EMPIRICAL EVIDENCE ON THE RELATIONSHIP BETWEEN INTERNAL AUDIT FACTORS AND THE QUALITY OF EXTERNAL AUDIT

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Abstract- The corporate governance literature indicates efforts to investigate the relationship between internal Corporate Governance Mechanisms (CGM) and Audit Quality (AQ). However, empirical findings prior to this study are inconclusive and not comprehensive enough to address all CGMs in terms of its effect on AQ; hence, this study extends the scope of previous empirical evidence by investigating the impact of internal audit factors as one of the main CGMs on AQ, since the previous studies have not investigated the role of these mechanisms in improving AQ. Mainly, this study aims to investigate and understand the point view of the Jordanian external auditors concerning the impact of internal audit competency, objectivity and work performance on AQ. As a result, this research contributes to the existing literature both in theoretical and practical fronts by developing a theoretical and conceptual framework that aimed to establish a relationship between internal audit factors and AQ. Further, this study test how agency theory can be served as a framework for explaining which mechanisms are important for improving AQ. Professional standards and previous empirical results highlighted that the client's internal audit can contribute to the external audit service in different ways either direct or indirect way. This research used questionnaire survey to understand the perceptions of external auditors as to the importance specified by them to several internal audit factors which may influence AQ. Respondents were given statements referring to possible attributes of an audit which could enhance and reflect AQ, and were asked to indicate their personal view of the importance of each indicator for AQ. Pilot study was conducted to test the reliability and validity of the research instrument. As a descriptive, correlation and regression findings illustrate that work performance of internal audit is the most important factor that effect on AQ, followed by objectivity and competency respectively. The results also indicate the external auditors consider the AQ indicators are important to achieve high AQ for instance, the audit is conducted in accordance with international standards and the audit's evidence are important to achieve high AQ. This study recommends that companies should improve the work performance; competency and objectivity of the internal audit to ensure the internal mechanisms are effective to improve the quality of audit service and quality of financial report because internal audit is an essential mechanism of the corporate governance system within the company. The results have implications for the practitioners and regulators who are assessing the role of internal audit functions in improving the quality of financial report. The results also suggest that internal audit factors can assist improving the quality of the audit service during the planning and conducting the audit service such as the evidence that collecting by the internal auditors and the guidance from the internal auditor to the external auditor.

Key words- corporate governance, Audit Quality, internal audit.

I. INTRODUCTION AND BACKGROUND OF THE RESEARCH

Internal audit factors have been established to investigate and evaluate the level of internal control and monitoring process in the company (Zain and Subramaniam, 2007), as a complementary role the external audit is more concentrated on offering reasonable assurance on the financial reporting system (Hay et al., 2008; Lawrence et al., 2011; Abbott et al., 2012)). Previous literature indicates efforts to investigate the role of internal audit function in the external audit process (Ho and Hutchinson, 2010; Abbott et al., 2012; Mohamed et al., 2012; Mat Zain et al., 2015). Despite, the main role of the external auditor is different from the main role of the internal auditor, there are many ways for collaboration and coordination between the two roles; this may lead to improving the level of control and AQ (Gramling et al., 2004; Goodwin-Stewart and Kent, 2006; Mat Zain et al., 2015). There are common interests and purposes between the two of them since the main aim for both of them is to discover the martial misstatements and weakness and then report that as well as both of them seek advice and help from each other (Goodwin-Stewart and Kent, 2006; Edge and Farley, 1991). Professional standards (for instance, International Auditing Standards (IAS) allow the contribution of the internal audit to external audit service (see ISA 610, SAS No. 65; SAS 110; Hay et al., 2008; Saidin, 2010 ;Mat Zain et al., 2015). ISA 610 and SAS No. 65 highlighted the external auditor's responsibilities related using the internal auditors works and allow the external auditor to depend on internal audit as assistance factors after the external auditor assesses and ensures the IAF's work performance, objectivity and competence to be satisfactory and effective to rely on them (Lawrence et al., 2011). In the post-Sarbanes-Oxley Act (SOX), this is revealed by the increased requirement for internal auditing to take place (Carcello et al., 2005), the requirements of SOX have exacerbated the pressure on firms and their auditors to conduct financial statements audits in effective manner and the cooperation between different monitoring bodies in the companies (Ettredge et al., 2006; Lawrence et al., 2011). AQ and internal CGM are significant aspects of today's

business practices. Recently, these issues have evoked interest and received attention of regulators, researchers and practitioners and have become the centre of the argument, due to their role in boosting investor's confidence and improving the reliability of the financial reports. The internal corporate governance failure has resulted in the audit failure (Elson and Gyves, 2003). For instance, boards of directors and external auditors were conniving in the Enron collapse and involved conspiring with external auditor of the Enron, thereby blaming the board of directors for these collapses and frauds (Benston and Hartgraves, 2002; Coffee Jr, 2003; Arnold and De Lange, 2004). Further, such incidence is collective that has affected the audit failure and the audit committee was not perform its duties effectively (Carcello and Neal, 2003), the Enron incidents highlighted the importance of the interaction between internal audit with audit committee and the interaction between external audit and internal audit should report directly to the audit committee rather than to the management (Chaney and Philipich, 2002). Therefore, one of the main reasons of audit failure was the cooperation between board of directors and external auditors for presenting misleading financial statements. This is more prevalent following the economic collapse and financial scams which have been witnessed by a number of countries in Asia, Latin America, Russia and the Western countries in 1990s (O'sullivan, 2000; Boo and Sharma, 2008; Owens-Jackson, 2009; Basiruddin, 2011; Karaibrahimoglu, 2013; Shan, 2014). Moreover, the USA has also witnessed similar financial collapses particularly in 2001 (Zanani et al., 2008; Adeyemi et al., 2012; Soliman and Elsalam, 2013; Marashdeh, 2014). In addition, some of developing countries witnessed some financial scandals (Ehikioya, 2009). Similarly, the Jordanian regulators issued corporate governance code in 2006 in response to the then corporate governance problems in Jordan (Marashdeh, 2014), as such the Jordanian economy faced squeezing in the last decade (Bekhet and Matar, 2013), as a result of corporate scandals such as Petra bank and Almsfofah company caused by the failure of audit and weak corporate governance mechanisms which the situation weakened the economic growth resulting in the Jordanian public companies losing 40% of their capital.

II. AN OVERVIEW OF AUDIT QUALITY

There is a considerable debate about the description of AQ as well as the lack of worldwide recognition and acceptance of a description for AQ. As supposed by the Financial Reporting Council FRC: "There is no single agreed definition of audit quality that can be used as standard against which actual performance can be assessed" (FRC, 2008:p16). There are various definitions of the quality of audit services, Deangelo (1981:p186) described the quality of audit services and his illustration considers the most widespread description for AQ which is "the market evaluated joint probability that a given auditor will both (a) detect a breach in the client's accounting system, and (b) report the breach". This implies that the AQ takes into account two basic issues discovering and reporting. In other words, AQ would be measured by capturing and reporting the material misstatement and any weakness in the financial reporting system for stakeholders. Deangelo (1989) suggested that the key roles for external auditors are oversight and supervision of the corporate governance system. Moreover, the main tasks for an auditor are included the discovery of material misstatements, rectification of such errors and in some cases prevention of any significant omissions, fraud or misleading financial data (Palmrose, 1988; Halbouni, 2015).

Furthermore, the literature also shows there are various possible approaches to measuring AQ. There is still no consensus about the measurement of AQ; some prior studies considered the dichotomous 'Big-4/ Non- Big-4' as indicators of AQ (Zanani et al., 2008; Mahdavi et al., 2011; Zureigat, 2011; Soliman and Elsalam, 2013). Hence, most prior studies measure AQ by the size of the audit companies because bigger companies hire qualified and skilled staff, they have more resources and better techniques, since most previous studies suppose Big-4 audit firms which have better AQ compared to non-top 4 (Deangelo, 1981). There are many studies which have examined the effect of audit fees on AQ and they found that audit fees are considered an AQ indicator (Hoitash et al., 2007), this is supported by previous research that have used audit fees as AQ indicator (O'Sullivan, 2000; Kane and Velury, 2004; Voeller et al., 2013; Kikhia, 2014). However, this study used questionnaire to measure AQ by adopting some practical indicators from previous literature which could reflect and measure AQ (Carcello et al., 1992; Kilgore, 2007; Christensen et al., 2015).

III. AGENCY THEORETICAL FOUNDATION OF THE RELATIONSHIP BETWEEN ON CGM AND AQ

The agency relationship comes from the relationship between different parties: shareholders and managers (Jensen and Meckling, 1976; Eisenhardt, 1989), then CG and audit come in to govern this relationship, and then AQ can be used as an assertion on CG as a solution of agency conflicts and information asymmetry (Jensen and Meckling, 1976). Moreover, the audit literature employs agency theory to describe the value of external audit work (DeAngelo, 1981; Antle, 1982; Watkins et al., 2004). This can be explained by employing agency theory because it suggests that there are various mechanisms that could be used to prevent opportunistic management behaviour and improve the level of control.

Furthermore, external auditors act as an independent party to check the reliability of a firm's financial information provided by the management, agency theory identifies that external audit and internal audit assist to enhance confidence and promote reliability in the financial report (Jensen and Meckling, 1976).

According to agency theory, independent audit plays a vital role in the financial market. The independent auditor as a third party helps to solve the agency problem by providing reasonable assurance that the financial reports prepared fairly and truthfully by auditing the company's financial report (Wallace and Ross, 1980). Since, agency problems arise due to separation of ownership from management; this requires external auditors as a solution for this problem (Mahdavi et al., 2011). This study relies on agency theory perspective, which is suitable for the nature and scope of the empirical work. Moreover, this study tests AQ as a solution for the agency problem. Agency theory provides a direct link between corporate governance and AQ (Watts and Zimmerman, 1983). According to agency theory, the main purpose for audit is to enhance the reliability and confidence in the financial reporting system for the company (Jensen & Meckling, 1976); thus, the existence of audit service is premised mainly on agency theory (Singh et al., 2014). Furthermore, agency theory describes that the need for high AQ is through a monitoring proposition (Chayasombat, 2010). CGM include internal mechanisms (i.e. internal audit and board of directors) and external mechanisms (i.e. external audit), each mechanism has different task (Makni et al., 2012).

IV. PREVIOUS STUDIES AND HYPOTHESES DEVELOPMENT: THE IMPACT OF INTERNAL AUDIT FACTORS ON THE QUALITY OF AUDIT PROCESS

Previous empirical results and auditing standards acknowledge that internal audit can contribute to the external audit work in various ways (Abbott et al., 2012; Mohamed et al., 2012; Mat Zain et al., 2015), specifically, the Statement on Auditing Standards (SAS) No. 65 highlighted that the extent of this contribution depends on the quality of internal audit as assessed by the external auditor (Felix Jr and Gramling, 2001; Abbott et al., 2012; Mat Zain et al., 2015).

There are some professional standards and principles highlighting the relationship between internal and external audit such as, the "International Auditing Standards" (ISA) which are developed by the "International Federation of Accountants" (IFAC) and the SAS which is issued by the "American Institute of Certified Public Accountants" (AICPA). Hence, these standards regulate and organize the relationship and interaction between internal and external audit to maximize the benefit from their tasks.

In recent years, internal auditing has become more and more identified as an essential control mechanism that can be utilised to help the board of directors and management to achieve the objectives of the business (Gramling et al., 2004, Spira and Page, 2003). SAS issued some standards in order to coordinate and organize the interaction between internal and external auditors, for instance, SAS No. 65, issued in order to identify the opportunities of cooperative between internal and external auditors (Reinstein et al., 1994). Jordanian corporate governance code (2006) states and identifies internal audit as an essential part of the internal mechanisms to measure internal control and risk management. Moreover, internal audit plays an important part in fulfilling an effective governance system (Sarens and Abdolmohammadi, 2011; Ho and Hutchinson, 2010). Thereby, this study intends to investigate the significance of internal audit as one of the key CGMs (Mat Zain et al., 2015). For example, prior studies have utilized internal competency as one of the essential dimensions of internal audit (Said Suwaidan and Qasim, 2010, Abbass and Aleqab, 2013). The competency of internal audit is vital to the qualifications of the internal auditor in order to achieve effective AQ (Messier and Schneider, 1988). The internal auditors are responsible for performing various duties that are related to the company's accounting system by employing techniques to produce a high quality financial reporting system (Moeller, 2009).

As a result of that, the external auditor evaluates the internal audit to identify the quality of internal audit activities and competency before deciding to rely on the internal audit work (Ho and Hutchinson, 2010). According to Zain et al. (2009) the economic outcome of this relationship between the internal and external audit is still unclear and has mixed results (Mohamed et al., 2012). Moreover, the literature claims that there is scant and mixed results on the relationship between internal audit and external audit (Abbass and Aleqab, 2013); hence, examining the relationship between CGM and AQ still needs more investigation (Kikhia, 2014; Aghaei Chadegani, 2011; Holm and Laursen, 2007; O'Sullivan, 2000; Zaman et al., 2011). Prior studies on the criteria of auditor assessment of the competency of internal audit focus on particular characteristics to evaluate internal audit competence and include; internal auditor obtaining an accounting and auditing professional certificate (e.g. Certified Public Accountant "CPA") (Brown, 1983; Cahill, 1994). This is so because the internal auditor can perform monitoring and oversight duties effectively and successfully if they have a professional qualification (Mohamed et al., 2012). The importance of internal audit experience (Messier and Schneider, 1988), the training programmes, education and qualification level all play an important factor for assessing auditor competency. Hence, internal audit competency

reflects the characteristics of internal auditors with attributes like skills employed, the level of experience and education, and accounting and auditing certification (Margheim, 1986). These attributes will aid the external auditor to improve the reliability of the financial statement audit. This is supported by previous studies and auditing standards that suggest that the complementary relationship exists between external and internal audits and their contribution to audit financial report (ISA 610, SAS No. 65; Hay et al., 2008).

In addition, objectivity of the internal audit is related mainly to reporting relationship and independence between internal audit departments with other parties within a particular company, allowing free communication channels to external auditors (Margheim, 1986). Hence, each company sets a distinctive objectivity, which is a criterion different from another company, with each organization defining its own objectivity criteria (Schneider, 1984); for instance, the nature of the connection between internal and external auditors allows either free communication channels or not (Margheim, 1986). Recent studies have focused on the effective CGM (i.e. internal and external mechanisms) and how they work in synergy to improve the reliability of the financial reporting system for the company (Abbass and Aleqab, 2013; Singh et al., 2014). The rationale for the complementary relationship is that more effective quality of internal audit initiatives are seen to reflect on the company that seeks for higher quality of corporate structure which leads to higher external AQ to complement internal CGM. Further, consistent with Goodwin et al. (2009) and Hay et al. (2008) the complementary perspective indicates that companies committed to effective corporate structure are likely to demand higher AQ and also engage in a greater level of internal audit. However, the substitution perspective proposes that more effective internal audit will decrease the external audit work (Saidin, 2010). On the other hand, the complementary perspective propounds that better quality of internal audit is likely to be connected with higher external quality (Mat Zain et al., 2015). Previous literature has investigated the external auditors' perception of internal audit factors. The table illustrates the ranking of factors identified by previous studies that were employed by external auditors in assessing the internal audit work. The findings from these studies show that there are three main internal audit factors namely, objectivity, competency and work performance.

Furthermore, Al- Twaijry's (2004) study found that the extent of internal audit effects on external AQ depend on the competency and independence of internal audit. Further, the findings indicated that, when the external auditors believed in a confident observation about internal audit competency and objectivity then they tend to depend more on internal audit performance. However, when they held negative opinion about competency or objectivity of internal audit, they tend to depend less on internal audit performance. However, studies by Maletta (1993), Al-Twaijry (2004) and Said Suwaidan and Qasim (2010) found work performance is the least significant factor. They mentioned the objectivity of internal audit is the most important factor for internal audit function. These studies offered mixed findings and are inconclusive in terms of ranking of theses internal audit factors; these factors are bases of external auditor assessment of internal audit work and all these factors influence external auditors' decisions. Thus, according to the above argument it is reasonable to assume these factors impact on AQ.

- H1: internal audit competency has a significant effect on audit quality in Jordan.
- H2: internal audit work performance has a significant effect on audit quality in Jordanian public companies
- H3: Objectivity of internal auditor has a significant effect on audit quality in Jordanian public companies

V. DATA COLLECTION AND ANALYSIS

In order to understand this relationship, the target population will be audit firms in Jordan. In order to gain deeper insight, external auditors will be the sample; the questionnaire is required to be completed by Jordanian external auditors who have secured the licence to work in Jordan and have their names publicly available through the "JACPA" website http://jacpa.org.jo/ar-jo/home.aspx. Therefore, since the population size is not too large (about 487) this study targets all the Jordanian external auditors in order to conduct the empirical part of this research. Email addresses and contact numbers were obtained with their permission from the JACPA. The purpose is to have a large number of participants in order to be able to generalise the results from the study. They are considered the most representative group of participants for this study, because they are independent and professional and they are represent independent monitoring party, as well as being responsible for audit service. According to Emory and Cooper (2003), the vital test of a sample design is how well the sample represents the characteristics of the population.

Questionnaires are commonly employed for collecting data in the AQ research to determine the factors affecting AQ (Sulaiman, 2011; Abbass and Aleqab, 2013; Enofe et al., 2013; Mat Zain et al., 2015). The researcher contacted all the external auditors by email and phone and the questionnaires were distributed to all of them by helping of JACPA but the number of questionnaires that received with full data is 206 questionnaires. The questionnaire should have questions and indicators reflecting the level of data measurement which is suitable to answer the research questions. There are four main levels of

measurement: ratio, nominal, interval and ordinal (Stevens, 1951).

VI. VALIDITY AND RELIABILITY ANALYSIS

The validity of each questionnaire's constructs was tested using Pearson's correlation coefficient. Run on SPSS, this test correlates scores for each indicators of the questionnaire with the total score. Items that correlate significantly with the total score indicate that the items are valid (Rimm et al., 1992). According to the results that found all items are valid apart from one indicator. The results of Pearson's correlation for pilot study show that the items are significant at $p<.001$ level which indicate that the items are valid and a significant correlation was found between the total score and the score for each item of the questionnaire. Total score for each scale is calculated in addition to the total questionnaire items score. After completing the test of validity of the research instrument, the next step is to determine the consistency and reliability of a questionnaire as a research instrument. For each scale of the questionnaire, validity and reliability are tested and reported below.

Table 1 lists the values of reliability coefficients Cronbach's alpha α for the four constructs of the questionnaire. Reliability analysis was performed in SPSS and the results revealed an overall questionnaire reliability coefficient of 94.5%, which is Excellent. Reliability coefficients for the questionnaire scales ranged from 90.1% to 94.8%, indicating that items of each scale have high internal consistency.

However, for the scale "objectivity on internal auditor" which contained six items, item no. 6 "internal auditors have direct and free channels of communication to the external auditor" was found to be a bad item as reliability coefficient value would increase if this item was removed from the scale. Reliability coefficient of this scale was 88.2% with item 6 included, while it increased to 92.4% when item 6 was removed. Reliability analysis revealed that the research instrument is significantly reliable.

VII. DESCRIPTIVE ANALYSIS

This section provides descriptive statistics of background information of the questionnaire respondents and their responses to the questionnaires' questions and indicators. Descriptive statistics that used to summarize respondents' background information are frequencies and percentages of the different categories of respondents with respect to their highest level of educational qualification, their major in their highest educational qualification, their principal role in audit inspection, and their overall experience in auditing practice. Pie charts are used to graphically represent the percentages of respondents.

VIII. BACKGROUND INFORMATION

The questionnaire provided background information about four aspects of the respondents addressed by their highest level of education, education major, role in audit inspection, and number of years as an auditor. The majority of respondents 69% hold bachelor's degrees, 23% hold master's degrees, while only 7% hold doctoral degrees. From this, it can be noted that the majority of respondents are well educated and near to third 30% of respondents have post graduate education. With respect to respondents' specialization, most respondents 60% specialize in accounting, 17% specialize in finance, and 8% specialize in business administration. Also, 15% of respondents specialize in other majors (e.g project management, economics and information system).

Regarding the role of audit inspection, near to half 44% of respondents are partners, 33% are seniors, 14% are managers, while 10% are staff assistance audit. This indicates that the majority of respondents have higher positions. Almost half of respondents 47% have more than 10 years of experience in the auditing practice, 27% have from 6 to 10 years of experience, 16% have from 2 to 5 years of experience, and 10% have less than 2 years of experience in this role. This indicates that the majority of respondents are well experienced in the audit practice.

	Frequency	Percent
Highest Level of Academic Qualification		
Bachelor degree	142	68.93
Master degree	47	22.82
Doctoral degree	15	7.28
Other	2	.97
Education Specialization (Major)		
Accounting	123	59.71
Finance	36	17.48
Bus-Admin	17	8.25
Other	30	14.56
Principal Role in Audit Inspection		
Staff assistance audit	20	9.71
Senior	67	32.52
Manger	29	14.08
Partner	90	43.69
Years of Overall Experience in Auditing Practice		
Less than 2 years	21	10.19
2 to 5 years	33	16.02
6 to 10 years	55	26.70
More than 10 years	97	47.09

IX. ATTRIBUTES OF AN AUDIT QUALITY

Respondents were given statements referring to possible attributes of an audit which could enhance and reflect AQ, and were asked to indicate their personal view of the importance of each statement for AQ by choosing one number on the scale. Descriptive statistics for the fourteen items of the "Audit Quality attributes" scale; that is include median and mode are reported for each item to indicate central tendency and frequencies with (percentages) to indicate variability. Median values ranged between score (4) and (5), indicating that 50% of respondents view each item as either "Important" or "Very Important". The same finding is given by the Mode values that ranged also between (4) and (5). Overall, the majority of respondents 80% view AQ attributes important, with 40% "Very Important" and 40% "Important". From these findings, it can be stated that, on average, 80% of respondents view these attributes as important factors in improving AQ. Specifically, it can be also seen the majority of participants observed that 88% of respondents think that it is crucial the audit is carried out in accordance with standards, since the external audit consider being in compliance with standards and regulations it is significant because these standards allow guiding the audit service to be in the efficient way and are predicted to be the criteria which establish high AQ service. It can be also observed that the majority of participants 87% consider it is essential that the audit work is conducted by a proper planning process, because it allows managing the audit work and highlighted the main weakness in the company financial reporting. The majority of participants 86% agree with the significance of technically competent in improving AQ, because this will effect on the efficiency of the audit service and the quality of audit evidence.

Statements (Scale Items)	Not Important at all (1)	Unimportant (2)	Neither Important nor Unimportant (3)	Important (4)	Very Important (5)	Median	Mode
1 The audit is carried out in accordance with standards.	0 (.00)	9 (4.37)	16 (7.77)	58 (28.16)	123 (59.71)	5.00	5
2 The auditor does sufficient work to obtain sufficient evidence.	0 (.00)	3 (1.46)	32 (15.53)	75 (36.41)	96 (46.60)	4.00	5
3 Before accepting a new client the CPA firm conducts a background search on the senior management.	0 (.00)	6 (2.91)	43 (20.87)	102 (49.51)	55 (26.70)	4.00	5
4 The CPA firm makes extensive use of statistical techniques.	0 (.00)	4 (1.94)	53 (25.73)	94 (45.63)	55 (26.70)	4.00	4
5 The audit work undertaken is based primarily on an assessment of the risks associated with the client.	0 (.00)	9 (4.37)	33 (16.02)	72 (34.95)	92 (44.66)	4.00	5
6 The audit work is determined by a proper planning process.	0 (.00)	5 (2.43)	22 (10.68)	80 (38.83)	99 (48.06)	4.00	5
7 The audit firm conducting the audit has other clients in the industry.	0 (.00)	10 (4.85)	39 (18.93)	106 (51.46)	51 (24.76)	4.00	4
8 The auditor demonstrates an appropriate level of challenge to the management.	0 (.00)	12 (5.83)	25 (12.14)	101 (49.03)	68 (33.01)	4.00	4
9 The auditor is technically competent.	5 (2.43)	3 (1.46)	20 (9.71)	76 (36.89)	102 (49.51)	4.00	5
10 The auditor is	5	0	25	57	119	5.00	5

independent.	(2.43)	(.00)	(12.14)	(27.67)	(57.77)		
11 The audit is completed in a timely manner.	5 (2.44)	7 (3.41)	24 (11.71)	73 (35.61)	96 (46.83)	4.00	5
12 The auditor maintains a high level of documentation in the completed audit files.	5 (2.43)	4 (1.94)	19 (9.22)	96 (46.60)	82 (39.81)	4.00	4
13 The auditor maintains effective communication and interaction with the audit.	4 (1.94)	8 (3.88)	40 (19.42)	77 (37.38)	77 (37.38)	4.00	4
14 The audit firm that is conducting the audit performs no consulting services.	4 (1.94)	11 (5.34)	67 (32.52)	72 (34.95)	52 (25.24)	4.00	4
Overall Attributes of an Audit Quality	28 (.97)	91 (3.16)	458 (15.89)	1139 (39.51)	1167 (40.48)	4.00	4

X. COMPETENCY OF INTERNAL AUDIT

This scale measures possible characteristics of the internal audit competency which could enhance AQ service. Respondents were asked to choose the score of importance of each competency attribute. The findings show that the five competency attributes are important for the majority of respondents 72%, with 25% "Very Important" and 47% "Important". Median scores had a value of (4), so as the Mode, indicating that at least 50% of respondents view competency attributes as important. Based on the results, it is worth to mention that, on average, 72% of respondents believe that these attributes are important. In details, 77% of respondents consider that it is important that the education level of internal auditors is satisfactory, 75% of respondents consider that it is important that internal auditors are provided with continuing training, 72% of respondents consider that it is important that internal auditors have sufficient years of experience, 71% of respondents think that it is important that the practices for hiring internal auditors are satisfactory, and 67% of respondents consider that it is important that internal auditors have professional certification. The perception of external auditor about the importance of the auditor competency is consistent with previous studies, since the auditor competency can improve the auditors' capabilities in terms of their knowledge of financial reporting process to conduct high level of AQ (Francis, 2004; Defond and Zhang, 2014). Based on the above results, as perceived by the respondent 72% of respondents consider that it is important that internal auditors have professional certification, this is consistent with literature on the criteria of external auditor assessment of the competency of internal audit focus on particular characteristics to evaluate internal audit competence and include; internal auditor obtaining an accounting and auditing professional certificate (e.g. Certified Public Accountant "CPA") (Brown, 1983; Cahill, 1994; Mohamed et al., 2012), this is because a professional qualification help the internal auditor to perform and conduct the practical work in professional and effective way. Since, high level of performance requires a professional and qualified internal auditor.

XI. WORK PERFORMANCE AND DUE PROFESSIONAL CARE

Previous empirical results and auditing standards acknowledge that the importance of the internal audit factors and the role of internal audit in the financial and monitoring process (Abbott et al., 2012; Mohamed et al., 2012; Mat Zain et al., 2015) and supported by relevant legislations (e.g. JCGC, 2006; IAS). Based on respondents' experience and knowledge they were asked to determine the level of importance of the nine attributes of work performance and due professional care. The majority of respondents 72% had a tendency to score (4) or (5), indicating that the attributes are either 41% "Important" or 31% "Very Important". In addition, the median scores for all attributes are (4), indicating that at least 50% of respondents selected to score (4), and the Mode is also (3), indicating that the most frequent value is (3). It can be also observed that 75% of respondents consider that it is important that there are appropriate ways for documenting and reporting. It can be also seen that the majority of participants 75% of respondents think that it is important that internal audit work is planned and supervised effectively. It can be also observed that the majority of participants 75% consider that it is important internal audit evidences are sufficient, the auditor perceived that the importance of the internal audit evidences are sufficient in improving AQ and support the auditor opinion. The least important item is that existence of an annual audit plan that covers various

areas of the firm, of 69% of respondents consider that it is important for high AQ.

XII. OBJECTIVITY ON INTERNAL AUDIT AND ORGANIZATIONAL STATUS

Six attributes were used to measure objectivity on internal auditor and organizational status. Overall, 73% of respondents viewed the six attributes as important factors for improving AQ. The Median score was (4) for all attributes and for the aggregated scale, indicating that at least 50% of respondents would score (4) for these attributes. The Mode scores ranged from (3) for "Neither Important nor Unimportant" to (5) for "Very Important". The overall Mode score was (4), indicating that the most selected score was (4). However, as seen from the descriptive results, item 6 had a Mode score of (3), indicating that the most selected score was (3). That is, 38% of respondents were unsure about the importance of this item "Internal auditors have direct and free channels of communication to the external auditor", which is a considerable proportion of the sample under study. This may attribute the results, where item 6 had a negative impact on the scale by lowering the reliability of this scale as it has a different pattern than the other five items.

XIII. HYPOTHESIS TESTING – ANSWERING RESEARCH QUESTIONS

This section considers testing research hypotheses stated earlier in the literature review section, with which findings answer research questions. The questionnaire scales are summated and averaged to get new composite (average) variables that can be used in the analysis to test the hypotheses. To recall, this research has three main hypotheses:

- H1: Internal audit competency has a significant effect on AQ in Jordan.
- H2: Internal audit work performance has a significant effect on AQ in Jordan.
- H3: Objectivity of internal audit has a significant effect on AQ in Jordan.

The three hypotheses are tested using OLS regression analysis, as Likert scale data are treated as interval variables and considering that parametric analysis of ordinary averages of Likert scale data is justifiable by the Central Limit Theorem; sample size = 206 (exceeding 30), which approximates the distribution to normality.

OLS Regression Analysis

OLS regression is a generalized linear modeling technique that is used to model a single response variable which has been recorded on at least an interval scale. Basically, it assumes that the relationship between the continuous response variable (Y) and the continuous explanatory variable (X) is linear; that is, to be represented using a line of best-fit, where Y is predicted, at least to some extent, by X. If this relationship is linear, it may be appropriately represented mathematically using the straight line equation 'Y = $\alpha + \beta x$'. The equation for multiple explanatory variables is: $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$. In this case, the model used in this research is represented by the equation: $AQ = \alpha + \beta_1 COM + \beta_2 WP + \beta_3 OBJ$, where AQ = Audit Quality, COM = Internal audit competency, WP = Work performance and due professional care, OBJ = Objectivity on internal audit and organizational status.

- OLS Regression Analysis Findings

The regression assumptions were checked and verified, and no serious violations were detected using the transformed composite data scores. Correlation analysis was performed at the first step to detect basic relationships between the dependent variable and the predictors. The results reveal that there is a significant positive relationship between the AQ and the competency, work performance, and objectivity, using the transformed scores, at significance level of $\alpha = .01$ as reported in SPSS output. The strongest relationship was between AQ and work performance, r = .461, p = .000, indicating a positive moderate relationship. On the other hand, the relationship between AQ and competency as well as between AQ and objectivity was weaker, r = .230 with p = .001 and r = .220 with p = .001 for competency, indicating a positive weak relationship. Table 12 presents OLS regression results, it can be figured out that competency, work performance and objectivity have significant effect on AQ, it can be seen that work performance contribute to the model more than other mechanisms,

Table 12: Regression and Collinearity statistics - Transformed scores

Model		Coefficients β		T	Sig	Collinearity Statistics	
		SE	Beta			Tolerance	VIF
1	(Constant)	.046	-	10.89	.000		
	Competency	.03	-.146	-2.66	.01	.602	1.662
	Work Performance	.067	.495	6.177	.000	.605	1.653
	Objectivity	.01	-.187	-2.829	.01	.612	1.633

Model summary							
R	R Square	Adjusted R Square	R Square Change	F Change	Sig. F Change	F	Sig
0.74	0.54	.52	0.43	86.99	0.003	7.10	0.00

According to the regression results, it has been found that there is a strong positive relationship which is statistically significant between work performance of internal auditors and the AQ (β =0.495, p=.000), the strongest relationship was between AQ and work performance and it contributes to the model and this is consistent with prior studies (Schneider, A. 1984; Haron et al., 2004; Abbass and Aleqab, 2013). According to the coefficient of determination, there is a negative association between objectivity and AQ. The coefficient of objectivity is -.187 significant at

the 1% level, the value of the overall correlation coefficient (R) for the model was 0.74, which value is statistical significance and indicates the degree of function correlation statistically between independent variables of the dependent variable, and the value (R-square) is 0.54, as indicated by the value of the coefficient of determination for the overall model, adjusted R-square equal 0.52, a statistically significant value that explains the ability of independent variables in the model to influence the dependent variable if applied on the whole population "true population value".

XIV. THEORETICAL AND PRACTICAL IMPLICATIONS

This study is aiming to address the gaps that highlighted by reviewing previous literature through providing a valid, empirically tested model to investigate the relationship between internal audit factors and AQ. The contribution to knowledge will, in a sense, be on the practical side, with the provision of results can improve the practitioner's ability to better understanding effective internal audit factors and how they can influence on the external AQ. This study recommends that companies should improve the work performance; competency and objectivity of the internal audit to ensure the internal mechanisms are effective to improve the quality of audit service and the quality of financial report because internal audit is an essential mechanism of the corporate governance system within the company. The results have implications for the practitioner and regulators who are assessing the role of internal audit functions. This study generated empirical evidences from Jordanian context related to the effect of CGM on AQ as well as this study would offer recommendations that will help regulators and decision makers to improve and reform the corporate governance and auditing standards. This research offers practical contributions while the practitioners, regulatory and monitoring bodies have been giving significant attention to the relationship between CGM and AQ (Karaibrahimoglu, 2013; Kikhia, 2014; Beisland et al., 2015). This research focuses on the Jordan context; however its results have significant implications at international level because the Jordanian companies follow and apply the international standards and principles that related to audit and governance system such as the requirements of Sarbanes-Oxley Act (SOX) and the UK combined Code of Corporate Governance (1998). Regarding the practical significant, this research offer empirical evidence related to which internal audit factors that support and improve AQ, this lead to improve the level of control on the financial reporting system in the companies. The results also make a contribution by helping policy makers in understanding the influence of some of CGMs on AQ. Thereby, improving AQ and CGM have important implications for the companies in ensuring the reliability of financial reports and preventing fraud.

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[42] Appendix I

Table 1: Reliability Coefficients Cronbach's Alpha α and validity of the questionnaires' constructs

Scale	No. of Items	Cronbach's Alpha α	Bad Items	α Bad Items Excluded	Validity
Attributes of an Audit Quality	14	.920	-	.920	.903
Competency of Internal Audit	5	.901	-	.901	.889
Work Performance and Due Professional Care	9	.948	-	.948	.917
Objectivity on Internal Auditor and Organizational Status	(6) 5*	.882	Item 5.6*	.924	.833
Overall Questionnaire	(34) 33*	.943	Item 5.6*	.945	-

** Item 5.6 Internal auditors have direct and free channels of communication to the external auditor.*

Table 2: Descriptive statistics for competency of internal audit

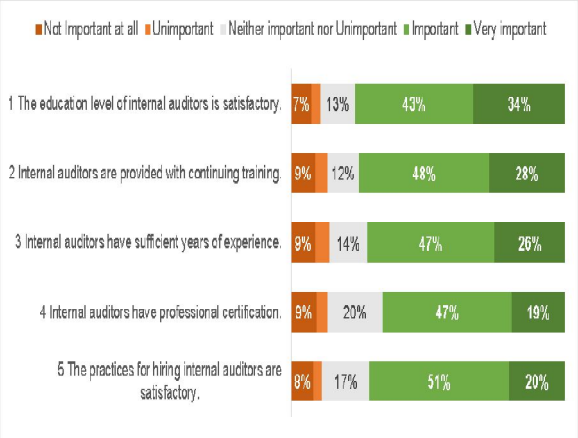
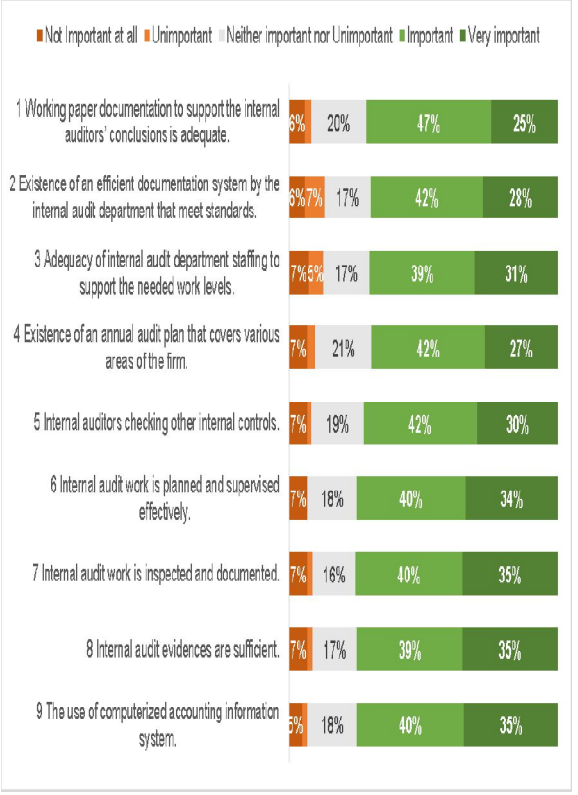


Table 3: Descriptive statistics for work performance



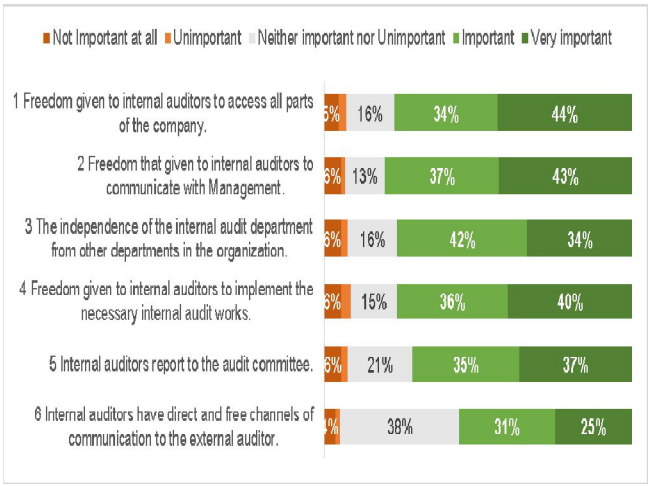


Table 4: Descriptive statistics for objectivity on internal auditor and organizational status

★★★