

# ASSESSING THE EFFECTIVENESS OF INTERNAL GOVERNANCE CONTROLS: THE CASE OF INTERNAL AUDITORS SKILLS AND CHALLENGES IN LIBYA

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## Abstract

**Purpose:** The main aim of this research is to assess the effectiveness of internal governance controls and processes with specific focus on the skills and challenges facing internal auditors operating in Libya when they conduct internal audits. This study also investigates whether Libyan internal auditors have sufficient skills needed to implement their internal audit function effectively.

**Design/methodology/approach:** Forty one internal auditors working in six banks and three insurance companies listed on the Libyan Stock Market were surveyed. Wilcoxon signed test and Z-test were used to test the research hypotheses.

**Findings:** The findings of this study illustrate that internal auditors operating in companies listed on the Libyan Stock Market have limited professional, interpersonal and technical skills. Specifically, the findings show that internal auditors in Libya have limited skills including public speaking and presentation skills. Additionally, they have limited skills of IT audit and international financial report preparation skills.

**Originality/value:** There is a dearth of empirical evidence on the extent of audit, interpersonal, professional and technical skills relating to internal auditors generally, but particularly acute in Arab and developing countries. This study, therefore, contributes to the literature by offering new insights with particular focus on Libya.

**Keywords:** Internal Governance Controls, Internal Audit, Internal Audit Function, Challenges, Libyan Stock Market, Libya

## 1. INTRODUCTION

Internal governance controls and processes are critical to the success of every organization (Ntim et al., 2012a, b; Ntim et al., 2015a, b; Al-Bassam et al., 2016; Al-Bassam and Ntim, 2016; Ntim et al., 2016). One such internal governance control is the role of internal audit and auditors in public corporations. Indeed, the internal audit function is an essential mission for all types of institutions especially for publicly-traded companies, where objectives are commonly difficult to measure (Onumah and Krah, 2012). However, many listed firms in countries with developed stock exchanges, such as the Australian Securities Exchange (ASX) either do not have internal audit departments or only have a small number of internal auditors (Goodwin-Stewart and Kent, 2006). In return, other stock exchanges in other developed countries, such as the New York Stock Exchange (NYSE) require listed companies to retain an effective internal audit function in order to meet the requirements of listing on the NYSE (Soh and Martinov-Bennie, 2011). According to the published report requested by the House of Lords of the UK Parliament in 2011, internal audit departments of listed firms face new challenges in recruiting the right people with the right skills. Specifically, the

smaller listed firms are more prone to face such challenges.

A number of individual theories has been developed to predict and explain the effectiveness of internal auditing, including for example: (i) communications theory, which indicates that the internal audit effectiveness depends mainly on the communication skills possessed by internal auditors (Smith, 2005; Clampitt and Downs, 1993; Carvalho, 2013); (ii) agency theory which has widely been applied not only to explain the effectiveness of external auditors, but also used to provide a useful theoretical explanations for studying the effectiveness of internal auditing (Adams, 1994; Colbert and Jahera, 2011; Mihret, 2014; Sarens and Abdolmohammadi, 2011); (iii) structuration theory, which indicates that culture, power and morality are the main structural properties needed to explain the interactions between the social actions, including accounting and auditing events (Omoteso et al., 2010; DeSanctis and Poole, 1994; Mahdavi and Daryaei, 2015); and (iv) institutional theory, which indicates that internal audit practices are basically determined by the institutional norms, which in turn identify the institutional changes required to improve the existing internal audit practices (Al-Twaijry et al., 2003; Ahmad, 2015; Mihret et al., 2012). However, very few studies have applied

multiple theoretical frameworks to examine the effectiveness of internal auditing, such as agency theory, communication theory and institutional theory (Endaya and Hanefah, 2013; SwinKels, 2012; Abdullah, 2014). Hence, this study extends the literature by applying a multi-theoretical framework.

Empirically, a recent study performed by Fourie et al. (2013) has examined the effectiveness of internal auditing by identifying the basic skills required by internal audit management teams in South Africa. These skills include general competencies, behavioural skills and technical skills. Another study has been conducted by Ahmed et al., (2009) to examine the importance of internal audit quality to foster the effectiveness of internal auditing in Malaysian public sector. The study investigated three basic skills required to enhance the effectiveness of internal auditing. These skills involve the objectivity of internal auditors, the quality of internal audit work and the competence of internal auditors, which include several skills, namely professional qualification, educational background, training and development, knowledge and experience. Further research has been performed by Cohen and Sayag (2010) to examine the effectiveness and the determinants of internal auditing function. The study examined the influence of five major skills on the internal audit quality. These skills include professional proficiency, quality of internal audit work, organisational independence, career advancement, and top management support.

The extant literature review shows that the number of studies that have been conducted on examining the effectiveness of the internal audit function in developing countries is very limited (Al-Twajry et al., 2003; Stewart and Subramaniam, 2010; Ahmad et al., 2009; Mihret and Yismaw, 2007; Lagoarde-Segota and Lucey, 2008). This study, therefore, contributes to the literatures on the internal audit function in a different context. Theoretically, this research contributes to the literature by applying and testing multi-theoretical perspective to examine the challenges facing internal auditors operating in listed firms on the Libyan Stock Market. There is a dearth of empirical evidence on the extent of audit, interpersonal, professional and technical skills relating to internal auditors generally, but particularly acute in Arab and developing countries. This study, therefore, contributes to the literature by offering new insights with particular focus on Libya.

The rest of this paper is organised as the following sections. The next section outlines the Libyan internal auditing setting. Thereafter, section 3 discusses the theoretical and empirical literature and develops hypotheses. After that, section 4 presents the research design and methodology. Finally, section 5 reports the empirical findings and discussion, whilst section 6 the summary and conclusion.

## 2. LIBYAN INTERNAL AUDITING SETTING

According to the 1953 Libyan Commercial Code, all Libyan public companies should have internal audit department to be headed by a director. Additionally, Libyan public firms are required to appoint external auditors to audit their financial statements primarily for tax purposes (Abuazza, et al., 2015). The

Treasury Ministry of Libya established the State Accounting Bureau (SAB) under the 1955 Legal Act (number 35). Thereafter, in 1988, the SAB was combined with the Institute of Public Control (IPC) that released in order to ensure that all local and foreign corporations operating in Libya were running according with the Libyan laws and regulations. Subsequently, due to the shortage level of accounting and auditing standards and practices in Libya, the government established the Law No 116 in 1973 to govern accounting and audit standards. Afterward, the government established the Libyan Association of Accountants and Auditors (LAAA) in 1975 with a view to increase the standards of accountants and auditors professionally (Ahmad and Gao, 2004). Thereafter, the Government of Libya has released the 1996 Legal Act (number 55), which requires public companies to be audited by the General Auditor (Abuazza, et al., 2015).

According to the 1973 Legal Act, number 116 (subsection 32), an auditor must register with the institute of chartered accountant (LAAA) before he/she can practice as an auditor. In order to register within the LAAA institute, an auditor should possess a higher educational degree in accounting and should also have gained practical working good experience in accounting and auditing in one of the independent public accounting and auditing bureaux for five years after graduation (Sawan and Alzeban, 2015). With regard to International Standards on Auditing (ISAs), they are not required officially and therefore, are not applied within the Libyan context. This is due to the absence of professional bodies that can encourage companies to adopt these standards in Libya, such as the Institute of Internal Auditors (Al-Kilani, 2002). With respect to IFRS, Laga (2012) stated that listed firms that have recently adopted IFRS in Libya are facing many obstacles due to the apparent shortage of highly qualified professional accountants and auditors with the requisite professional and technical skills.

Against this background, this study seeks to ascertain the various challenges facing internal auditors in carrying out their internal audit roles.

## 3. THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

### 3.1. Theoretical literature review

This research uses multi-theoretical framework as an integral theory to examine the challenges facing internal auditors in Libya. This section, therefore, briefly reviews these theories.

#### 3.1.1. Communication theory

According to communication theory, all internal auditors need to improve their communication skills (Endaya and Hanefah, 2013). In a similar vein, Smith (2005) indicated that communications skills play a crucial role to in creating a successful career for internal auditors. Owing to the rapid changed in technology, internal auditors are becoming not just investigators, but business partners as well. Hence, internal auditors have to possess high levels of communication and interpersonal skills that can help them to provide consultations to senior management teams in order to help them to make

right decisions. According to Clappitt and Downs (1993) an effective communication between managers and employees can have a positive effect on corporate profitability and productivity. It can also reduce costs and increase the quality of goods and services.

### 3.1.2. Structuration theory

Structuration theory consists of two major components, namely structure and agency. Structures relate to rule-based resource groups that can identify productivity of strategies and social activities across corporations, while agency is to determine the capabilities of employees to act purposefully (Omoteso et al., 2010). However, Rose and Jones (2004) stated that technology can also be seen as an agent because it can help organisations to articulate influences of information and communications technology (ICT) on their performance. Further, DeSanctis and Poole (1994) who developed adaptive structuration theory (AST) suggested that AST illustrates the relationship between sophisticated IT, human interaction and social structures. Moreover, using a particular technology depends on many factors, such as the type of technology itself, the business environment, standards, pressures and structures that are associated with the technology. Thus, new structures provided by sophisticated technology should be consistent with current organisational practices. In this regard, Dowling (2009) reported that a faithful use of technology can be achieved when all internal audit members use the audit support system in a way that is consistent with the intentions of their companies.

### 3.3.3. Institutional theory

According institutional theory, organisations are embedded within their wider institutional environment. However, there is a new concept of institutional theory, which indicates that mutual relations between the internal and external environments define the behaviour of the organisation. As a result, many researchers in auditing have interpreted that companies facing similar challenges may exhibit similar behaviour (Arena and Azzone (2007). The institutional theory has therefore provided a way of developing internal audit departments in developing countries. This is because most of internal audit departments have established in order to meet the aims of ruling governments without looking at available resources, training and education, qualification of auditors, independence and audit scope. Hence, internal audit function is often ineffective because most companies tend to be concentrate on complying with audit rules instead of audit improving their actual audit performance (Al-Twajry et al., 2003; Dessalegn et al., 2012).

## 3.2. Empirical literature and hypotheses development

This section discusses prior empirical studies that have tried to examine the four key skills needed to implement the internal auditing function effectively.

### 3.2.1. Professional skills

There is no specific qualification required from corporations to employ internal auditors. Nonetheless, some countries request CIA to employ some people as internal auditors. However, other certificates such as ACCA, CFE, CPA, and CISA might also be acceptable, but most of internal auditors tend to acquire (CIA) because it shows that they have a practical and theoretical knowledge about the audit job (Savcuk, 2007; Moeller, 2005). Empirically, Carey et al. (2006) carried out a survey about whether listed companies in the Australian Stock Exchange rely on their internal audit staff or use outsourcing to conduct the internal audit function. The results of this study illustrated that about 55% of these companies relied on their own internal audit staff, while 45% of these companies outsourced their internal audit function. The study also concluded that the examined firms tended to outsource the internal audit function when they intend to expand their business and also to reduce the cost of training their employees. Another recent research was conducted by Inua and Abianga (2015) to examine the influence of outsourcing of the internal audit function on the independence of internal auditors in Nigeria. The findings of the study concluded that although outsourcing of internal auditing function has some advantages for firms and clients, it has a number of disadvantages, such as hindering the independence of external auditors, when they provide internal audit services to organisations, whilst at same the time they serve external auditors. Therefore, this study posits the following hypothesis:

**H1:** *Internal auditors operating in the banking and insurance companies listed on the Libyan Stock Market have sufficient professional skills required to implement the audit function.*

### 3.2.2. Interpersonal skills

Karan (2011) stated that the interpersonal skill is one of the most important non-technical skills that internal auditors should develop in order to improve their audit communication throughout a corporation. Empirically, Plant and Slippers, (2015) examined whether postgraduate internal audit students in South Africa have the sufficient communication skills after taking a business communication course. The findings of the study revealed that postgraduate students have benefited from the course and their interpersonal skills have been remarkably developed. These soft skills comprise presentation skills, verbal skills and written communication skills. Further study implemented by Tabone (2010) reported that the role of internal audit mission has increased over the past few decades and it is likely to increase in the foreseeable future. The results of the study showed that the top two important skills: (i) soft skills, including critical thinking and analyses; and (ii) technical skills, encompassing knowledge of risk management processes. Both of these skills are needed in order to help internal auditor to meet emerging challenges. Therefore, this study formulates the next hypothesis:

**H3:** *Internal auditors operating in the banking and insurance companies listed on the Libyan Stock*

Market have sufficient interpersonal skills required to implement the audit function.

### 3.2.3. Technical skills

The technical skills are very essential to internal auditors for assessing risk management and understanding the security system of a company (Whitehouse, 2011). Empirically, Abu-Musa (2008) studied the impact of IT on internal auditors' activities in Saudi Arabia. The findings concluded that the performance of internal auditors of IT audit depends on many factors such as the number of internal auditors who specialists in IT audit and the type of industry. Another study implemented by Taghavi et al. (2013) examined the factors that influencing the IT audit in Iran. The results of the study displayed that internal auditors who have good perceptions towards IT audit tend to take advantage of IT skills needed thus improve their IT audit skills. Moreover, the educational level of internal auditors have a big impact on implementing IT audit, while job experience does not have any effect on IT audit. Christensen (2015) referred to a recent survey conducted by Protiviti Company's about audit ability and IT skills needed. The survey included about 700 of internal auditors and about 22% of them were chief audit executives (CAEs). The study concluded that internal auditors need more concentration on their IT skills which have been developed very fast in recent times. Moreover, auditors should have better understanding of audit IT techniques such as data analysis software and business networking. Therefore, this study proposes the following hypothesis:

**H2:** *Internal auditors operating in the banking and insurance companies listed on the Libyan Stock Market have adequate technical skills required to implement the audit function.*

### 3.2.4. Audit skills

Internal audit function is facing new challenges at the present time. These challenges need additional audit skills to avoid any skills gaps (Ridley, 2008). Empirically, Al Sawalqa and Qtish (2012) studied the relationship between the effectiveness of internal auditing function and the environment and the activities of internal auditing in Jordan. The findings of the study showed that the environment and activities of internal auditing do not provide an efficient internal auditing programme. Another study conducted by Jung and Hui (1998) investigated the internal auditing effectiveness of listed companies in Taiwan. They studied the factors that can impact the effectiveness of internal auditing. The findings of the study deduced that there are many factors that affect the effectiveness of internal auditing by the top management team.

These factors include management's behaviour, controller's behaviour, promotion programmer, training and development agenda and the professional capabilities of auditors. A recent study performed by Mebratu (2015) examined the challenges facing internal auditing function of public sector organisations in Ethiopia. The study found a positive correlation between the role of internal auditors in assessing risk management and some factors including compliance with audit standards, access to data, and support from the top management. However, they found negative correlation between the role of internal auditors in assessing risk management and a number of other factors, namely adequate funding, qualified internal auditors and organisational independence. Therefore, this study posits the following hypothesis:

**H4:** *Internal auditors operating in the banking and insurance companies listed on the Libyan Stock Market have sufficient audit skills required to implement the audit function.*

## 4. RESEARCH METHODOLOGY

### 4.1. Population and research sample

The population of this research included internal auditors operating in listed companies on the Libyan Stock Market (LSM) in order to evaluate the challenges facing these auditors. During the research interval in 2014, a sample of internal auditors operating in six banks and three insurance companies listed in the LSM has been randomly selected. The banks and insurance companies listed on the LSM have been chosen as a sample for this study because these institutions are considered to be the most active institutions on the LSM since it was established in 2007. These banks include Wahda Bank, Al jumhuria Bank, Sahara Bank, National Commercial Bank, Trade Bank, and Mediterranean Bank, as well as three Insurance companies, namely Sahara Insurance, Libya Insurance Co, and United Insurance Company.

### 4.2. Data Collection

This research relied on a questionnaire with open-ended questions to collect the data. The questionnaire was designed to investigate the presence of four key skills needed to implement the audit function effectively including professional, interpersonal, technical, and audit skills. A total of 50 questionnaires were distributed randomly to internal auditors operating in listed banks and insurance companies on the LSM. Table 1 shows the number of questionnaires distributed and the number of valid questionnaires received.

**Table 1.** Survey Responses

| Research sample          | Number of distributed questionnaires | Number of valid received questionnaires | Percentage % |
|--------------------------|--------------------------------------|---|--------------|
| Wahda Bank               | 5                                    | 4                                       | 8%           |
| Al jumhuriya Bank        | 7                                    | 6                                       | 12%          |
| Sahara Bank              | 5                                    | 5                                       | 10%          |
| National Commercial Bank | 6                                    | 4                                       | 8%           |
| Trade Bank               | 7                                    | 6                                       | 12%          |
| Mediterranean Bank       | 5                                    | 3                                       | 6%           |
| Sahara Insurance Company | 4                                    | 4                                       | 8%           |
| Libya Insurance Company  | 6                                    | 5                                       | 10%          |
| United Insurance Company | 5                                    | 4                                       | 8%           |
| <b>Total</b>             | <b>N= 50 (100%)</b>                  | <b>41</b>                               | <b>82%</b>   |

Source: researcher development

## 5. EMPIRICAL ANALYSES AND DISCUSSION

This study relied on descriptive statistics to reflect on the effectiveness of internal auditing function in the most active companies listed on the LSM. The frequency distribution is used to find out the challenges facing the internal audit function of the banking and insurance companies listed on the

Libyan Stock Market. The data was analysed by using SPSS.

### 5.1. The first axis

Table 2 shows the frequency distribution and the percentage for each question related to the availability of professional skills needed to implement the audit function effectively.

**Table 2.** The frequency distribution of professional skills needed to implement internal audit job

| N.    | Questions  | Frequency | No    | Yes   | Total |
|-------|--|-----------|-------|-------|-------|
|       |  | Percent % |       |       |       |
| Q1.12 | Do you think that you need to be trained into the professional skills fields?  | Frequency | 29    | 12    | 41    |
|       |  | Percent % | 70.7% | 29.3% | 100%  |
| Q1.13 | Do you think that you need to be trained into the time management skills?  | Frequency | 25    | 16    | 41    |
|       |  | Percent % | 61.0% | 39.0% | 100%  |
| Q1.14 | Do you think that you need to be trained in the conflict resolution and negotiating skills?                                  | Frequency | 13    | 28    | 41    |
|       |  | Percent % | 31.7% | 68.3% | 100%  |
| Q1.15 | Do you think that you need to be trained into the participation skills in decision-making?                                   | Frequency | 22    | 19    | 41    |
|       |  | Percent % | 53.7% | 46.3% | 100%  |
| Q1.16 | Do you think that you need to be trained to increase your ability to handle multiple tasks at the same time?                 | Frequency | 28    | 13    | 41    |
|       |  | Percent % | 68.3% | 31.7% | 100%  |
| Q1.17 | Do you have good knowledge about the local and international laws and regulations that your organization should comply with? | Frequency | 30    | 11    | 41    |
|       |  | Percent % | 73.2% | 26.8% | 100%  |
| Q1.18 | Do internal auditors operating in your organization communicate with the audit committee of your organization?               | Frequency | 37    | 4     | 41    |
|       |  | Percent % | 90.2% | 9.8%  | 100%  |

**Table 3.** Wilcoxon Signed Ranks test (Descriptive Statistics related to professional skills)

| N      | Questions  | N  | Mean | Std. Deviation | Test Z Statistics <sup>a</sup> | Asymp. Sig. (2-tailed) |
|--------|--|----|------|----------------|--------------------------------|------------------------|
| Q 1.1  | Do you speak English?  | 41 | 1.37 | 0.488          | -1.718 <sup>a</sup>            | 0.086                  |
| Q 1.2  | Have you obtained Intermediate Diploma?  | 41 | 1.22 | 0.419          | -3.592 <sup>a</sup>            | 0.000                  |
| Q 1.3  | Have you obtained Bachelor Degree?   | 41 | 1.76 | 0.435          | -3.280 <sup>b</sup>            | 0.001                  |
| Q 1.4  | Have you obtained Master Degree?   | 41 | 1.24 | 0.435          | -3.280 <sup>b</sup>            | 0.001                  |
| Q 1.5  | Is Accounting your specialty?  | 41 | 1.88 | 0.331          | -4.841 <sup>b</sup>            | 0.000                  |
| Q 1.6  | Is Legal your specialty?   | 41 | 1.15 | 0.358          | -4.529 <sup>a</sup>            | 0.000                  |
| Q 1.7  | Is Management your specialty?  | 41 | 1.02 | 0.156          | -6.091 <sup>a</sup>            | 0.000                  |
| Q 1.8  | Is Economy your specialty?   | 41 | 1.02 | 0.156          | -6.091 <sup>a</sup>            | 0.000                  |
| Q 1.9  | Have you ever obtained any certificate in professional qualifications?   | 41 | 1.37 | 0.488          | -1.718 <sup>a</sup>            | 0.086                  |
| Q 1.10 | Have you ever obtained any certificate in audit professional qualifications?   | 41 | 1.32 | 0.471          | -2.343 <sup>a</sup>            | 0.019                  |
| Q 1.11 | Have you ever obtained any certificate in professional qualifications in IT?   | 41 | 1.17 | 0.381          | -4.217 <sup>a</sup>            | 0.000                  |
| Q 1.12 | Do you think that you need to be trained into the professional skills?   | 41 | 1.29 | 0.461          | -2.655 <sup>a</sup>            | 0.008                  |
| Q 1.13 | Do you think that you need to be trained into the time management skills?  | 41 | 1.39 | 0.494          | -1.406 <sup>a</sup>            | 0.16                   |
| Q 1.14 | Do you think that you need to be trained in the conflict resolution and negotiating skills?                                  | 41 | 1.68 | 0.471          | -2.343 <sup>b</sup>            | 0.019                  |
| Q 1.15 | Do you think that you need to be trained into participation skills in decision-making?                                       | 41 | 1.46 | 0.505          | -.469 <sup>a</sup>             | 0.639                  |
| Q 1.16 | Do you think that you need to be trained to increase your ability to handle multiple tasks at the same time?                 | 41 | 1.32 | 0.471          | -2.343 <sup>a</sup>            | 0.019                  |
| Q 1.17 | Do you have good knowledge about the local and international laws and regulations that your organization should comply with? | 41 | 1.27 | 0.449          | -2.967 <sup>a</sup>            | 0.003                  |
| Q 1.18 | Do internal auditors who operating in your organization communicate with the audit committee in your organization?           | 41 | 1.1  | 0.3            | -5.154 <sup>a</sup>            | 0.000                  |

Table 3 reports the overall average for the answers relevant to all questions of the first axis. The Z-test was also used on average (1.5), the results have shown in Table 3. Table 3 shows that the mean of some questions are greater than the supposed median for all questions in the first axis which consists of two choices Yes or No. Therefore, the supposed median is 1.5 and the significance levels of these questions are less than 5%. Where a= is based on negative ranks, b is based on positive ranks and c is indicating to Wilcoxon Signed Ranks Test. Therefore, this study investigates whether the

overall median of the availability of professional skills is equal or different from 1.5.

H0: M = 1.5 H1: M ≠ 1.5

Table 4 showed that the value of Sig (2-tailed) 0.000 is less than the significance level  $\alpha = 0.05$ . Therefore, we reject the null hypothesis and accept the alternative hypothesis. Moreover, the overall average mean of all answers of the first axis is 1.335 which is less than the assumed median namely 1.5. This proves that internal auditors operating in listed firms in LSM suffer from lacking into their professional skills.

**Table 4.** One-Sample Statistics degree of professional skills possess by internal auditors

|  | Test Value = 1.5 |     |                 |                 |   |        |
|--|------------------|-----|-----------------|-----------------|---|--------|
|  | t                | d.f | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference |        |
|  |                  |     |                 |                 | Lower                                     | Upper  |
| MQI. The availability of professional skills needed to implement the audit function effectively. | -8.720           | 40  | 0.000           | -.16531         | -.2036                                    | -.1270 |

## 5.2. The second axis

The table 5 in the appendices explains the frequency distribution and the percentage of all participants about the second axis related to the interpersonal skills needed to implement the audit function effectively. The median of the second axis that

consists of 5 answers is 3, therefore, the next statistical hypotheses have been assumed to examine whether the significance level for each question about interpersonal skills is equal or different from 3.

H0: M = 3

H1: M ≠ 3

**Table 5.** The frequency of interpersonal skills needed to implement the audit function effectively

| N  | Statements  | Frequency<br>Percent % | Extremely<br>important | Very<br>important | important | unimportant | unimportant<br>at all |
|----|---|------------------------|------------------------|-------------------|-----------|-------------|-----------------------|
| 11 | Training internal auditors on the interpersonal skills and capabilities   | Frequency              | 13                     | 14                | 14        | 0           | 0                     |
|    |   | Percent %              | 31.7                   | 34.1              | 34.1      | 0           | 0                     |
| 12 | Training internal auditors on presentation and public speaking skills   | Frequency              | 20                     | 6                 | 9         | 6           | 0                     |
|    |   | Percent %              | 48.8                   | 14.6              | 22        | 14.6        | 0                     |
| 13 | Training internal auditors on verbal skills   | Frequency              | 4                      | 5                 | 19        | 11          | 2                     |
|    |   | Percent %              | 9.8                    | 12.2              | 46.3      | 26.8        | 4.9                   |
| 14 | Training internal auditors on writing skills  | Frequency              | 14                     | 17                | 6         | 3           | 1                     |
|    |   | Percent %              | 34.1                   | 41.5              | 14.6      | 7.3         | 2.4                   |
| 15 | Training internal auditors on reading skills  | Frequency              | 5                      | 10                | 13        | 11          | 2                     |
|    |   | Percent %              | 12.2                   | 24.4              | 31.7      | 26.8        | 4.9                   |
| 16 | Continuous training for internal auditors on presentation and public speaking skills                                    | Frequency              | 19                     | 8                 | 9         | 4           | 1                     |
|    |   | Percent %              | 46.3                   | 19.5              | 22        | 9.8         | 2.4                   |
| 17 | Continuous training for internal auditors on reading and writing skills   | Frequency              | 6                      | 19                | 12        | 3           | 1                     |
|    |   | Percent %              | 14.6                   | 46.3              | 29.3      | 7.3         | 2.4                   |
| 18 | Continuous training for internal auditors to develop their interaction with audit committee                             | Frequency              | 18                     | 13                | 7         | 2           | 1                     |
|    |   | Percent %              | 43.9                   | 31.7              | 17.1      | 4.9         | 2.4                   |
| 19 | Continuous training for internal auditors to develop their relationship with other committees of the Board of Directors | Frequency              | 3                      | 12                | 8         | 16          | 2                     |
|    |   | Percent %              | 7.3                    | 29.3              | 19.5      | 39          | 4.9                   |
| 20 | Continuous training for internal auditors on critical thinking skills.  | Frequency              | 11                     | 12                | 5         | 9           | 4                     |
|    |   | Percent %              | 26.8                   | 29.3              | 12.2      | 22          | 9.8                   |
| 21 | Continuous training for internal auditors on leadership skills  | Frequency              | 13                     | 7                 | 10        | 8           | 3                     |
|    |   | Percent %              | 31.7                   | 17.1              | 24.4      | 19.5        | 7.3                   |
| 22 | Continuous training for internal auditors on persuasion skills.   | Frequency              | 9                      | 18                | 7         | 5           | 2                     |
|    |   | Percent %              | 22                     | 43.9              | 17.1      | 12.2        | 4.9                   |
| 23 | Continuous training for internal auditors to teach them how they can work with teams                                    | Frequency              | 16                     | 8                 | 15        | 1           | 1                     |
|    |   | Percent %              | 39                     | 19.5              | 36.6      | 2.4         | 2.4                   |

Source: Statistical Package for Social Science SPSS

**Table 6.** The frequency of interpersonal skills needed to implement the audit function effectively

|        | Questions / statements  | N  | Mean | Std. Deviation | Test Z Statistics   | Asymp. Sig. (2-tailed) |
|--------|---|----|------|----------------|---------------------|------------------------|
| Q 2.1  | Is your age from 20-30 years  | 41 | 2.15 | 0.527          | -5.466 <sup>a</sup> | 0.000                  |
| Q 2.2  | Is your age from 31-40 years  | 41 | 2.78 | 0.988          | -1.406 <sup>a</sup> | 0.16                   |
| Q 2.3  | Is your age from 41-50 years  | 41 | 2.61 | 0.9186         | -2.530 <sup>a</sup> | 0.011                  |
| Q 2.4  | Is your age from 51-60 years  | 41 | 2.49 | 0.87           | -3.280 <sup>a</sup> | 0.001                  |
| Q 2.5  | Are you over 60 years old   | 41 | 2.17 | 0.629          | -5.126 <sup>a</sup> | 0.000                  |
| Q 2.6  | Have you ever worked as an internal auditor at any other institutions listed in Stock Markets       | 41 | 2.32 | 0.722          | -4.427 <sup>a</sup> | 0.000                  |
| Q 2.7  | Have you been working as an internal auditor in this institution for less than five years           | 41 | 2.41 | 0.865          | -3.618 <sup>a</sup> | 0.000                  |
| Q 2.8  | Have you been working as an internal auditor in this institution from 6 to 10 years                 | 41 | 2.85 | 1.038          | -.905 <sup>a</sup>  | 0.366                  |
| Q 2.9  | Have you been working as an internal auditor in this institution from 11 to 20 years                | 41 | 2.61 | 0.972          | -2.412 <sup>a</sup> | 0.016                  |
| Q 2.10 | Have you been working as an internal auditor in this institution for more than 20 years             | 41 | 2.34 | 0.762          | -4.217 <sup>a</sup> | 0.000                  |
| Q 2.11 | Training internal auditors on the interpersonal skills and capabilities                             | 41 | 3.98 | 0.821          | -4.681 <sup>b</sup> | 0.000                  |
| Q 2.12 | Training internal auditors on presentation and public speaking skills                               | 41 | 3.98 | 1.151          | -4.364 <sup>b</sup> | 0.000                  |
| Q 2.13 | Training internal auditors on verbal skills   | 41 | 2.95 | 0.999          | -.205 <sup>a</sup>  | 0.838                  |
| Q 2.14 | Training internal auditors on writing skills  | 41 | 3.95 | 1.094          | -4.198 <sup>b</sup> | 0.000                  |
| Q 2.15 | Training internal auditors on reading skills  | 41 | 3.12 | 1.1            | -.770 <sup>b</sup>  | 0.442                  |
| Q 2.16 | Continuous training for internal auditors on public speaking and presentation skills                | 41 | 3.98 | 1.151          | -4.180 <sup>b</sup> | 0.000                  |
| Q 2.17 | Continuous training for internal auditors on reading and writing skills                             | 41 | 3.63 | 0.915          | -3.592 <sup>b</sup> | 0.000                  |
| Q 2.18 | Continuous training for internal auditors to develop their interaction with audit committee         | 41 | 4.1  | 1.02           | -4.528 <sup>b</sup> | 0.000                  |
| Q 2.19 | Continuous training for internal auditors to develop their relationship with other Board Committees | 41 | 2.95 | 1.094          | -.261 <sup>a</sup>  | 0.794                  |
| Q 2.20 | Continuous training for internal auditors on critical thinking skills.                              | 41 | 3.41 | 1.36           | -1.917 <sup>b</sup> | 0.055                  |
| Q 2.21 | Continuous training for internal auditors on leadership skills                                      | 41 | 3.46 | 1.325          | -2.294 <sup>b</sup> | 0.022                  |
| Q 2.22 | Continuous training for internal auditors on persuasion skills.                                     | 41 | 3.66 | 1.109          | -3.203 <sup>b</sup> | 0.001                  |
| Q 2.23 | Continuous training for internal auditors to teach them how they can work with teams                | 41 | 3.9  | 1.044          | -4.028 <sup>b</sup> | 0.000                  |

**Table 7.** One-Sample Statistics degree of interpersonal skills possessed by internal auditors

|   | N  | Mean   | Std. Deviation | Std. Error Mean |
|---|----|--------|----------------|-----------------|
| MQ2. The availability of interpersonal skills needed to implement the audit function effectively. | 41 | 3.1220 | .28398         | .04435          |

**Table 8.** One-Sample Test - degree of interpersonal skills possess by internal auditors

|   | Test Value = 3 |    |                 |                 |   |       |
|---|----------------|----|-----------------|-----------------|---|-------|
|   | t              | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference |       |
|   |                |    |                 |                 | Lower                                     | Upper |
| MQ2. The availability of interpersonal skills needed to implement the audit function effectively. | 2.750          | 40 | .009            | .12195          | .0323                                     | .2116 |

Table 6 shows that the significance levels of the most questions of the second axis are less than 5%, while, it is greater than 0.05 for other questions which means that internal auditors have skills shortage in these areas. Table 7 shows the overall mean of all answers of the second axis = 3.122 bigger than the overall mean 3. This proves that internal auditors operating on listed firms on the LSM are skills shortage into their interpersonal skills. Tables 8 showed that the value of Sig (2-tailed) = 0.009 is less than the significance level  $\alpha = 0.05$ . Therefore, we reject the null hypothesis and accept the alternative hypothesis. This means that internal

auditors operating on listed firms on LSM suffer from lacking into their interpersonal skills.

### 5.3. The third axis

The table 9 shows the frequency distribution and the percentage of all answers of the third axis related to the technical skills. The median of the third axis that consists of 5 answers is =3. Therefore, this study investigates whether the overall median of the technical skills needed is equal or different from 3.

$$H_0: M = 3 \quad H_1: M \neq 3$$

**Table 9.** The frequency of technical skills needed to implement the audit function effectively

| <b>Statements</b>  | <b>Frequency</b> | <b>Extremely important</b> | <b>Very important</b> | <b>important</b> | <b>unimportant</b> | <b>unimportant at all</b> |
|--|------------------|----------------------------|-----------------------|------------------|--------------------|---------------------------|
| Internal audit members are the responsible set for assessing the enterprise risk management in your institution  | Frequency        | 0                          | 10                    | 0                | 31                 | 0                         |
|  | Percent %        | 0                          | 24.4                  | 0                | 75.6               | 0                         |
| The Chairman is the responsible person for assessing the enterprise risk management in your institution  | Frequency        | 0                          | 24                    | 0                | 17                 | 0                         |
|  | Percent %        | 0                          | 58.5                  | 0                | 41.5               | 0                         |
| The audit Committee are the responsible party for assessing the enterprise risk management in your institution   | Frequency        | 0                          | 8                     | 0                | 33                 | 0                         |
|  | Percent %        | 0                          | 19.5                  | 0                | 80.5               | 0                         |
| The chief audit executive is the responsible person for assessing the enterprise risk management in your institution   | Frequency        | 0                          | 11                    | 0                | 30                 | 0                         |
|  | Percent %        | 0                          | 26.8                  | 0                | 73.2               | 0                         |
| The risk management department is the responsible party for assessing the enterprise risk management in your institution   | Frequency        | 0                          | 11                    | 0                | 30                 | 0                         |
|  | Percent %        | 0                          | 26.8                  | 0                | 73.2               | 0                         |
| Does your organization have a written official guide about the risk management process?  | Frequency        | 0                          | 21                    | 0                | 20                 | 0                         |
|  | Percent %        | 0                          | 51.2                  | 0                | 48.8               | 0                         |
| Do you think that internal auditors operating in your organization need more training courses on the IT audit  | Frequency        | 0                          | 40                    | 0                | 1                  | 0                         |
|  | Percent %        | 0                          | 97.6                  | 0                | 2.4                | 0                         |
| Do you think that internal auditors operating in your organization need more training programs to maintain the information safe?                                 | Frequency        | 0                          | 20                    | 0                | 21                 | 0                         |
|  | Percent %        | 0                          | 48.8                  | 0                | 51.2               | 0                         |
| Do you think that internal auditors operating in your organization need more training courses on forensic accounting   | Frequency        | 0                          | 20                    | 0                | 21                 | 0                         |
|  | Percent %        | 0                          | 48.8                  | 0                | 51.2               | 0                         |
| Do you think that internal auditors operating in your organization need more training on how they can detect manipulation and fraud in IT?                       | Frequency        | 0                          | 40                    | 0                | 1                  | 0                         |
|  | Percent %        | 0                          | 97.6                  | 0                | 2.4                | 0                         |
| Do you think that internal auditors operating in your organization need more training courses on how to conduct statistical analysis of the financial statements | Frequency        | 0                          | 32                    | 0                | 9                  | 0                         |
|  | Percent %        | 0                          | 78                    | 0                | 22                 | 0                         |
| Do you think that internal auditors operating in your organization need more training program on how to retrieve and backup data                                 | Frequency        | 0                          | 27                    | 0                | 14                 | 0                         |
|  | Percent %        | 0                          | 65.9                  | 0                | 34.1               | 0                         |
| IT risk is a fundamental portion of internal audit function  | Frequency        | 21                         | 16                    | 4                | 0                  | 0                         |
|  | Percent %        | 51.2                       | 39                    | 9.8              | 0                  | 0                         |
| The legal risk is a fundamental portion of internal audit function   | Frequency        | 16                         | 16                    | 9                | 0                  | 0                         |
|  | Percent %        | 39                         | 39                    | 22               | 0                  | 0                         |
| The fraud risk is a fundamental portion of internal audit function   | Frequency        | 25                         | 15                    | 0                | 1                  | 0                         |
|  | Percent %        | 61                         | 36                    | 0                | 2.4                | 0                         |
| The strategic risk is a fundamental portion of internal audit function   | Frequency        | 5                          | 9                     | 18               | 9                  | 0                         |
|  | Percent %        | 12.2                       | 22                    | 43.9             | 22                 | 0                         |
| The Financial risk is a fundamental portion of internal audit function   | Frequency        | 26                         | 14                    | 1                | 0                  | 0                         |
|  | Percent %        | 63.4                       | 34.1                  | 2.4              | 0                  | 0                         |
| The environmental risk is a major part of internal audit function  | Frequency        | 2                          | 12                    | 24               | 3                  | 0                         |
|  | Percent %        | 4.9                        | 29.3                  | 58.5             | 7.3                | 0                         |
| The tax audit risk is an essential part of the internal audit function 7   | Frequency        | 4                          | 19                    | 15               | 3                  | 0                         |
|  | Percent %        | 9.8                        | 46.3                  | 36.6             | 7.3                | 0                         |
| Assessing the enterprise risk management by internal auditors  | Frequency        | 8                          | 11                    | 11               | 11                 | 0                         |
|  | Percent %        | 19.5                       | 26.8                  | 26.8             | 26.8               | 0                         |
| Improve the internal auditor's abilities in data collection and analysis skills  | Frequency        | 14                         | 19                    | 7                | 1                  | 0                         |
|  | Percent %        | 34.1                       | 46.3                  | 17.1             | 2.4                | 0                         |
| Improve the internal auditor's capabilities in IT audit  | Frequency        | 26                         | 14                    | 1                | 0                  | 0                         |
|  | Percent %        | 63.4                       | 34.1                  | 2.4              | 0                  | 0                         |
| Improve the internal auditor's ability to retrieve and backup data.  | Frequency        | 3                          | 8                     | 23               | 7                  | 0                         |
|  | Percent %        | 7.3                        | 19.5                  | 56.1             | 17.1               | 0                         |
| Improve the internal auditors' abilities to comply with ISO 27000 for information security standards   | Frequency        | 4                          | 17                    | 18               | 2                  | 0                         |
|  | Percent %        | 9.8                        | 41.5                  | 43.9             | 4.9                | 0                         |
| Improve the internal auditors abilities to prepare financial reports in accordance with IFRS   | Frequency        | 29                         | 10                    | 2                | 0                  | 0                         |
|  | Percent %        | 70.7                       | 24.4                  | 4.9              | 0                  | 0                         |
| Develop the internal auditors' skills to use information technology in the audit profession  | Frequency        | 25                         | 14                    | 1                | 1                  | 0                         |
|  | Percent %        | 61                         | 34.1                  | 2.4              | 2.4                | 0                         |
| Develop internal auditors' skills in protection data and information technology from breakthrough  | Frequency        | 12                         | 15                    | 10               | 4                  | 0                         |
|  | Percent %        | 29.3                       | 36.6                  | 24.4             | 9.8                | 0                         |
| Develop the internal auditors' skills to monitor any change in insertion data about the financial statements   | Frequency        | 8                          | 23                    | 9                | 1                  | 0                         |
|  | Percent %        | 19.5                       | 56.1                  | 22               | 2.4                | 0                         |
| Improve internal auditors' skills on how to use and operate computers  | Frequency        | 21                         | 11                    | 7                | 1                  | 1                         |
|  | Percent %        | 51.2                       | 26.8                  | 17.1             | 2.4                | 2.4                       |

Source: Statistical Package for Social Science (SPSS)

**Table 10.** Wilcoxon Signed Ranks Test (Descriptive Statistics related to technical skills)

| <i>N</i> | <i>Questions/ statements</i>   | <i>N</i> | <i>Mean</i> | <i>Std. Deviation</i> | <i>Z Test Statisticsc</i> | <i>Asymp. Sig. (2-tailed)</i> |
|----------|--|----------|-------------|-----------------------|---------------------------|-------------------------------|
| Q 3.1    | Internal audit members are the responsible set for assessing the enterprise risk management in your institution  | 41       | 2.49        | 0.87                  | -3.280a                   | 0.001                         |
| Q 3.2    | The Chairman is the responsible person for assessing the enterprise risk management in your institution  | 41       | 3.17        | 0.998                 | -1.093b                   | 0.274                         |
| Q 3.3    | The audit Committee are the responsible party for assessing the enterprise risk management in your institution   | 41       | 2.39        | 0.802                 | -3.904a                   | 0.000                         |
| Q 3.4    | The chief audit executive is the responsible person for assessing the enterprise risk management in your institution   | 41       | 2.54        | 0.897                 | -2.967a                   | 0.003                         |
| Q 3.5    | The risk management department is the responsible party for assessing the enterprise risk management in your institution   | 41       | 2.54        | 0.897                 | -2.967a                   | 0.003                         |
| Q 3.6    | Does your organization have a written official guide about the risk management process   | 41       | 3.02        | 1.012                 | -.156b                    | 0.876                         |
| Q 3.7    | Do you think that internal auditors operating in your organization need more training courses on the IT audit  | 41       | 3.95        | 0.312                 | -6.091b                   | 0.000                         |
| Q 3.8    | Do you think that internal auditors operating in your organization need more training programs to maintain information safe                                      | 41       | 2.98        | 1.012                 | -.156a                    | 0.876                         |
| Q 3.9    | Do you think that internal auditors operating in your organization need more training courses on forensic accounting   | 41       | 2.98        | 1.012                 | -.156a                    | 0.876                         |
| Q 3.10   | Do you think that internal auditors operating in your organization need more training on how they can detect manipulation and fraud in information technology    | 41       | 3.95        | 0.312                 | -6.091b                   | 0.000                         |
| Q 3.11   | Do you think that internal auditors operating in your organization need more training courses on how to conduct statistical analysis of the financial statements | 41       | 3.56        | 0.838                 | -3.592b                   | 0.000                         |
| Q 3.12   | Do you think that internal auditors operating in your organization need more training program on how to retrieve and backup data                                 | 41       | 3.32        | 0.96                  | -2.030b                   | 0.042                         |
| Q 3.13   | IT risk is a fundamental portion of internal audit function  | 41       | 4.41        | 0.67                  | -5.479b                   | 0.000                         |
| Q 3.14   | The legal risk is a fundamental portion of internal audit function   | 41       | 4.17        | 0.771                 | -5.090b                   | 0.000                         |
| Q 3.15   | The fraud risk is a fundamental portion of internal audit function   | 41       | 4.56        | 0.634                 | -5.667b                   | 0.000                         |
| Q 3.16   | The strategic risk is a fundamental portion of internal audit function   | 41       | 3.24        | 0.943                 | -1.697b                   | 0.09                          |
| Q 3.17   | The Financial risk is a fundamental portion of internal audit function   | 41       | 4.61        | 0.542                 | -5.734b                   | 0.000                         |
| Q 3.18   | The environmental risk is a major part of internal audit function  | 41       | 3.32        | 0.687                 | -2.707b                   | 0.007                         |
| Q 3.19   | The tax audit risk is an essential part of the internal audit function   | 41       | 3.59        | 0.774                 | -3.870b                   | 0.000                         |
| Q 3.20   | Assessing the enterprise risk management by internal auditors  | 41       | 3.39        | 1.093                 | -2.296b                   | 0.022                         |
| Q 3.21   | Improve the internal auditor's abilities in data collection and analysis skills  | 41       | 4.12        | 0.781                 | -5.075b                   | 0.000                         |
| Q 3.22   | Improve the internal auditor's capabilities in IT audit  | 41       | 4.61        | 0.542                 | -5.734b                   | 0.000                         |
| Q 3.23   | Improve the internal auditor's ability to retrieve and backup data.  | 41       | 3.17        | 0.802                 | -1.380b                   | 0.167                         |
| Q 3.24   | Improve the internal auditors' abilities to comply with ISO 27000 for information security standards   | 41       | 3.56        | 0.743                 | -3.854b                   | 0.000                         |
| Q 3.25   | Improve the internal auditors abilities to prepare financial reports in accordance with IFRS requirements  | 41       | 4.66        | 0.575                 | -5.746b                   | 0.000                         |
| Q 3.26   | Develop the internal auditors' skills to use information technology in the audit profession  | 41       | 4.51        | 0.779                 | -5.350b                   | 0.000                         |
| Q 3.27   | Develop internal auditors skills in protection 'information technology from breakthrough   | 41       | 3.85        | 0.963                 | -4.223b                   | 0.000                         |
| Q 3.28   | Develop the internal auditors' skills to monitor any change in insertion data about the financial statements   | 41       | 3.93        | 0.721                 | -4.969b                   | 0.000                         |
| Q 3.29   | Improve internal auditors skills on how to use and operate computers   | 41       | 4.22        | 0.988                 | -4.756b                   | 0.000                         |

Table 10 illustrates that the significance levels of the most questions of the third axis are less than 5%, while it is greater than 0.05 for other questions. Therefore, in order to test the third hypothesis related to the technical skills, the overall mean has

been computed to test the significant median difference for all questions of the third axis and the Z-test has been also calculated and the results are shown in tables 11 and 12 respectively.

**Table 11.** One-Sample Statistics- degree of technical skills possess by internal auditors

|   | N  | Mean   | Std. Deviation | Std. Error Mean |
|---|----|--------|----------------|-----------------|
| MQ3 the availability of technical skills needed to implement the audit function effectively | 41 | 3.6140 | .23504         | .03671          |

**Table 12.** One-Sample Test- degree of technical skills possess by internal auditors

|   | Test Value = 3 |     |                 |                 |   |       |
|---|----------------|-----|-----------------|-----------------|---|-------|
|   | t              | d.f | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference |       |
|   |                |     |                 |                 | Lower                                     | Upper |
| MQ3 the availability of technical skills needed to implement the audit function effectively | 16.726         | 40  | 0.000           | .61396          | .5398                                     | .6881 |

Table 11 shows that the overall mean for all answers of the third axis = 3.6140 bigger than the assumed value = 3. This proves that internal auditors operating on listed banks and insurance companies on the LSM suffer from lacking into their technical skills. The table 12 also proves that because the value of Sig (2-tailed) 0.000 is less than the significance level 0.05. This means that overall median of the technical skills is different from 3.

#### 5.4. The fourth axis

The table 13 in the appendices shows the frequency distribution and the percentage of all answers of the fourth axis related to the audit skills. The median of the fourth axis that consists of two choices, therefore the hypothetical median is = 1.5. Therefore, the next statistical hypotheses have been proposed to examine the significance level for each question related to the audit skills and also to investigate whether the overall median of the existing audit skills needed to perform the audit function efficiently is equal or different from 1.5.

$$H_0: M = 1.5 \quad H_1: M \neq 1.5$$

**Table 13.** The frequency of audit skills needed to implement the audit function effectively

| N  | Statements   | Frequency<br>Percent % | Yes  | No   |
|----|--|------------------------|------|------|
| 1  | Is there a shortage into the skills of internal auditors who operating in the listed companies in the Libyan Stock Market?   | Frequency              | 37   | 4    |
|    |  | Percent %              | 90.2 | 9.8  |
| 2  | Does your institution rely on some colleges or universities to fill in any skills gaps into its internal audit department?   | Frequency              | 4    | 37   |
|    |  | Percent %              | 9.8  | 90.2 |
| 3  | Does your institution train its current in-house internal auditors to fill in any skills gaps into its internal audit department?  | Frequency              | 33   | 8    |
|    |  | Percent %              | 80.5 | 19.5 |
| 4  | Does your institution rely on outsourcing people that have good experience in the audit knowledge to fill in any skills gaps into its internal audit department?                                   | Frequency              | 17   | 24   |
|    |  | Percent %              | 41.5 | 58.5 |
| 5  | Does your institution rely on external auditing bureaus that have good knowledge about auditing skills to fill in any skills gaps into its internal audit department?                              | Frequency              | 17   | 24   |
|    |  | Percent %              | 41.5 | 58.5 |
| 6  | Do you think that organizations usually rely on outsourcing in order to benefit from their wide experiences?   | Frequency              | 33   | 8    |
|    |  | Percent %              | 80.5 | 19.5 |
| 7  | Do you think that organizations usually rely on outsourcing because the cost of hiring outsourcing is cheaper than train their current in-house audit members?                                     | Frequency              | 5    | 36   |
|    |  | Percent %              | 12.2 | 87.8 |
| 8  | Do you think that organizations usually rely on outsourcing because most in-house auditors are suffering from lacking their skills in the software audit knowledge?                                | Frequency              | 25   | 16   |
|    |  | Percent %              | 61   | 39   |
| 9  | Do you think that organizations usually rely on outsourcing because outsourcing often associate with organizations by temporary contracts which do not cost the company any long-term obligations? | Frequency              | 16   | 25   |
|    |  | Percent %              | 39   | 61   |
| 10 | Does your organization measure the skills of internal auditors by calculating the average number of working years in audit department?   | Frequency              | 28   | 13   |
|    |  | Percent %              | 68.3 | 31.7 |
| 11 | Does your organization measure the skills of internal auditors by calculating the number of working hours of annual training program on how to perform the internal audit profession effectively?  | Frequency              | 11   | 30   |
|    |  | Percent %              | 26.8 | 73.2 |
| 12 | Does your organization measure the skills of internal auditors by calculating the number and the type of certificates obtained by internal audit staff?  | Frequency              | 7    | 34   |
|    |  | Percent %              | 17.1 | 82.9 |
| 13 | Does your organization measure the skills of internal auditors by calculating the period of stay into the internal audit function in a company or industry alike?                                  | Frequency              | 27   | 14   |
|    |  | Percent %              | 65.9 | 34.1 |
| 14 | Do you usually take training program for less than a month in a year in your internal audit department?  | Frequency              | 26   | 15   |
|    |  | Percent %              | 63.4 | 36.6 |
| 15 | Do you usually take training program from a month to three months in a year in your internal audit department?   | Frequency              | 13   | 28   |
|    |  | Percent %              | 31.7 | 68.3 |
| 16 | Do you usually take training program for more than six months in yearly in your internal audit department?   | Frequency              | 2    | 39   |
|    |  | Percent %              | 4.9  | 95.1 |

Source: Statistical Package for Social Science SPSS

**Table 14.** Wilcoxon Signed Ranks Test (Descriptive Statistics related to audit skills)

| N      | Questions   | N  | Mean | Std Deviation | Test Z Statistics <sup>c</sup> | Asymp. Sig. (2-tailed) |
|--------|---|----|------|---------------|--------------------------------|------------------------|
| Q 4.1  | Is there a shortage into the skills of internal auditors who operating in the listed companies in the Libyan Stock Market?  | 41 | 1.9  | 0.3           | -5.154 <sup>a</sup>            | 0.000                  |
| Q 4.2  | Does your institution rely on some colleges or universities to fill in any skills gaps into its internal audit department?  | 41 | 1.1  | 0.3           | -5.154 <sup>b</sup>            | 0.000                  |
| Q 4.3  | Does your institution train its current in-house internal auditors to fill in any skills gaps into its internal audit department?   | 41 | 1.8  | 0.401         | -3.904 <sup>a</sup>            | 0.000                  |
| Q 4.4  | Does your institution rely on outsourcing people that have good experience in the audit knowledge to fill in any skills gaps into its internal audit department?                                  | 41 | 1.41 | 0.499         | -1.093 <sup>b</sup>            | 0.274                  |
| Q 4.5  | Does your institution rely on external auditing bureaus that have good knowledge about auditing skills to fill in any skills gaps into its internal audit department?                             | 41 | 1.41 | 0.499         | -1.093 <sup>b</sup>            | 0.274                  |
| Q 4.6  | Do you think that organizations usually rely on outsourcing in order to benefit from their wide experiences?  | 41 | 1.8  | 0.401         | -3.904 <sup>a</sup>            | 0.000                  |
| Q 4.7  | Do you think that organizations usually rely on outsourcing because the cost of hiring outsourcing is cheaper than train their current in-house audit members?                                    | 41 | 1.12 | 0.331         | -4.841 <sup>b</sup>            | 0.000                  |
| Q 4.8  | Do you think that organizations usually rely on outsourcing because most in-house auditors are suffering from lacking their skills in the software audit knowledge?                               | 41 | 1.81 | 0.494         | -1.406 <sup>a</sup>            | 0.16                   |
| Q 4.9  | Do you think that organizations usually rely on outsourcing because associate with organizations by temporary contracts which do not cost the company any long-term obligations?                  | 41 | 1.39 | 0.494         | -1.406 <sup>b</sup>            | 0.16                   |
| Q 4.10 | Does your organization measure the skills of internal auditors by calculating the average number of working years in audit department?  | 41 | 1.68 | 0.471         | -2.343 <sup>a</sup>            | 0.019                  |
| Q 4.11 | Does your organization measure the skills of internal auditors by calculating the number of working hours of annual training program on how to perform the internal audit profession effectively? | 41 | 1.27 | 0.449         | -2.967 <sup>b</sup>            | 0.003                  |
| Q 4.12 | Does your organization measure the skills of internal auditors by calculating the number and the type of certificates obtained by internal audit staff?   | 41 | 1.17 | 0.381         | -4.217 <sup>b</sup>            | 0.000                  |
| Q 4.13 | Does your organization measure the skills of internal auditors by calculating the period of staying into the internal audit function in a company or industry alike?                              | 41 | 1.66 | 0.48          | -2.030 <sup>a</sup>            | 0.042                  |
| Q 4.14 | Do you usually take training program for less than a month per year in your internal audit department?  | 41 | 1.63 | 0.488         | -1.718 <sup>a</sup>            | 0.086                  |
| Q 4.15 | Do you usually take training program from a month to three months per year in your internal audit department?   | 41 | 1.32 | 0.471         | -2.343 <sup>b</sup>            | 0.019                  |
| Q 4.16 | Do you usually take training program for more than six months per year in your internal audit department?   | 41 | 1.05 | 0.218         | -5.778 <sup>b</sup>            | 0.000                  |

**Table 15.** One-Sample Statistics- degree of audit skills possess by internal auditors

|   | N  | Mean   | Std. Deviation | Std. Error Mean |
|---|----|--------|----------------|-----------------|
| MQ4 The availability of audit skills needed to perform the audit function effectively | 41 | 1.4588 | .15538         | .02427          |

**Table 16.** One-Sample Test- degree of audit skills possess by internal auditors

|  | Test Value = 1.5 |     |                 |                 |   |       |
|--|------------------|-----|-----------------|-----------------|---|-------|
|  | t                | d.f | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference |       |
|  |                  |     |                 |                 | Lower                                     | Upper |
| MQ4 The availability of audit skills needed to perform the audit function effectively. | -1.696           | 40  | .098            | -.04116         | -.0902                                    | .0079 |

Table 14 shows that the significance levels of the most questions of the fourth axis are less than 5%, while it is also greater than 0.05 for some questions in the fourth axis. Therefore, the overall mean has been computed to test the significant median difference for all questions. Moreover, the Z-test was also calculated and the results are shown in tables 15 and 16. The table 15 shows that the overall sample median of all answers of the fourth axis =

1.4588 is not significantly different from the hypothetical median 1.5. This indicates that internal auditors operating on listed firms in the LSM have sufficient level of audit skills required to perform the audit function properly. The table 16 presents that the value of Sig (2-tailed) = 0.098 is bigger than the significance level  $\alpha = 0.05$ , therefore, we accept the null hypothesis. This confirms that the degree of audit skills possess by internal auditors is equal 1.5.

## 6. SUMMARY AND CONCLUSION

This study has examined the effectiveness of internal governance controls with specific focus on skills and challenges facing internal auditors operating in 6 banks and 3 insurance listed companies on the Libyan Stock Market (LSM). By using a sample of 41 internal auditors, this study examines whether internal auditors have sufficient skills needed to implement the internal auditing function effectively. These skills include four key areas, namely professional, interpersonal, technical, and audit skills.

Firstly, the results of this study showed that internal auditors operating in companies listed on the LSM have limited skills in a number of key areas, namely professional, interpersonal and technical skills. The findings of this study were consistent with the results of some prior studies. The findings of this study are also consistent with the results of another study conducted by Carey et al. (2006) who stated that 45% of listed companies in the Australian Stock Exchange tend to outsource their internal audit function rather than use in-house service. The reason for this is because the cost of outsourcing is less than the cost of training their in-house internal auditors. Around 61% of respondents confirmed that the internal audit departments of listed firms on the LSM are relying on outsourcing to fill in any skills gaps in IT because most in-house internal auditors have shortage into IT skills.

Secondly, the findings of this study provide support for multi-theoretical frameworks. Firstly, for the Communication theory which indicates that all internal auditors need to improve their communication skills continuously even they are good communicators. Secondly, this study provides support for the Structuration theory because the technology is the core element of Structuration theory. However, most listed companies are still hiring junior auditors who do not have sufficient level of IT skills. This is consistent with the achieved results as about 63% of participants indicated that they needed more training in IT. Moreover, 59% of participants were junior auditors and nearly 51% of them have working experience in audit domain for less than 10 years. Additionally, this study provides support for institutional theory because most of internal audit departments of firms listed in the LSM are facing similar challenges and they also follow similar behaviour by hiring internal auditors with a view to meet the government rules without looking at the needed skills necessary to implement the internal auditing function effectively.

Finally, this study has some limitations. The number of listed companies and internal auditors who were surveyed is relatively limited and that this can be enhanced by future research. Additionally, we investigated only four key skills, whilst there are other needed skills that may be helpful when conducting internal audit. Future research can therefore address this limitation by expanding the focus of this study.

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