RESULTS

The data for this study was collected through a questionnaire from the external auditors in Jordan. Total numbers of 200 questionnaires were distributed to the respondents, whereas 164 questionnaires were answered and received out of 200 survey questionnaires were distributed

during actual visits to participants' location based on the list of population. Therefore, a response rate of 82% was achieved by receiving filled and returned survey instruments from 200 respondents. Table 2 shows the detail about the response rate

Table 2: Response rate

Questionnaire	Frequency	Percentage
Returned:	164	82%

Completed	150	75%
Not completed	14	7%
Not Returned	36	18%
Total Questionnaire Distributed	200	100%

The current study presents demographic data on respondents, including their gender, age, education level, professional qualifications, length of service, academic major, and

employment with the Big 4 audit firms. These data represent the respondents' basic information based on 150 questionnaires. Table 3 shows the results of respondents' information in detail.

Table 3: Respondents' information

Demography	Frequency (n=150)	Percentage (%)
<b>Age (years)</b>		
25 – 30 years	30	20%
31 – 35 years	72	48%
36 – 40 years	40	26.6%
41 and above	8	5.4%
Total	150	100%
<b>Gender</b>		
Male	139	93%
Female	11	7%
Total	150	100%
<b>Education level</b>		
Diploma	25	17%
Bachelor	97	65%
Master	25	16%
Doctorate	3	2%
Best Doctorate	0	0%
Total	150	100%
<b>Professional qualifications</b>		
CPA	0	0
JCPA	150	100%
CFA	0	0
others	0	0
Total	150	100%
<b>Length of audit services</b>		
1-3 years	33	22%
4-6 years	57	38%
7 and above	60	40%
Total	150	100%
<b>Academic major</b>		
Accounting	150	100%
Management	0	0
Finance	0	0
Others	0	0
Total	150	100%
<b>Working in Big 4 audit firm</b>		
Yes	42	28%
No	108	72%
Total	150	100%

According to Table 3, the majority of respondents (93 %) were male, while the remaining 7% were female, as Jordanian society discourages women from working. Additionally, descriptive statistics indicate that the majority of respondents (20%) are between the ages of 25 and 30; the age group begins at 25 because that is the age at which an auditor begins his or her career in Jordan. When aspiring auditors graduate with a bachelor's degree at the age of 23, they have two years to complete auditing work and obtain their licence (JCPA). The data showed that those under the age of 35 and those between the ages of 36 and 40 represented by 48% and 26.6% respectively, while those over 41 (5.4%) had the lowest percentage, possibly because they work in countries such as Saudi Arabia and Qatar to earn more fees.

Additionally, the descriptive statistic for education level indicates that the majority of auditors had a bachelor's degree (65%), followed by a diploma (17%) and then a Master's degree (16 %). However, the lower percentage was the Doctorate with the percentage of (2%). The descriptive statistic also shows that all respondents have professional qualifications (JCPA) with a percentage of (100%).

According to the length of audit services, the majority of the respondents were providing audit services seven years and above with a percentage of (40%). The second level is 4-6 years representing (38%), while the third level is 1-3 years with a percentage of (22%). In addition, a descriptive statistic also shows that all respondents have an academic major (Accounting) with a percentage of (100%). The last descriptive statistic analysed those working in Big 4 audit firm; table 3 shows that most of the respondents were not working in the Big 4 (72%) while the rest (28%) were working in the Big 4.

In order to determine whether the data is normal enough for a further statistical test, a normality test is conducted. Under this normality test, the main concern is the distribution of scores on variables, and this is conducted by looking at the value of skewness (symmetry of the distribution) and kurtosis (peakedness of the distribution). According to Klein (1998), the data is normally distributed if the value of skewness is less  $\pm 3$  and the kurtosis does not exceed  $\pm 10$ .

Table 4: Normality test for audit quality

Variables	Skewness	Kurtosis
AQ	-0.285	0.277
AT	-0.159	0.097
IAF	-0.104	-0.313

Table 4 presented the Statistical Package for the Social Science (SPSS) normality output of skewness and kurtosis for the audit quality model. Based on the skewness and kurtosis test results, it shows that all the values of skewness are less than  $\pm 3$ , and the kurtosis does not exceed  $\pm 10$ , which indicates that the data is accurate and normal for further analysis.

Descriptive analysis is used to examine the common statistical description of this study's constructs. This is done by calculating the means values, minimum, maximum, and standard deviation for all the constructs (i.e., independent and dependent). Table 5 shows the findings of the statistical values. The constructs have been on a five-point scale anchored on 1 = strongly disagree to 5= strongly agree.

Table 5: Descriptive statistics of the constructs (n=150)

Construct	Minimum	Maximum	Mean	Std. Deviation
AQ	1.00	5.00	3.60	0.837
AT	1.00	5.00	3.57	0.841
IAF	1.00	5.00	3.54	0.841

Table 6: Convergent validity and reliability analysis

Construct	Items	Loadings	Composite Reliability	AVE
Audit Quality	AQ2	0.7449	0.819	0.531
	AQ4	0.7175		
	AQ5	0.7062		
	AQ7	0.7453		
Audit Tenure	AT1	0.7685	0.7554	0.5083
	AT3	0.6618		
	AT4	0.7044		
Internal Audit Effectiveness	IAE2	0.7158	0.8013	0.5047
	IAE3	0.8174		
	IAE4	0.6812		
	IAE5	0.6118		

Note: 7 items (AT2, AT5, ER2, AQ1, AQ3, AQ6, IAE1) were deleted to low items loading.

In this study, the discriminant validity of the constructs was evaluated through the (Fornell, C., & Larcker, 1981) criterion (see Table 7). Similarly, the correlation matrix shown in Table 6 indicates that diagonal elements serve as the average variance square root extracted from the latent constructs. This discriminant

validity is present when the diagonal elements exceed off-diagonal elements presented in the columns and rows. The table below shows that AVE's square root is higher among the inter constructs correlations in the columns, which indicates the discriminant validity of data.

Table 7: Discriminant validity (Fornell-Lacker criterion)

	AQ	AT	IAE
AQ	0.7062		
AT	0.4757	0.6618	
AFZ	0.2467	0.3602	
LCER	0.3435	0.3601	
IAE	0.1345	0.1896	0.6118

Bootstrapping analysis enables statistical testing of research hypotheses. However, the t-value is used to determine whether or not the assumed effect is significant. Commonly used critical values are 1.65 (significance level= 10%), 1.96 (significance level = 5%), and 2.57 (significance level = 1 %).

When a study is exploratory in nature, researchers often assume a significance level of 10%. Ultimately, the choice of the significance level depends on the field of study and the study's objective (Sather, 2004). Table 8 contain the Std. Beta and the bootstrapping results, where the hypothesized effects below were tested:

Table 8: Result of hypothesis testing

Hypotheses	Effects	Std. Beta	Standard error	T-value	Decision
H1	AT > AQ	0.5022	0.0662	7.5842*	Accepted
H2	IAE > AQ	-0.0128	0.0296	0.4335	Rejected

Notes: \*P<1% \*\*P<5% \*\*\*P<10%

Hypothesis 1: audit tenure has an effect on audit quality. This hypothesis received strong support, as demonstrated in Table 8, where the standard beta value is 0.5022,8, and the corresponding T-statistic is 7.5842, indicating a 1% significance level. So, it is accepted that audit tenure has a positive and significant effect on audit quality. This finding is consistent with Okolie's (2014) and Adeniyi & Mieseigha's (2015) findings (2013). They all discovered a positive relationship between audit tenure and audit quality.

Hypothesis 2: internal audit effectiveness was hypothesized to have an effect on the audit quality. However, the Std. Beta for this variable was -0.0128, and the corresponding T-statistic was 0.4335. This finding indicates that internal audit effectiveness has no significant effect on audit quality, leading to the dismissal of hypothesis H4. This result was unexpected, as it contradicts the findings of two well-known accounting researchers, Prawitt et

al. (2012) and Dezoort et al. (2001), who discovered negative effects. As a result, the relationship between internal audit effectiveness and audit quality is insignificant. This study conducted additional analysis by comparing respondents from Big 4 and non-Big 4 audit firms to confirm the findings. Furthermore, based on the demographic profile, most of the respondents are from non-big 4 audit firms, which could provide a unique result.

In further analysis, the sample for this study collected from Jordanian auditors, which include 200 auditors, where these auditors working in big 4 audit firms and non-big 4 audit firms in Jordan. This study tested the hypothesized effects by running PLS bootstrapping algorithm for the auditors who working in big 4 audit firms separately from the auditors who work in non-big 4 audit firms. Table 9 shows the results of hypotheses testing for auditors working in big 4 audit firms (which include 42 auditors):

Table 9: Results of hypotheses testing for auditors working in big 4 audit firms (which include 42 auditors)

Hypotheses	Effects	Std. Beta	Standard error	T-value	Decision
H1	AT > AQ	0.4281	0.0494	8.6682*	Accepted
H2	IAE > AQ	0.1652	0.0542	3.0465*	Accepted

Notes: \*P<1% \*\*P<5% \*\*\*P<10%

In table 9 presented the result of hypothesis testing, when this study tests the data for the auditors working in big 4 audit firms (which include 42 auditors) the H2 is accepted. The table 4.9 depicted that the Std. Beta value is 0.1652 and the corresponding T-statistics is 3.0465 that indicates 1% significance level. So, it is accepted that internal audit effectiveness has positive and significant effect on the audit quality. That is means, there is positive significant effect between internal audit

effectiveness and the audit quality in big 4 audit firms. AT also show a significant result at 1% level. The results suggested there is positive effect between internal audit effectiveness and audit quality in big 4 audit firms because there is communication between the internal and external auditors before and during audit process. Table 10 shows the results of hypotheses testing for auditors working in non-big 4 audit firms (which include 108 auditors):

Table 10: Results of hypotheses testing for auditors working in non-big 4 audit firms (which include 108 auditors)

Hypotheses	Effects	Std. Beta	Standard error	T-value	Decision
H1	AT > AQ	0.6346	0.0455	13.9595*	Accepted
H2	IAE > AQ	-0.1419	0.0321	4.4169*	Rejected

Notes: \*P<1% \*\*P<5% \*\*\*P<10%

In Table 10 presented the result of hypothesis testing, when this study tests the data for the auditors working in non-big 4 audit firms (which include 108 auditors) the H2 is accepted. The table 4.10 depicted that the Std. Beta value is -0.1419. So, it is rejected that internal audit effectiveness has negative and significant effect on the audit quality. That is means, there is negative significant effect between internal audit effectiveness and audit quality in non-big 4 audit firms. The results suggested there is negative effect between internal audit effectiveness and audit quality in big 4 audit firms because there is no communication between the internal and external auditors before and during audit process. However, H2 is rejected maybe due to the almost respondent is from non-big 4 audit firm

From the findings of this research, several practical implications in audit quality and specifically in the context of Jordan can be achieved. In particular, the findings assist the Jordanian Association of Certified Public Accountants (JACA) in laying down strategies for support and motivation in the work environment of Jordanian auditors. The significant findings shown that Jordanian auditors need good working environment to offer high-quality of audit. Based on the results detected, the JACA must impose law (instead of instructions) encourages an increase the audit tenure to increase the audit quality by providing the auditor with an opportunity to understand the client's internal system. Also, the JACA should enhance the auditor's ethical rules to improve audit quality through the provision of training courses and awareness lectures compulsively for

auditors, that promote and develop the ethical rules of the auditor. Lastly, strengthen communication between the internal auditor and the external auditor by creating a meeting between the internal auditor and the external auditor before audit process and obligate the external auditor to rely on the internal auditor work to get high-quality of audit.

Moreover, the research findings useful for audit firms in Jordan by conduct an analysis regarding their work environment and assessment of the auditors' work performance. Moreover, Audit firms will be able to effectively identify the most optimum way to enhance work environment quality. The results helped the audit firms to understand and improve the audit quality by increasing the audit tenure this positively affects the audit quality, while paying attention to ethical rules by observing auditors' compliance with ethical rules. Further, enhancing communication between the internal auditor and the external auditor. Moreover, it is suggested that for Big 4 audit firms' management should consider audit tenure, audit firm size and internal audit effectiveness as an important deterrent on the design to increase audit quality. Whereas for non-Big 4 audit firms audit, audit tenure, the level of compliance toward ethical rules and internal audit effectiveness is important deterrents for improving the audit quality. In addition, non-Big 4 audit firms is suggested to improve the relationship between internal and external auditor. Lastly, this study contributes to improve and enhance Jordanian auditors' work.

## CONCLUSION

The first hypothesis stated that audit tenure positively and significantly affects audit quality. The result from the PLS analysis supported this hypothesis. This finding is consistent with previous studies such as Okolie (2014) and Adeniyi & Mieseigha (2013); they all found a positive effect between audit tenure and audit quality. Specifically, Okolie (2014) suggested that the quality of auditor reporting improves over time because of the increasing of the auditor's knowledge on the client's specialization and the processes within the organization. This study establishes that audit tenure has a significant impact on the audit quality of Jordanian auditors.

Consistent with the fourth research question, the second objective of the study was to examine the effect between internal audit effectiveness and audit quality; the research question hypothesized that internal audit effectiveness has an effect on audit quality. However, the PLS result shown insignificant effect. Thus, the effectiveness of internal audit has a minimal impact on the audit's quality.

Taken together, this study provided the evidence to contribute to the body of knowledge in the field of audit quality. The current study satisfactorily addressed all of the questions. The current study's findings indicate that audit attributes have an effect on audit quality in Jordanian contexts, resulting in three independent variables: audit tenure, internal audit effectiveness, and audit quality (dependent variable). Two hypotheses were formulated based on theory and previous empirical evidence, which clearly, contribute to the literature and theory. This study also provided the implication for the organization auditors and management of firms. Limitations and future research were also discussed.

Present study has supported a number of the hypothesis effects between dependent variables and independent variables, the findings of this study have also limitations. Limitation provides the opportunities for scholar to further investigate the current study with different perspectives. First limitation of present study that only focused on perceptions of auditors which may be bias. Future research is to examine the other perceptions of interested

parties, such as auditing professional associations, clients and legislators.

Second limitation is that due to lack of the time and budget issues present study focused on the survey cross sectional study. Future research will be longitude study to bring the more and reliable data and comprehensive results. Thirdly, research method techniques of data collection do not provide the equal chance to all respondents. Hence, future researchers may enhance the findings of questionnaire by conducting interview with the respondents. Fourthly, from further analysis presented this study has rejected H2 for non-Big 4 audit firm. This is considered one of the limitations for this research, and it's a starting point for many future researches.

In the perspective of findings recommendation for the future researcher auditor should be motivated by firms to main the high level of audit quality and firm arrange the training program and seminars for auditors to enhance the skills and get more experience to their field and scale up their qualification and increase the interaction with high qualified in auditing specialization to influence his proficiency. Professional auditor must be knowing the auditing rules, restrictions, policies, directions and standards to use them in their tasks.

Jordanian audit firms should prove offers auditors competitive fess, rewards and bounces to enhance their motivation to main the high-quality auditing and also to be comfortable, satisfied and nominate them to audit the branches of firms outside or inside the country where the parent firm is located with a high reward. Apart from that these practices of company will help to maintain the audit quality and accomplish the success for the firm.

In view of the above, it is suggested that future studies may employ a longitudinal design to assess the link between audit attributes and audit quality such as internal audit effectiveness in a similar study area or different field of study. Future studies should use a more number sample to see whether the result may change especially on Big 4 audit firms. Hence, a worthwhile future research direction is to explore the effectiveness of the internal audit department at the clients and

the impact of the external auditor decision to relying on the internal auditor's work papers.

### ACKNOWLEDGEMENT

This research is being funded by UKM -GSB under the GSB-2021-019 and the Ministry of Higher Education, Malaysia under the FRGS Scheme Phase FRGS/1/2020/SS01/UNIMAP/02/1.

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## Appendix

### Questionnaire

#### PART A: Demographic Information.

**Instruction:** Please provide some background information about yourself by ticking the most appropriate box in each of the following questions.

1. Gender ☐ Male ☐ Female
2. Age ☐ 25-30 years ☐ 31-35 years ☐ 36-40 years ☐ 41 years and above
3. Highest education level ☐ Diploma ☐ Bachelor ☐ Master ☐ Doctorate ☐ Best Doctorate
4. What professional qualifications do you hold? ☐ CPA ☐ CFA ☐ JCPA ☐ Others
5. What is the average for the audit tenure with the clients? ☐ 1-3 years ☐ 4-6 years ☐ 7 and above
6. Academic major ☐ Accounting ☐ Finance ☐ Management ☐ Others

7. Are you working in Big 4 audit firm?  
☐ Yes ☐ No

### PART B: Audit Quality

**Instruction:** Please read the statement and tick in the box based on the level of your agreement. The numbers below have the following meanings:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

B. Questions Related to the Audit Quality						
1.	The audit is carried out in accordance with international auditing standards.	1	2	3	4	5
2.	The audit work is determined by a proper planning and consecutive process.	1	2	3	4	5
3.	The audit is carried out in accordance with ethical auditing standards.	1	2	3	4	5
4.	The audit process is done at the level which obtain a sufficient evidence to support an auditor opinion.	1	2	3	4	5
5.	The audit work undertaken is based primarily on an assessment of the risks associated with the client financial statements.	1	2	3	4	5
6.	The audit is completed in a timely manner.	1	2	3	4	5
7.	The work done in carrying out the audit is subject to review before the audit is completed.	1	2	3	4	5

### PART C: Audit Tenure

C. Questions Related to the Audit Tenure						
1.	A lengthy relationship between an auditor and client is threat to auditor credibility.	1	2	3	4	5
2.	Once the auditor wants to audit the client, the auditor should take consideration the length of the relationship between the client and its auditor.	1	2	3	4	5
3.	The implementation of audit partner rotation will enhance auditor credibility.	1	2	3	4	5
4.	The implementation of audit firm rotation would add more costs to audit clients.	1	2	3	4	5
5.	The likely benefits of audit firm rotation exceed the likely benefits of audit partner rotation.	1	2	3	4	5

### PART C: Audit Effectiveness

D. Questions Related to the Internal Audit Effectiveness						
1.	The external auditor evaluates the independency of internal auditor in order to determine the audit sample size (auditing process design).	1	2	3	4	5
2.	The external auditor considers the efficiency of	1	2	3	4	5

<b>D. Questions Related to the Internal Audit Effectiveness</b>						
	internal auditor to performs his professional duties diligently, in line with the ethics of the profession, governing standards and laws.					
3.	The internal auditors experience affects the decision of the external auditor to approve their work.	1	2	3	4	5
4.	The external auditor finds that management responds to the internal auditor's recommendations to determine the degree of reliance on his work.	1	2	3	4	5
5.	The external auditor may use the plans and work papers of the internal auditor when planning the audit process.	1	2	3	4	5