The Sufficiency and Appropriateness of Audit Evidence Obtained By Libyan Auditors

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ABSTRACT

The crux of audit work is the collection and the evaluation of evidence (Abou-Seada and Abdel-Kader, 2003; Rittenberg *et al.*, 2009). International auditing standards suggest that the auditors should obtain evidence to support their opinions (IFAC, 2010b). Thus, this study investigates the extent of sufficiency and appropriateness of evidence obtained by Libyan auditors in the Libyan context thus contributing to the knowledge of the auditing in developing Arab countries. Particularly, this study examines the effects of the six selected factors which are: source of evidence, directness of evidence, types of evidence, professional and academic qualifications of the auditor, consistency of evidence, and amount of evidence; on the audit evidence.

A mixed method approach was utilised in the study to gather a range of views from all the professional groups involved in Libyan Auditing. Self-administered questionnaires were used to collect data concerning the perceptions of participants (external, internal, state auditors, and tax experts) regarding the effect of the six selected factors on evidence. Statistical analysis was undertaken on the resulting data and to test if the study hypotheses were supported.

To confirm and support the questionnaire findings semi-structured interviews were conducted with Libyan auditors. This process enhanced and supplemented the questionnaire findings providing in-depth clarification and understanding of the effects that the selected factors have on evidence obtained by Libyan auditors. Content analysis was used to analyse the collected data from the interviews.

The study found that the six factors create an impact on audit evidence. There is a difference in perceptions in relation to evidence within the Libyan professional auditing groups. Survey participants did not perceive any impact from education, experience or gender yet interviewees supported literature in relation to education and experience. Recommendations and implications for Libyan professional practice have been developed from the literature and study evidence. A key recommendation is the updating of Libyan legislation to address the challenges auditors face in gathering audit evidence.

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ABBREVIATIONS

AAA	American Accounting Association
ABACUS	A Journal of Accounting, Finance and Business Studies
AIA	American Institute of Accountants
AICPA	American Institute of Certified Public Accountants
ANOVA	Analysis of Variance
ASE	Alexandria Stock Exchange
ASE	Amman Stock Exchange
ASM	Arab Stock Markets
BAA	British Accounting Association
BSAA	Bahrain Society of Accountants and Auditors
BSE	Beirut Stock Exchange
CBL	Central Bank of Libya
CICA	Canadian Institute of Chartered Accountants
CPA	Certified Public Accountants
CPAS	Certified Public Accounting System
CPC	Central People's Congress
CSE	Cairo Stock Exchange
DSE	Damascus Stock Exchange
EAS	Egyptian Auditing Standards
ESAA	Egyptian Society of Accountants and Auditors
GAAP	Generally Accepted Accounting Principles
GAO	Government Accountability Office
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GPC	General People's Committee
GPC	General People's Congress
GSPLAJ	Great Socialist People's Libyan Arab Jamahyria
HSBC	Hong Kong and Shanghai Banking Corporation
IASB	International Auditing Standards Board
IASC	International Accounting Standards Committee
IASs	International Accounting Standards
ICR	Inter-item Consistency Reliability
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standards
IPC	Institute of Public Control
ISA 500	International Standard on Auditing *'Audit Evidence'*
ISA 501	International Standard on Auditing *'Audit Evidence-Additional Considerations for Specific Items'*
ISA 505	International Standard on Auditing *'External Confirmations'*
ISA 520	International Standard on Auditing *'Analytical Procedures'*
ISA 530	International Standard on Auditing *'Audit Sampling'*
ISA 580	International Standard on Auditing *'Management Representations'*

ISA 330	International Standard on Auditing *'Auditor Responses to Assessed Risks'*
ISAs	International Standards on Auditing
IT	Information Technology
JACPA	Jordanian Association of Certified Public Accountants
KAAA	Kuwait Accounting and Auditing Association
LAAA	Libyan Accountants and Auditors Association
LACPA	Lebanese Association of Certified Public Accountants
LJMU	Liverpool John Moores University
LSE	Libyan Stock Exchange
MENA	Middle Eastern and North African
PDP	Professional Development Program
PhD	Doctor of Philosophy
RCC	Revolutionary Command Council
REC	Research Ethical Committee
SAB	State Accounting Bureau
SACPA	Syrian Association of Certified Public Accountants
SOCPA	Saudi Organization for Certified Public Accountants
SPSS	Statistical Package for the Social Sciences
SSE	Syrian Stock Exchange
UAE	United Arab Emirates
UAEAAA	United Arab Emirates Accountants and Auditors Association
UK	United Kingdom
UN	United Nations
US	United States

CHAPTER ONE
INTRODUCTION TO THE RESEARCH

1.1 Introduction and Background

This study aims to examine the sufficiency and appropriateness of audit evidence obtained by Libyan auditors. Auditing is described as a sequential process of evidence gathering and evaluation with the aim of giving an independent opinion about the financial statements (Boynton and Johnson, 2005; Arens *et al.*, 2006; Soltani, 2007). The American Accounting Association's Committee [AAA] on Basic Auditing Concepts defined auditing as:

> "a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria and communicating the results to interested users" (1972)

The evidence-obtaining and the evidence-evaluation processes are core activities within an audit process (Abou-Seada and Abdel-Kader, 2003; Rittenberg *et al.*, 2009). Soltani (2007) added that audit evidence is the substance of the audit process. Figure 1.1 on page 3 visually represents the audit process including the collecting and determining of the audit evidence process.

The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity to its stakeholders. This financial information would be useful to a wide range of users for the purpose of making economic decisions (International Financial Reporting Standards [IFRS] Foundation, 2010). In 1973, the International Accounting Standards Committee [IASC] issued the International Accounting

Standards [IASs] to provide a standard level of financial reporting to enable the needs of stakeholders to be met (IFAC, 2010a).

Figure 1.1: Overall of the audit process

Source: Boynton and Johnson (2005: 6)

The International Accounting Standards Board [IASB] developed from the IASC (IFRS Foundation, 2010). The IASB in April 2001 reviewed and updated the previously developed international standards to meet regulatory requirements and further formalisation of accounting standards and procedures. These updated standards are called the "International Financial Reporting Standards [IFRS] (IFRS Foundation, 2010).

A second professional body the International Federation of Accountants [IFAC] during the same period of time has also been working to improve the professional practice of its practitioners. This professional organisation was founded in 1977 and aims to establish standards and guidance for professionals in the various sectors of accountancy (IFAC, 2010a). This organisation has also

issued International Standards on Auditing [ISAs] whose purpose is to establish standard practices and provide guidance on the objectives and general principles governing the auditing of financial statements (IFAC, 2010a).

In recent years there have been significant changes to international auditing standard-setting processes. These changes, reflected today in the standard-setting activities of the IFAC, include greater direct public input into the auditing process, more rigorous and transparent processes and international public interest oversight (IFAC, 2010a). As part of the professional standards development, the IFAC established the International Auditing Practices Committee [IAPC] in 1978 which is now known as the International Auditing and Assurance Standards Board [IAASB] (IAASB, 2007). In 2010, the IAASB updated two standards in relation to audit evidence (IFAC, 2010b). These two standards are: ISA 500 '*Audit Evidence'* and ISA 501 '*Audit Evidence-Additional Considerations for Specific Items*' (IFAC, 2010b). The ISA 500 requires the auditors to meet an expected minimum standard in relation to the audit evidence that they gather and base their professional opinion upon (IFAC, 2010b). This evidence must be assessed by the auditor using a range of tests that assess the control systems in place along with substantive tests of transactions and balances. The second standard ISA 501 provides additional guidance to support ISA 500 so that auditors have examples along with defined testing criteria for specific items (IFAC, 2010b). The specific items discussed in ISA 501 include evidence for financial statements account balances and disclosures (IFAC, 2010b). The IFAC (2010) Handbook within ISA 501 also covers explicit examples of disclosure items which include: physical inventory

counting, litigation and claims, long-term investments, and segment information.

With the rising internationalisation of economic trade, accounting and auditing system must be up to dated (Zeghal and Mhedhbi, 2006). As a result of the increasing popularity of participating in the global economy investors are becoming increasingly interested in emerging markets as they present a diversification opportunity according to Levich (2001). A side effect of working in a new or emerging environment is that integration of local and international accounting practices including the audit process, needs to be considered. Michas (2010) highlights that, in emerging market countries, there are often deficiencies in the auditing and accounting practices. These countries may not have basic audit rules and legislation in place and it is important for investors to consider the risk impact that this lack of specific rules and regulation places on their venture into these new markets (Michas, 2010). Investors consider the risk that the lack of policy and practice infrastructure represent and may be reluctant to invest if the developing country is not attempting to address the basic policy infrastructure for accounting and auditing which are more commonly found in developed countries (Michas, 2010).

Part of the rationale as to why international organisations encourage the adoption of ISA, IAS and IFRS is that it helps the organisations feel that their investment is protected as these standards provide rigorous verification

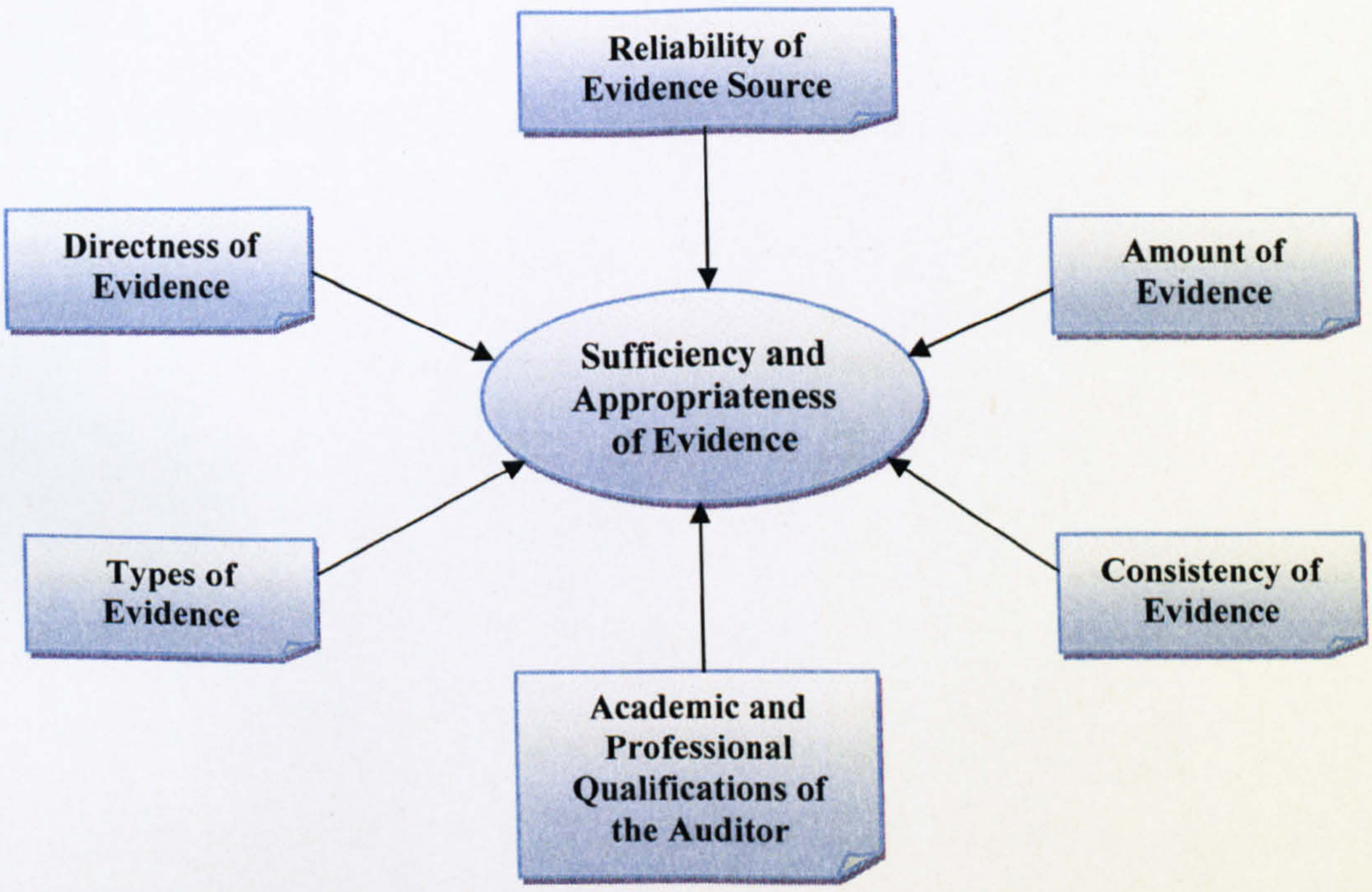
opportunities for stakeholder assessments of investment performance (Carson and Dowling, 2010).

Caster and Pincus (1996) through to Glover *et al.* (2004), McDaniel and Simmons (2007), Kaplan *et al.* (2008), Missah (2008), William *et al.* (2009) and Ohta (2009) all raise concerns about the need for accurate and scrupulous evidence to support the audit process including the final audit opinion report. Academics and professional organisations have mostly focused on identifying how audit evidence is perceived by the different interested parties or stakeholders involved in the audit process (Abou-Seada and Abdel-Kader, 2003; McDaniel & Simmons, 2007), what factors might influence the audit process (Glover *et al.*, 2004; Kaplan *et al*, 2008), and assessing the impact of auditors upon quality and quantity of evidence (Gronewold, 2006). The resulting professional opinion report from the audit process needs to be trustworthy and considered valid with the suitable use of evidence to support the opinion developed (IFAC, 2010b).

Bentham's (1827) theory of persuasiveness of evidence is still a fundamental underpinning notion in relation to evidence (Caster and Pincus 1996) but it is not the only fundamental philosophy which has influenced the development of concepts and practices in relation to evidence. The source, the directness, the consistency, and the amount of evidence were derived from Bentham's theory of the persuasiveness of evidence (for more details see Chapter 3, section 3.5.3). However, Caster and Pincus (1996) point out Bentham's theory did not deal with the important issues such as the structure of the audit evidence and

the characteristics of the auditor (e.g. experience, knowledge). This deficiency in addressing issues such as the experience of the auditor according to Hollingshead (1996) and Gronewold (2006) are areas which need to be explored to improve the professional practice of auditors. The relationship between these factors is described in Figure 1.2 below.

Figure 1.2: The study factors



When examining at the above model Figure 1.2 it is important to note that all the factors interact with each other to affect the sufficiency and appropriateness of the evidence. The ISA 500 attempts to address these various factors to improve the professionalism and the consistency of evidence (IFAC, 2010b). The supporting guidance, ISA 501 provides additional detailed guidance to auditors to enable them to address specific issues where they may run into difficulties when undertaking an audit process (IFAC, 2010b).

1.2 Justification and Rational for This Research

There are a number of reasons why the research is necessary. First, emerging market economies are becoming more integrated into the global economy as a whole and have become more important to investors worldwide in recent years. The share of global economic output generated by emerging markets is currently just below 50 percent and rising (Francis and Wang, 2008). This has highlighted the increasing importance emerging market economies are playing in the global business environment and signals a need for additional academic research that investigates the audit process in these countries (Michas, 2010). Prior to the 1960s, the Libyan economy was predominately agricultural. With the development of the exploration for oil and gas (hydrocarbon) into full production facilities the economy of Libya changed. The income from oil was used to support the provision of infrastructure services and facilities (Salama and Flanagan, 2005). This provision of infrastructure and communication of ideas with the rest of the world was constrained during the political challenges of the United Nations [UN] sanctions due to Libya's isolation from the rest of the world (Salama and Flanagan, 2005; UN, 2007). The UN sanctions on Libya finally lifted in 2003 and as a result the national economy underwent rapid change (UN, 2007).

While the external national politics was effecting the development of Libya, there have also been some major internal changes to Libya's economic structure and policies in the last twenty years (Almajberi, 2003).

With the political infrastructure changes there has been a move to alter the economic structure of Libya. One of the reasons why the Libyan government has adapted its policies and is encouraging the development of new industry sectors is the realisation that the economic structure was too dependent on the oil revenues and these were finite (Fayad, 2006). An indication in the change in government policy can be found in the Development Plans which have been introduced since 2001 according to Fayad (2006). To encourage the move from state ownership and development of privatisation the General People's Committee [GPC] has undertaken a number of legislative changes which has included the establishment of the Libyan Stock Exchange [LSE] (GPC, 2005).

The establishment of the LSE was an important policy action to encourage foreign investors to participate in the Libyan economy, allowing foreign banks such as Hong Kong and Shanghai Banking Corporation [HSBC], and other international financial businesses such as audit firms. As a result of the changing economic policy there was entry into the Libyan accounting environment of PricewaterhouseCoopers, Deloitte Touche Tohmatsu, Ernst and Young and KPMG. These large multinational firms are collectively known as the Big 4 of international accountancy, auditing and professional service firms and all have opened branches in Libya (Alfaitori, 2007; Faraj and Akbar, 2010). Due to the presence of the Big 4 companies and their activities along with the LSE and foreign investment there has been an increased number of financial information users in recent years in Libya and, as a result, the importance and reliance on the auditor's report has increased in significance. All of the changes to the economic environment have generated the need to

investigate the use of audit evidence practices by professional auditors within Libya and the results of this study aims to improve the professional activities of Libyan auditors, audit firms and regulators. Ahmad and Gao (2004) argue that within accounting professional practice and education in Libya there needs to be further research. It is hoped that by identifying current best practice and how a developing country, such as Libya, can implement these policies and practices into its local infrastructure, this will enhance investors' confidence in the Libyan market economy.

The adoption of IASs, IFRSs and ISAs by the developing countries is not only imperative (Faraj and Akbar, 2010), but also required in order to access the capital markets at the global level. It is an international trend, which is recognised as 'best practice' around the world (Obaidat, 2007). In addition, the adoption of IASs, IFRSs and ISAs had become a significant global phenomenon (Al-Hussaini *et al.*, 2008). Richter Quinn (2004) concluded that accounting and financial information originating from developing countries is still difficult to trust, despite the urgent need for these countries to attract foreign investment and foreign capital, and despite the pressing demands from individual and institutional investors, lending institutions, and multinational agencies. Some developing countries have taken the initiative to adopt IAS, IFRS and ISA such as Jordan, China, Poland and the United Arab Emirates [UAE] or adapt them to their particular reality as observed in Egypt. This process is expected to improve the quality and credibility of accounting and auditing information and develop the flow of capital and investment, resulting in economic development. Libya, as a developing country, aims to be part of

the global economy and it is suggested by Obaidat (2007) that developing countries should adopt the international standards such as ISAs, IASs and IFRS. Libya at this point in time has not adopted any of the current international standards in auditing or accounting practices (Faraj and Akbar, 2009).

Another reason why the researcher wanted to carry out the study was that the majority of studies, which investigate audit processes and practices, tend to be related to developed countries. As a result there are only a limited number of studies which address the issues that developing countries have in attempting to improve their professional accountancy and auditing practices and the challenges that policy makers along with local professional bodies encounter (Dixon *et al.*, 2006; Pratten and Mashat, 2009; Michas, 2010). Blay *et al.* (2003) highlight the concerns that investors and stakeholders have in relation to risk and their capital. Libya with its past political world history, the rapid economic developments and the increasing presence of multinational organisations participating within its growing economy will face similar issues that other developing nations have faced as a result of globalisation and the open market structure. Harrison *et al.* (2001), Pratten and Mashat (2009), Faraj and Akbar (2010), Michas (2010) and Siddiqui (2010) all stress the need that there needs to be further studies about auditing in developing countries. Kalel (2000), Glover *et al.* (2004) and Jarboh (2006) all draw attention to the specific need to focus on audit evidence in particular relating to the quality and quantity of evidence utilised to complete the professional opinion report. Several researchers including Gronewold (2006) has suggested that there is a

need to undertake more research to examine the impact of some variables (e.g. amount of evidence, source of evidence) on the report. These suggestions provide further insights for studying sufficiency and appropriateness of audit evidence to support the opinion.

When reviewing the current literature in relation to audit evidence the researcher identified that the majority of studies of audit evidence tend to look at the relationship between single factors and evidence (i.e. Rose and Rose, 2003; Kizirian *et al.*, 2005; Payne and Ramsay, 2008; Caster *et al.*, 2008). However, this research intends to study six audit evidence factors that impact on its quality and quantity, thereby giving a more comprehensive picture of the pertinent issues in collecting and evaluating of audit evidence. From the review of auditing literature and the researcher's personal experience as an auditor in Libya, there is anecdotal evidence that there is an interconnected relationship between a number of factors that impacts on the quality and quantity of audit evidence. At this stage there is currently not enough academic evidence to support the anecdote so this study is questioning and investigating if there is a interrelationship between various factors.

Finally, most empirical studies in the auditing field have investigated the audit evidence using only one specific research methodology such as quantitative methods or qualitative methods (Rose and Rose, 2003; Kizirian *et al.*, 2005; Payne and Ramsay, 2008). This study will use both quantitative and qualitative methods to collect and analyse study data and contribute to the understanding of the significance of audit evidence in the development of the audit opinion.

The source of evidence, directness of evidence, types of evidence, professional and academic qualifications of the auditor, consistency of evidence and the amount of evidence available are all factors which were selected in this study to measure the sufficiency and appropriateness of audit evidence obtained by Libyan Auditors. The personal rationale for this topic comes from the researcher's personal experience as a professional auditor and public servant in the Libyan Electric Company for five years. The recent changes to the political and economic policies have impacted on the researcher's professional practice and as a result there is full awareness that faces many challenges to meet the new expectations of the globalised world economy. In order to meet the increasing challenges as a professional, it is necessary to review the current practices of Libyan auditors and if the evidence upon which they base the audit opinion reports, is sufficient and appropriate.

1.3 Aim and Objectives of the Research

The main aim of this study is ***to investigate and understand the extent of the sufficiency and appropriateness of audit evidence used by Libyan auditors as part of the auditing process.***

From this contextual analysis, the researcher aims to identify areas for further development to improve current professional practice within Libya or other developing countries with similar issues.

To meet this aim, five objectives have been formulated:

1. ***To explore the effect of the study variables on quality and quantity of evidence collected by Libyan auditors.***

This objective will explore the effect of the study variables which are: source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence; on the sufficiency and appropriateness of evidence obtained by the Libyan auditor. Most previous studies in the audit evidence field have tended to be focused on a single factor. This objective will therefore seek to develop a unifying framework of audit evidence factors based on previous literature and views of auditors.

2. ***To analyse the Libyan auditors' perceptions regarding the influence of the study factors on the sufficiency and appropriateness of audit evidence.***

The auditor groups selected for this study are external, internal, state and taxation auditors. The rationale for this is that (a) these four groups are used commonly in studies conducted in the audit evidence field in developing countries in general and in Arab world countries particularly. (Kalel, 2000; Ahmid, 2000; Al-Amro and Al-Angari, 2007; Al-Jadaani and Al-Angari, 2009; Faraj and Akbar, 2010; Ali *et al.*, 2010), (b) the majority of participants in the focus group conducted at the first stage of this study stressed the importance of the external, internal, state and taxation auditors' perceptions for this study because all these selected groups use audit evidence in order to support their work and report in the Libyan auditing environment, and (c) in order to provide

the best chance for generalisablity of the study findings (Hussey and Hussey, 1997), more than one related group were used to collect the data for this study.

Some prior research addressed the relationships between the auditor type (e.g. external, internal, taxation) and the audit quality (see Jakubowski, 1995; Brown and Raghunandan, 1995; Morrill and Morrill, 2003; Haron *et al.*, 2004; Jarboh, 2005; Michas, 2010; Lopez and Smith, 2010). These studies found that there are major differences in the amount of experience and expertise between the internal, state and external auditors. For instance, Jakubowski (1995) investigated audit quality among governmental and non-governmental auditors and found differences in the quality of audit reports across auditor types. Similarly, Brown and Raghunandan (1995) found that state and local auditors provide higher quality audits than the Big 4 firms, possibly due to lower levels of litigation risk faced by Big 4 firms when conducting government audits. Therefore, the different types of auditors lead to variances in their perceptions about some of the key issues such as the attitudes towards audit evidence (Ahmid, 2000). This objective will explore the potential effects of the auditors' occupation (external, internal, state, and taxation auditor) on quality of audit evidence.

3. ***To assess independent variables (educational level, years of experience, and gender of auditors) which may affect the participants' perception about the factors concerning audit evidence***

A number of previous studies into Libyan accounting education concluded that Libya needs to strategically plan in order to modify and modernise both its accounting education and practice (Mahmud and Russell, 2003; Ahmad and

Gao, 2004; Abofars, 2008). Bait-El-Mal *et al.* (1973) and Abofars (2008) found that accounting and auditing practice in Libya is influenced by their education and the contribution of academics and practitioners in the accounting field. The period of economic stagnation in Libya during the 1990s also created stagnation in other areas such as education and infrastructure development (Agnaia, 1997; Abulgasem and Alukel, 2007). This delay in professional educational development has possibly resulted in current professional educational practices not meeting international standards and a lack of awareness of the importance of the quality of audit evidence. There is increasing reliance on the auditors' report in Libya as a result of the increasing use of financial statements by investors in the new open market economy. The auditor may not have the professional knowledge or experience to meet these new demands. For the experience of the auditor, Gronewold (2006) found that experience affects auditors' judgements regarding audit evidence. Pratten and Mashat (2009) point out that the male-dominated culture in Libya and Arab society has a significant effect on the attitude and behaviour of people. In addition, Gold *et al.* (2009) found that female auditors were more influenced by a male client and less influenced by a female client than male auditors. Thus, educational level, years of experience, and gender of the participants are considered as independent variables that may affect the auditors' viewpoints regarding audit evidence.

4. ***To improve the current knowledge and literature in relation to audit evidence and practices for Arab countries such as Libya.***

There is little or no current evidence and knowledge of current attitudes and practices within Libya in relation to audit evidence. This limitation of evidence also affects other Arab countries in the Middle East, Gulf States and the Western Arab countries (Jarboh, 2006; Joshi and Deshmukh, 2009). The Gulf States have been undergoing rapid development and, when compared to Libya, are highly advanced in their economic and political structures (Al-Shammari *et al.*, 2008). With the rapid development in this part of the globe there have been challenges that have to be addressed and overcome including cultural attitudes and practices along with the political structures.

5. ***Provide recommendations and suggestions based on the findings of this study to the auditing sector in Libya regarding audit evidence.***

The questionnaire and interviews will provide the researcher with data to enable a contextual analysis of the current environment which is found in Libya for auditors and their attitudes towards audit evidence and the factors which impact on their perspectives towards evidence. From this contextual evidence the researcher plans to identify areas which can be developed and, with support from the literature, suggest appropriate models or solutions that can address the contextual issues which were identified through the research process. These recommendations will be sent to the LAAA for consideration and possible implementations.

1.4 The Research Questions

To achieve study objectives, the following questions were formulated:

1. ***How does source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence affect the sufficiency and appropriateness of audit evidence gathered by the Libyan auditor?***

2. ***Are the perceptions of Libyan auditors affected by the source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence on quality and quantity of evidence?***

3. ***Does the demographic backgrounds of Libyan auditors (educational level, years of experience, and gender of auditors) influence their perceptions or opinions regarding the effects of source of obtaining evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and the amount of evidence?***

Several hypotheses are developed to address the above objectives and provide answers to the research questions. These will be discussed in chapter four, section 4.19.

1.5 Research Methodology

The choice of research methodology adopted for this study is dictated by the objectives of the study. The positivist approach was deemed most suitable for this research allowing for the development of study hypotheses and the testing of relationships between variables without influence from the researcher. Furthermore, previous studies in this field have tended to use this approach (for example, Kalel, 2000; Ahmid, 2000; Jarboh, 2005; Al-Hadi, 2008) but in order to reduce any potential bias and weakness of using a single method

approach (Hussey and Hussey, 1997) and enhance the study findings, a mixed-methods approach was utilised (See Figure 4.1 for detail).

A questionnaire is used to collect the primary data for the study. In order to increase validity and reliability of the results arising out of this survey tool, pre-testing and a pilot study for the questionnaire were employed. This is followed by semi-structured interviews designed to supplement and enhance the data obtained from questionnaires. Using latent content analysis, responses from interviews were analysed.

1.6 Structure of the Thesis

This thesis consists of seven chapters as outlined below (See Figure 1.3 on page 21).

Chapter One provides a brief background to the study. It also highlights the justification and rational of the study. It sets the research objectives and questions and outlines the structure of the study.

Chapter Two provides a discussion of the factors from emerging economies, Arab nations and Libya to provide a systematic contextual understanding of the effects that impact on Libyan accounting and auditing professionals in their daily practice. Libya's recent political, economic and socio-cultural environment is explained and the relationship between accounting and auditing education and practice is contextualised to provide the reader with a systematic understanding of the factors influencing Libyan auditors.

Chapter Three critically reviews the literature on audit evidence in general and provides a definition and discussion of the nature of evidence. The study factors are examined in detail along with their effect on the sufficiency and appropriateness of evidence. This chapter also reviews different theories which have been proposed for evaluating quality and quantity of audit evidence.

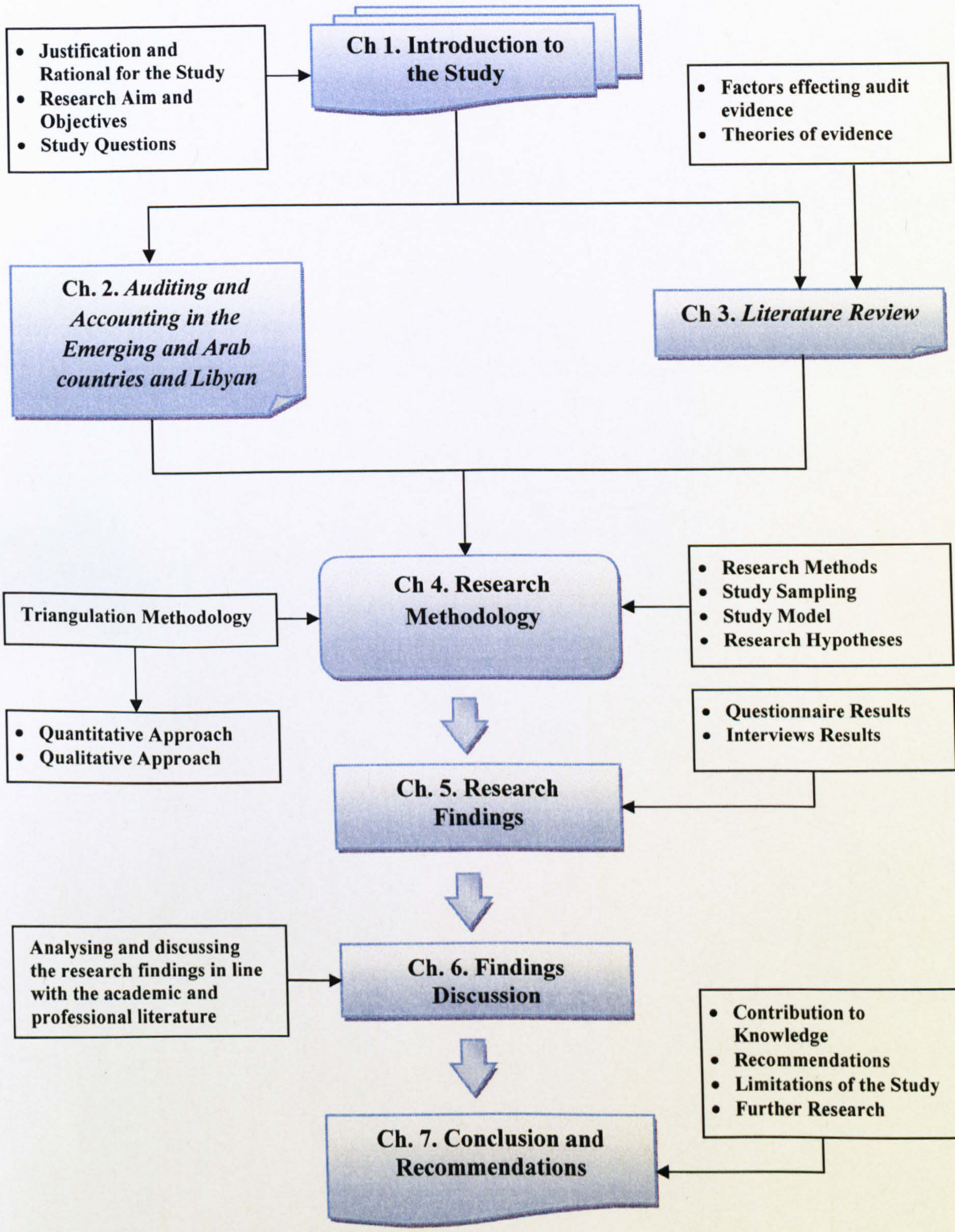
Chapter Four discusses the research methodology and methods underpinning the study. From a discussion of the philosophical ontology the research rationale evaluated the issues which the researcher needed to consider such as limitations and ethical considerations. The study model is developed in detail and includes four hypotheses.

Chapter Five presents the results of the data obtained from the study questionnaire and interviews. The results of testing hypotheses related to source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence are presented in this chapter.

Chapter Six analysis and collates the findings in line with the academic and professional literature. These findings are analysed in order of the research objectives to provide suggestions for further research and identifies implications to practice for Libyan auditors.

Chapter Seven provides contribution to knowledge and limitations of the study. Based on the research findings, recommendations are provided along with suggestion for future research.

Figure 1.3: Outline of the thesis



1.7 Conference and Publication Papers Based on the Thesis

Zakari, M. "Evaluating the quality and quantity of audit evidence", ***Inaugural Annual Liverpool John Moores University, Faculty of Business and Law, Research Student Conference***, June 2008 (Verbal presentation based on the pilot study findings).

Zakari, M. "The sufficiency and appropriateness of audit evidence obtained by Libyan auditors", ***University of Salford Postgraduate Annual Research Conference (SPARC)***, May 2009 (Verbal presentation).

Zakari, M. "Sufficiency and appropriateness of audit evidence", ***Liverpool John Moores University, Postgraduate Researchers in Education Conference***, June 2009 (Verbal presentation).

Zakari, M. "The sufficiency and appropriateness of audit evidence obtained by Libyan auditors", ***3rd Graduate Conference on Social Sciences and Management, University of Bradford***, October 2009 (Verbal presentation, the abstract is published in the conference book 2009).

Zakari, M. "Sufficiency and appropriateness of audit evidence", ***3rd Annual Liverpool John Moores University, Faculty of Business and Law, Research Student Conference***, June 2010 (Poster Presentation).

Zakari, M. "The quality of audit evidence obtained by Libyan auditors", ***4th Graduate Conference on Social Sciences and Management, University of Bradford***, October 2010 (Verbal presentation).

Zakari, M. "Sufficiency and appropriateness of audit evidence", ***4th Scientific Symposium for Libyan Students in the UK, University of Cardiff***, January 2011 (Verbal Presentation).

Zakari, M., Mouzughi, Y., and Pegum, R. "An empirical analysis of the sufficiency and appropriateness of audit evidence obtained by Libyan auditors", ***5th Workshop of Accounting in Emerging Economies, British Accounting Association [BAA], University of Leicester***, January 2011 (Verbal presentation).

Zakari, M., Mouzughi, Y., and Pegum, R. "An empirical analysis of the sufficiency and appropriateness of audit evidence obtained by Libyan auditors", ***Journal of Accounting in Emerging Economies***, under review by the publisher, forthcoming (2011).

Zakari, M. and Menacere, K. "Accounting and auditing standards in developing and Arab countries", forthcoming (2011)

Zakari, M. and Menacere, K. "The challenges of the quality of audit evidence in Libya", forthcoming (2011)

CHAPTER TWO

AUDITING AND ACCOUNTING IN THE EMERGING AND ARAB COUNTRIES AND LIBYAN ENVIRONMENT

2.1 Introduction

The aim of this chapter is to present a background of accounting and auditing in emerging economies, Arab countries and in particular, Libya, in order to develop a greater understanding of the complex political, economic and cultural environment that is impacting on the professional accounting and auditing services. This contextual background will be reviewed in relation to the potential effect of the Libyan auditor's education level, years of experience and gender have on their professional attitudes towards audit evidence. This chapter includes a brief description of the current political and economic systems including the Libyan Stock Market, professional bodies and the current education of Libyan accounting professionals. Through a discussion of the underlying issues and background it is expected that an understanding of why there are differences in Libyan auditor's perceptions regarding sufficiency and appropriateness of audit evidence. In addition, this chapter will discuss of the possibility of transferring this research to other Arab countries and what can be learnt from the close regional neighbours of Libya.

2.2 Accounting and Auditing in Emerging Economies

Developing countries are defined as *'third world countries'*, meaning they are less developed and do not include either the western world as their centre (as US) or the eastern world (as Russia). Developing countries are mostly found in Africa such as Libya, Tunisia and Egypt, Asia, Latin America, and the Middle East (Al-Oqla and Al-Angari, 2010). Although developing countries have some common features they are not a homogeneous group (Askary, 2006). Each

country is different in terms of Gross National Product [GNP], population, culture, degree of literacy, and the kind of legal, economic and political system under which it operates (Chand, 2005; Askary, 2006; Al-Oqla and Al-Angari, 2010). However, despite great differences in these factors, they are many characteristics that are quite similar (Al-Hussaini *et al*, 2008; Askary *et al.*, 2008; Michas, 2010), including:

- Low levels of living standards and productivity
- High rates of population growth, dependency burden and levels of unemployment and underemployment
- Political mismanagement and an inefficient public sector
- The absence of Stock Markets
- An absence of the relevant education system in general and accounting education in particular.

Prior accounting research (Ahmad and Gao, 2004; Ashraf and Ghani, 2005; Zeghal and Mhedhbi, 2006; Askary, 2006; Cooper and Robson, 2006; Abulgasem and Alukel, 2007; Ali and Ahmed, 2007; Askary *et al.*, 2008; Aggestam, 2009; Arsoy and Gucenme, 2009) have investigated the influences of the environmental factors on accounting and auditing professions. These studies identify several factors, such as international factors, economic and political influences, legal systems, taxation, culture, religion, and accounting education system, that seem to affect the development of auditing and accounting practices in emerging countries. Ali and Ahmed (2007), Askary *et al.* (2008), Aggestam (2009) and Arsoy and Gucenme (2009) have all found that any significant change in these factors in a particular country could affect its accounting and auditing regulations and policies. For instance, a decision to

establish or develop a stock market and attract international investment could trigger the restructuring of the auditing and accounting systems and strongly motivate the adoption of international accounting and auditing standards.

With the growing internationalisation of economic trade and the globalisation of businesses and financial markets, financial information prepared and audited according to a national auditing and accounting system may no longer satisfy the needs of users whose decisions are more international in their scope according to Beke (2010). Thus, to meet the new global environment and to the new requirements of decision makers, accounting regulating authorities have sought out solutions that allow for the improvement and advancement of accounting and auditing (Zeghal and Mhedhbi, 2006). Recently, several initiatives have been proposed such as harmonization of accounting standards and practices on an international scale. This initiative's goal is to have a coherent set of accounting standards and practices that provide national and international decision makers with a relatively homogenous information product that is comparable and reliable (Carmona and Trombetta, 2008). Thus, some emerging countries such Jordan, Bahrain, China, Egypt, Qatar, UAE who have adopted international accounting and auditing standards [IASs, IFRSs and ISAs] to improve the credibility and quality of accounting information and in order to share the global economic.

Economic conditions are a major determinant in the development of a country's accounting system. For example, a country's level of economic growth has a positive effect on the development of accounting systems and

auditing practices (Abulgasem and Alukel, 2007). According to Bakre (2006), Celik and Ecer (2009), Al-Akra *et al.* (2009), and Salehi (2010), the economic factors such as nature of business ownership, nature of the economic system, and the stock market have an important effect on accounting and auditing professions. For instance, the stock markets in some emerging economics such as China, UAE, and Egypt have developed significantly over the last decade (Chen *et al.*, 2005; Samer, 2008; Abdmoulah, 2010). Several factors have played a vital role in this development, which include the achievement of higher economic growth, monetary stability, stock market reform, privatisation, financial liberalisation and new institutional framework for investors (Marashdeh and Shrestha, 2010). As result of these developments, the accounting and auditing practices have been positively affected. However, Hassan (2008) concludes that the development of accounting in emerging economies depends mainly on the cultural and political motives rather than on economic changes. In addition, Hassan (2008) argues that both types of motives are interchangeable as cultural and political ones are hidden under the promoted economic benefits. Cooper and Robson (2006) suggests that legitimacy is a dynamic process in which the development of accounting regulations is located in relation to the desires of various groups such as regulatory agencies, the accounting profession and the government officials (the state).

For the relationship between the religion factor and the accounting and auditing practices, the prior studies of Islam and accounting (Karim, 2001; Lewis, 2001; Lewis, 2005; Kamla *et al.*, 2006; Abd- El-Razik, 2009) concluded that in the

Islamic world the Islamic principles from '*Sharia*' influenced the accounting systems. According to Kamla *et al.* (2006), the '*Quran'* (the revealed words of God) and *Sunnah* (Contains God's inspired acts; sayings of the Prophet Mohamed) are the material sources of Islamic Law. Together, they are referred to as the Islamic principles or *Sharia*. The Islamic tradition places ethical or social activity ahead of individual profit maximisation. Speculative investments, such as margin trading, are not allowed because Islam bans transactions that involve uncertainties. Partnerships are a common form of business organisation. That is, Islam recognizes and encourages commerce. Although it requires business activities to be conducted in compliance with principles enshrined in the Sharia. What is lawful, '*Halal'*, and unlawful, '*Haram'*, for various aspects of business activity is prescribed. The *Sharia*'s prescriptions include all areas of trading activity and this religious body of knowledge advises the nature of allowable traded goods and services, as well as the mores of business conduct (Kamla *et al.*, 2006).

The challenges and problems of accounting education in emerging economies have been a source of ongoing debate and controversy from the accounting and auditing researchers (Ahmad and Gao, 2004; Bakre, 2006; Watson *et al.*, 2007; Aggestam, 2009; Celik and Ecer, 2009; Siddiqui, 2009; Hammami and Fedhila, 2009). Yapa (2000), Ahmad and Gao (2004), and Bakre (2006) found that almost all developing countries that have been colonies under powerful Western rulers have inherited their accounting education from a colonial system. Ahmad and Gao (2004) argue that accounting education in emerging countries should focus on national information needs and emphasize the use of

accounting not only to business enterprises but also to state and economic development activities. Social and economic characteristics must be fully taken into account in improving accounting education systems and curricula from the West. Likewise, Bakre (2006) suggests that developing countries need to evolve appropriate accounting structures, education and training that can better address their peculiar economic problems, rather than just adopting the accounting systems that have been developed by western nations. Accounting teaching in developing countries is facing serious challenges due to the increasing number of students (Hammami and Fedhila, 2009).

Within the Middle East region there are a number of developing countries and the global changes to the business market and the impact of international businesses who operate in multiple markets according to Taylor *et al.* (2003) highlights the challenges that Hammami and Fedhila (2009) identify in the provision of accounting and auditing information that meets the users' needs in this region.

2.3 Accounting and Auditing in Arab Countries Environment

The Arab world stretches across more than eleven million square kilometres (about four million square miles) of North Africa and part of western Asia. It consists of twenty two countries which have a population of more than three hundred million people (Ellabbar and Havard, 2005). The majority of people in Arab countries profess Islam and speak Arabic.

The accounting profession in the Arab countries has gone through different stages leading up to their current situation. The Middle Eastern countries began to regulate the accounting profession during the first half of the twentieth century, influenced by prevailing Mandate regulations (Al-Emary and Manah, 2010). For example, the accounting regulations of Egypt of 1909, Iraq and Palestine of 1919 were influenced by British precedents. The Syrian and Lebanese commercial laws were based on French counterparts. The British Mandate had transferred the British income tax system and accounting practices to Egypt and Palestine in 1932 and 1941, and the French did the same with their systems and practices to Syria and Lebanon in 1942 and 1944 (Aldine, 1999).

Many Arab countries have experienced major structural changes that have transformed the whole economy in recent years. These changes has included the privatization of the public sector, encouraging foreign investment and establishing Arab Stock Markets [ASM] such as in Syria, Libya, and Algeria, or developing existing ones, such as Egyptian, Saudi or Kuwaiti stock markets (Ellabbar and Havard, 2005; Al-Hussaini *et al.*, 2008; Alami, 2009; Elsayed and Hoque, 2010; Hassan *et al.*, 2011). According to Al-Qahtani (2005) and Marashdeh and Shrestha (2010) these systematic challenges have been aimed at:

- Removing official barriers that have blocked the market due to monopolistic or oligopolistic power.
- Liberating economic activities and allowing the forces of the market to take control based on the laws of demand and supply in production, commerce, and service.

- Reducing the government role in the national economy by giving the private sector more influence.
- Creating the appropriate judicial and institutional settings as incentives for both local and foreign investments.

Due to the adoption of these new economic changes in the Arab world, the last ten years have been filled with an increasing interest in developing accounting and auditing practices. Companies listed in the Egyptian Stock Market [ESM], Kuwaiti Stock Market [KSM], and Jordanian Stock Market [JSM] all have had to adopt the IASs, IFRSs and ISAs for preparing and auditing their financial statements (Pryor, 2007; Al-Yaseen and Al-Khadash, 2011).

Egypt has a developing economy whose Stock Exchange dates from 1882 (Abd-Elsalam and Weetman, 2003). In the mid-1970s, the Egyptian government followed an open-door policy by liberalizing the national economy, and initiated several improvements to the accounting and auditing standards and practices. These developments were accompanied by increasing competition among audit firms, decreasing audit fees, and an increasing pressure to enhance the efficiency of audits without decreasing effectiveness (Wahdan *et al.*, 2005). The Egyptian government issued the *Banking Law No. 163* in 1957, the *Company Law No. 159* in 1981, and the *Capital Market Law No. 95* in 1992 in order to restructure (1) financial reporting, (2) disclosure requirements, and (3) accounting and auditing professions (Farag, 2009). The company law has required an auditor to collect all required evidence in order to report whether financial statements fairly present the company's financial condition and results of operations (Fawzy, 2004).

The Egyptian Society of Accountants and Auditors [ESAA], emerged in 1977, plays a central role in the accounting and auditing professions within Egypt, it is an association of chartered accountants that develops educational and professional standards. The ESAA is a member of IFAC (Wahdan *et al.*, 2005) and it issued Egyptian Auditing Standards [EAS] in 1997 (Fawzy, 2004).

In Jordan, the *Auditing Profession Law No. 32* of 1985 was issued to regulate auditing practice (Rawashdeh, 2003). This legislation established the Jordanian Association of Certified Public Accountants [JACPA], and organised the linkage between auditing practitioners and public and private corporations, and limited liability companies. The JACPA is a member of IFAC and some regional bodies such as the Arabic Association of Certified Public Accountants. In addition, it has approved ISAs as national standards and used them to audit all listed companies in the Amman Stock Exchange [ASE] (Al-Akra *et al.*, 2009). According to the Al-Akra *et al.* (2009) accounting practice in Jordan was limited to the recording of transactions, satisfying only the formalities of the outdated law requirements with no set form or content for financial statements. In addition, accounting regulation in Jordan has suffered from many weaknesses according to Al-Akra *et al.* (2009) including the lack of professional regulations that meet the international standards for accounting and auditing.

For Lebanon, auditing is a legal requirement for all listed companies on the Beirut Stock Exchange [BSE] and other stock corporations, banks and insurance companies, limited companies and some individual enterprises

(Tabet, 1998). Although the ISAs have not been approved as national standards, the auditors are using them widely when providing auditing services and reporting (Abu-Mansour, 2001). Mansour (1997) has confirmed that Lebanese auditors are required to implement ISAs because the Lebanese Association of Certified Public Accountants [LACPA] is a member of IFAC. According to Harb (1999), the Lebanese auditing profession is mainly influenced by the *Commercial Law of 1942* as a legal requirement. This law ordered that all stock and limited companies must appoint an auditor and specified the auditor's responsibilities and duties. It further stated that the stock companies should appoint one additional auditor or more to add more credibility to the auditing process.

In Syria, the auditing profession is ruled by two pieces of legislation: the *Commercial Law of 1949* and the *Certified Public Accounting System* [CPAS] *of 1958*. The Commercial Law requires that an auditor should be appointed for stock corporations. Other legal texts have dealt with auditor responsibilities and auditing reports. The *CPA System* was issued to organise auditing practice and to establish the Syrian Association of Certified Public Accountants [SACPA]. However, the SACPA has not been given the legal authority to organise the accounting and auditing practice effectively (Alkadi, 1992). Syrian Stock Exchange [SSE] was established in 2009 (Abdmoulah, 2010). Financial reporting in Syria is not oriented toward a fair presentation of the financial position and results, rather it is directed towards compliance with legal requirements and tax law, and accordingly can be described as a form over substance accounting system (Deloitte and Touche, 1990). Syria does not apply

any special accounting principles, but depends on some rules and regulations issued concerning different accounting principles such as inventory valuation and depreciation of fixed assets (Alkadi, 1992).

For the Arab Gulf Cooperation Council [GCC] countries, namely, Bahrain, Qatar, Oman, Kuwait, Saudi Arabia and UAE, the accounting and auditing professions have been organised by company law and auditor law. Although only Kuwait and Bahrain are members of IFAC, the IAS and ISA have adopted by all GCC countries (Al-Qahtani, 2005). In all GCC countries, the government regulates financial reporting and controls the accounting and auditing professions. Professional accounting bodies exist in four states; namely, Bahrain, Kuwait, the UAE and Saudi Arabia. However, the Bahrain Society of Accountants and Auditors [BSAA], the Kuwait Accounting and Auditing Association [KAAA] and the UAE Accountants and Auditors Association [UAEAAA] have no regulatory power to license accountants and auditors or to establish accounting and auditing standards (Al-Basteki, 2000). In contrast, the Saudi Organisation for Certified Public Accountants [SOCPA], established in 1992, is empowered by the Saudi Ministry of Commerce to issue accounting and auditing standards and has the authority to recognise certified public accountants (Al-Amro and Al-Angari, 2007; Al-Hussaini *et al.*, 2008).

External auditor laws have been enacted in all GCC member states to regulate the auditing profession from 1962 according to Al-Qahtani (2005) who argues that the effectiveness of the audit function depends on the qualifications of the auditor. Furthermore, the various GCC legislative statutes require auditors to

collect sufficient evidence in order to support their professional opinions, the maintenance of official accounting standards and statutory requirements as well as a clear financial position for the stakeholders who are interested in the organisation which has been audited by them (Al-Qahtani, 2005; Al-Jadaani and Al-Angari, 2009).

For the all GCC countries, the Stock Exchanges were established in the early 1990s and they have developed significantly over the last decade. Several factors have a major role in this development, which includes the achievement of higher economic growth, monetary stability, privatization, financial liberalization and a new institutional framework for investors (Marashdeh and Shrestha, 2010).

Some important features of development in the accounting and auditing professions in Arab economics during the last fifty years can be observed. Prior studies (Obaidat, 2007; Askary *et al.*, 2008; Al-Akra *et al.*, 2009; Farag, 2009; Michas, 2010) evaluated these financial professions and found four common characteristics. The first characteristic according Al-Akra *et al.* (2009) and Michas (2010) when describing accounting and auditing professions in the Arab countries is the various countries' previous association with developed countries and how this association affects the current economic and political situation or the side effects of a previous colonial connection. The second characteristic describes the recurring state of change for the professionals and the resulting lack of established stable concepts or standards (Al-Akra *et al.*,

2009; Farag, 2009). This feature might be related to the condition of political and economic instability that exists in many Arab countries.

The third characteristic according to Farag (2009) and Al-Akra *et al.* (2009) is the dominance of government agencies in relation to the professional bodies. This is either because of the lack of qualified professional bodies presence or a professional body which does not have the authority that would enable the professional body to issue professional standards and a code of ethics (Farag, 2009), Al-Akra *et al.* (2009) highlight that there is a desire to implement a uniform accounting system for the whole economy in the centrally controlled systems prevailing in some countries. The fourth characteristic described by Farag (2009) is related to the social view of the accounting profession, which is generally downgraded. Arab societies consider this profession as a means of tax evasion rather than as a system of useful information for prudent financial decision-making.

Several studies in accounting and auditing areas conducted in the Arab countries i.e. Egypt, Jordan, Libya, and Bahrain found that there is a compliance gap between accounting and auditing requirements and actual practices (Wahdan *et al.*, 2005; Faraj and Akbar, 2010; Al-Akra *et al.*, 2009; Joshi and Deshmukh, 2009). According to Jahamani (2003), this non-compliance with auditing is mainly caused by (1) the lack of experience and expertise in the professions, (2) the lack of accounting and auditing education, and (3) the lack of developments of accounting and auditing regulations.

Al-Rashed (2002), Hassan (1998) and Jahamani (2003) suggested the following practice problems of accounting and auditing in most Arab economies:

1. There is a shortage of qualified accountants and auditors.
2. Accounting information is not available or is not available in the proper form, or is received too late.
3. There is a lack or weakness of legislation relating to accounting and auditing standards and procedures.
4. A strong national association of accountants and auditors is lacking.
5. The non-existence of any clear accounting policies and standards.

Additionally, Jahamani (2003), Humphrey (2007), and Michas (2010) indicated key factors which have a significant influence on accounting and auditing education in Arab countries. These include:

1. Locally authored accounting and auditing textbooks are inadequate.
2. Teaching of accounting and auditing subjects at the college level is inadequate.
3. Qualified accounting instructors are insufficient.
4. Professional development opportunities for accounting educators and practitioners are lacking.
5. There is a lack of accounting and auditing research.

Culture has been shown to be a major factor affecting the structure of business and society (Hassan, 2008; Askary *et al.*, 2008; Al-Akra *et al.*, 2009) and, latterly, accounting and auditing (Maali *et al.*, 2006; Askary *et al.*, 2008; Sim, 2010). Similarly, the legal structure and the development of stock markets in a society affect its accounting structure (Abdmoulah, 2010). The Arab countries have a great deal in common, although they may perceive themselves from time to time as having different political and economic aims. Despite great wealth in some of them, they are all developing countries attempting to build a

modern business infrastructure within the constraints of limitations in available social and physical resources. Countries in the Middle East and Northern Africa share the common bond of an Islamic religious and cultural heritage which specifies certain rules about life and economic activity.

Prior accounting studies (Kantor *et al.*, 1995; Maali *et al.*, 2006; Abumustafa, 2006; Wilson, 2009) found that Arab countries share similar characteristics in the accounting field. For example, some share an Islamic Finance System and Islamic banking. In addition, The Arab world has been presented as a largely homogeneous unit in cultural, legal, and religious terms (Kantor *et al.*, 1995; Wilson, 2009). Hofstede (1991) places Egypt and Saudi Arabia in a common Arabic-speaking group that includes such politically diverse countries as Lebanon, Libya, Iraq, and Kuwait. These countries are portrayed as highly masculine and uncertainty avoidant with a large power distance and a low individualism or collectivist perspective on life (Hofstede, 1991). This cultural oneness is supported in many cases by an Islamic philosophy.

Another similarity is that several Arab countries have moved from planned economies to the global economic stage and are adopting some of the characteristics of a market economy (Maali *et al.*, 2006).

2.4 Libya's Environment and Its Accounting and Auditing Practices

A number of studies (Ahmad and Gao, 2004; Bakre, 2006; Watson *et al.*, 2007; Abulgasem and Alukel, 2007; Aggestam, 2009) conducted within the accounting field revealed that the study of accounting or auditing systems for

any country should precede a study of its environmental factors. Jarboh (2008) point out that the accounting objectives, standards, policies, and techniques result from the environmental factors in each country. Therefore, this study considers the influence of environmental factors on accounting and auditing professions in Libya, including political and economic influences, cultural, the professional and legal regulations of accounting and auditing, and the education system of the country.

2.4.1 A Brief Libyan Background

The Great Socialist People's Libyan Arab Jamahyria [GSPLAJ] has been the official name of Libya since 1981. Libya is situated in North Africa (Gadhafi, 1981). The capital city is Tripoli which is also the largest city and one of the country's two major ports. Benghazi is the other major port.

The latest official census which was conducted in 2005 recorded a population of 5.5 million, with about 51 per cent males and 49 per cent females (Libyan Secretariat of Economic and Planning, 2005). Islam is the state religion and large percentages of the population are Muslims. There are some non-Libyan Christians who live in the country. Arabic is the official language, while English and Italian are also used in business and trade.

2.4.2 History of Accounting Practice in Libya

When income tax was first introduced in 1923, accounting was at its starting point in Libya (Kilani, 1988). When this tax law was introduced Italian enterprises brought with them Italian accountants, but there was no evidence

that Libyans practiced accounting during that period, as the Italian colonial authorities kept their accounting practices to themselves (Kilani, 1988; Abozyredh, 2007). Since the early 1950s, the development of the Libyan accounting profession has been significantly influenced by several factors. These include Libyan accounting education, accounting academics, international oil companies, international accounting firms, and, to some extent, rapid changes in the Libyan social, economic, political and legal environment (Kilani, 1988; El-Moghirbi, 2003; Central Bank of Libya, 2006).

Up to Libya's independence in 1951, there was no domestic accounting profession and most business firms depended upon foreign accounting firms from Italy and the UK (Abozyredh, 2007). No formal accounting education or training was available locally, and so, when independence came, there was a shortage of personnel to fill clerical and technical positions in the administrative and public services (Abofars, 2008). This was one of the country's most serious handicaps and meant that, throughout the 1950s, it relied greatly on advisers from the UK, US and UN to establish rudimentary accounting systems (Abofars, 2008). At that time, many foreign agencies from the UK and the US such as the Libyan Public Development and Stabilisation Agency, the Libyan American Reconstruction Commission, the Libyan and American Joint Service impacted on the development of accountancy in Libya when they carried out various projects (Buzied, 1998). These agencies were all administered by non-Libyans and, through them, the British and Americans implemented their own accounting models, significantly influencing the accounting system (Buzied, 1998).

The discovery of oil in the early 1960s provided the country with the financial resources to develop business activities leading to a significant growth of the economy (Ahmad and Gao, 2004). Accordingly, there were increasing needs from investors, creditors, business managers and governmental agencies for financial information and resulting accounting services. Subsequently, many foreign accounting firms from Egypt, the US and the UK opened branches in Libya, predominantly providing audit services. Following the People's Revolution and the major transformation of the country's political system, Libya attempted to distance its processes and reduce the influence of foreign organisations such as those from the UK and US on the local systems. As part of this alteration to the market structure, post revolution included the nationalisation of foreign owned companies (Buzied, 1998). This decision to alter the spheres of influence also impacted on the systems of recognizing and producing professional accountants by putting a strong emphasis on university education and qualifications from Libya (Ahmad and Gao, 2004; Abulgasem and Alukel, 2007; Abofars, 2008).

The accounting practice in Libya is influenced by four key sources of impact namely (Mahmud and Russell, 2003; Ahmad and Gao, 2004; Al-Badre, 2007; Alfaitori, 2007; Pratten and Mashat, 2009):

1. Statutory requirements (i.e., governmental laws and regulations) that control business in this particular country.
2. The impact of accounting technology and know-how imported from other countries (particularly from the UK and through publications and the experience of qualified personnel and companies).

3. The influence of accounting education and the contribution of academics and practitioners in the accounting field.
4. Some changes in the Libyan social, economic, political and legal environment.

In Libya, as in several of its counterparts in the rest of the world, a number of laws have been issued and promulgated to regulate accounting practice. Therefore, the major influence on accounting practice has primarily been statutory (Al-Hasade, 2007; Abozyredh, 2007; Al-Hadi, 2008). Accounting technology and know-how imported from other countries also has a major impact on accounting practice in Libya. Mahmud and Russell (2003) demonstrated that British and American accounting practices, transferred to Libya though oil companies, have affected the country's oil companies. This, in turn, also has influenced other business enterprises (non-oil companies) as employees move in and out of the oil sector.

Education has been recognized as a key element in political and socio-economic development (Mahmud and Russell, 2003; Ahmad and Gao, 2004; Alfaitori, 2007; Abofars, 2008). Universities in Libya played a major role in constructing and developing the accounting practices in the country (Mahmud and Russell, 2003).

2.4.3 The Influence of Political Environment System

Libya's political system is theoretically based on the political philosophy in Gadhafi's Green Book, which combines socialist and Islamic theories and rejects parliamentary democracy and political parties (Gadhafi, 1981). In the

theory of Gadhafi, Libya became a direct democracy governed by the people through local popular councils and communes (Gadhafi, 1981). Gadhafi based his new regime on a blend of Arab nationalism, and aspects of the welfare state. Gadhafi (1981) called this system *'Islamic socialism'* and while he permitted private control over small companies, the government controlled the larger ones. Welfare, liberation, and education were emphasised, the implementation of a system of Islamic laws including the banning of alcohol and gambling (Gadhafi, 1981).

The General People's Congress is the legislature in Libya; it consists of circa 2,700 representatives of the People's Congresses (Gadhafi, 1981). The GPC is the legislative forum that interacts with the General People's Committee, whose members are secretaries of Libyan ministries (Khorwatt, 2006).

For most of the 1990s, Libya endured economic sanctions and diplomatic isolation as a result of Libya's refusal to allow the extradition to the United States [US] or Britain of two Libyans accused of planting a bomb on Pan Am Flight 103, which exploded over Lockerbie, Scotland. Following the intervention of South African President Nelson Mandela, who made a high profile visit to Libya in 1997 and United Nations [UN] Secretary General Kofi Annan, Libya agreed in 1999 to a compromise that involved handing over the defendants to the Netherlands for trial under Scottish law. UN sanctions were thereupon suspended, but US sanctions against Libya remained in force.

In August 2003, Libya wrote to the UN formally accepting responsibility for the actions of its officials in respect of the Lockerbie bombing and agreed to

pay compensation of up to US $2.7 billion or up to US $10 million each to the families of the 270 victims (Khorwatt, 2006). Thereafter, the US rescinded its ban on travel to Libya and authorised US oil companies to invest in Libya. Libyan cooperation led to relations warming with the US and in April 2004, when the US economic sanctions against Libya were ended, a written statement from the White House Press Secretary stated that US companies will be able to buy or invest in Libyan oil and products (Otman and Karlberg, 2007). US commercial banks and other financial service providers will be able to participate in and support these transactions. Since then, the Libyan government, with its new relationship with European Countries and the US, has attempted to play a more high profile role in the world and a number of international oil companies have invested in Libya (Khorwatt, 2006).

The recent improvements in diplomatic matters have been highlighted by the recent official visit by US Secretary of State Condoleezza Rice in 2008 (St John, 2008). Harrison *et al.* (2001) highlighted that needs to be further studies about auditing in developing countries. Joshi and Deshmukh (2009), Farag (2009), Faraj and Akbar (2010), and Michas (2010) have all identified the need for further studies which relate to Middle Eastern or Arab countries and the factors which are currently influencing these developing nations. One of the objectives of this study is to analyse the independent variables which may affect the auditor's perceptions about audit evidence and these factors are likely to be dually effected by the individual's perceptions and experiences of the political structure of the country they live and work in.

2.4.4 The Influence of Economic Environment System

2.4.4.1 Economic System

In the early 1970s, the government began a drive for economic development. Over the past 30 years, the expansion in the hydrocarbon sector has driven the country's economy, with the contribution of oil to Gross Domestic Product [GDP] at over 50% in the 1970s and early 1980s (Otman and Karlberg 2005). While the economy has largely depended on oil as the main source of wealth, the country has allocated a large amount of money to establishing industrial companies in non-oil sectors over the last two decades, following the government's Development Plans of 1980. Thus, the non-oil sectors increased significantly, contributing over 70% of GDP (Otman and Karlberg 2005). Nevertheless, the country still faced difficulty in being able to produce enough capital goods and consumer goods to achieve *'self sufficiency'* (Agnaia, 1996).

Libyan's economic system consists of private and public sectors. However, it is based on what is termed *'the Third Universal Theory'*, which is based on the *'Green Book'* authored by Gadhafi (1981).

In September 1992, *Privatisation Law No. 9* was passed to regulate the private sector business in the national economy and to open up a number of public sector enterprises for privatisation (General People's Congress, 1992). The law's key goal was to regulate and improve private sector investments. The law identified the economic sectors in which the private sector and individuals could invest. These sectors included production, distribution and service

activities in industry, agriculture, transport, commerce, finance, and tourism (General People's Congress, 1992). The law authorised the establishment of privately funded businesses, along with family and individual activities.

In 1997, the General People's Congress [GPC] issued *Foreign Investment Law No. 5*. This legislation is designed to encourage foreign investment in areas that would result in a transfer of modern technology, a multiplicity of income resources, and which would contribute to the development of the national products (General People's Congress, 1997).

In 2005, the GPC established the Libyan Stock Exchange [LSE] by *Libyan Stock Exchange Law No. 134*. The objectives of the LSE include (General People's Congress, 2005):

- Encouraging saving by ordinary citizens and raising capital for public companies
- Promoting and encouraging investment in securities
- Creating the necessary investment environment
- Establishing a code of conduct and fairness among the various investors
- Guaranteeing equal opportunities for those dealing in securities in order to protect small investors.

The first phase focused on introducing financial definitions and rules, the addition of several workshop courses, and a series of agreements with the Amman Stock Exchange [ASM], Cairo and Alexandria Stock Exchange [CSE, ASE] and the Egyptian Company for clearance and deposit. Listed market securities include the National Mills and Fodder Company, the United Insurance Company, and the Libyan Insurance Company, Sahari Bank, and the

Hay Alandalus Domestic Bank. The volume of subscription on July 2, 2007, totaled 49539 shares, with a total value amounting to US $ 568,707.00 [346,773 LD].

In October 2007, a cooperation agreement was signed in London between the Libyan Stock Exchange and London Stock Exchange. The agreement provides for training of teams from the Libyan Stock Exchange in Tripoli and in London to enable them to run the stock market operations (Libyan Stock Exchange, 2008).

2.4.4.2 Banking in Libya

Libya's banking and financial sectors are developing (Alfaitori, 2007). The economy largely operates on a cash only basis, and ATM cash machines are a common use on most Libyan city streets (Fayad, 2006). The Central Bank of Libya [CBL] started its operations in 1956 to replace the Libyan currency committee which was established in 1951 and whose functions were confined to maintaining sterling assets against the issue of local currency, thus having no role in controlling the money supply or credit or in supervising banks (Central Bank of Libya, 2003). The CBL is completely state owned and represents the monetary authority in Libya and enjoys the status of autonomous corporate body (Central Bank of Libya, 2003). The law establishing the CBL stipulates that the objectives of the Central Bank shall be to maintain monetary stability in Libya, and to promote the sustained growth of the economy in accordance with the general economic policy of the state (Central Bank of Libya, 2003). The

functions of the CBL have grown since its establishment, and now include the following (Central Bank of Libya, 2008):

1. Issuing and regulating banknotes and coins in Libya
2. Maintaining and stabilising the Libyan currency internally and externally
3. Maintaining and managing the official reserves of gold and foreign exchange
4. Regulating the quantity, quality and cost of credit to meet the requirements of economic growth and monetary stability
5. Taking appropriate measures to deal with foreign or local economic and financial problems
6. Acting as a banker to the commercial banks
7. Supervising commercial banks to ensure the soundness of their financial position and protection of the rights of depositors and shareholders
8. Acting as a banker and fiscal agent to the state and public entities
9. Advising the state on the formulation and implementation of financial and economic policy
10. Supervising foreign exchange
11. Carrying out any other functions or transactions normally performed by central banks, as well as any tasks charged to it under the law of banking and currency and credit or any international convention to which the state is a party
12. Managing and issuing all state loans

During the period of 1969-1992, there were no private banks in Libya. As shown in the Figure 2.1 on page 49, at the top of the system is the Central Bank of Libya, which sets the monetary policy and acts as a bank of the banks (commercial and specialised banks). The monopoly of the state-owned banks over the Libyan banking system and the absence of competition in the sector led to poor financial services (Alfaitori, 2007).

Figure 2.1: The Libyan banking system

Source: Central Bank of Libya [CBL] (2006)

The issuing of *Law No. 1 of 1993* has allowed for the establishment of private commercial banks and for foreign banks to open branches, agencies or have representatives in Libya (General People's Congress, 1993). Despite government efforts to build a strong financial sector that could support private investment initiatives (Alfaitori, 2007), the Libyan banking sector plays no significant role in improving the economy and is still in its very early stages compared to those of developed countries (Otman and Karlberg, 2007). However, the fluid nature of the financial industry is very promising for foreign investors as it generates US$ 60 to US$ 70 billion in revenue every year (Fayad, 2006). Because the Libyan banks have a high level of accounting

and auditing systems (Alfaitori, 2007; Al-Badre, 2007) the internal auditors for this study will be selected from the banking sector in Libya.

Following the recent political changes and their impact on the economic sector in Libya, there has been a high demand for auditors to meet the new challenges of the changing economic structure. Farag (2009) and Michas (2010) highlight the need to improve professional practice and develop professional education to meet the challenges of the global economy in developing countries. Gronewold (2006) stress that accountants and auditors need to meet the needs of the users of their documentation. As the circumstances for the users in Libya along with the types of users are changing thanks to the economic development of Libya, the professionals need to change to address the new needs (Gronewold, 2006).

2.4.5 The Influence of Culture

The main aspects of the social structure of contemporary Libya are the extended family, the clan, the tribe and the village, all of which play a major role in the individual's and community's life. The Libyan family has a wide connotation which includes father and mother and their unmarried and married sons and daughters with their families as well as many more distant relatives and kinsmen such as grandparents, aunts, uncles, cousins, nieces and nephews (El-Fathaly and Palmer, 1980; Ritchie and Khorwatt, 2007). Agnaia (1996) indicated that because the individual is identified with his family, his good or bad deeds bring collective fame or shame to the family members. The individual has to obey and respect the rules and traditions of the family, clan,

the tribe and village. Agnaia (1996) pointed out that personal relations and family contacts can play a greater part in gaining business and career promotion than practical experience or academic qualifications. Loyalty to the family, clan, and tribe along with the emphasis placed on regionalism and sectarianism, occasionally outweigh loyalty to a profession and sometimes the law. Pratten and Mashat (2009) indicated that family; religion and language have a significant effect on the attitude and behaviour of people in Libya and Arab society. In Libya, the family operates as a small society, with its members being assigned to a hierarchical order, according to age and generation. Authority and leadership are the preserve of the father, grandfather, or eldest son (Ritchie and Khorwatt, 2007).

As most of the Libyan population is Muslim, Islam plays an important role in the community's life and in people's relationships with each other (Lewis, 2001). Furthermore, the revolutionary system is committed to Islam and has on a number of occasions clearly reaffirmed Islamic values (Agnaia, 1997). In societies with a high level of male-domination, there are rewards in the form of wealth or status for the successful achiever. In male-dominated cultures, men are expected to be ambitious, assertive; concerned with money and to admire whatever is big and strong. In contrast, in cultures identified as having low masculinity, trying to be better than others is neither socially nor materially rewarded. In feminine cultures both men and women are expected to be non-competitive, modest, concerned with relationships and to sympathise with whatever is small and weak (Hofstede, 1991).

Pratten and Mashat (2009) indicates that Libyan society is described as one which is characterised as male-dominated. Libya, like all Arab countries, distinguishes clearly between male and female roles. Libyan culture is mainly masculine because the dominant role in Libyan society belongs to men (Pratten and Mashat, 2009). In addition, in Libya, the high degree of collectiveness and solidarity cannot be matched in any modern country (El-Fathaly and Palmer, 1980). Agnaia (1996) pointed out that Libya as an Arab country may be characterised more as a collectivist culture.

Hofstede (1991) observes that culture plays an important part in the culture of organisations. This cultural factor is likely to influence the political and economic structure of organisations within Libya and other Arab counties and thus needs to be considered when investigating current practices and policies in the Libyan context for auditors.

2.4.6 The Effect of Accounting Education in Libya

Prior studies in accounting education in conducted in Libya (e.g. Kilani, 1988; Mahmud and Russell, 2003; Ahmad and Gao, 2004) concluded that since most university teachers undertook their education at American universities, the accounting system has shifted from British oriented textbooks to American oriented textbooks. Mahmud and Russell (2003) in their study of the development of accounting education and practice in Libya identified several factors as the main impediments to the development of accounting education in the Libyan context. These include: (a) the outmoded accounting curricula and syllabuses; (b) the scarcity of modern textbooks and references in Arabic, (c)

the lack of active professional societies, and (d) insufficient public knowledge of the role of accounting. Mahmud and Russell (2003) find that Libya needs to strategically plan in order to modify and modernize both its accounting education and practice.

Libyan accounting education focused entirely on the intermediate level (pre-university), with the establishment of the first School of Public Administration in 1953, the aim of which was to develop clerks and book keepers (Buzied, 1998). Accounting education at university level started in 1957 with the establishment of the Accounting Department in the Faculty of Economics and Commerce at the University of Libya (now called Garyounis University) (Kilani,1988; Buzied,1998). The accounting education system in Libya is divided into three levels: pre-university, undergraduate programme, and postgraduate programme.

Pre-university level accounting education extends over 3-4 years of study. It is subdivided into general baccalaureate, specialised baccalaureates, technical and vocational institutes and centres. This level of education is made up of over 30 commercial institutes, colleges and secondary commercial schools. Most of them were established to meet the increasing demand for bookkeepers, accountants, clerks and secretaries for both governmental and private sectors (Buzied, 1998).

Since undergraduate programme inception in 1957, the Accounting Department in the Faculty of Economics and Commerce at Garyounis University has been the most influential force in accounting education in Libya. From 1957-1981, it

was the only faculty that offered accounting education at the university level. The growing demand for accountants and accounting services in the 1980s increased the need for the provision of accounting education at the higher education level. As a result, a few other universities such as El-Fatah University and Al-Jabal Algarbi University also began to offer accounting programmes (Buzied, 1998; Mahmud and Russell, 2003).

For the postgraduate programme, the Department of Accounting at Garyounis University has been offering a master's programme since 1988. The programme is organised into three components: core subjects, electives and a dissertation. It includes five core subjects of accounting and accounting related subjects, plus a minimum of three electives from six choices, among which must be at least one from management postgraduate subjects, one from economics postgraduate subjects and a dissertation (Ahmad and Gao, 2004).

Until 2004, there was no Doctor of Philosophy [PhD] programme available in accounting accessible within Libya, even though this qualification was considered to be very important for the advancement of the accounting faculty and the development of accounting research. Staff members with a PhD are either foreigners or Libyans who studied outside Libya in another country such as the US or UK. The lack of a PhD programme is one of the main factors that have contributed to the slow development of accounting education and research in Libya according to Ahmad and Gao (2004) along with the previous diplomatic difficulties.

Research in accounting and auditing in Libya has been quite insignificant (Ahmad and Gao, 2004; Pratten and Mashat, 2009). Only a few staff members of accounting departments in the universities have been active in this field and then only on a small scale (Abofars, 2008). Accounting and auditing research in Libya is conducted in two ways: firstly by publishing articles in the journals by academics accountants. The other way to conduct research in Libya is through the research project which is one of the requirements for either MSc or PhD degrees. The study by undertaking research in the Libyan environment is attempting to improve the knowledge of auditing in Libya.

After the revolution of 1969, the Libyan state has paid more attention to higher education and offered many scholarships for Libyan graduates to pursue their education abroad (Abulgasem and Alukel, 2007). The policy of the government was focused on sending accounting students to the US and the UK (Abofars, 2008). However, this policy only continued for a short time, and then political issues negatively affected the relationships between Libya and the US and UK (Khorwatt, 2006). This was especially after the killing of a policewoman during a demonstration outside the Libyan People's Bureau in London in April 1984, which had led to the breakup of diplomatic relations with the two countries.

The relationship with the US got worse in 1982 when the American government banned the import of Libyan oil to the US, and the US stopped all exports to Libya. As a result of that, the number of students who were sent to the US and the UK decreased sharply especially in the eighties and nineties. This has created an extreme skills gap and shortage of the number of academic

accountants who teach in Libyan universities and in auditing research (Khorwatt, 2006).

Furthermore, with regard to auditing, it can be argued that the accounting education system in Libya has offered few courses related to auditing even on undergraduate programs or Masters Programmes. This means that there is a high probability that an accounting student will graduate with little experience of auditing. Haniffa and Cooke (2002) states that a well-educated society will demand their right for companies to fulfil their social obligations and be accountable for their actions.

Mahmud and Russell (2003), Ahmad and Gao (2004) and Abofars (2008) have all identified that further professional education is required to improve professional practice while Farag (2009) and Michas (2010) emphasise the needs for professionals in developing countries to improve their practice to meet the challenges of globalisation. Abulgasem and Alukel (2007) highlighted that the diplomatic situation during the 1990s created a lag in the educational development of professionals and academics within Libya and as a result the professional development education sector has been delayed in relation to current best practice ideas and ideals.

2.4.7 The Influence of Auditing Regulations

In the 1970s, with the increase of accounting graduates from the Garyounis University and the return of many graduates from abroad, many Libyan-run accounting firms were established. As a result of the increase of accounting

firms in both number and size, and the lack of regulation over accounting and auditing standards and practices, there was an urgent need to set up a professional body, to take the responsibility for developing a general framework of accounting and auditing. To meet the demand, *Accounting and Auditing Professions Law No. 116* was enacted in 1973 (Libyan State, 1974). It covers (Libyan State, 1974):

- The establishment of the Libyan Accountants and Auditors Association [LAAA]
- Registration of accountants
- Exercise of profession
- Fees
- Pension and contribution fund
- Obligations of accountants and auditors
- Penalties
- General and transitional provisions

The LAAA was established in 1974 with the following objectives (Libyan State, 1974):

1. To organise and improve the conditions of the accounting profession and to raise the standards of accountants and auditors professionally, academically, culturally and politically
2. To organise and participate in conferences and seminars related to accounting internally and externally and to keep in touch with new events, scientific periodicals, lectures and so on
3. To establish a retirement pension fund for its members
4. To increase co-operation between its members and to protect their rights
5. To take action against members who violate the traditions and ethics of the profession.

The primary professional qualification of accountancy in Libya is membership of the LAAA. Accountants who want to qualify as members must meet the following requirements (Libyan State, 1974):

1. Hold Libyan nationality.
2. Have a bachelor's degree in accounting.
3. Have five years experience of accountancy related jobs in an accounting office after obtaining the bachelor's degree.
4. Be of good conduct, reputation and respectability, commensurate with the profession.

Accountants who are registered on the list of accountants in practice have the right to certify accounts and balance sheets of all types of firms and taxpayers. Registration with the LAAA ensures that an accountant or auditor has the accreditation to work in the private sector as a professionally accredited individual. Accounting firms in Libya, which are required to be licensed by the LAAA, can offer services in such areas as preparing financial reports, auditing, tax services, bankruptcy, management consulting, system design and installation (Libyan State, 1974). Because of a shortage of expertise and experience in many service areas, along with low demand from companies and organisations for other services, most of the public accountants are predominantly occupied in preparing and auditing financial reports. Other services are seldom provided (Buzied, 1998).

In 1988, Libyan State established the Institute of Public Control [IPC] by *State Accounting Bureau [SAB] Law No. 7*. The IPC is responsible for auditing all the state agencies, departments, organisations aided by or in receipt of loans from the government together with any other corporations to which the state

contributes more than 25% of the capital (Libyan State, 1988). The IPC's responsibilities have been extended to include the auditing of foreign companies and joint ventures operating in Libya, with the purpose of ensuring that these companies operated in accordance with Libya's laws and regulations. IPC membership is the alternative professional qualification for auditors in Libya who work in the public sector. An accountant who wants to qualify as a member must meet the following requirements (Libyan State, 1988):

- Hold Libyan nationality.
- Have a bachelor's degree in accounting.
- Have five years of accountancy experience in the IPC.
- Be of good conduct, reputation and respectability, commensurate with the profession; and swear to do work with complete honesty and integrity.

The variation in professional registration body for Libyan auditors is highly likely to affect their professional perceptions based on the different rules and expectations that they have from the professional bodies(Ahmid, 2000). The IPC versus the LAAA division is likely to create variables based on the sectors that the auditors are individually focused upon (Haron *et al.*, 2004: Michas, 2010; Lopez and Smith, 2010). While IPC are state auditors for government agencies the LAAA auditors work in the private sector and experience a different operational environment. The IPC group of auditors is also likely to be differentiated by the audit sector they predominately work in for example taxation. This experiential background of the LAAA and the range of service sectors that the work in provides a greater range of environments (Kalel, 2000; Ahmid, 2000).

2.5 Summary

Like many Arab countries in recent history, Libya, is experiencing rapid economic change and undergoing major developments (Al-Hussaini *et al.*, 2008). Developing countries around the world are facing economic changes and in particular in the Middle East, North Africa and GCC there is a tendancy to diversify industry from agriculture or oil dominated economies (Marashdeh and Shrestha, 2010). An initial emerging economy discussion was extended with the historical economic developments of Arab countries in the region to develop the characteristics that impact on the development of professional practice and regulation in the region. From this discussion of emerging and Arab nations, characteristics were identified and these factors can be observed in Libya (Maali *et al.*, 2006). These cross contextual similarities present an opportunity to learn from each other (Jahamani, 2003; Humphrey, 2007; Michas, 2010). It is hoped from the investigation of the situation in Libya new approaches will be developed and these will transferable to other Arab nations who are attempting to address the audit evidence needs as a developing country (Abulgasem and Alukel, 2007; Aggestam, 2009). By extension from Libya and other Arab Nations further strategies may be applied to other emerging economies around the world.

Libya's recent history has been identified as a factor in the delay in professional development and education and this includes Libya's participation in the global economy. The change from a planned economy to a market economy has also

impacted on the accounting and auditing practices within the country. Cultural practices of organisations impact on the society and its people.

CHAPTER THREE
LITERATURE REVIEW

3.1 Introduction

The aim of this chapter is to review the literature regarding audit evidence in general and the study factors which are: source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence that may affect its quality and quantity in particular.

Through a discussion of the nature and definition of evidence this study identifies how evidence is defined and can be interpreted within auditing. From the definition of evidence in the contextual setting of auditing, the discussion will then move onto the sufficiency and the appropriateness of audit evidence highlighting the factors which impact on evidence including the theories of evidence.

3.2 The Definitions and Nature of Evidence

In general, Oxford Dictionary (2008) defines the concept of evidence, as:

> "Information or signs indicating whether a belief or proposition is true or valid"

Mautz and Sharaf (1961) in their philosophical discussion about evidence describe it as: *'Truth'*. This approach to truth is classified by Mautz and Sharaf (1961) as:

- Material truths are those which are impressed on our minds by natural evidence.
- Mathematical truths which result from the acceptance of the basic postulations and assumptions of mathematics.

- In addition to mathematical abstract rules of law or conceptual truths there are additional abstract definitions of truth from other philosophical and theoretic knowledge areas which provide a diverse and complex range of theoretical concepts.

Evidence has received considerable attention from several fields such as law and auditing, who have attempted to define what is meant by evidence. For example, the theoretical approach to evidence in the law subject area is described as the means of establishing and proving the details of any fact that is alleged demonstrating the truth or untruth of the assertion (Keane, 2008; Gorter, 2008; Gardner and Anderson, 2009; Nemeth, 2010). While, it defined by the ISA 500 (2010) as:

> "All the information used by the auditor in arriving at the conclusions on which the audit opinion is based, and includes the information contained in the accounting records underlying the financial statements and other information" (IFAC, 2010b: Para.3).

Evidence, in the context of auditing, according to Kumar and Sharma (2005), Soltani (2007) and Rittenberg *et al.* (2009) refers to any information used by the auditor to evaluate whether the quantifiable information under audit has been stated in accordance with the established criteria. As part of the audit opinion the evidence utilised on which the opinion is based is required to be documented (Kumar and Sharma, 2005; Soltani, 2007; Rittenberg *et al.*, 2009).

From the various definitions of evidence for the purpose of this study *evidence* will be defined utilising the ISA 500 (2010) where information gathered by either oral conversation, physical and electronic documents, and visual observation of specific practices and locations will be considered as part of the

audit evidence. Evidence must be utilised in the audit process to support the expert analysis, assessment and final opinion report by the auditor. The advantage of using this definition and standardised approach to evidence in the Libyan context is, as an international standard, this definition of evidence currently operates in other countries. By using International Standards such as ISA 500 (2010), Libyan auditing professionals are working to provide confidence to the users of audit information. This confidence in relation to the business practices provides a lower risk exposure for foreign multinational organisations when they are considering investing in the Libyan economy.

The literature of evidence provided comparisons between evidence in different fields. Mautz and Sharaf (1961: 76) consider five conceptual areas in relation to evidence (See Table 3.1 on page 67). This table by Mautz and Sharaf (1961) illustrates the dissimilarity that the theoretical areas including auditing, has towards the different characteristics of each type of evidence. An example for these differences in theoretical approaches is the purpose for which the different theoretical and philosophical areas use the evidence. In the legal theoretical area, evidence is to prove a statement while in the theoretical area of history; evidence is to enable the historian to develop an understanding of the event that has occurred in the past. As the needs and requirements of each theoretical area will differ, therefore their approach to evidence will differ. While there is some dissimilarity there is also considerable similarity between some of the theoretical areas. A good example of this similarity in the use of evidence can be observed in historical studies and auditing. Historical research and auditing have much in common in their usage of evidence. These two

theoretical areas both work with the documentation of past events although auditing is also concerned with some present conditions as well as what has happened in the past.

Table 3.1: Comparative classification of evidence in five fields

Source: Mautz and Sharaf (1961: 76)

Audit evidence includes data generated by the operation of organisational accounting systems, the actual physical inspection of assets held by an organisation, and documents created internally and externally which includes previous audit opinion statements (Kumar and Sharma, 2005; Soltani, 2007). Table 3.2 below provides some examples of audit evidence which can be utilised in the audit process by the auditor.

Table 3.2: Some examples of audit evidence

Source: Soltani (2007: 281)

There have been a number of theoretical attempts by auditing researchers to clarify the nature of audit evidence. Mautz and Sharaf (1961) recognised that there were three broad classes of audit evidence which are natural evidence, creative evidence and rational argument.

Natural evidence is a type of evidence that exists all around us and is relied upon commonly in every mental activity that we perform (Mautz and Sharaf, 1961; Flint, 1988; Barnes, 1991; Power, 1992; Gronewold, 2006). This type of evidence leads to the description of 'material truths' that leave no room for doubt. Gronewold (2006) emphasises that natural evidence is the most convincing type of evidence available as the individual intrapersonal cognition about the evidence does not factor into the use of the evidence.

The second class of evidence described by Mautz and Sharaf (1961) is creative evidence. This evidence does not naturally occur but is created through effort to bring it forth. Scientific experimentation is an example of this type of evidence. When a scientist performs an experiment the results of the experiment have been created through the activities of the scientist thus they have created evidence through effort. Within the auditing process scientific or creative evidence is when the auditor uses calculation to confirm the figures reported in a financial statement such as the balance sheet. Gronewold (2006) describes this secondary form of evidence as information which the auditor has to perform cogitative evaluation for it to become evidence.

From the empirical scientific approach the third class of evidence is that of rational argument has developed from the application of logic to philosophical discussion which is described by Mautz and Sharaf (1961) as abstract evidence. Rational argument is not directly developed from the observation of natural evidence or from experimental created evidence. The logical approach of experimental created evidence has been expanded to rational argument which

covers the discussion of ideas which have developed from observed fact. The observed facts may appear to be true to the observer yet the observer has had to undertake mental effort to take the sequences of images that they have observed into a conclusion that their mind finds appealing. Taylor *et al.* (2003) highlight that evidence is affected by abstract theoretical approaches even ethical concepts including validity and reliability. The auditor when undertaking an audit needs to have a detailed understanding and appreciation of the ethical concepts.

3.3 Sufficiency and Appropriateness of Audit Evidence

ISA 500 (2010) has defined the terms of '*sufficient*' and '*appropriate*' in relation to evidence as:

> "Sufficiency is the measure of the quantity of audit evidence. Appropriateness is the measure of the quality of audit evidence" (IFAC, 2010b: Para.7).

For the purpose of this study sufficiency has been defined based on the ISA 500 (2010) as the quantity of the material while the terminology of appropriateness is when the researcher is describing the quality of the audit evidence.

There is a symbiotic relationship between the '*sufficiency*' and '*appropriateness*' concepts of evidence has been described by the auditing literature and standards as an *interrelationship* as a result of the interaction between these two concepts (Chambers, 2006; Talbot, 2006; IFAC, 2010b, ISA 500). For example, ISA 500 (2010) states that:

> "The sufficiency and appropriateness of evidence are interrelated concepts and refer to the quantity and quality of evidence. The decision as to whether a

> sufficient quantity of evidence has been obtained will be influenced by its quality" (IFAC, 2010b: Para. 33).

Rittenbery *et al.* (2009) suggests that there is a generally a strong interrelationship between the concepts of *sufficiency* and *appropriateness* of evidence but there are cases where the quantity of evidence may not have the quality or appropriateness as required and *visa versa.*

In determining the quality and quantity of evidence, studies by Kumar and Sharma (2005), Talbot (2006) and Soltani (2007) have suggested that the auditor will be influenced by some factors that s/he should consider. These include:

- The assessment of the nature and degree of risk of misstatement at both the financial statement level and account balance or class of transaction level.
- The nature of the accounting and internal control systems, including the control environment.
- The materiality of the item being examined.
- The experience gained during the previous audits and the auditors' knowledge of the business and industry.
- The findings from the audit procedures and from audit work carried out in the course of preparing the financial statements, including indications of fraud and error.
- The source and reliability of information available.

(Kumar and Sharma, 2005; Talbot, 2006; Soltani, 2007)

Mautz and Sharaf (1961) argue that the important point is not the quantity of evidence but rather the quality of evidence that is used in an audit. For instance,

a single piece of evidence may be compelling, whereas a large amount may be only somewhat persuasive. Guy *et al.* (1996: 142) state that:

> "Evidence is persuasive if it is sufficient in quantity and quality to allow the auditor to reach a conclusion. Persuasiveness should stand the test of evaluation by other auditors; that is, other auditors should also agree that the amount of evidence is persuasive".

Reliability of audit evidence is judged by its ability to provide convincing evidence related to the audit objective being evaluated (Caster and Verardo, 2007; Rittenbery *et al.*, 2009). The ISA 500 (2010) has established several presumptions about the reliability of audit evidence in order to guide the auditor in the collection and evaluation of the evidence that they gather during the audit process (See Table 3.3 below).

Table 3.3: Reliability of audit evidence

Source: (IFAC, 2010b, ISA 500)

According to the guidance provided to auditors by the ISA 500 (2010), evidence obtained directly by the auditor is preferable to that obtained indirectly. Evidence from well-controlled information systems is more desirable for the audit process than evidence from poorly controlled systems.

Independent third-parties evidence obtained from knowledgeable individuals with adequate time and motivation to respond to auditor inquiries is preferable to internally generated information from the client. Evidence supported by original documents is preferable to photocopied documents or verbal evidence not supported by original documents. However, some types of evidence better address specific assertions. For example, if the auditor wishes to test warranty liabilities, it is likely that most of the information resides internally such as client's accounting system and some operational data. However, that data should be supported by a strong internal control system and documentation related to client warranty claims (Rittenbery *et al.*, 2009).

3.4 Factors Effecting Sufficiency and Appropriateness of Audit Evidence

It is important to note that examining a range of audit evidence types is expected to increase audit quality and effectiveness (Marietta and Arnold, 2008). As previously be discussed in chapter one there are six factors which have been developed from Bentham's (1827) theory of evidence, Caster and Pincus (1996) two additional factors of evidence. Caster and Pincus (1996) identified that the structure of audit evidence and the personal characteristics of the auditor such as their knowledge and experience as an auditor are additional factors which affect the evidence that they collect. The specific factors were described in Figure 1.2 on page 7. Gronewold (2006) identifies that by addressing these additional factors identified by Caster and Pincus (1996) that

this will lead to improvements in the quality of audits and the performance of auditors.

The six identified variables which may impact on audit evidence are: source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence. These six variables will be used to examine the main aim of this study which is to investigate and understand the extent of the sufficiency and appropriateness of audit evidence used by Libyan auditors as part of the auditing process. A short synopsis of the factors that affect audit evidence has been provided on page 75 in Table 3.4.

Table 3.4: Synopsis of factors that influence audit evidence

	Ahmid (2000)	Kalel (2000)	Arthur (2001)	Anderson *et al.* (2001)	Harrison *et al.* (2001)	Abou-Seada and Abdel-Kader (2003)	Rose and Rose (2003)	Blay *et al.* (2003)	Glover *et al.* (2004)	Kizirian *et al.* (2005)	Glover *et al.* (2005)	Gronewold (2006)	McDaniel and Simmons (07)	Payne and Ramsay (08)	Kaplan *et al.* (2008)	ISA 500 (IFAC, 2010b)
1. Source reliability Independence						✓						✓				✓
Integrity				✓												
Knowledge										✓					✓	✓
2. Directness of evidence Direct evidence		✓										✓				✓
Indirect evidence												✓				✓
3. Type of evidence		✓				✓					✓	✓		✓	✓	✓
4. The auditor Experience	✓		✓									✓				✓
Independence of auditor																✓
The errors and biases						✓										✓
Skills												✓				
Adequate question framing																✓
5. Combination of evidence Dispersion between items of evidence									✓							✓
Consistency vs. inconsistency of evidence					✓											
6. Amount of evidence The materiality or significance of the account												✓				
The risk of material misstatement of financial statement							✓									
Cost of evidence								✓								
Adequacy of internal control																✓

3.4.1 Source of Evidence

The persuasiveness or quality of audit evidence depends on the reliability of its source (Gronewold, 2006; Missah, 2008). According to Goodwin (1999) the independent source is perceived by the auditor as more credible than the non-independent source, but to confirm the reliability of this source, the source should be known to the auditor. The ISA 500 (2010) state:

> "Audit evidence obtained from an independent source may not be reliable if the source is not knowledgeable" (IFAC, 2010b: Para. 4).

Figure 3.1 below describes the various sources of evidence. The auditor needs to gather sufficient evidence so that the risk of material misstatements is minimised. The assurance that is gained through a combination of procedures that always includes: (a) an evaluation of internal controls over the financial reporting process and; (b) direct tests of the account balance or underlying transactions. Evidence is obtained through the combination of control testing and account balance testing.

Figure 3.1: Some sources of audit evidence

Source: Rittenberg *et al.* (2009: 307)

Several studies in the auditing area have indicated that the competence and the objectivity of the source is an important determinant of persuasive power of the evidence (Payne, 2004; Marris, 2010). The ISA 500 (2010) state that:

> "Evidence obtained from independent sources outside the enterprise is more reliable than that secured solely from within the enterprise" (IFAC, 2010b:Para.9).

However, Rose and Rose (2003) advise that is not always possible to determine the validity of specific information or its source.

Prior auditing literature including Kizirian *et al.* (2005), McDaniel and Simmons (2007), Payne and Ramsay (2008), Kaplan *et al.* (2008), Zhang e*t al.* (2009), Marris (2010) and professional standards such as ISA 580 *'Management Representations'* (2010) have focused on examining the influence that some characteristics have on the audit process. These characteristics include the *competence, credibility, reliability* and *objectivity* of the entity's management of the quality of management information. These studies found that the audit evidence affected by the type of its source such as external or internal. Kaplan *et al.* (2008) concluded that the accounting system of a client is not a completely objective and reliable source for obtaining audit evidence. On the other hand, Goodwin's (1999) study revealed that auditor judgment did not differ when information came from an external source such as independent agency versus an internal source such as the organisation's management information systems such as the accounting application.

According to Janvrin (2001) and ISA 500 (2010), the auditors should assign greater persuasiveness to evidence from external parties than to evidence from

internal parties. However, the auditors may be unable to collect evidence from external parties. There could be delays in obtaining responses to requests for information and as a result the auditor may be compelled to rely on internal sources for gathering audit evidence (Caster and Pincus, 1996). ISA 330 *'The Auditor's Responses to Assessed Risks'* (2010) directs auditors to maintain an attitude of professional scepticism when they integrate information provided by management into their auditing judgments (IFAC, 2010b).

Haynes (1999) investigated the relationship between the auditor experience and the evidence source. Haynes (1999) found that the persuasiveness of information obtained from management was influenced by auditor experience and source credibility. More recently, Kaplan *et al.* (2008) examined the auditor experience and its effect on management-provided information and suggested that management is not an objective information source.

According to Salterio and Koonce (1997) and Agoglia *et al.* (2009) audit team members placed more weight on information originating from other audit team members than information from client personnel. Anderson *et al.* (2001) and Al-Angari (2006) point out that auditors are sensitive to the objectivity of the source of evidence. Auditors consider evidence from a fellow auditor to have a higher standard of quality than evidence from the entity's management, because the fellow auditor is seen as more objective than client management (Salterio and Koonce, 1997). Kizirian *et al.* (2005) discovered that management integrity exhibits incremental explanatory power beyond the risk of material misstatement for the persuasiveness of audit evidence collected.

According to Kizirian *et al.* (2005), when the client's information is not trustworthy, the auditor seeks to collect external evidence such as a report from an expert. On the other hand, Von Wielligh (2006) concluded that it is not appropriate for the external auditor to rely solely on the reports of experts in expressing an opinion in relation to the financial affairs. Von Wielligh (2006) suggested that some key issues that should be considered by the auditor before deciding to rely on an expert's report. These issues include: the type of expertise, the assessment of the risk of error in the report of the expert, the scope of the work of the expert and the appropriateness of the work of the expert as audit evidence.

Evidence gathered from highly credible sources is perceived as being more valid than evidence obtained from less credible sources (Murphy and Yetmar, 1996). Therefore, the auditors rely more heavily on evidence from a more competent source than a less competent source (Anderson *et al.*, 2001), But as previously mentioned the credibility of the source is dependent on the expert's previous experience, the scope of the evidence which they are providing their expert opinion upon and the validity of the context where the expert opinion has been asked. Where the expert comes from and what they are asked about are identified by Von Wielligh (2006) are important to ensure the credibility and validity of the expert's opinion.

3.4.2 Directness of Evidence

Caster and Pincus (1996: 6) define direct evidence as: "Evidence that goes in one stage to the matter asserted in the evidence".

Most auditing studies that discuss the evidence area have focused on investigating the effect of some issues on audit evidence such as source, type and amount (Kizirian *et al.* 2005; Gronewold, 2006; Morariu *et al.*, 2008; Zhang e*t al.*, 2009; Agoglia *et al.*, 2009). Caster and Pincus (1996) however, identify that the directness of evidence factor has not received sufficient attention from both auditing researchers and professional standards.

Caster and Pincus (1996) found that the number of audit tests and the direction of audit evidence to the test at hand were influential in affecting the persuasiveness of audit evidence. Caster and Pincus (1996: 7) state that: "as the directness of evidence increases, the evidence becomes more persuasive". Similarly, Audit evidence obtained directly by the auditor (for example, observation of the application of a control) is more reliable than evidence obtained indirectly or by inference (for example, inquiry about the application of a control) (IFAC, 2010b, ISA 500). For instance, confirmations obtained directly by the auditors from knowledgeable third parties are considered to have a very high degree of reliability (Cosserat, 2000). However, evidence obtained indirectly by the auditor is at least as effective in initially detecting financial statement errors (Spires, 1991).

Martin (2007) advises that the auditor needs to ensure that the internal controls of the organisation which is being audited should be assessed. If internal controls are understood by the auditor as those which are to likely be strong, the auditor will plan to gather audit evidence to confirm that controls are in place and operating effectively in order to minimise the amount of direct audit

evidence needed to test the financial statements (Martin, 2007). If the auditor assesses that the internal controls within an organisation are likely to be weak they will need to identify alternative methods to collect and assess the evidence about the organisation. According to Missah (2008), some documents represent direct audit evidence of the existence of an asset, for example, a document constituting a financial instrument such as a stock or bond. However, Inspection of such documents may not necessarily give evidence about ownership or value of the financial instrument (IFAC, 2010b, ISA 500).

3.4.3 Types of Evidence

Audit evidence is information that provides a factual basis for the audit opinion. It is the information documented by the auditors and obtained through observing conditions, interviewing people, examining records, and testing documents (Kaptein *et al.*, 2009; Agoglia *et al.*, 2009). This information can come in many different forms such as documents or oral information, from many different sources such as the accounting system of organisation which is being audited, and may be obtained in several different ways such as observation or inspection (Marris, 2010).

The different types of audit evidence can be classified as being: physical evidence, documentary evidence, confirmations (third-party representations), analytical procedures, and oral evidence (Aldhizer and Cashell, 2006; Payne and Ramsay, 2008; Zhang e*t al.*, 2009; Pany and Whittington, 2010; Janvrin *et al.*, 2010; IFAC 2010b, ISA 500). Most these studies analysed each type of evidence separately, discussing peculiarities, exceptions, special factors that

influence reliability, and then describe certain situations, in which evidence is either more or less reliable.

3.4.3.1 Physical Evidence

Physical evidence is described by Gray (2008), and Oprean and Span (2009) as the inventory or the examination of the quantitative existence and qualitative status of the tangible assets (stocks and cash) and other items reflected in the balance sheet (licenses, patents, trade effects, securities, and others). Physical examination is useful for verifying the occurrence of production operations making or receiving of goods and execution of works (Gray, 2008; Pany and Whittington, 2010). The Inventory process and physical examination of tangible assets provide conclusive audit evidence or a high probative force (Oprean and Span, 2009). According to Jarboh (2006) and Joshi and Deshmukh (2009), physical evidence provides reliable audit evidence with respect to existence. However, it cannot provide sufficient evidence about the ownership of goods (rights and obligations) or on the valuation of these assets (historical cost, realizable value or recoverable amount) (IFAC, 2010b, ISA 500). In order to increase the reliability of the physical evidence of tangible assets, Oprean and Span (2009) suggested that the existence of assets shall be inspected on the basis of relating documentary evidence.

3.4.3.2 Documentary Evidence

Documentary evidence has traditionally been defined as paper based information and recently this definition has been refined to include any type of

recorded information such as a computer or video or audio (Gray, 2008; Jarboh, 2006; Agoglia *et al.*, 2009; Marris, 2010). Documentary evidence is described by ISA 500 (2010) and Joshi and Deshmukh (2009) as a reliable form of evidence. The ISA 500 (2010) states that:

> "Documents that have not passed through the client's organisation are usually considered the most reliable ones, followed by those created outside that are in the possession of the client. However, those that were prepared inside the client's entity are considered the least reliable ones" (IFAC, 2010b: Para.7).

The degree of credibility of this type is dependent on the independence and objectivity of the document's source, the effectiveness of internal control (Ross and McHugh, 2006; Oprean and Span, 2009). External documents such as confirmations form third parties are more credible than documents created inside the entity (IFAC, 2010b, ISA 500). Prior literature related to auditing evidence (Ross and McHugh, 2006; Gronewold, 2006; Marris, 2010) and ISA 500 (2010) advised the auditor to consider the independence, integrity and reliability of the source of documents, the effectiveness of the control, and the method of delivery (direct or indirect), and the form of documents (original or copy) when s/he is evaluating the sufficiency of this type of evidence.

3.4.3.3 Confirmations

Confirmation is an interview process which is directly obtained from third parties such as customers, banks and other business partners. According to Janvrin *et al.* (2010) confirmation can consists of some written statements as a result of requests made to third party organisations and individuals such as lawyers' letters and specialist reports (Gray, 2008; IFAC, 2010b, ISA 505). Client's confirmation and other claims by debtors is a costly procedure and

creates some inconvenience to third parties (Allen and Elder, 2001; Hammami and Fedhila, 2009). However, the requested answers for confirmations are received directly from independent sources of the audited entity and, therefore, they are considered reliable audit evidence (Oprean and Span, 2009; Caster *et al.*, 2008; Marris, 2010).

US audit standards have required auditors to confirm accounts receivable balances since 1939 (American Institute of Accountants [AIA], 1939), and because auditors perceive them to be persuasive evidence for many assertions, they also use them for other accounts such as cash, debt and marketable securities (Caster *et al.*, 2008). The current international audit confirmation standard, ISA 505 '*External Confirmations*' was recently revised and updated (IFAC, 2010b). According to this standard, confirmatory applications take several forms such as positive and negative forms (IFAC, 2010b, ISA 505), each of them have some advantages and disadvantages. For example, confirmation received from third parties can represent audit evidence regarding the existence and accuracy of accounting, but does not provide sufficient evidence of accounting or completeness on the debtor's solvency to enable to the recoverability of receivables (Oprean and Span, 2009).

Cosserat (2000) suggests several factors which may influence an auditor when considering the acceptability of third party certificates as evidence. These include:

1. It is written
2. It is received in direct response to a request made by the auditor himself, it neither is volunteered nor is received following a request by the company

3. The third party is properly qualified for the purpose of the certificate and that his status is credible and has integrity in the opinion of the auditor
4. The third party is independent of the company.

Examining the audit confirmation process is important since confirmations are commonly used in the audit process and are often perceived to be one of the more persuasive forms of audit evidence. Janvrin *et al.* (2010) described audit confirmation process as illustrated in Figure 3.2 on page 86. The audit confirmation process consists of several steps. First, auditors evaluate if confirmations are appropriate and choose the financial statement items relevant to the audit objectives for which confirmations are to be requested. Assuming confirmations are appropriate; auditors design the confirmation request and identify the appropriate relevant third party who will receive the request. Once the request is designed, auditors communicate the request, most often a written confirmation sent by postal mail, to the appropriate third party (Aldhizer and Cashell, 2006). To reduce the possibility that the results will be biased because of interception and alteration of the confirmation requests, auditors are advised by auditing standard to maintain appropriate control over the request when communicating to third parties (IFAC, 2010b, ISA 505).

Next, the third party provides the requested evidence. If the third party fails to respond to the request, the auditing standard suggested that the auditors follow-up with a second (and potential third) request (IFAC, 2010b, ISA 505). When no response is received, auditors usually perform alternative audit procedures to

reduce audit risk to an acceptably low level (American Institute of Certified Public Accountants [AICPA], 2008).

Figure 3.2: Audit confirmation process

Source: Janvrin *et al.* (2010: 29)

The ISA 505 standard provides little guidance for auditors when they obtain evidence from a third party. First, they may determine if control was maintained over the response. Stated differently, they may examine the evidence to authenticate the identity of the third party respondent and determine that the original request was not altered. Second, auditors may determine if this evidence matches the auditee's financial information. If differences are discovered, auditors follow up on these differences and/or generally perform alternative audit procedures. Third, auditors evaluate the reliability of the evidence (IFAC, 2010b, ISA 505).

3.4.3.4 Analytical Procedures

In 2010, the International Federation of Accountants Committee [IFAC] updated International Standard on Auditing [ISA] No. 520 '*Analytical Procedures*'. This standard aims to guide the auditor when s/he performing analytical procedures. According to this standard, the term analytical procedure means:

> "Evaluations of financial information through analysis of plausible relationships among both financial and non-financial data"
> (IFAC, 2010b: Para. 4)

Analytical procedures also include investigating the fluctuations that are not consistent with other relevant information or that deviate from expected values (Oprean and Span, 2009). The purpose of substantive analytical procedures is to obtain assurance that accounts are fairly stated, detect fraud and error in transactions and account balances, and provide evidence about audit objectives (Harrison *et al.*, 2001; Arens and Loebbecke, 2000; Oprean and Span, 2009).

ISA 520 (2010) indicated that the analytical procedures assist the auditor when forming his/her opinion. For example, numbers, missing from the sequence may indicate incompleteness of the financial statements (IFAC, 2010b). This assists the auditor to draw reasonable conclusions on which to base the auditor's opinion.

3.4.3.5 Oral Evidence

Oral information obtained by interviewing different people within the entity or beyond, who know well enough the conditions and other specific issues that have developed audited transactions and operations, is widely used as primary evidence in auditing (Gray, 2008; Marris, 2010; IFAC, 2010b, ISA 500). The interview is a procedure commonly used by auditors in order to obtain particular knowledge of the entity, its environment including internal control and may take the form of free discussions of informal or formal writing interview (Oprean and Span, 2009). However, it alone ordinarily does not provide sufficient audit evidence of the absence of a material misstatement at the assertion level, nor of the operating effectiveness of controls (IFAC, 2010b, ISA 500). Thus, under IAS 330 (2010) *'The Auditor's Responses to Assessed Risks'*, professional scepticism should be applied during inquiries of management and employees, and exercising professional scepticism requires the auditor to respond to heightened risk of material misstatement by considering changing the nature, timing, and extent of the auditing procedures to obtain reasonable assurance that the financial statements are free from material misstatements (IFAC, 2010b, ISA 330).

Interviewing cannot replace other audit procedures which provide more reliable evidence, but there are situations in which interviewing is the only type of procedure for collecting necessary information (Oprean and Span, 2009). Thus, management intentions regarding the reorganisation of the entity, the disposal of assets, in combination with other entities, etc. can be documented only on interview (Marris, 2010). To increase the relevance of the interview, all the statements or responses of the management or other persons shall be written either by the auditors or by the respondents (Oprean and Span, 2009). Based on the responses received from these interviews, the auditors may collect confirmation of the information they previously obtained or of other corroborated information (IFAC, 2010b, ISA 505), or they may declare that the information obtained was not collected by other procedures or contradict the information held (IFAC, 2010c, ISA 580 '*Management Representations*').

Prior auditing literature (Payne and Ramsay, 2008; Caster *et al.*, 2008; Kaptein *et al.*, 2009; Agoglia *et al.*, 2009) and professional standards such as ISA 500 (2010) argued that different types of evidence provide different levels of support for auditors' opinion. The most reliable type of evidence would be that which is created outside the company and sent directly to the auditors such as confirmations from third parties (Marris, 2010). For example, physical evidence collected by the auditor is described as providing a high level of assurance and being the most reliable type of evidence (Hammami and Fedhila, 2009; IFAC, 2010b, ISA 500). Soltani (2007) point out the best audit conclusions depend upon the most reliable types of evidence.

3.4.4 The Academic and Professional Qualifications of the Auditor

There are significant differences between experienced and inexperienced auditors with respect to knowledge, problem solving behavior, searching and evaluating evidence, and decision quality (Qing, 2006; Sheng-wen, 2006; Bruynseels *et al.*, 2007; Marietta and Arnold, 2008; Marris, 2010; Ali *et al.*, 2010; Habib and Bhuiyan, 2011). Abou-Seada and Abdel-Kader (2003) also found that the evidence process by auditors is influenced by the extent of their knowledge of a client's operations and industry. In addition, the result of the study of Sim (2010) observed that the group culture towards consensus that the auditors have experienced within their organisation will affect their beliefs significantly when evaluating internal control of the client. Bowlin *et al.* (2006) indicate that financial reporters who have experience as an auditor are more sensitive to large penalties for misreporting than other financial reporters who have the same amount of experience but have only exclusively worked in the accounting reporter role.

Moreover, previous literature (i.e. Arthur, 2001; Hoffman *et al.*, 2003; Jarboh, 2005) on the effect of auditor experience on audit evidence indicated that the well-developed knowledge structures of experienced auditors help them to consider the risk, the cost and the time of searching audit evidence. Bruynseels *et al.* (2007) concluded that an increased level of experience is predicted to have an increasing effect on auditors processing of audit evidence. Abou-Seada and Abdel-Kader (2003) observed the role of professional expertise is significant in auditing decisions and especially in the evidence process. For

example, audit evidence collected by a competent and experienced auditor is expected to be more reliable than evidence from a novice (Bruynseels *et al.*, 2007). Additionally, industry specialist auditors are more likely to resolve complex accounting issues earlier compared to their non-specialist counterparts because of their strong industry-focused knowledge (Habib and Bhuiyan, 2011).

Arthur (2001: 253) states that:

> "It is a matter of personal skill for auditors to judge how much, what kind, and what combinations of different types of evidence are necessary to enable an opinion justifiably to be formed and a report to be made".

Auditing standards require the auditor to approach the client with professional scepticism. Any bias that impairs an auditor is judgment of either the competence or the objectivity of a source could reduce the audit's effectiveness and increase audit risk (IFAC, 2010b, ISA 330).

In a tax-related context, Magro (2003) found both experts and students who were undertaking a similar audit would adequately consider directly relevant information from the different tax-authorities as part of the decision of a specific estate tax issue. However, in contrast to the experts, the students through their lack of audit experience according to Magro (2003) apparently did not distinguish between indirectly relevant and irrelevant information. This lack of experience hindered the students' ability to recognise the value of the evidence as irrelevant or relevant and thus hindered their judgement reports. Additionally, the students either did not recognize irrelevance or they were unable to ignore irrelevant evidence when forming their judgment. As

Bruynseels *et al.* (2007) and Abou-Seada and Abdel-Kader (2003) highlighted experience as an accountant over a number of years is needed before making the transition to an auditor. This industrial professional experience will develop the future auditor's awareness and understanding of accounting practices and processes in an operational context rather than just the theoretical academic learning in a higher education. The workplace experiences of the new auditor will be affected by the contextual location of their accounting experience according to Sim (2010).

3.4.5 Consistency of Evidence

Boritz and Wensley (1990: 69) stress that:

> "The evidence provided by audit procedures is not necessarily of the same type. Two items of evidence may provide corroborating or conflicting information about financial assertions. We say that two different audit procedures provide corroborating evidence when both fall on the same side of 50 per cent. We say two different audit procedures provide conflicting evidence when both fall on different sides of 50 per cent".

The ISA 500 (2010) points out:

> "When audit evidence obtained from one source appears inconsistent with that obtained from another, the reliability of each remains in doubt until further work has been done to resolve the inconsistency. However, when the individual items of evidence relating to a particular matter are all consistent, then the auditor may obtain a cumulative degree of assurance higher than that which he obtains from the individual items" (IFAC, 2010b: Para. 17).

As an example, an auditor has three pieces of evidence available to support the receipt of stock: (1) A goods received note, (2) A purchase invoice, and (3) A payment to the supplier (Goodwin, 1999). According to Harrison *et al.* (2001), the quality of any such comparison as audit evidence depends upon:

1. The quality and independence of the evidence compared.
2. The quality of enquiries made into any lack of consistency between the sources of evidence.
3. The independence of the internal control operative from the sources of evidence under examination.
4. The quality of any comparison evidence.

Goodwin (1999) argues that auditors will be less concerned with source integrity when evidence provided by the source is consistent with evidence obtained from a different source. According to Caster and Pincus (1996), evaluating the strength or persuasiveness of the evidence sets is important in auditing. Conflicting evidence may indicate an inappropriate set of initial assumptions and those assessments of inherent risk, degree of evidential support, and other factors need to be revised. In many cases it also will be necessary to devise strategies to collect additional evidence to resolve the conflict (Boritz and Wensley, 1990). Dutta and Srivastava (1993) argued that the process of combining pieces of evidence contributes to uncertainty because there are not uniform procedures for combining different items of evidence that relate to a single objective or a single account. Moeckel (1991) pointed out that when considering evidence relating to any potentially material audit area, auditors need to take steps to ensure that items that are potentially relevant to one another are considered together.

3.4.6 Amount of Evidence

According to Rittenberg *et al.* (2009), the auditor must collect an appropriate amount of reliable evidence concerning the fairness of the financial statements

and their conformity with the Generally Accepted Accounting Principles [GAAP]. Empirical auditing studies (e.g. Caster and Pincus, 1996; Blay *et al.*, 2003; Gronewold, 2006; Al-Hadi, 2008) and professional standards such as ISA 500 (2010) have addressed the relationship between the quantity of audit evidence and its reliability and they found that the quality of audit evidence is influenced by its amount. For example, ISA 500 (2010) indicated that the quantity of the audit evidence needed is affected by the auditor's assessment of the risks of material misstatement and also by the quality of such audit evidence (IFAC, 2010b). Caster and Pincus (1996) concluded that the greater number of witnesses, the greater the persuasiveness of evidence. However, in some cases the high amount of evidence provides a limited amount of persuasiveness (Al-Hadi, 2008). Bowlin (2009) studied the effect of material risk on the amount of audit evidence, and found that the auditors tend to collect more evidence when they find high-risk on balance accounts. The amount of evidence to be obtained based on the following factors (Morariu *et al.*, 2008):

1. Establishing the dimension of the audit sample and the population elements that are to be tested
2. Generated costs
3. The evaluation of the nature and level of risk inherent for the financial statements, an account balance or a type of transaction
4. The evaluation of the nature and effectiveness of internal control systems
5. Personal expertise and skills of the auditor
6. The results of the audit procedures, including fraud or errors that might have been revealed
7. The source and credibility of the available information.

Cosserat (2000) indicates that the materiality and the risk of material misstatement are the main factors that affect the sufficiency of audit evidence. The higher the risk of material misstatement, the quality of the audit evidence should be greater. If the quality of the evidence is high, the amount of audit evidence needed is less (Marris, 2010). There are several risks associated with obtaining sufficient appropriate audit evidence. These include (1) inadequate records, for example, incomplete files, excessive adjustments to books and accounts, transactions not recorded in accordance with normal procedures, and out of balance control accounts, (2) inadequate documentation of transactions, such as lack of proper authorisation, supporting documents not available and alteration to documents (any of these documentation problems assume greater significance when they relate to large or unusual transactions), (3) an excessive number of differences between accounting records and third party confirmations, conflicting audit evidence and unexplainable changes in operating ratios, and (4) evasive or unreasonable responses by management to audit inquiries (American Institute of Certified Public Accountants [AICPA], 2006).

One way an auditor may overcome concerns about ensuring that they have a representative sample of the population of evidence is to use statistical sampling. Rivest (2007) advises that the lower bands of confidence for the sampling size should be identified in legislation so that the same standard for sampling is used by all in the auditing profession. This statistical value of the population provides greater confidence that the sample is representative of the population (Saunders *et al.*, 2007). VanderStoep and Johnston (2009) identify

non-probability based sampling techniques which can be utilised by auditors and through the use of statistical standards the auditor can improve other practitioners and stakeholders in their confidence in relation to the professional practice. The use of statistically supported probability sampling enables auditors to reduce the judgment risk that they may have when using non-statistically based sampling (VanderStoep and Johnston, 2009). The current International Standard on Auditing [ISA 530] *'Audit Sampling'* (2010) advises that the auditor use a population sample that is representative of the population and this sample size should be increased by the risk factors observed by the auditor.

The auditor may obtain more than one item of evidence for a specific assertion about reality (Gronewold, 2006). For example, the auditor will require more appropriate evidence when there is doubt about the integrity of management (Cosserat, 2000). Auditing standards require sufficient substantive audit evidence for all significant accounts, regardless of the auditor's planned reliance on controls (IFAC, 2010b, ISA 500).

The main objective of external auditors is to express an opinion on the financial statements. In order to achieve this objective, an external auditor needs to evaluate the internal control system of the organisation to ensure that this system can detect and prevent any material misstatements (Haron *et al*, 2004). Tests of control are made to provide evidence about the effectiveness of the design and operations of the accounting and internal control systems (Cosserat,

2000). Janvrin (2001) suggested that internal control effectiveness may completely mitigate the need to use internal rather than external evidence.

3.5 Theories of evidence

Auditing, history, and law are among the fields of inquiry which rely upon evidence for reducing doubt and obtaining belief. Mautz and Sharaf (1961) were among the earliest researchers to consider aspects of a theory of evidence in auditing. Among their most important contributions was pointing out that intrinsic characteristics of the evidence set influence audit judgment.

The first general theory of audit evidence was established by Toba (1975) and later developed by Kissinger (1977), Gibbs (1977) and Stephens (1983). Furthermore, this theory was extended and examined by Smieliauskas and Smith (1990). This line of research led to the introduction of more rigorous notation (formal logic); a recognition that evidence was related to propositions that, in turn, were related to propositions that the financial statements were fairly presented; and a recognition that evidence aggregation might be viewed as a problem of combining probabilities (Gronewold, 2006). The three theories (general theory, theory of logic, and theory of the persuasiveness of evidence) will be outlined and discussed.

3.5.1 General Theory of Evidence

Toba (1975) developed a normative framework for describing the relationship between audit evidence and opinions by auditors on financial statements. Toba's framework was further developed and modified by Kissinger (1977). A

number of studies have supposed that there would already be a "general theory" of audit evidence (e.g. Toba, 1975; Srivastava, 1996). However, Caster and Pincus (1996: 1) state:

> "To date, no general theory of audit evidence has been accepted in either the research or practice literature".

The study of Toba (1975) *'A General Theory of Evidence as the Conceptual Foundation in Auditing Theory'* discussed the concept of evidence in auditing and the reasoning processes employed by auditors in establishing the fairness of financial statements. According to Toba (1975),

> "The concept of evidence can be divided into two distinct parts: confirming evidence and supporting evidence" (Toba, 1975: 9).

Furthermore, Toba (1975) suggested that the heuristic reasoning pattern of auditing implies the existence of a distinct process of persuasion separable from a process of proof.

Kissinger (1977) examined the Toba framework in order to (1) point out Toba's oversights and conceptual deficiencies and attempt to correct them and (2) to extend some of Toba's results particularly in the area of necessary and sufficient conditions for the various options available to the auditor regarding the opinion on a client's financial statements.

The Toba-Kissinger framework addressed the relationship between evidence and auditors' opinions on financial statements; these relationships are derived from a general theory of evidence using the rules of formal logic. It is concerned with the evidential conditions for the issuance of an auditor's opinion on a set of financial statements under examination. In other words,

Toba (1975) developed the relationship between evidence and audit opinions as a set of necessary conditions based upon weight of evidence, while Kissinger (1977)'s extension to include materiality and explication of 'preponderance of evidence' makes the conditions sufficient rather than necessary for the issuance of an unqualified opinion.

The Toba-Kissinger logical relationships were based upon completeness of collection of evidential matter, weight of evidence, and materiality. Stephens (1983) indicated that these factors are important issues for relating the framework to generally accepted auditing standards. Regarding completeness of evidence, Toba argued that the judgments required from auditors concerning evidential matter include (1) the amount of evidence and (2) the integration of evidence for evaluation. The Toba-Kissinger framework relating evidence and audit opinions requires completeness of evidence because it makes no provision for utilizing the output for collection of additional evidential matter.

With regard to weight of evidence, the weight required in the Toba-Kissinger framework is a simple preponderance of evidence (Stephens, 1983). A possible alternative weight of evidence requirement might have been to require an arbitrarily pre-selected weight of evidence (Stephens, 1983). Kissinger (1977: 335) declares that:

> "The requirements for a preponderance of evidence are usually less than the requirement for some arbitrarily selected (high) level of evidence which might be required".

In terms of materiality, Kissinger injected materiality into the Toba-Kissinger framework, but did not provide a precise definition of materiality (Stephens,

1983). The framework of Kissinger made the evidential conditions sufficient but not necessary. For example, compliance with General Accepted Accounting Principles [GAAP] is sufficient for an unqualified opinion in the Toba-Kissinger framework, but compliance with generally accepted accounting principles is not a necessary condition. Thus, financial statements of a firm not complying with GAAP could receive an unqualified opinion if the lack of compliance did not have a material effect.

The empirical study by Stephens (1983) investigated the descriptiveness of the Toba-Kissinger normative standards and sufficiency in three areas: (1) compliance with GAAP, (2) completeness of internal control, and (3) effectiveness of internal control. The results revealed that: (a) there is substantial overall non-conformity with the Toba-Kissinger framework, (b) the sufficiency conditions of Kissinger decrease conformity when compared to the necessary conditions of Toba, and (c) the weight-of-evidence requirement postulated in the Toba-Kissinger framework, a preponderance of evidence is descriptive for audit opinions issued by the respondents. Smieliauskas and Smith (1990) attempted to develop further a theory of audit evidence by incorporating the concept of audit assertions from professional standards and developments in the philosophy of science. They suggested that the explanatory factor provides a sufficient understanding for developing a theory of audit evidence.

From the above it appears that all studies require an explanatory link between evidence and the assertion to be confirmed by evidence. Besides this specific

aspect, no additional advice and guidance is provided on how the actual sufficiency and appropriateness of evidence should be judged.

3.5.2 The Theory of Logic

With respect to evidence, Montague (1953) pointed out three points:

1. Belief, to be rational, must be supported by evidence
2. Evidence has varying influences upon the human mind
3. There are only a few basic ways of obtaining ideas and beliefs

Evidence varies in its influences on the human mind in two ways. First, some evidence is so strong and so vivid that it compels the mind to accept it as truthful and the mind then reaches a sureness of knowledge; other evidence is neither not nearly so forceful nor so vivid, and the mind can entertain, along with the evidence itself, the thought that it might not really be so. Some evidence becomes more or less persuasive as it influences the mind to accept or reject the proposition in support of which the evidence has been submitted or obtained. Thus, there are differences within evidence itself that help to account for the influence it has on the mind of the judgment maker. The second factor which accounts for the varying influence of judgment is the degree of skill and experience possessed by the one using the evidence (Montague, 1953).

For the third factor, Montague (1953: 34) points out that:

> "Our ideas and beliefs can be traced to one or more of the following origins: (a) Testimony of others; (b) Intuition, which is at least partly grounded in instincts, feelings and desires; (c) Abstract reasoning from universal principles; (d) Sensory experience; and (e) Practical activity having successful consequences. Each of these sources may be, and actually has been, accepted as indicating a primary criterion for determining philosophic truth; and thus to the five sources of belief there correspond the following six

types of logical theory: (1) Authoritarianism, (2) Mysticism, (3) Rationalism, (4) Empiricism, (5) Pragmatism, and (6) Scepticism."

These methods were summarised as follows:

Regarding authoritarianism, Montague (1953: 39) stresses that:

> "We get our beliefs from the testimony of our fellows than from any other source. Little of our knowledge of the universe is directly tested by our own intuition, reason, experience, or practice. We accept on trust nine tenths of what we hold to be true".

For instance, when the auditors obtains confirmations from outside parties, a statement from a bank, from a customer, or from a creditor must be accepted because the auditor cannot investigate the fact at issue in any other way. In addition, more than this, he is entitled to rely on this testimony unless there is reason to suppose that the ones returning the confirmation are biased or incompetent.

In terms of mysticism, Mautz and Sharaf (1961) point out that knowledge obtained through authoritarianism comes to us from others; knowledge obtained through intuition comes to us within ourselves. Intuition brings the sudden flash of insight, the quick perception of truth, the unexplained awareness of relationships that we can account for in no other way. Montague (1953: 55) explains intuition as: "a combination of instinct, imagination, and experience".

Rationalism consists of reasoning from the universal to the particular; it is identified particularly with mathematics and applications of pure logic in which we start with accepted assumptions of universal application and reason from them to conclusions. Thus, in solving an arithmetical problem, we accept the numbering system, the meaning of arithmetical signs and symbols, and

proceeding from these, we solve the particular problem before us. For instance, the auditors use mathematics a good deal in auditing (Montague, 1953). Regarding empiricism theory, Montague (1953) suggests that empiricism consists of basing knowledge on perceptual experience and the auditor who physically examines inventory or observes a paymaster distributing payroll checks as examples of empirical evidence.

With regard to pragmatism method, Montague (1953) indicates that the pragmatist believes that what works well must be true: whatever fails to work is not true, workability are the tests of truth. Montague (1953) declares that in auditing, we apply pragmatism when we trace the results of transactions or conditions into the future. In terms of scepticism, some philosophers have carried scepticism to the point where they are willing to believe nothing, a state of complete doubt (Mautz and Sharaf, 1961). Montague (1953) believes that the human mind is unable to attain absolute certainty in any field of inquiry.

3.5.3 The Theory of the Persuasiveness of Evidence

The theory of the persuasiveness of legal evidence was developed in the 1800s by Bentham and is still the subject of academic discourse in modern jurisprudence (Caster and Pincus, 1996). Within the field of jurisprudence, Bentham is recognised as one of the most influential legal theorists regarding evidence (Caster and Pincus, 1996). Twining (1985: 169) states that:

> "In the specialised field of evidence, Bentham's is the most comprehensive general theory of the subject".

Bentham (1827) intended his theory to be comprehensive and applicable to all fields of study. He states that:

> "Questions in natural philosophy, questions in natural history, questions in technology in all its branches, questions in medicine, are all questions in evidence" (Bentham, 1827: 19).

Bentham's theory of persuasiveness is part of his nine-volume treatise on evidence 'Rationale of Judicial Evidence'. To Bentham, persuasion is based on the perceived strength of evidence, as weighed and expressed by witnesses and judges.

Bentham (1827) was critical of using qualitative terms to express the strength of evidence. He reviewed and rejected the English, French and Roman schools of thought, illustrating deficiencies of each. For example, the English courts used the terms (1) positive proof, (2) violent presumption, (3) probable presumption, and (4) light or rash presumption to express four degrees of persuasiveness (Caster and Pincus, 1996). Reinard (1988) reviewed over 150 empirical studies of persuasiveness of evidence covering several disciplines and spanning a period of about 50 years. Some evidence characteristics such as source reliability and quantity of evidence were identified by Reinard (1988) as consistently affecting persuasiveness or quality.

Bentham (1827) proposed a quantitative measurement system. He believes that persuasiveness was a matter of degree that could be measured on a scale, similar to a thermometer. Bentham (1827) declares that:

> "The zero point of the scale indicated neutrality or nonexistence of any degree of persuasion on either side. Positive numbers on the scale indicated evidence persuasive in favor of a proposition or affirming the existence of the fact in question. In contrast, negative numbers on the scale indicated

> evidence persuasive against a proposition or denying the existence of the same fact" (Bentham, 1827:p. 75)

In addition, Bentham (1827) states that: "as probative force increased, the chance of an incorrect decision decreased".

Bentham (1827) identified the characteristics of evidence that affect persuasiveness, which is termed *'probative force'* in jurisprudence. These include: (1) Amount of evidence, (2) Dispersion of estimates, (3) Composition of evidence set, (4) Source reliability, (5) Directness of evidence, and (6) Deviations from expectations. Regarding amount of evidence, Bentham (1827) believes that the amount of evidence affects its persuasiveness. Particularly, he points out that a greater number of witnesses on one side of an issue increased the probative force of evidence. In terms of dispersion of estimates, Bentham (1827) suggested a simple model for weighing the testimony of witnesses. When witnesses are used to attempt to prove a fact, the number of witnesses could be summed to determine the probative force of the evidence. But consider a legal case where two equally credible witnesses testify that a car was speeding. Is the evidence equally persuasive if (a) one witness testifies that the car was moving at about 70 miles per hour and the other witness testifies it was moving at 75 miles per hour, or (b) one witness testifies the car's speed was 60 miles an hour, while the other witness testifies the car was moving 85 miles per hour? According to Caster and Pincus (1996) when multiple estimates do not agree, accuracy and confidence in decisions based on these estimates decrease.

With regard to the composition of evidence set, Bentham (1827) noted that witnesses in a legal case often provide a mix of evidence, some operating in

proof of the fact, others in disproof of it. The strength of an evidence set depends on the mix of evidence. According to Bentham's theory, the more one-sided the evidence set, the greater the probative value. Bentham (1827) suggested a simple additive model to illustrate this point: when there are some witnesses to prove a fact, and others to disprove a fact, the difference in the number of witnesses is taken instead of the sum. Thus, the probative force of evidence increases as the evidence set because more one-sided. Regarding source reliability, Bentham's theory of evidence recognised it as important in determining the persuasiveness of an evidence set. Bentham (1827) described characteristics such as rank, power, or official function that add credibility to a witness. Testimony from such a witness has a superior degree of credence, which increased the probative force of the evidence. In contrast, Bentham noted that the morals or intellect of a witness may be suspect. In terms of directness of evidence, Bentham suggested that directness of evidence affects its persuasiveness. Bentham (1827) argues that the probative force of evidence diminishes as more intervening steps are added.

Experience leads to certain expectations about the evidence that will be presented in any given case (Caster and Pincus, 1996). Bentham (1827) described these expectations as the *'shape'* of evidence. According to Bentham,

> "any deviation from the expected shape of the evidence made it inferior, thereby decreasing its probative force" (Bentham, 1827: 66).

In the context of testing this theory, the results of several studies theory (e.g., Caster and Pincus, 1996; Srivastava, 1996) reveal some evidence supporting persuasiveness of evidence. Caster and Pincus (1996) used amount of evidence,

dispersion of estimates, composition of evidence set, source reliability, directness of evidence, and deviations from expectations to test Bentham's theory of persuasiveness of evidence. Caster and Pincus (1996) found that all six characteristics affect the persuasiveness of audit evidence.

Caster and Pincus (1996: 14) state:

> "Bentham's theory provides a model that is potentially valuable because it cuts across several disciplines, which is significant because of the commonalities of evidence characteristics across disciplines. Furthermore, a theory of persuasiveness of evidence would be particularly useful in auditing".

Moreover, Caster and Pincus (1996) suggest that given the parallels between the concepts of probative force of legal evidence and persuasiveness of audit evidence ongoing work on audit evidence may both benefit from and contribute to related work in jurisprudence.

From the previous discussion, one can fairly recognise that Bentham's theory of persuasiveness provides a particularly useful basis for the profession of auditing. However, Bentham's theory does not consider the impact of the contextual situation on the strength of evidence (Twining, 1985). For example, the same set of evidence would provide a different level of persuasiveness if the background story were changed. Furthermore, it is not capable of dealing with any of their important issues (the structure of the audit evidence, the strength of evidence, and the combination of various items of evidence) related to evidential reasoning studied by (e.g. Boritz and Wensley 1990; Shafer and Srivastava, 1990; Srivastava and Shafer 1992) in an inclusive way. Therefore,

Bentham's theory is not a comprehensive theory of evidence as claimed by Caster and Pincus (1996) (Srivastava, 1996).

3.6 The Summary of Previous Studies

While reviewing the previous literature, the researcher focused on the following: The areas that were covered by the previous studies of developed and developing countries and related to this study, the most important findings of previous studies, and the extent to which the current study benefited from those studies.

Firstly, areas were covered by the previous studies, which include (a) source of evidence, including independence, integrity, and knowledge of the evidence; (b) directness of evidence, including direct, and indirect evidence; (c) type of evidence, including documentary, and oral evidence; (d) auditor characteristics, including experience, knowledge, independence, and skills of the auditor; (e) combination of evidence, including dispersion between items of evidence, and consistency vs. inconsistency of evidence; and (f) amount of evidence, including materiality of the accounts, the risk of material misstatement of financial statement, cost of evidence, internal control.

The researcher reviewed the most important findings of previous studies, which summarised in the Table 3.5 on page 111. Source of evidence has been found to be significantly affected on sufficiency and appropriateness of evidence (for example, Payne and Ramsay, 2008; Kaplan *et al.*, 2008; Zhang e*t al.*, 2009; Marris, 2010). Directness of evidence has also influenced the quality and

quantity of evidence (e.g. Kizirian *et al.*, 2005; Gronewold, 2006; Morariu *et al.*, 2008; Zhang e*t al.*, 2009; Agoglia *et al.*, 2009).

With relationship between the auditor characteristics (independence, experience, knowledge) and quality of evidence, there is a link between quality and quantity of evidence and the auditor (i.e. Qing, 2006; Sheng-wen, 2006; Bruynseels *et al.*, 2007; Marietta and Arnold, 2008; Marris, 2010; Ali *et al.*, 2010). Furthermore, type of evidence has been found to be impacted on persuasiveness of evidence (e.g. Caster *et al.*, 2008; Payne and Ramsay, 2008; Oprean and Span, 2009; Zhang e*t al.*, 2009; Pany and Whittington, 2010; Janvrin *et al.*, 2010).

Regarding combination of evidence, studies have found that the consistency of evidence affects its quality and reliability (Messier, 1992; Dutta and Srivastava, 1993; Coster and Pincus, 1996; Goodwin, 1999). Moreover, the amount of evidence has been found to affect sufficiency and appropriateness of evidence (e.g. Caster and Pincus, 1996; Blay *et al.*, 2003; Gronewold, 2006; Al-Hadi, 2008).

Most theoretical and empirical audit evidence studies relate to developed countries with a Western culture, particularly Europe, and the US (Blay *et al.*, 2003; Kizirian *et al.*, 2005; Marietta and Arnold, 2008; Ohta, 2009; Marris, 2010). However, Ahmid (2000), Michas (2010), and Adeyemi and Fagbemi (2010) indicated that very few studies are available on auditing in general and audit evidence particularly in the emerging economics such as Libya. Therefore, this study will attempt to fill in the gap in the current knowledge and

literature in relation to audit evidence and practices for Libya and other Arab countries.

Additionally, the quantitative method was used by most of the studies such as Kuzirian *et al.*, 2005; Payne and Ramsay, 2008, whereas, the qualitative one was used by Abou-Seada and Abdel-Kader (2003) and Jarboh (2008) only. This study will use both quantitative and qualitative approaches to collect and analysis study data and contribute to the understanding the significant of audit evidence in the auditing.

Finally, this study benefited from the reviewing related literature in (a) forming a structure for this study (e.g. selecting a study variables), (b) developing a study hypotheses (See Chapter 4, Section 4.19), (c) developing the study questionnaire, (d) selecting appropriate methodologies and techniques to collect and analysis the study data, and (e) choosing a suitable sample and statistical sampling method.

Table 3.5: Summary of key previous studies of audit evidence

Author(s)	*Country*	*Main Finding(s)*
Developed Countries		
Caster and Pincus (1996)	**USA**	The amount of evidence- number of tests, dispersion of estimates, the composition of the evidence set, source reliability, directness of evidence and deviations from expectation affect the persuasiveness of audit evidence.
Cosserat (2000)	**UK**	• Confirmations obtained directly by the auditors from knowledgeable third parties are considered to have very high degree of reliability. • The auditor requires more appropriate evidence when there is doubt about the integrity of management.
Janvrin (2001)	**USA**	Internal control effectiveness partially mitigates the impact on evidence persuasiveness of using internal than external evidence.
Harrison *et al.* (2001)	**Not stated**	Auditors think about the evidence problem in terms of support and ignorance rather than in terms of support for and support against the audit objective being true.
Anderson *et al.* (2001)	**Not stated**	The auditors rely more heavily on evidence from a more competent source than a less competent source.
Arthur (2001)	**Not stated**	The personal experience, skill, and knowledge for auditors is useful to judge how much, what kind, and what combinations of types of evidence are necessary to enable an opinion justifiably to be reported
Rose and Rose (2003)	**Not stated**	The assessed level of fraud risk systematically affects the evaluation of evidence by auditors. More specifically, auditors facing high levels of assessed fraud risk evaluating audit evidence more thoroughly than auditors facing low levels of assessed fraud risk.
Blay *et al.* (2003)	**USA**	While fraud risk is substantially captured by the current audit risk model, going concern risk remains significantly related to our proxies for the persuasiveness of audit evidence after controlling for inherent and control risk.
Glover *et al.* (2004)	**USA**	Provided evidence consistent with the idea that insensitivity to the imprecision of weak analytical procedures that yield a favourable outcome is a potential cause for auditor over reliance on weak audit evidence.
Kizirian *et al.* (2005)	**USA**	When the client's information is not trustworthy, the auditor seeks external validation of the financial information instead of pursuing additional scrutiny of client-supplied evidence.

Table 3.5 (continued): Summary of key previous studies of audit evidence

Author(s)	*Country*	*Main Finding(s)*
Caster and Verardo (2007)	**USA**	Scanners of evidence have negatively affected the persuasiveness of confirmations from third parties
Bruynseels *et al.* (2007)	**USA**	Experience auditors more able to collect information on the going-concern decision than novice auditors.
Marietta and Arnold (2008)	**USA**	Accounting standards lead auditors to experience greater epistemic motivation, thereby likely resulting in more thorough, effortful, and systematic processing of available information.
Kaplan *et al.* (2008)	**Not stated**	Accounting system of client is not completely objective and reliable source for obtaining audit evidence
Ohta (2009)	**Japan**	If the auditor has a sufficiently strong incentive for avoiding false rejection, audit risk also increases with audit evidence.
Gold *et al.* (2009)	**Not stated**	Female auditors were more influenced by a male client and less influenced by a female client than male auditors.
Sim (2010)	**Taiwan**	The group culture towards consensus that the auditors have experienced within their organisation will effect on their beliefs significantly when evaluating internal control of client.
Marris (2010)	**USA**	The inexperience auditors play a role in the obtaining of poor evidence
Habib and Bhuiyan (2011)	**New Zealand**	Industry specialist auditors are more able to resolve complex accounting issues earlier compared to their non-specialist counterparts because of their strong industry-focused knowledge
Developing Countries		
Ahmid (2000)	**Libya**	When the experience of auditor was increased, the quality of audit evidence increased
Kalel (2000)	**Libya**	There are significant differences between external and state auditors views about extent quality of direct evidence and also about influence of document of evidence on persuasiveness
Jarboh (2005)	**Palestine**	• The confirmation from third parties perceived by external auditors as the most reliable forms of evidence • external auditors can provide higher level of competence and experience in audit services when compared to government auditors
Qing (2006)	**China**	Auditors judged the relevancy of audit evidence by their experiences
O'Leary *et al.* (2006)	**Australia**	The information collected from internal control evaluation of the entity is an important audit evidence for external auditors
Sheng-wen (2006)	**China**	The sufficiency of audit evidence influenced by auditors' competence and experience

Table 3.5 (continued): Summary of key previous studies of audit evidence

Author(s)	*Country*	*Main Finding(s)*
Sarens and De-Beelde (2006)	**Belgium**	Internal evidence such as information from accounting system affected by the organisational support for internal audit; the status of the internal control system.
Hao and Wen-Ming (2007)	**China**	Evidence collection process plays an important role in enhance the quality of audit evidence obtained. Particularly, evidence should satisfy the audit requirement of obtaining and using evidence at relatively low cost, which means the evidence should be collectible, verifiable, easy to understand and analyse.
Chen *et al.* (2007)	**Taiwan**	Continuous Auditing Assistance System [CAAS] can benefit auditors in detecting potential internal control weaknesses and use this information as audit evidence
Missah (2008)	**Ghana**	Audit office able to establish the credibility of evidence obtained and they provide reliable documents evidence carried out by audit team.
Morariu *et al.* (2008)	**Romania**	Type of audit evidence influence on the auditors when they forming their report.
Al-Hadi (2008)	**Libya**	Most auditors believed that audit evidence is persuasiveness and not conclusive.
Joshi and Deshmukh (2009)	**Bahrain**	• The auditors rank confirmation, physical and documentary evidence as the most reliable forms of evidence. The auditors also spend most of their time on these techniques. • The common problems faced by both the Big 4 and non-Big 4 firms are difficulties in collecting external evidence and uncooperative clients. • The different also found between experience and inexperience auditors in the evidence process
Owojori and Asaolu (2009)	**Nigeria**	Tests of control are test performed to obtain sufficient and appropriate audit evidence about the design and operation of the accounting and internal control systems
Xiao-wei1 *et al.* (2009)	**China**	Computerized method more helpful in finding information and more audit evidence in audit data rather than manual audit progress
Ali *et al.* (2010)	**Malaysia**	Internal auditors working in state and local Malaysian governmental bodies faced some problems such as skills and training shortages in their attempts to perform their duties such as searching audit evidence.
Malkawi *et al.* (2010)	**Syria**	Internal controls systems provided an information about the reliability of information collected from accounting system of organisation

CHAPTER FOUR
THE RESEARCH METHODOLOGY, METHODS, MODEL AND HYPOTHESES

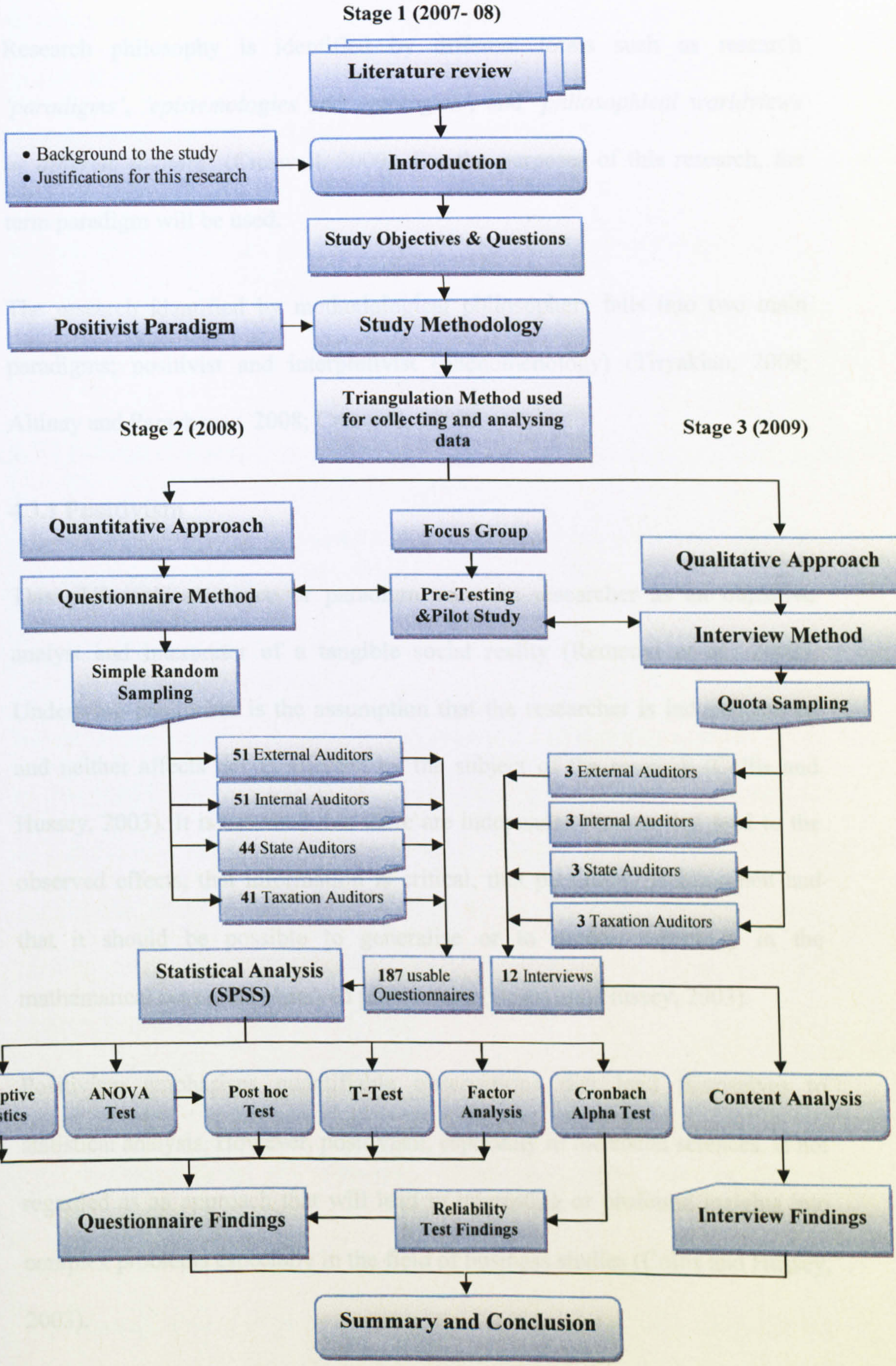
4.1 Introduction

This chapter presents the research philosophy, approach, design and methods used to address the research problem as outlined in Chapter 1. It discusses philosophical assumptions (positivist and interpretivist paradigms) in order to justify the methodology adopted. Both quantitative and qualitative methods are employed as well as the rationale behind the decision making process used in developing the research methodology for this study. Furthermore, the chapter discusses the questionnaire survey and interview methods with detailed procedures for each, describing the identification of the population groups and the selection of the target sample participants for the study. The rationale for the discussion will also describe the development of the hypotheses and how they link to the research model, and will give a review of the statistical techniques that will be utilised in analysing the information and testing the research hypotheses.

4.2 Research Strategy

Research methodology is a way to systematically solve the research problems (Kumar, 2008). A research strategy described as overall direction of the research including the process by which the research is conducted (Creswell, 2009). Figure 4.1 on page 116 summaries the study process used in this report. According to Remenyi *et al.* (2002), Altinay and Paraskevas (2008) and Yin (2009), there are several aspects that affect the selection of an appropriate strategy such as: the type of research questions, research problem, the nature of research questions and the data required. In this study all these issues considered in choosing a suitable strategy.

Figure 4.1: The study process



4.3 Research philosophy

Research philosophy is identified by different terms such as research *'paradigms'*, *'epistemologies* and *ontologies'*, and *'philosophical worldviews by different authors'* (Creswell, 2009). For the purposes of this research, the term paradigm will be used.

The research identified by methodological philosophers falls into two main paradigms; positivist and interpretivist (phenomenology) (Tiryakian, 2009; Altinay and Paraskevas, 2008; Creswell, 2009).

4.3.1 Positivism

This philosophical stance or paradigm sees the researcher as an objective analyst and interpreter of a tangible social reality (Remenyi *et al.*, 2002). Underlying positivism is the assumption that the researcher is independent of and neither affects nor is affected by the subject of the research (Collis and Hussey, 2003). It is assumed that there are independent causes that lead to the observed effects, that information is critical, that parsimony is important and that it should be possible to generalise or to model, especially in the mathematical sense, the observed phenomena (Collis and Hussey, 2003).

Positivism emphasises quantifiable observations that lend themselves to statistical analysis. However, positivism, especially in the social sciences, is not regarded as an approach that will lead to interesting or profound insights into complex problems especially in the field of business studies (Collis and Hussey, 2003).

One of the key tenets of positivism is that it takes a reductionist approach to exploring the relationships among the variables being studied. This is necessary in order to be able to control an experiment or an investigation and thus be able to understand how the variables concerned are behaving. This reductionist approach should by its very nature lead to simplifications of the real world environment in which the variables naturally or usually exist (Remenyi *et al.*, 2002). The main aim of the positivistic researcher is to generalising the results to the larger population (Saunders *et al.*, 2009).

4.3.2 Interpretivism

The contrasting research philosophy to positivism is that of interpretivism, or what is sometimes termed '*phenomenology*' or '*social constructionism*'. For the purposes of this thesis, the term interpretivism will be used.

Interpretivism identifies the real human experience concerning a phenomenon as described by the participants in research. This is also sometimes referred to as a philosophy which involves a process of understanding the experiences of participants while attempting to bracket the researcher's own experiences (Collis and Hussey, 2003; Creswell, 2009; Tiryakian, 2009). Remenyi *et al.* (2002: 95) stated that:

> "Interpretivism is a theoretical point of view that advocates the study of direct experience taken at face value; and one which sees behaviour as determined by the phenomena of experience rather than by external, objective and physically described reality."

The interpretivist believes that the world can be modelled, but not necessarily in a mathematical sense (Remenyi *et al.*, 2002). In addition, it understands that the

world is not composed of a single objective reality, but rather is composed of a series of multiple realities, each of which should be understood and taken into account (Collis and Hussey, 2003).

To use an interpretivs approach the researcher has to look beyond the details of the situation to understand the reality or perhaps a reality working behind them. In addition, it is important that real-life problems that are used by interpretivs researchers in tandem with at least an emerging understanding of the literature (Remenyi *et al.*, 2002).

The interpretivist approach to research is not reductionist but holistic. This approach to research allows much more complicated situations to be examined. It involves itself not only in as many as possible of the variables being studied but also the context of the study (Denscombe, 2007). Thus part of the context of any research study is the nature of the researcher and the characteristics of the setting. At the end of the research study the interpretivs researcher has also produced a still photograph of the variables being studied. Although this photograph is more sophisticated than the one obtained by the positivist it achieves approximately the same results (Remenyi *et al.*, 2002).

Table 4.1 on page 120, presents the main differences between the positivist and interpretivs paradigms.

Table 4.1: Key features of positivist and interpretivisit paradigms

Source: Remenyi *et al.* (2002: 104)

Whilst not all research within the field of audit evidence adopts a positivist approach, the majority of popular studies seem to assume this method. The table below (Table 4.2) gives examples of major studies where the positivist approach has been utilised.

Table 4.2: Examples of major studies in audit evidence

Author(s)	Sample Size	Research approach(s)	Methodology(s)	Method(s)
Kalel (2000)	**210** state auditors and **40** external auditor	Positivistic paradigm/ quantitative approach	Questionnaire survey	Descriptive statistics
Ahmid (2000)	**165** external auditors	Positivistic paradigm/ quantitative approach	Questionnaire survey	Descriptive statistics
Jarboh (2005)	**43** external auditors	Positivistic paradigm/ quantitative and qualitative approach	Questionnaire and interviews	ANOVA test / content analysis
Al-Hadi (2008)	**23** external auditors and **35** internal auditors	Positivistic paradigm/ quantitative approach	Web based questionnaire	Descriptive statistics
Joshi and Deshmukh (2009)	**76** auditors	Quantitative approach	Questionnaire survey	Descriptive statistics, T-Test and MANOVA test
William *et al.* (2009)	**71** auditing professors	Quantitative approach	Questionnaire survey	MANOVA test

This thesis will be using a positivist approach for the following reasons:

- The positivistic approach is the dominant paradigm in business research (Collis and Hussey, 2003; Yin, 2009). This paradigm is often utilised by business researchers to observe situations and reduce phenomena to its simplest factual essentials according to Remenyi *et al.*, (2002). This approach was selected for the Libyan context, so that phenomena of the recent economic and political changes and their impact on the role and activities of auditors could be identified in a factual manner. There has been anecdotal evidence that has suggested that the political and economic changes have been impacting on auditing practice but the study is investigating to assess if this is empirically true.
- The research topic for this study, which is relatively a literature wealthy topic, and its objectives (See Chapter 1, Section 1.2), which seeks to examine the audit evidence in auditing Libyan environment and to identify the relationship between research variables and sufficiency and appropriateness of evidence using Bentham (1827) theory of persuasiveness of evidence. The use of an evidential theory to investigate the current phenomena of auditing practice in Libya is suitable with the positivist approach because the variables that affect the contextual situation can be considered independently and allows the researcher to formulate and test hypotheses about this contextual environment.
- In similar previous studies, the positivism was used as the main approach methodology by Kalel (2000); Ahmid (2000), Jarboh (2005)

and Al-Hadi (2008) (See Table 4.2 on page 116). By employing a similar approach the researcher intends to utilise previous studies and extend the knowledge of the current situation in Libya.

4.4 The Research Approaches

Several approaches to the collection of information are available and the specific approach chosen will depend upon the questions being asked, the research strategy adopted, the facilities available from the organisation, the extent of accuracy required, the time span of the study, and other costs and resources associated with and available for data gathering (Sekaran and Bougie, 2009).

The research methodological approaches are categorised by Berg (2007) and Bergh and Ketchen (2009) into two types namely: quantitative and qualitative approaches. Punch (2000) argues that the distinction between qualitative and quantitative approaches is of major importance in social science research.

In his attempt to differentiate between quantitative and qualitative approaches, Berg (2001: 2) states that:

> "The notion of quality is essential to the nature of things. On the other hand, quantity is elementally an amount of something".

Thus, qualitative research refers to the meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions of things (Berg, 2007). In contrast, quantitative research refers to counts and measures of things by using numbers for example (Berg, 2007; Thomas, 2009).

According to Ary *et al.* (2009) and Saunders *et al.* (2009), the main difference between qualitative and quantitative research is the nature of data used and the results. In qualitative research, findings are not arrived at by statistical methods or other procedures of quantification. The differences in the emphasis between qualitative and quantitative studies are illustrated in Table 4.3 below.

Table 4.3: Comparison of quantitative and qualitative research

Source: Ary *et al.* (2009: 25)

Previous studies for audit evidence predominantly use the quantitative approach and this provides an opportunity to test hypotheses about the current context within Libya. To enhance the understanding of the relational causes and effects identified in the quantitative part of the study the qualitative approach provides a perceptual discussion of why the phenomenon is occurring.

4.5 Triangulation Methodology

Given the growing body of opinion favouring the use of multi-methods in obtaining or analysing data (Saunders *et al.*, 2009), triangulation was used in this study as a method for collecting and analysing study data.

In business research, the term *'triangulation'* refers to gathering information from multiple sources which is analysed to ensure that a biased view is not

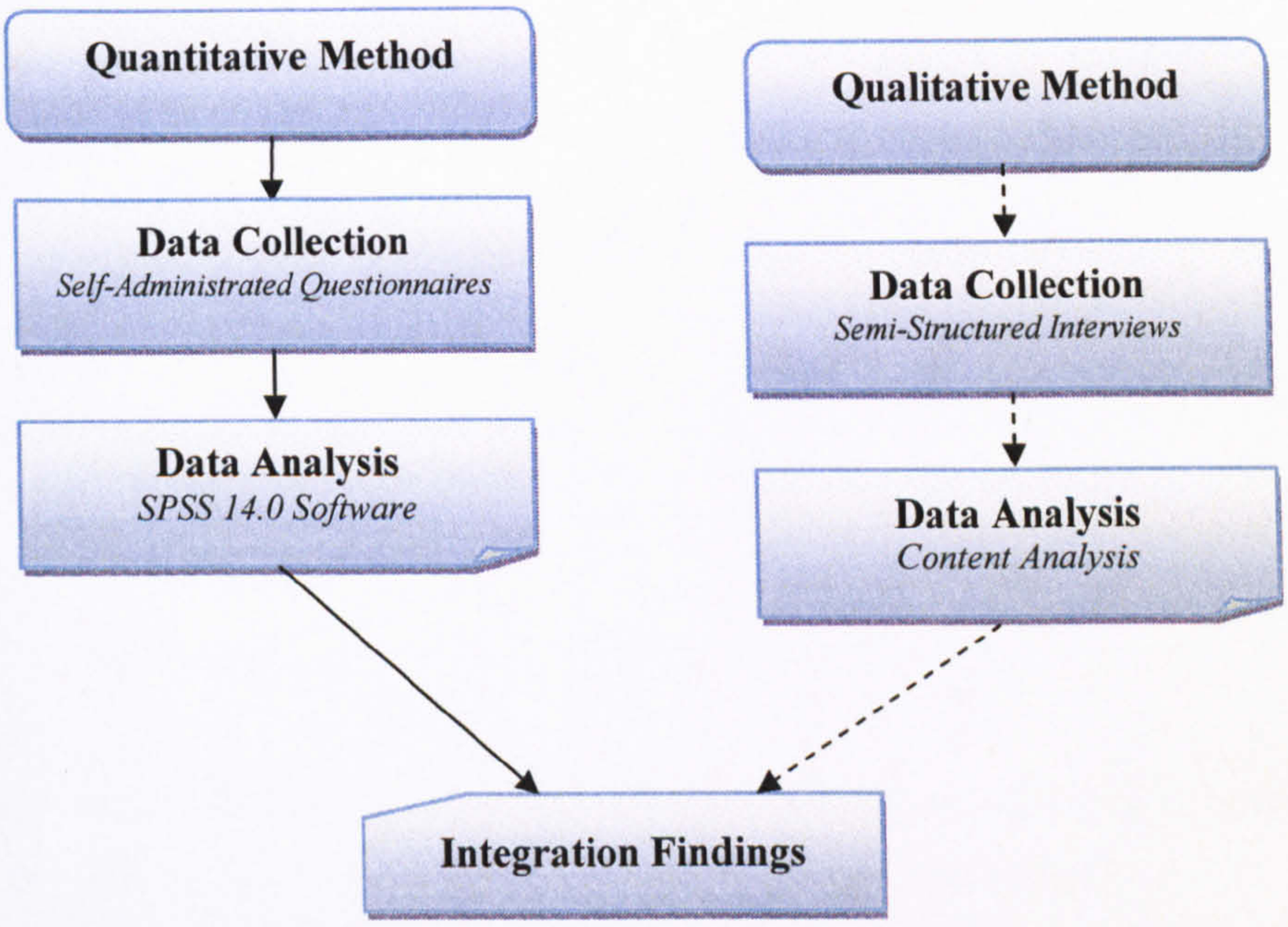
being obtained from one informant (Saunders *et al.*, 2009; Ghauri and Gronhaug, 2010). Creswell (2009) indicted that the most common and well-known approach to mixing methods is the triangulation design. Creswell and Clark (2007: 18) state that:

> **"Triangulation research is important today because of the complexity of problems that need to be addressed, the rise of interest in qualitative research, and the practical need to gather multiple forms of data for diverse audiences".**

For this study, the main purpose of using triangulation (qualitative and quantitative methods) is to obtain complementary data to support the study. The main rationale for this combination is that each approach has its strengths and weaknesses (Saunders *et al.*, 2009); therefore, employing a triangulation methodology, would maximise the advantages and minimise the disadvantages of each one.

For the purposes of this study, triangulation was used to provide a comprehensive understanding of the situation. The use of the second research process was used to confirm the findings of the quantitative method and identify if there was any additional influences that impacted on the study which was not covered by the questionnaire. The data was collected initially through a thorough review of the literature, then from self-administered questionnaire and finally from semi-structured interviews (See Figure 4.2 on page 125). The follow-up semi-structured interviews enabled the researcher to probe for additional details which the questionnaire would not necessarily provide while providing confirmation data to support the original questionnaire.

Figure 4.2: The structure of triangulation approach for this research



4.6 Quantitative Research

In quantitative research, quantitative data is collected using instruments that measure individual performance or individual attitudes (Creswell, 2009). In addition, they obtain factual information in the form of numbers from census data, attendance reports, and progress summaries (Creswell and Clark, 2007).

Quantitative data includes closed-ended information such as that found on attitude, behavior or performance instruments (Saunders *et al.*, 2009). However, sometimes quantitative information is found in documents such as census records or attendance records (Sekaran and Bougie, 2009). The quantitative data analysis proceeds from descriptive analysis to inferential analysis and multiple steps in the inferential analysis build a greater refined analysis (Creswell and Clark, 2007).

4.7 The Questionnaire Survey

The term *'survey'* refers to both interviews and pencil-and-paper questionnaires (Berg, 2007). In business research, questionnaires are often used to collect information from participants in order to test the research hypotheses or answer study questions (Brace, 2008). Thus, the questionnaire survey was employed as main method to collect the data for the purpose of testing the research hypotheses and answering the study questions. The rationale behind choosing the survey method in this research is fourfold:

- It is a popular and common method of primary data collection in business research (Sekaran, 2003; Creswell, 2009; Saunders *et al.*, 2009).
- To be consistent with the research paradigm adopted (pragmatic paradigm) and to achieve the research objectives (See Chapter 1, Section 1.2) in terms of generalisation, identifying relationships between research variables and conducting the required test analysis techniques such as ANOVA test and factor analysis, the survey approach was regarded as appropriate (Collis and Hussey, 2003; Saunders *et al.*, 2009).
- To achieve the research objectives, a potentially large sample of a targeted population in geographically different locations is required; it was decided to adopt the questionnaire survey.
- It has been extensively used in previous research in similar areas of audit evidence such Jarboh (2005), Al-Hadi (2008), Joshi and Deshmukh (2009) and William *et al.* (2009) (See Table 4.2 on page 120).

4.8 Types of Questionnaires

A questionnaire can be classified into three main types (Dillman, 2007; Denscombe, 2007; Brace, 2008; Babbie, 2009; Rubin and Babbie, 2009; Wright and Marsden, 2010) which are: Web-Based Questionnaire, Self-Administered Questionnaire and Face-To-Face Questionnaire. Table 4.4 below summarises the contrasts between all these types.

Table 4.4: Comparison of self-administered survey with other types of survey

Source: Ray and Tabor (2003), Denscombe (2007), Brace (2008), Babbie (2009) Rubin and Babbie (2009) and Wright and Marsden (2010)

A web based questionnaire is good for undertaking research over a large geographical area but only if there is the necessary infrastructure in place to enable internet access. While the mail questionnaire is simple to administer historically it is acknowledged to have a low response rate as it is easy to ignore by the receiving parties (Saunders *et al.*, 2009).

Self-administered questionnaires have two main advantages. First, self-administered questionnaires are easily distributed to a large number of people (Mitchell and Jolley, 2009). Second, the researcher has the opportunity to introduce the research topic and motivate the respondents to give honest answers (Sekaran, 2003). However, using a self-administered questionnaire has some drawbacks. For example, organisations often are not able or willing to allow company time for data collection (Bernard, 2000).

Because streets names and infrastructure is constantly being changed, employing a self-administered questionnaires rather than mailing the questionnaires was used as an attempt to increase the response rate and enhance the completeness of the returned questionnaires.

4.9 The Rationale for Each Section of the Questionnaire

The main sources of ideas for designing questions for the current study are mainly derived from an extensive review and analysis of the existing literature regarding the research objectives.

The final version of the questionnaire is divided into three sections; the first section included the demographic data while the second was designed to test the study variables. The final section was designed to provide the opportunity for the respondents to comment on the subject of the study.

The first part of the questionnaire was designed to obtain some personal information of participants relating to their background. In order to achieve the Objective 3 of this study, which is concerned with the independent variables,

this section consists of questions seeking to obtain information about educational level, years of experience, and gender of participants. An example is for education where the participants were asked to identify their highest level of achievement and the options were high school, undergraduate degree, Masters, Doctor of Philosophy [PhD] or other. The nominal (or classificatory) scale was used on designing questions of this section.

The second section was designed to focus on the main aim of the study, which is to gather the opinions of Libyan external, internal, state, and taxation auditors regarding the effects of the study factors which are: source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence; on sufficiency and appropriateness of audit evidence. The participants were asked to make a comment on various statements in relation to the factors. An example statement for the source of evidence item factor was '*The auditor obtains evidence from independent sources*'. To this statement the participant was asked to mark a Likert-type scale response. In Appendix 1.A, and 1.B the full questionnaire is available for further reference.

A 5-point Likert- type scale was designed to measure the extent to which the respondents perceive that each statement was undermined or enhanced concerning sufficiency and appropriateness of audit evidence (Remenyi *et al.*, 2002; Saunders *et al.*, 2009). Furthermore, there is a need to use statistical techniques such as the SPSS package to complete this examination. The scale ranged from seriously undermines evidence to strongly enhances evidence.

Moreover, neutral choice was provided in the middle. Saunders *et al.* (2009) advises that through the use of a neutral option on the Likert-type scale, the researcher is attempting to reduce any bias that their statement could create as the participant may not have any cognitive response to the statement.

Attitudes can be ascertained by presenting a list of declarative statements and asking respondents to rate them in terms of agreement or disagreement (Black, 1999). In addition, appropriate scales have to be used depending on the type of data that needs to be obtained (Sekaran and Bougie, 2009).

Likert-type scales are often 5-point scales (Bernard, 2000). 5-point Likert scales were utilised in this study. The reasons behind employing Likert-type scales are (a) it is useful to obtain respondent's feelings or opinions (Mitchell and Jolley, 2009), and (b) to give participants a range of options as shown in Table 4.5 below to choose and therefore increase the response rate.

Table 4.5: Five point scales

	Strongly Undermines Evidence	***Slightly Undermines Evidence***	***Neither***	***Slightly Enhances Evidence***	***Strongly Enhances Evidence***
Items	1	2	3	4	5

The third section of the questionnaire used an open question to enable the participants to provide the researcher with additional information which they felt would help the study and to identify any missing subject topics which should be considered when reviewing audit evidence and auditing practices.

4.10 The Study Questionnaire Design

The preparation of questionnaires is vital to obtaining relevant and useful data for analysis. It needs to take account of guidelines for good practice in this field and the work of by Kalel (2000), Ahmid (2000), Jarboh (2005) and Al-Hadi (2008) were used in the development of the questionnaire used in this study. From Table 4.2 the various topics of these specific studies relate to individual factors which were investigated in this study. The pilot study is a recommended process by Saunders *et al.* (2009) as a method to establish that the proposed questionnaire is intelligible and clear to members of the target population. As part of the assessment for clarity and fitness for purpose the researcher checks that the instructions are clear, the quality of information gathered is appropriate, the time taken to complete the questionnaire is reasonable, addresses the relevance of questions including identification of ambiguous questions, and other issues that improve response rate and reliability and validity of analysis.

Bernard (2000) sets the following rules for constructing and designing the questionnaire:

- Be unambiguous
- Use a vocabulary that your respondents understand
- Remember that respondents must know enough to respond to your questions
- Make sure there is a clear purpose for every question you ask in a survey
- Pay careful attention to contingencies and filter questions.
- Use clear scales
- Always provide alternatives, if appropriate

- Avoid loaded questions
- Do not use double-barrelled questions. A double-barrelled question that lends itself to different possible answers to its subparts
- Do not put false premises into questions
- Do not take emotional stands in the wording of questions
- The layout of the questionnaire is also important. It should look neat and tidy.

The questionnaire was designed in accordance with these guidelines. It was split into three sections. The questions in the first section were relevant to respondents' background information as age, gender. The second section consisted of six parts relevant to the purpose of the study. Moreover, every effort was made to use simple, clear, language and words, a vocabulary that all respondents understand, and avoid double-barrelled questions when constructing a study questionnaire (See Appendix 1.A, for a copy of questionnaire).

4.10.1 The Wording of Questions

The precise wording of questions is crucial in achieving the maximum validity of survey information collected (Creswell and Clark, 2007). Black (1999) indicated that a small change in wording can cause large differences in the meaning and responses. The principles of wording refer to such factors as: (1) the appropriateness of the content of the questions (2) how questions are worded and the level of sophistication of the language used, (3) the type and form of questions asked, (4) the sequencing of the questions in the questionnaire, and (5) the personal data sought from the respondents (Black,

1999). The wording of questions and statements in a questionnaire is the key to its validity as a measuring instrument, and can contribute significantly to its reliability (Sekaran and Bougie, 2009).

In this study, sequencing, phrasing and level of language were considered in constructing the questionnaire. The study questionnaires started with questions that respondents find easy to answer such as gender and years of experience. The aim was to ease the respondent into completing the questionnaire by providing an initial set of simple questions that were straight forward to answer for the participants thus, increasing the response rate. The ordering of the questions presented to the participants was designed to help them to answer the question without difficulty. At the start of each section directions were provided to the participants to clarify the purpose of the section and to ensure a standardised response. This standardised response for the Likert-type scales for section 2 is highly important as if this was not provided the respondent is more likely to misquote their desired response based on their previous experience of Likert-type scales (Easterby-Smith *et al.*, 2008). In addition, the study questionnaire avoided asking respondents' names to give participants a sense of freedom to participate without self-censoring which is culturally important within Libya due to the historical political controls.

4.10.2 The Type of Questions

In designing questionnaires, the choice of type of questions is important. Black (1999) indicated that there are two major types of questions, open and closed. Open questions allow for a free, unpredictable response by subjects such as

used in interviews, while closed questions result in only a limited range of possible responses, such as multiple-choice questions or rating scales, or factual questions requiring a predictable range of responses (Oppenheim, 1992).

Open questions are typically used in exploratory studies where the researcher is not in a position to or is not willing to pre-specify the response categories (Remenyi *et al.*, 2002). However, open questions are more troublesome to answer and more difficult to analyse (Gillham, 2002). The study questionnaire included an open question at the end to provide the opportunity for the respondents to comment on the subject of the study.

Closed questions are classified by Sekaran and Bougie (2009) into two types:

- Recall of facts, experiences, names, dates, etc.
- Convergent, demanding predictable answers or restricting the respondent to a limited number of choices. For example, responding to a multiple-choice question on an achievement test or rating scale on an attitude survey.

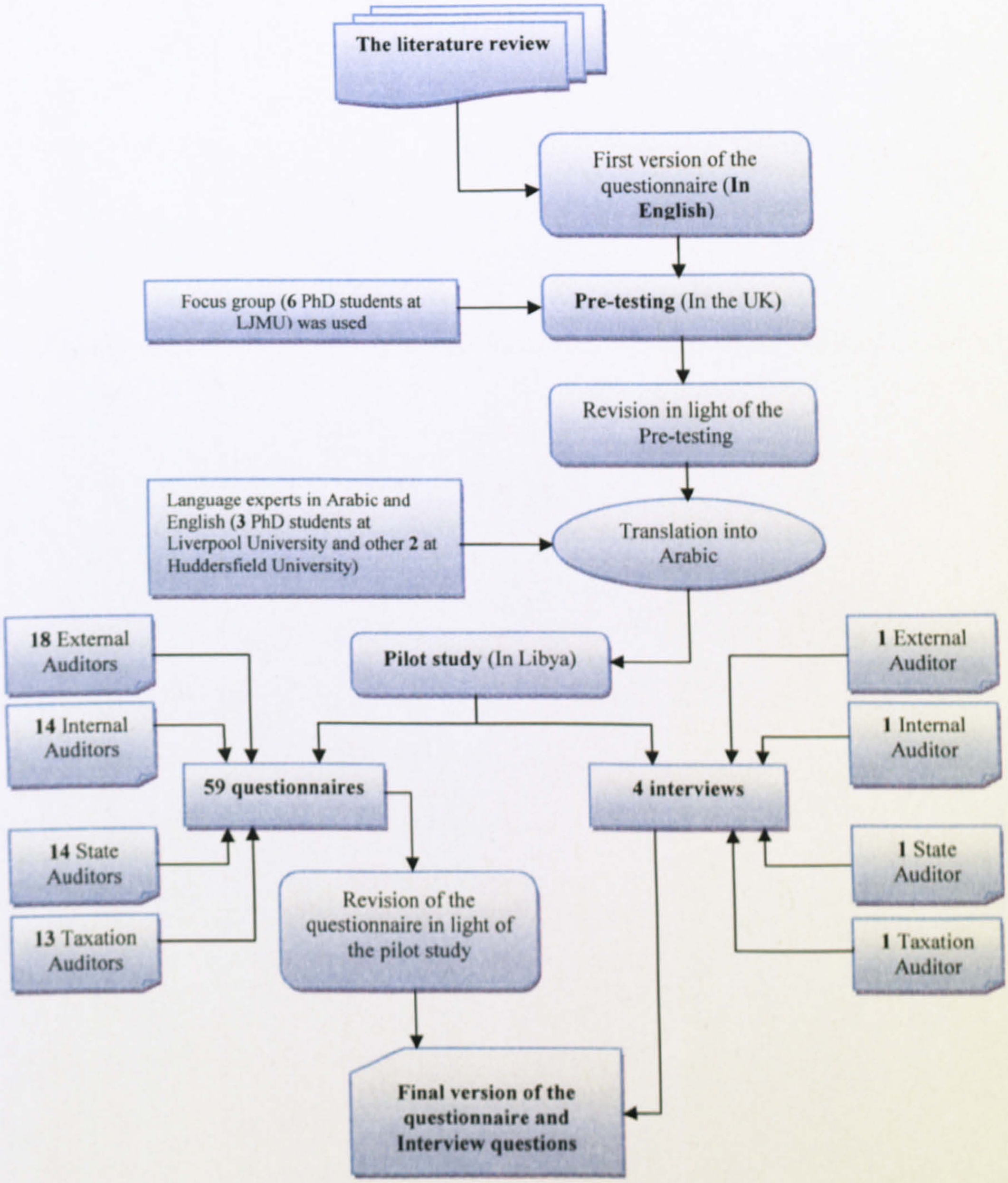
In this study, closed questions were utilised. The main rationales for this that (a) closed questions are typically used in quantitative studies (Mitchell and Jolley, 2009), (b) closed questions help the respondent to make quick decisions by making a choice among the several alternatives that are provided, (c) closed questions aid the coding of the information from large participants easily for subsequent analysis (Sekaran and Bougie, 2009), (d) closed questions can mean a lower error rate and, consequently higher reliability (Black, 1999).

4.10.3 Questionnaire Pre-Testing and Pilot Study

Pre-testing or a pilot study of the questionnaire needs to be undertaken before final administration (Remenyi *et al.*, 2002). The main objective of pre-testing is to detect possible shortcomings in the design and administration of the questionnaire (Ary *et al.*, 2009). Pre-testing can be informal where one consults friends, colleagues, experts and people of diverse opinions, or it could be formal, involving a pilot study which is a replication, on a small scale of the main study (Remenyi *et al.*, 2002). According to Ghauri *et al.* (1995), the questionnaire should be evaluated in order to check: question comprehension, the level of difficulty, the willingness to answer sensitive questions and the time it takes to answer the questionnaire to an appropriate standard of information.

The pre-testing and pilot study were utilised in this study to provide the opportunity to assess (a) the clarity of the questionnaire instructions and questions, (b) the quality of the information and the ability to perform meaningful analysis of the information obtained, the time taken to complete the questionnaire, the likely response rate, which questions are irrelevant, and which are relevant (Sekaran, 2003; Ary *et al.*, 2009). The pre-testing for the study questionnaire consists of four stages (See Figure 4.3 on page 136).

Figure 4.3: Pre-testing and pilot study of the study questionnaire and interviews



The first stage started by presenting the English draft questionnaire to 6 PhD students at Liverpool John Moores University [LJMU] Business School as a focus group. All the students were undertaking a PhD in accounting and they have experience with accounting and auditing within the Libyan environment (See Table 4.6 below).

Table 4.6: The focus group participant descriptors

No.	Years of experience	Position	Organisation
1	8	Lecturer	Alfath University
2	4	Lecturer	Alfath University
3	3	Lecturer	Al-Mergab University
4	6	Lecturer	Al-Jabel AL-Garbi University
5	12	State auditor	Tripoli Institute of Public Control
6	3	External auditor	Tarek Audit Firm
(6) Total No. of interviewees			

The focus group interview was conducted on 16th May 2007 in the John Foster building at LJMU and took about 1 hour and 30 minutes. A number of useful suggestions relating to the wording and layout of questions were provided from the group and resulted in a revised questionnaire. In the second step, the questionnaire was presented to the supervisory team who provided important comments regarding the wording and scale of the questions.

The third stage was translating the questionnaire into Arabic with help of experts in Arabic and English. It is necessary to make sure that both the Arabic and English versions of the questionnaire had the same meaning in both languages. Hence, the translated draft was discussed with 5 PhD students in the UK universities (3 from Liverpool University and 2 from Huddersfield University) whose native language is Arabic. Some amendments were made to

the Arabic version to ensure that the clarity of the questions remained with the same intent as the English language question.

In the final step of pre-testing, English and Arabic copies of the questionnaire were e-mailed to three academic staff that hold a PhD degree from universities in the UK and the USA, and are currently working at Alfath University in Libya. Useful feedback was received from them including suggestions for changes to the wording and translation of the questionnaire.

For the pilot study, four groups of sources were used to collect data, the external auditors at LAAA, the internal auditors at the banks, state auditors at the IPC, and taxation auditors at tax departments. The identification of possible targets for the pilot study followed the same procedure as the final study process. This process is described in detail in Section 4.12 and 4.13. The sample of external auditors included managers and senior staff at the auditing firms. For the internal auditors, the sample included directors of audit departments and internal audit staff with different levels of experience in the audit department. The banks selected for the pilot study were chosen randomly. The selected banks were: Libyan Central Bank, Libyan Foreign Bank, Wahda Bank, Alaman Bank, and Gumhoria Bank. For the state auditors, the sample included managers and state auditors at three departments (public company audit, private company audit, and bank audit departments). The sample of taxation auditors included directors and taxation auditors in the Tripoli, Salah den, and Sog guma branches.

At this stage, stratified sampling was used to select the respondents of the questionnaires. 73 questionnaires were randomly distributed to 22 external auditors at 22 auditing firms, to 18 internal auditors at the 5 banks, to 17 state auditors at the IPC, and to 16 taxation auditors at the 3 taxation branches in June 2008 (See Table 4.7 below).

Table 4.7: Sample size of pilot study

Description	External auditors	Internal auditors	State auditors	Taxation auditors	Total
Total No. of auditors	117	110	84	76	**387**
Sample of pilot study	*22	*18	*17	*16	*73

*the sample size of each group was selected according to the percentage amount that each group made up of the total number of auditors.

Fifty-nine usable questionnaires were received from the pilot participants- only five were not returned. A total of 9 incomplete questionnaires were returned and these were not able to be used and therefore were excluded. The final usable questionnaires were received from 18 external auditors, 14 internal and state auditors, and 13 taxation auditors (See Table 4.8).

Table 4.8: Response rate for the pilot study questionnaires

Description	External auditors	Internal auditors	State auditors	Taxation auditors	Total
Distributed questionnaires	22	18	17	16	**73**
Usable questionnaires	18	14	14	13	**59**
Percentage (%)	**82**	**78**	**82**	**81**	**81**

Table 4.9 on page 140 illustrates the background information of the participants of pilot study questionnaires. The table lists the descriptive statistics of the participants in the pilot process and their spread through the individual independent variables of the study.

Table 4.9: Demographic data of pilot study questionnaire participants

	External auditors		Internal auditors		State auditors		Taxation auditors		Total	
	No	%	No	%	No	%	No	%	No	%
Auditors' gender										
Male	18	100	12	85.7	9	64.3	13	100	52	88.1
Female	0	0	2	14.3	5	35.7	0	0	7	11.9
Total	**18**	**100**	**14**	**100**	**14**	**100**	**13**	**100**	**59**	**100**
Auditors' age										
21-29 years	3	16.7	3	29.4	11	78.6	1	7.7	18	30.5
30 to 39 years	9	50	6	42.9	2	14.3	8	61.5	25	42.4
Over 40 years	6	33.3	5	35.7	1	7.1	4	30.8	16	27.1
Total	**18**	**100**	**14**	**100**	**14**	**100**	**13**	**100**	**59**	**100**
Auditors' highest education level										
High school	0	0	2	14.3	2	14.3	1	7.7	5	8.5
First university degree	4	22.2	8	57.1	6	42.9	9	69.2	27	45.8
Masters degree	12	66.7	3	21.4	5	35.7	2	15.4	22	37.3
PhD	2	11.1	1	7.1	1	7.1	1	7.7	5	8.5
Total	**18**	**100**	**14**	**100**	**14**	**100**	**13**	**100**	**59**	**100**
Auditors' education subject										
Accounting	18	100	13	92.9	12	85.7	13	100	56	94.9
Management	0	0	1	7.1	1	7.1	0	0	2	3.4
Economics	0	0	0	0	1	7.1	0	0	1	1.7
Total	**18**	**100**	**14**	**100**	**14**	**100**	**100**	**100**	**59**	**100**
Auditors' years of experience										
Under 5 years	7	38.9	6	42.9	1	7.1	6	46.2	20	33.9
5 to 9 years	4	22.2	5	35.7	6	42.9	2	15.4	17	28.8
10 to 14 years	1	5.6	0	0	6	42.9	0	0	7	11.9
15 to 19 years	3	16.7	1	7.1	1	7.1	4	30.8	9	15.3
Over 20 years	3	16.7	2	14.3	0	0	1	7.7	6	10.2
Total	**18**	**100**	**14**	**100**	**14**	**100**	**13**	**100**	**59**	**100**
Auditors' sector										
Private sector auditing	18	100	0	0	0	0	0	0	18	30.5
Public sector	0	0	14	100	0	0	0	0	14	23.7
Institute of Public contro	0	0	0	0	14	100	0	0	14	23.7
Taxation firm	0	0	0	0	0	0	13	100	13	22
Total	**18**	**100**	**14**	**100**	**14**	**100**	**13**	**100**	**59**	**100**

All participants were asked to fill in the Arabic version of the study questionnaire. In addition, they were asked to write their comments and suggestions regarding the questionnaire's clarity, answering options, layout and length. All respondents, except 7 participants, reported as requested, the time taken to complete the questionnaire. Most of the respondents reported that it took between15 to 25 minutes, with an average of 20 minutes.

In general, the findings on the layout and completion of the questionnaire can be summarised in the following three points:

1. Respondents felt that the questionnaire was not too long.
2. The questionnaire was clear and understandable.
3. Respondents found the 5-point scale usable.

Additionally, two phone calls were received, one from a senior auditor and the other from a director of audit department of Alaman Bank who apologised for not completing the questionnaire as it was their employer's policy not to participate in surveys. However, they indicated that the questionnaire was suitable for meeting the objective and that the topic was important. Moreover, they did not suggest any changes regarding the types of questions or the wording.

In response to the comments received from the pre-testing and pilot study stage some modifications were made to the questionnaire, but without exceeding the number of pages or deleting important questions (most of these modifications related to wording of the questionnaire items). In addition, the Statistical Package for the Social Sciences [SPSS] computer program was used to analyse the data collected from the pilot study questionnaires. The analysis of Variance [One-way ANOVA] was used with level of significance of P=.05. This pilot data was also assessed for its internal reliability through the use of Cronbach's Alpha. For the pilot sample the score was good (α=0.84)

In addition to the pilot study of questionnaire, four Interviews were conducted with an internal, external, state, and taxation auditor in June 2008 in order to assess the time of the interview and to confirm the ideas of the interview

questions are covered. The internal auditor was selected from directors of audit departments at five banks which are: Libyan Central Bank, Libyan Foreign Bank, Wahda Bank, Alaman Bank, and Gumhoria Bank. An external auditor who was the manager of Alric's Audit Office was chosen to be in the sample. The state and taxation auditors were selected from three directors of audit department at the IPC and 3 taxation branches (Tripoli, Salah den, and Sog guma). All auditors were selected randomly for the interviews (see Table 4.10 below).

Table 4.10: The pilot study interview schedules

No.	Date	Years of experience	Time (minutes)	Position	Organisation
1	**05/6/2008**	9	65	Director of audit department	Gumhoria Bank
2	**11/6/2008**	12	50	Senior auditor	Alric's Audit Office
3	**21/6/2008**	7	40	Director of private companies audit department	Institute of Public Central
4	**23/6/2008**	6	70	Director of branch	Salah den Taxation branch
(4) Total No. of interviews					

The interview of the audit department director at Gumhoria Bank was held during working time at a special meeting room in the bank's headquarters. For the external auditor, the Alric's Audit Office was decided to be the place of interview. Other interviews were conducted at the manager's offices in the IPC and Salah den taxation branch.

Many useful suggestions relating to the questions of interview were provided from interviewees and all were taken into consideration for the main interview and questionnaire process. The pilot interview process confirmed that the main study factors are of interest and need further investigation in the Libyan setting

with the recent structural changes. Moreover, the time of interviews was between 40 to 70 minutes, with an average of 1 hour. The data collected of interviews was analysed by the content analysis method.

4.11 Ethical Considerations

Ethical considerations must be taken into account for any research situation (Grinnell and Unrau, 2008), especially in collecting data from participants (Bryman and Bell, 2007). This research followed the ethical research procedures of the ethical guidelines of the Research Ethics Committee [REC] of LJMU (Young, 2006). These procedures can be summarising as following:

- Participants were given the option of participating or not participating in the research.
- Participants have right to withdraw from the research at any point.
- Written or verbal consent is sought prior to involvement in the research
- All participants were made fully aware of the requirements for involvement in the research.
- All participants were informed of the nature of the research.
- All participants were given the option to withdraw from the research at any time. The ethics approval can be found in Appendix 2.

4.12 Study Population and Sample

4.12.1 Study Population

The term '*population*' refers to the entire group of people, events, or things of interest under investigation, and the population frame is a listing of all the

elements in the population from which the sample is drawn (Sekaran, 2003). The population for this research is defined as Libyan auditors which are external, internal, state, and taxation auditors.

External, state, internal and taxation auditors were targeted in the population owing to the importance of their opinion regarding the effect of the study variables. The different groups have a range of professional limitations which the other groups do not encounter and this difference needed to be considered when looking at the impact of the economic and political structural changes and its impact on the use of audit evidence within Libya. External auditors are regulated by the LAAA who registered those who practice private enterprise auditing in Libya while state auditors are employed by the IPC to audit the financial statements of the public companies, private companies, and banks in Libya and are controlled by the requirements of the IPC. Meanwhile the internal auditors at Libyan banks were selected as a representative group for Libyan best practice for private sector usage of audit evidence to support their audit report.

The reason for choosing the Libyan bank sector was because of the high level of their accounting and auditing systems while taxation auditors who are not controlled by the IPC but are legally allowed reviewing the financial statements of Libyan organisations (public and private sector) in order to determine tax. Thus, they use audit evidence to support their evaluations of tax value. For government agencies such as the IPC the taxation auditors from the Tax Department will assess the employee income taxation requirements and request payment.

The population frame was selected to cover the various sectors described in previous empirical studies relating to the quality of audit evidence (e.g. Kalel, 2000; Ahmid, 2000; Jarboh, 2005; Al-Hadi, 2008; Joshi and Deshmukh, 2009; William *et al.*, 2009)

The participants were all based in Tripoli and this was a predetermined decision. Tripoli which is the capital city of Libya is where the majority of large organisations are based. The headquarters for the IPC and the eight major banks are all located in Tripoli and this location is where the majority of Libya's economic activity is conducted. While there are regional enterprises, by using Tripoli as the focus, the research study was able to access all sectors and a range of enterprise participants easily. Travel within Libya can be a difficult and expensive enterprise as there is not the same infrastructure which is found in the UK. The use of Tripoli as a location base was to enable the research to maintain contact with the participants and to ensure that a reasonable sample size was achieved in the questionnaire and interview process.

4.12.2 Sample of the Study Questionnaire

After defining the population, it was necessary to identify an appropriate sample and a suitable sampling frame. Selecting a sample is a fundamental element of a positivistic study (Hussey and Hussey, 1997). The reasons for sampling are the lower cost, greater speed of data collection and the availability of population elements (Cooper and Schindler, 2001).

Sampling is important because it is usually not possible to collect information from all members of the population being studied (Black, 1999). Black (1999) pointed out that some problems of sampling should be considered (e.g. sample size will constitute adequate sample size and how difficult it will be to contact and collect data from subjects).

The sampling frame for any sample is a complete list of all the cases in the population from which the sample will be drawn (Saunders *et al.*, 2007). However, McDaniel and Gates (1996) suggested that a researcher develops a sample frame that produces a representative sample of population elements with desired characteristics of attributes. For this study, four different sample frames were selected to representing the population (See Table 4.11).

Table 4.11: Sample frame of the study questionnaire

External auditors	Internal auditors	State auditors	Taxation auditors	Total
117	110	84	76	**387**

For external auditors, the first step was collecting all names and addresses of auditors who registered at LAAA. The total number of auditors was 173. In the second step, another list of external auditors was obtained from all taxation branches in Tripoli city (Tripoli taxation, Salah den taxation, and Sog guma taxation) in order to identify only auditors who are practicing auditing and they numbered 117 auditors.

According to internal and state auditors, the total number of internal auditors (110) at eight chosen banks (See Table 4.12 on page 147), and 84 state auditors

at IPC were selected. Moreover, all taxation auditors at three targeted taxation branches were included in the sample frame (76 auditors).

Table 4.12: Banks of study sample

No.	Name of the bank
1	Libyan Central Bank
2	Gumhoria Bank
3	Libyan Foreign Bank
4	Sahara Bank
5	Umma Bank
6	Wahda Bank
7	Saving Bank
8	Commerce Bank
(8) Banks	

After determining the sample frame it was necessary to choose the sample method and the sample size. There are two major types of sampling designs: Randomly (Probability) or Non-randomly (Non-probability). A random sample is a sample in which each member of the sample has an equal chance of being selected as a study participant. Probability sampling includes: simple random sampling, systematic sampling, stratified sampling, cluster sampling, and multi-stage sampling. On the other hand, a non-random sample is a sample, in which each member of the sampling frame does not have an equal chance of being selected as a participant in the study. Non-probability samples include: convenience samples, judgment samples, quota samples and snowball samples (VanderStoep and Johnston, 2009).

According to Ritchie and Lewis (2006) and Bernard (2000), there are some advantages and disadvantages of random and Non-random sampling methods. These summarised in Table 4.13 on page 148.

Table 4.13: Advantages and disadvantages of randomly and Non-randomly sampling methods

Type of sampling method	Advantages	Disadvantages
Random sampling	• Less prone to bias • Allows estimation of magnitude of sampling error, from which the researcher can determine the statistical significance of changes/differences in indicators	• Requires that the researcher have a list of all sample elements • More time-consuming • More costly • No advantage when small numbers of elements are to be chosen
Non -Random sampling	• More flexible • Less costly • Less time-consuming • Judgmentally representative samples may be preferred when small numbers of elements are to be chosen	• Greater risk of bias • May not be possible to generalise to program target population • Subjectivity can make it difficult to measure changes in indicators over time • No way to assess precision or reliability of data

Simple random sampling involves picking a certain number of participants out of the total number of possible participants and is often used by survey researchers (VanderStoep and Johnston, 2009). In this study the random sample method was used because there is a sample frame, and it was also more representative of the current Libyan auditor population (Sekaran, 2003). In addition, Hussey and Hussey (1997) indicated that a representative sample should be large enough to satisfy the need of the study and should be chosen at random and be unbiased. Thus, 70% of the external auditors at LAAA and 80% of the state auditors at IPC, and taxation auditors were included in the sample selected for this study. For the internal auditors, all auditors at 8 selected banks were used as participants for the study sample, except for those within the Libyan Central Bank, where only 50% of internal auditors were selected. This reduced amount for the Libyan Central Bank was because of the low

accessibility to the internal auditors due to the high work load which they have and the response demands that this workplace has on its employees.

Consequently, a sample size of 288 auditors was selected from the four target groups (81 external, 77 internal, 67 state, and 63 taxation auditors) out of the 387 auditors making an overall percentage of 74% (See Table 4.14).

Table 4.14: Sample size of the study questionnaire

Description	External auditors	Internal auditors	State auditors	Taxation auditors	Total
Total No. of auditors	117	110	84	76	**387**
Percentage of sample	70%	*50%	80%	80%	74%
Sample size	**81**	77	**67**	**63**	**288**

*50% for Libyan Central Bank

4.12.3 Interviews Sample

Qualitative research uses non-probability samples for selecting the sample for study (Flick, 1998; Ritchie and Lewis, 2006; Neuman, 2006). The sample units are chosen because they have particular features or characteristics which will enable detailed exploration and understanding of the central themes required for the study. These may be socio-demographic characteristics, or may relate to specific experiences, behaviours or roles (Ritchie and Lewis, 2006).

Quota sampling method (Non-random sampling) was chosen to select the participants of the study interviews. The rationale for this is that (a) it is an appropriate method when the population included different groups because it allows the study to include particular traits and characteristics such as education and gender for each subgroup in the population (VanderStoep and Johnston, 2009) and the sample of this study is based on the perceptions of four

auditor groups which are external, internal, state, and taxation auditors, (b) it takes less time and costs, and can be set up very quickly (Saunders *et al.*, 2007).

In terms of numbers, the larger the number of people, the less the amount of details typically emerging from any individual (Creswell and Clark, 2007). Ritchie and Lewis (2006) pointed out that qualitative samples are usually small in size. In addition, Libyans generally dislike participating in opinion polls. A sample size of 28 auditors (7%) from the population was selected to conduct the interviews as this sample size was considered feasible to achieve.

After determining the sample size, two steps were taken to select the sample of interviewees. The first was identifying the proportions of four target groups in the population (32% external auditors, 28% internal auditors, 21% state auditors, and 19% taxation auditors). In the second stage, the proportional allocation of previous step was used to select the sample (Table 4.15 on page 151). Thus, all directors of audit departments at target banks, 9 senior external auditors, 6 state auditors and 5 taxation auditors (including managers) were invited to interviews. In order to enhance the reliability of the information collected on interviews, the high level of experience of the auditor was the main criterion for selecting the interviewees. Only 12 auditors (three auditors from each group) were willing to be interviewed.

Table 4.15: Sample size of interviewees

Description	External auditors	Internal auditors	State auditors	Taxation auditors	Total
Sample selected	9	8	6	5	28
Proportions of sub-group in the population	32%	28%	21%	19%	100%
Sample of interviews	**3**	**3**	**3**	**3**	**12**

4.13 The Questionnaire Procedures and response rate

4.13.1 The Questionnaire Procedures

As mentioned earlier in this chapter, the postal services in Libya are not effective enough to send postal questionnaires to the places sampled such as banks or private audit firms. In addition, the internet network which is found in most developed countries is not a feature of Libya. Some parts of an organisation such as management may have internet access but not every member in a department will have access from their workplace. Based on the difficulty in administering the other types of questionnaires the self-administered questionnaire was employed to distribute the questionnaires for the study sample.

According to Black (1999), a major problem with a survey is getting the respondents to return the questionnaire. It may not be returned for many reasons such as design of questionnaire (Black, 1999; Gillham, 2002). For instance, long questionnaires lead to a reduction in the response rate (Ghauri *et al.*, 1995). To overcome the difficulties of transmission and return of the questionnaire the researcher visited the offices of the participants and hand delivered and collected the questionnaires. Where possible within organisations

a key contact was identified as a central holding person that respondents could return the enclosed questionnaire paper envelopes. This arrangement was used for the LAAA officers. The central contact would then lock these responses away for confidentiality and privacy of the participants. When a number of questionnaires had been completed, the central contact contacted the researcher so that he could collect a batch of responses.

The selection of the potential target participants for the research process was undertaken through an identification process which used a number of services to develop a list of potential participants. From this process the final list was developed and random selection was undertaken to produce a target group. The final selection list numbers were based on the percentage of practitioners in each of the group that were identified in the initial discovery process.

4.13.1.1 Identification of External Auditors

1. The researcher collected the list of names and addresses of all Libyan external auditors, who work in Tripoli, from the Libyan Accountants and Auditors Association [LAAA] who are registered with it. The Association had a total of 173 in the records.
2. To reduce the bias in the target sample, the researcher collected another list of Libyan external auditors who are practicing auditing. The information was obtained from Tripoli Taxation Office. According to the Tripoli Taxation Office, there were 117 auditors currently practicing in Libya.
3. Due to this final number, 70% was the percentage of target sample size that was selected for the external auditors. This percentage number was used to

ensure that as much of a small population group covered professionals who work in an audit role in Tripoli, Libya and thus therefore more likely to be representative of the total population group. Therefore, 81 auditors were selected by simple random sampling method to make up 70% of the target sample.

Table 4.16: The distribution of the questionnaire among the external auditors

Total No. of external auditors	Distributed Questionnaires	Useable questionnaires
117	81	51

From the 81 distributed questionnaires to external auditors, a total of 51 were returned that were usable (Table 4.16). A similar selection process was undertaken for state auditors. There was an initial identification process and this was then refined for the development of the final target audience.

4.13.1.2 Identification of State Auditors

1. The researcher collected a list of all auditors who are working at Institute of Public Control [IPC]. This list identified that there was about 84 auditors working in different departments (Public Company department, Private Company department, and the Bank department).
2. By simple random sampling, about 80% of the auditors were selected to represent the population and as a result 67 auditors in the IPC were targeted.
3. Within the different branches of the IPC departments sub-groups of auditors were targeted based on the percentage of the total group that they

represented. For example, private company auditors make up 32% of IPC auditors and therefore with the 80% selection of IPC auditors that means 21 questionnaires were distributed to this type of auditor. Further details can be seen below in Table 4.17.

Table 4.17: The distribution of the questionnaire among the state auditors

Name of the department	Total No. of State auditors	Distributed questionnaires	Useable questionnaires
Public company audit department	34	24	18
Private company audit department	27	21	12
Bank audit department	23	22	14
Total	**84**	**67**	**44**

A similar selection process was undertaken for internal auditors. An initial identification activity was undertaken to enable a sample selection target process to be undertaken. Table 4.18 provides the final details about the various numbers for the selection, distribution and return of useable questionnaires.

4.13.1.3 Identification of Internal Auditors

1. The list of the eight major banks in Tripoli was developed from the Central Bank of Libya [CBL] list of banks who they do business with in Tripoli (Central Bank of Libya, 2006).
2. After contacting the selected banks a list of all internal auditors was compiled. The final list identified that were only a small number of internal auditors who were not working for the Libyan Central Bank and this impacted on the resulting selection process.

3. Owing to small number of auditors in some banks, all auditors were selected to represent the population except the Libyan Central Bank. For the Libyan Central Bank a 50% selection was used of their auditors as they had the largest group of internal auditors and due to their high work demands. The final sample participants were selected by simple random sampling, they were (77).

Table 4.18: The distribution of the questionnaire among the banks internal auditors

Name of the bank	Total No. of Internal auditors	Distributed questionnaires	Useable questionnaires
Libyan Central Bank	58	25	11
Gumhoria Bank	8	8	6
Libyan Foreign Bank	13	13	11
Sahara Bank	4	4	3
Umma Bank	6	6	4
Wahda Bank	3	3	2
Saving Bank	7	7	7
Commerce Bank	11	11	7
Total	**110**	**77**	**51**

Table 4.18 provides details about the small numbers of internal auditors present in the banks other than the CBL which dominates the population group with a high percentage of the total population. The final group was the taxation auditors and these auditors are not affiliated with the other groups due to the legal responsibility to assess for taxation liability. This group was included as it is potentially possible for the taxation auditor to transfer into another working area within their career.

4.13.1.4 Identification of Taxation Auditors

1. The lists of taxation auditors who are working in 3 offices located in Tripoli (Tripoli Taxation Office, Salah den Taxation Office, and Sog Guma

Taxation Office), were collected from the taxation department. A total of 76 auditors were identified in this role.

2. Using simple random sampling, 80% of the population totalling 63 auditors were selected to be in the study sample.
3. In the subgroups of the different taxation offices. The researcher used the whole office populations for the regional offices while almost 70% of the population in the main Taxation Department Head Office was used. The Taxation Department Head Office is also described as the Tripoli taxation office. This lower number from the headquarters reflects the organisational demands on the taxation auditors in the office and their high workflow levels (Table 4.19).

Table 4.19: The distribution of the questionnaire among the taxation auditors

Name of the branch	Total No. of taxation auditors	Distributed questionnaires	Useable questionnaires
Tripoli taxation	41	28	23
Salah den taxation	18	18	7
Sog guma taxation	17	17	11
Total	**76**	**63**	**41**

The private auditing offices, banks, IPC, tax departments allowed the participants to respond to the questionnaires in their workplace. The ease of access location assisted in the high response rates.

4.13.2 Response Rate

A number of procedures of questionnaires distribution were undertaken in order to increase the response rate. The first procedure was for the researcher to physically distribute the questionnaire in person to the different types of

auditing organisations covering the four different groups. This personal contact and frequent contact assisted in the reminding the participants that researcher was looking for their responses. The use of a central collection point which was secured and locked assisted those in the larger organisations in returning their completed questionnaires. The fact that with the questionnaire an envelope was provided so that individual participants could maintain confidentiality was potentially another reason why they were willing to participate. The envelope in conjunction with the covering briefing letter may provide the participants with confidence in the purpose and use of the research data thus making individual's more willing to participate. A copy of the covering attachment with the questionnaire is in Appendix 1. A. As the briefing letter advised the participants that their questionnaire had been coded to ensure the security and to provide anonymity for the participants some may have felt more comfortable about the research process and therefore agreed to participate. Further, the researcher gave the respondents the opportunity to receive a report of the research findings and as it was a topical issue for the local profession those interested may have participated due to their professional development interest. The response rate was 65% (See Table 4.20) which is higher than the acceptable level of 60% defined by Black (1999) and Langbein and Felbinger (2006).

Table 4.20: Response rate for the main questionnaire survey

Description	External auditors	Internal auditors	State auditors	Taxation auditors	Total
Distributed questionnaires	81	77	67	63	**288**
Usable questionnaires	51	51	44	41	**187**
Percentage	**63%**	**66%**	**66%**	**65%**	**65%**

4.14 Data Analysis of the Questionnaires

Statistical Package for the Social Sciences [SPSS] software was used to analyse the information collected by questionnaires. According to Hougaard (2000), Pallant (2007) and Field (2009), there are two main methods of data analysis which are parametric and non-parametric methods.

Parametric statistics is a branch of statistics that assumes data come from a type of probability distribution and makes inferences about the parameters of the distribution (Pallant, 2007). While, non-parametric statistics are a branch of statistics that are applied when populations are not normal, or the dataset being analysed is known to have severely skewed data (Jackson, 2009).Table 4.21 below describes the main different between parametric and non-parametric models

Table 4.21: Comparison of parametric and non-parametric models

Source: Hougaard (2000: 69)

According to Pallant (2007) and Field (2009), there are five criteria that traditionally guide the researcher to parametric analysis:

- Level of measurement: the dependent variable measured at the interval or ratio level, which is, using a continuous scale, rather than discrete categories.

- Random sampling: the scores are obtained using a random sample from the population.
- Independence of observations: the observations that make up the research data are independent of one another.
- Normal distribution: the population from which the samples are taken are normally distributed. In other words, with large sample sizes (30 or more) the violation of this assumption should not cause any big problems.

For this study, the sample size is over 30 and they were selected randomly from a normally distributed population. Five techniques were used to analyse the information obtained by study questionnaires. These include: Descriptive Statistics, Analysis of Variance [One-way ANOVA], Post hoc test, T-test, and Factors Analysis technique.

4.14.1 Descriptive Statistics

Descriptive statistics refers to statistical techniques used to summarise and describe a data set, and to the statistics (measures) used in such summaries. Measures of central tendency such mean and variation such as range or are the main descriptive statistics (Blaikie, 2004). According to Vaus (2002), descriptive statistics provide simple summaries about the study sample and the measures used to describe the study sample.

For the purpose of this research, descriptive statistics technique were utilised to analyse the information that was collected by questionnaires. Descriptive statistics were used to describe the characteristics such as experience, education level and gender of participants in order to achieve objective one of the

research. Furthermore, descriptive statistics were used to analyse the effect of the study variables which are: source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence; on the sufficiency and appropriateness of evidence obtained by the Libyan auditor in order to achieve the study objective 1.

4.14.2 Analysis of Variance Test

In this study an Analysis of Variance [ANOVA] test was employed to test the study hypotheses 1, 2 and 3. ANOVA test is used when there are two more groups whose mean scores on continuous variables needed to be compared (Sekaran, 2003). Therefore, an ANOVA test was used in this study to examine whether the mean scores of the four groups which are external, internal, state, and taxation auditors significantly differ from each other with regard to their opinion about sufficiency and appropriateness of audit evidence.

4.14.3 Post Hoc Test

Post hoc test is used at the second stage of the ANOVA test if the null hypothesis is rejected (Field, 2009). For this study, the post hoc tests were utilised to indicate which groups of auditors significantly differ from others in respect to the mean.

4.14.4 T-Test

T-test is a parametric test based on the normal distribution, and it is used when there are two experimental conditions and different participants were assigned to each condition (Field, 2009). T-test compares two means, when those means have come from different groups of entities (Ghauri *et al.*, 1995). For the purpose of testing study hypothesis 4, the t-test was utilised to analyse whether the mean scores of the male and female groups significantly differ from each other regarding their views about quality and quantity of audit evidence.

4.14.5 Factor Analysis Method

In addition to descriptive statistics, ANOVA test, and T-test, factor analysis was used to reveal any common characteristics perceived by respondents underlying the concept of sufficiency and appropriateness of audit evidence. Ghauri *et al.* (1995: 129) defined factor analysis as:

> "a statistical technique used to identify a relatively small numbers of factors that can be used to represent relationships among sets of many interrelated variables."

Factor analysis is a method for determining the number and nature of which underlie the dimension (or factors) among large numbers of measures of concepts or constructs being evaluated or explored (Remenyi *et al.*, 2002). Factor analysis is a mathematical or statistical technique or procedure that can assist the researcher in conceptualising a problem especially with regards to data reduction and the exploration of underlying dimensions (Remenyi *et al.*, 2002). In this study, the factor analysis technique was utilised to identify a smaller number of underlying factors.

4.15 Reliability Analysis

A reliability test was used to examine the consistency with which individuals responded to the survey questionnaire. If individuals respond to items in the same way on multiple occasions, such an instrument is considered to be stable and valid to use for the exact measurement of the information of the interest (Sekaran and Bougie, 2009). Sekaran (1992: 209) stated that:

> "The reliability indicates how study and consistently the instrument measure the variable"

In this study, Cronbach's Alpha tests were utilised, because of its relevance to a questionnaire based on the Likert-type five-point scale, and measures the internal consistency of the questionnaire, based on the average inter-item correlation of the items (Salkind, 2009). Based on the recommendation of Pallant (2007) the statistical reliability value should be 0.60 or above. For the pilot study, the Cronbach's Alpha was 0.84 while in the main study it was 0.703 which are both acceptable (See Table 4.22 below and Appendix 3 for details).

Table 4.22: Cronbach's Alpha Test Result

	Scale total No. of items	Total No. of cases	Cronbach's Alpha
The pilot study	39	45	0.840
The final survey	38	187	0.703

In term of source of evidence, the first test was done using 8 items of this variable and the Cronbach's Alpha was found to be $\alpha = 0.692$. Then a reliability test was done by eliminating item No. 3 for evidence source which described the knowledge-ability of the source to increase the value of alpha, because the

item has negative correlation with the rest of the items (-0.010) (George and Mallery, 2003). Therefore, the new value of alpha was improved (α= 0.710).

Regarding directness of evidence, the first test was done by using 3 items of this factor and the Cronbach's Alpha was found be just under the preferred level (α= 0.698). Again the reliability test was repeated by deleting item No. 3 to increase the value of alpha, because the item has the weakest correlation (0.069) with the rest of the items (George and Mallery, 2003). Therefore, the new value of alpha has improved with the removal of this item (α= 0.703).

With respect to type of evidence, the first test was done by using 5 items of this variable and the Cronbach's Alpha was found to be α= 0.688. Then reliability test was done by eliminating item No. 4 which asks about the auditor's attitude towards expert documentation to increase the value of alpha, because the item had the weakest correlation (0.224) with the rest of the items (George and Mallery, 2003). Therefore, the new value of alpha was calculated (α= 0.696).

In term of academic and professional qualifications of the auditor, the first test was done by using 10 items of this variable and the Cronbach's Alpha was found to be α= 0.691. Then reliability test was done again by deleting items No. 7 and No. 10 to increase the value of alpha, because the items has negative correlation with the rest of the items (-0.048 and -0.053) (George and Mallery, 2003). Therefore, the new value of alpha is (α= 0.711).

Regarding consistency of evidence, the first test was done by using 4 items of this variable and the Cronbach's Alpha was found to be α= 0.689. Then

reliability test was done by eliminating item No. 4 to increase the value of alpha, because the item has the weakest correlation (0.41) with the rest of the items (George and Mallery, 2003). Therefore, the new value of alpha is (α= 0.705).

In terms of amount of evidence, the first test was done by using all items of this variable and the Cronbach's Alpha was found to be α= 0.693. Then reliability test was done again by eliminating item No. 3 to increase the value of alpha, because the item has the weakest correlation (0.030) with the rest of the items (George and Mallery, 2003).Therefore, the new value of alpha is (α= 0.706).

Table 4.23: Cronbach's Alpha Test Result (Variables)

Variables	No. of Items Before Deleting	No. of items after deleting	Cronbach's Alpha Before Deleting	Cronbach's Alpha After Deleting	Items deleted
Source of evidence	8	7	.692	.710	No. 3
Directness of evidence	3	2	.698	.703	No. 3
Type of evidence	5	4	.688	.696	No. 4
Academic and professional qualifications of the auditor	10	9	.691	.711	No. 7 and No. 10
Consistency of evidence	4	3	.689	.705	No. 4
Amount of evidence	8	7	.693	.706	No. 3
Total	**38**	**32**			**6**

After deleting items from the original scales, Cronbach's Alpha were calculated in order to evaluate the internal consistency of the resulting scales. The Table 4.23 shows the results from reliability test. All of the scales had high alpha scores, ranging from α= 0.696 to α= 0.711, and are all above the generally accepted level (0.60). From this finding it is concluded that the scales have high levels of internal consistency, and are considered to be suitably reliable, where

(Cronbach) Alpha for survey and all research variables are greater than 60%, which was acceptable in the social science studies.

4.16 Representative Bias

In order to examine the sample further and ensure that perceptions of sufficiency and appropriateness of audit evidence are not skewed by a particular group, a number of tests were conducted. T-tests was utilised to compare the male and female perceptions of quality and quantity of evidence. Moreover, one-way ANOVA tests were used to analyse whether age, qualifications and experience of participants may have any impact on perceptions of audit evidence in line with the guidance from Sekaran (2003) and Field (2009). Details of the findings of these tests are revealed below.

4.16.1 Impact of Gender on Perceptions of Audit Evidence

In this study a males represented 90.9% of the sample while females 9.1% of the sample. Because of males were 9 times of females, it was important to explore if this high ratio of 1:9 caused a difference in perceptions of audit evidence which may effect on study results. Testing of the ratio distortion was undertaken through the use of a t-test (Field, 2009) and Table 4.24 below illustrates the findings.

Table 4.24: T-test results of gender and perceptions of audit evidence

Gender	No.	Mean	Std. Deviation	t	df	Sig.
Male	170	3.69	.273	.636	185	**.526**
Female	17	3.65	.163			

A comparison of means indicated that there was no marked difference in the mean scores of the two samples. The t-test confirmed that there was no statistically significant difference in perceptions of quality and quantity audit evidence between the two groups and therefore the distortion observed in the ratio between participants in the two groups did not have an effect on the results.

4.16.2 Impact of Age on Perceptions of Audit Evidence

The ANOVA test was used to analyse whether the mean scores between the groups of participants age was statistically significant.

Table 4.25: ANOVA test results of age and perceptions of audit evidence

	Sum of Squares	df	Mean Square	f	Sig.
Between Groups	.397	3	.132	1.922	**.128**
Within Groups	12.614	183	.069		
Total	13.011	186			

From Table 4.25, the results of ANOVA test indicated that there was not statistical difference in perceptions of audit evidence amongst the groups based on their age.

4.16.3 Impact of Qualifications on Perceptions of Audit Evidence

The respondent's profile showed that 70.6% of the sample population held a First University Degree, 16.0% held a Masters Degree, while 9.6% held a High School and only 3.7% held a PhD Degree. Based on these results, it was important to investigate whether there was a difference in perceptions of quality

and quantity of evidence held by qualifications of the participants (First University Degree, Masters Degree, High School and PhD degree).

Table 4.26: ANOVA test results of qualifications and perceptions of audit evidence

	Sum of Squares	df	Mean Square	f	Sig.
Between Groups	.061	3	.020	.288	**.834**
Within Groups	12.950	183	.071		
Total	13.011	186			

The results of the ANOVA test (Table 4.26) did not reveal that there was any statistical difference in perceptions of quality and quantity of audit evidence between the groups based on their qualification as the *p* value was 0.834 and therefore not significant as $p<0.05$.

4.16.4 Impact of Experience on Perceptions of Audit Evidence

To further examine the sample, it was deemed important to find whether having a higher experience level in the participants had any impact on perceptions of quality and quantity of evidence. Due to 57.2% of the sample had more than 10 years experience while 42.8% had experience less that 10 years. It was necessary to identify the variance in perceptions of audit evidence amongst the groups.

Table 4.27: ANOVA test results of experience and perceptions of audit evidence

	Sum of Squares	df	Mean Square	f	Sig.
Between Groups	.148	4	.037	.525	**.718**
Within Groups	12.863	182	.071		
Total	13.011	186			

Table 4.27 presented the findings of ANOVA test which indicated that there was not statistically significant difference regarding perceptions of audit evidence amongst the six groups of auditors' experience.

T-test and ANOVA tests were used to analyse whether or not there was any representative bias in the sample. Gender, age, qualification and experience of participants were investigated. The results from these tests indicate that there is no statistically significant difference between these variables and perceptions of sufficiency and appropriateness of audit evidence. Based on these findings, gender, age, qualification and experience do has not an effect on this study's findings.

4.17 Validity of the Scales

Factors analysis was conducted as a structure detection method for justified scales of study variables. In addition, factors analysis was conducted to explain how the six dimensions of evidence; evidence source, directness of evidence, evidence type, consistency of evidence, academic and professional qualification of the auditor and amount of evidence relate to the constructs measuring them, and to establish the consistency of these items.

Factor loading were investigated. Factor loading below 0.5 were considered low, and low-loading items should be suppressed (Field, 2009) (See Section 5.2.6 for details).

4.18 Research Model

From the previous literature search and the Bentham's (1827) theory of persuasiveness of evidence a research model was developed to investigate the effect of the six dimensions of evidence relate to the four independent variables of occupational role, education, professional experience and gender of Libyan auditors. The study aims to describe the current scene of auditing in Libya and evaluate the use of audit evidence and what characteristics of the auditors impact on their exploitation and collection of audit evidence. Caster and Pincus (1996) identified that Bentham's theory did not extend to cover the individual factors that auditors demonstrate or the structure of audit evidence. Gronewold (2006) identified that independent characteristics of the auditor may impact on the quality and quantity of audit evidence collected. With the recent changes to the economic and political system in Libya this has had an impact on the professional roles of practitioners and thus there may be individual characteristics which impact on their adaptation to the current environment and the push for the adoption of the International Standards on Auditing [ISAs] by certain sectors of the auditing community.

As previously identified in Figure 1.2 on page 7 there are six factors which potentially impact on the sufficiency and appropriateness of evidence. These factors while describing the evidence could also are affected by the personal characteristics or independent variables of the auditor who is undertaking the process of audit evidence.

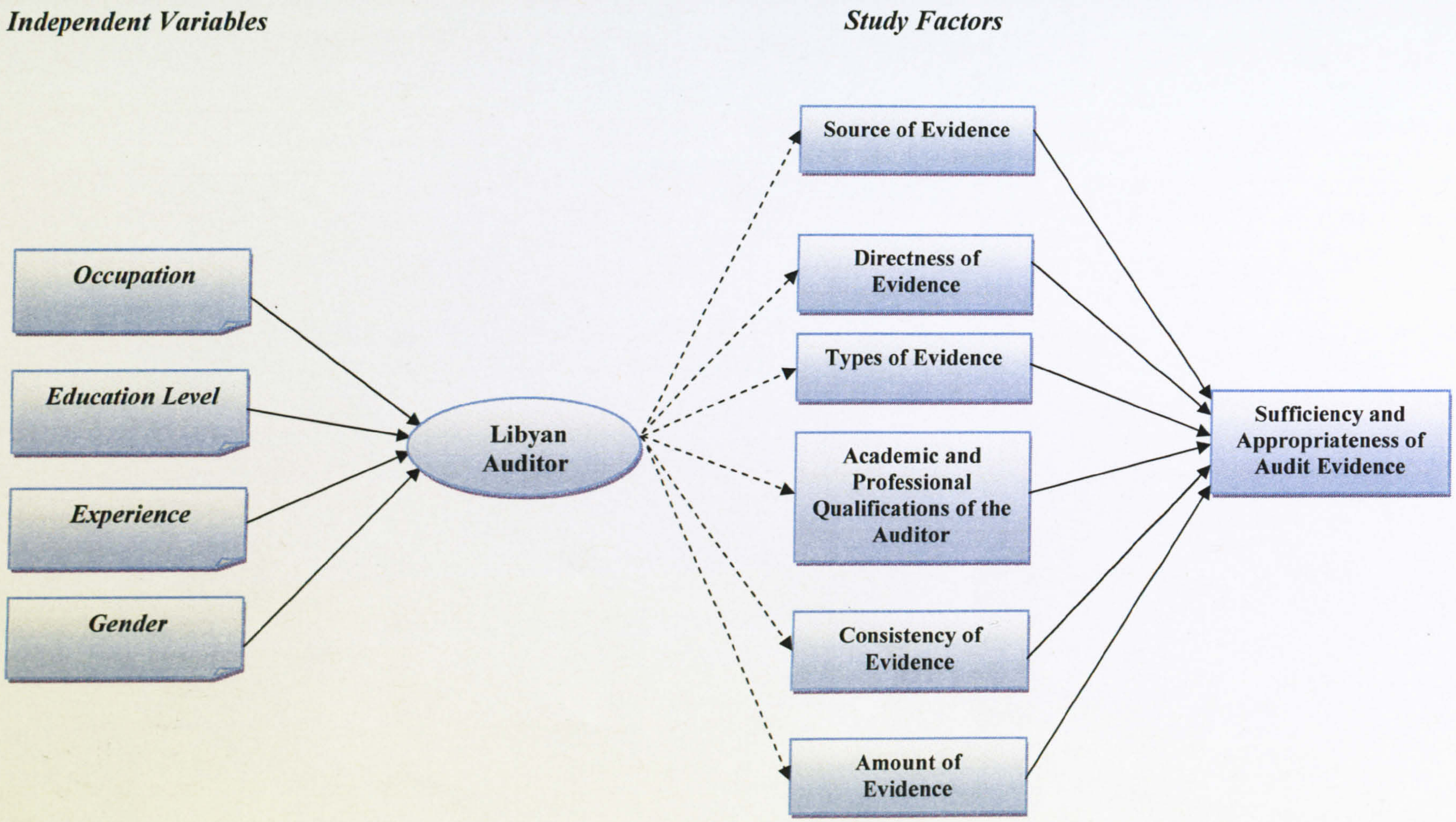
In Figure 4.4 on page 172 the interconnectivity between the independent variables and the study factors for evidence is displayed. Previous studies by a number of authors including Payne and Ramsay (2008), Kaplan *et al.*(2008), Al-Hadi (2008), Zhang e*t al.(*2009), Ali *et al.* (2010), Marris (2010) and Pany and Whittington (2010) highlight a number of factors that impact on the quality and quantity of audit evidence, which include (a) source of evidence, including independence, integrity, and knowledge of the evidence; (b) directness of evidence, including direct, and indirect evidence; (c) type of evidence, including documentary, and oral evidence; (d) auditor characteristics, including experience, knowledge, independence, and skills of the auditor; (e) combination of evidence, including dispersion between items of evidence, and consistency vs. inconsistency of evidence; and (f) amount of evidence, including materiality of the accounts, the risk of material misstatement of financial statement, cost of evidence, internal control. The majority of the literature relating to audit evidence is based in developed countries but as Ahmid (2000), Michas (2010) and Adeyemi and Fagbemi (2010) indicated that very few studies are available on auditing in general and audit evidence particularly in the emerging economics such as Libya.

A number of individual factors such as the professional experience as an auditor were identified by Abou-Seada and Abdel-Kader (2003), and Bruynseels *et al.* (2007) as potential variables which impact on the auditor's assessment of evidence. Abou-Seada and Abdel-Kader (2003) also found that the evidence process by auditors is influenced by the extent of their knowledge of a client's operations and industry. The environment where the auditor works

according to Sim (2010) is another variable which can affect their approach to audit evidence. With a male-dominated culture, Pratten and Mashat (2009) pointed out that this has a significant effect on the attitude and behaviour of people. The influence of the cultural dynamic is not only going to impact on the working environment and the professional attitudes but it is also likely to impact on the education system of Libya. Ahmad and Gao (2004) identified that accounting education within Libya needs to be modernised and modified to meet the professional requirements of the current political and economic challenges.

Thus, professional setting, educational level, years of experience and gender of the participants are considered as independent variables that may affect the auditors' viewpoints regarding audit evidence.

Figure 4.4: The study model



4.19 Development of Research Hypotheses

In this study, the researcher will test the effects of occupation, educational level, and experience of the Libyan auditors and their relationship with sufficiency and appropriateness of audit evidence. There are four main hypotheses from this Figure 4.4 the study model and these are:

- Hypothesis 1 postulates that the occupational settings of one of the auditing groups (external, internal, state and taxation) will impact on their opinions about the effects of the study variables on sufficiency and appropriateness of evidence.
- Hypothesis 2 believes , that the education of the auditor impacts on the study variables of sufficiency and appropriateness of evidence
- Hypothesis 3 suggests that the study variables on sufficiency and appropriated of evidence are likely to be effected by the auditor's professional experience.
- Hypothesis 4 proposes that gender in the Libyan context impacts on the auditor's approach to the study variables on sufficiency and appropriateness.

In Table 4.28 on page 174 the main and sub-hypotheses of this study are described along with their analysis method to test the validity of the hypotheses.

Table 4.28: Objectives, methods and main and sub-hypotheses for the study

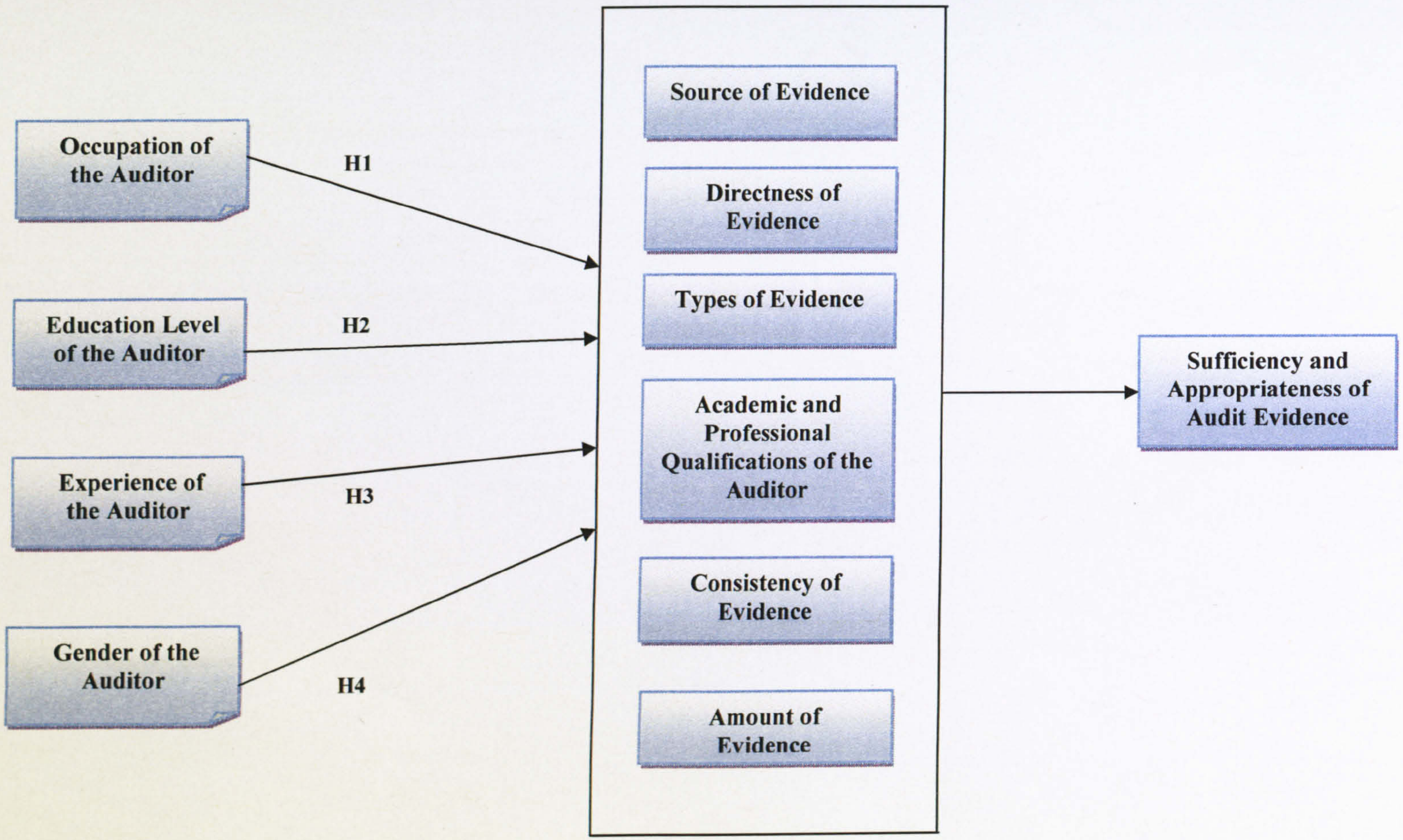
Hypotheses		Independent Variable	Related Study Objective	Analysis Method
Main	Sub			
H1		**Occupation of the auditor**	**Objective 2**	**ANOVA Test**
	H1.1	Source of evidence		
	H1.2	Directness of evidence		
	H1.3	Type of evidence		
	H1.4	Academic and professional qualifications of the auditor		
	H1.5	Consistency of evidence		
	H1.6	Amount of evidence		
H2		**Educational Level of the auditor**	**Objective 3**	**ANOVA Test**
	H2.1	Source of evidence		
	H2.2	Directness of evidence		
	H2.3	Type of evidence		
	H2.4	Academic and professional qualifications of the auditor		
	H2.5	Consistency of evidence		
	H2.6	Amount of evidence		
H3		**Experience of the auditor**	**Objective 3**	**ANOVA Test**
	H2.1	Source of evidence		
	H2.2	Directness of evidence		
	H2.3	Type of evidence		
	H2.4	Academic and professional qualifications of the auditor		
	H2.5	Consistency of evidence		
	H2.6	Amount of evidence		
H4		**Gender of the auditor**	**Objective 3**	**T-Test**
	H2.1	Source of evidence		
	H2.2	Directness of evidence		
	H2.3	Type of evidence		
	H2.4	Academic and professional qualifications of the auditor		
	H2.5	Consistency of evidence		
	H2.6	Amount of evidence		

The study model and hypotheses links are described in Figure 4.5 on page 176. This Figure displays the model of the study and indicates where each hypothesis (main or sub) fits within the model structure.

There have been a number of studies (Abou-Seada and Abdel-Kader , 2003; Ahmad and Gao , 2004; Bruynseels *et al*., 2007; Pratten and Mashat, 2009; Sim, 2010) who have identified that the individual factors of occupational

setting, professional experience, educational background, and gender all impact on the auditors approach to the sufficiency and appropriateness of audit evidence.

Figure 4.5: Hypotheses and model of the study



4.19.1 Hypothesis 1: Study Variables and Auditors

The auditor groups selected for this study are external, internal, state and taxation auditors. Morrill and Morrill (2003) and others (Haron *et al.*, 2004; Michas, 2010; Lopez and Smith, 2010) all identified that the auditor type had relationship with the quality of the audit process and reporting. These studies indicated that there are major differences in the levels and range of experience and expertise between the internal, state and external auditors. There have been studies (Kalel, 2000; Ahmid, 2000) concerning Libya but these studies have only focused on individual or a small number of specific groups found in the Libya. This study is investigating all four groups of auditors which are present in the Libyan context and postulates that the professional setting in which the auditor works will impact on their perceptions and approaches towards the various study factors for the sufficiency and appropriateness of audit evidence.

This main hypothesis links with objective 2 which was to explore and analyse the potential effects of the auditors' occupation (external, internal, state, and taxation) has on their perceptions towards audit evidence.

A. The Main Hypothesis: Study Variables and Auditor Occupation

H1: ***There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of study variables on sufficiency and appropriateness of evidence.***

The sub-hypotheses from this hypothesis are listed below and are for each individual study factor.

B. The Sub-Hypothesis: Study Variables and Auditor Occupation

H1.1: *There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of source of evidence on sufficiency and appropriateness of evidence.*

H1.2: *There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of directness of evidence on sufficiency and appropriateness of evidence.*

H1.3: *There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of type of evidence on sufficiency and appropriateness of evidence.*

H1.4: *There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of academic and professional qualifications of the auditor on sufficiency and appropriateness of evidence.*

H1.5: *There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of consistency of evidence on sufficiency and appropriateness of evidence.*

H1.6: *There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of amount of evidence on sufficiency and appropriateness of evidence.*

4.19.2 Hypothesis 2: Study Variables and Auditor Educational Level

A number of previous studies into Libyan accounting education concluded that Libya needs to strategically plan in order to modify and modernise both its accounting education and practice (Mahmud and Russell, 2003; Ahmad and Gao, 2004; Abofars, 2008). Bait-El-Mal *et al.* (1973) and Abofars (2008) found that accounting and auditing practice in Libya is influenced by their education and the contribution of academics and practitioners in the accounting field. The period of economic stagnation in Libya during the 1990s also created stagnation in other areas such as education and infrastructure development (Agnaia, 1997;

Abulgasem and Alukel, 2007). This delay in professional educational development has potential resulted in current professional educational practices not meeting international standards and a lack of awareness of the importance of quality audit evidence.

This main hypothesis links with part of Objective 3 which was to assess the independent variables such as the educational background and how this variable potentially effects the participant's perceptions towards audit evidence.

A. The Main Hypothesis: Study Variables and Auditor Educational Level

H2: ***There is at least one significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by educational level.***

From this hypothesis the sub-hypotheses below were developed for each individual study factor.

B. The Sub-Hypothesis: Study Variables and Auditor Educational Level:

H2.1: *There is at least one significant difference in mean effects of source evidence on sufficiency and appropriateness of evidence when factored by educational level.*

H2.2: *There is at least one significant difference in mean effects of evidence directness on sufficiency and appropriateness of evidence when factored by educational level.*

H2.3: *There is at least one significant difference in mean effects of evidence type on sufficiency and appropriateness of evidence when factored by educational level.*

H2.4: *There is at least one significant difference in mean effects of academic and professional qualifications of auditor on sufficiency and appropriateness of evidence when factored by educational level.*

H2.5: *There is at least one significant difference in mean effects of evidence consistency on sufficiency and appropriateness of evidence when factored by educational level.*

H2.6: *There is at least one significant difference in mean effects of amount of evidence on sufficiency and appropriateness of evidence when factored by educational level.*

4.19.3 Hypothesis 3: Study Variables and Auditor Experience

There are increasing demands on auditors' reports within Libya as a result of increasing use of financial statements in the new open market economy (Alfaitori, 2007; Faraj and Akbar, 2010). The auditor may not have the professional knowledge or experience to meet these new demands. For the experience of the auditor, previous literature (e.g. Abou-Seada and Abdel-Kader, 2003; Jarboh, 2005; Gronewold, 2006; Bruynseels *et al.*, 2007) revealed that experience affects auditors' judgements regarding audit evidence. Jarboh (2005) indicated that the well-developed knowledge structures of experienced auditors help them to consider the risk, the cost and the time of searching audit evidence. Bruynseels *et al.* (2007) concluded that an increased level of experience is predicted to have an increasing effect on auditors processing of audit evidence.

This main hypothesis links with part of Objective 3 which assesses how participant's perceptions towards audit evidence are affected by the independent variable of their professional experience.

A. The Main Hypothesis: Study Variables and Auditor Experience

H3: ***There is at least one significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.***

The sub-hypotheses from this hypothesis in relation to the auditor's experience are listed below and are for each individual study factor.

B. The Sub-Hypothesis: Study Variables and Auditor Experience

H3.1: *There is at least one significant difference in mean effects of source of evidence on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*

H3.2: *There is at least one significant difference in mean effects of directness of evidence on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*

H3.3: *There is at least one significant difference in mean effects of type of evidence on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*

H3.4: *There is at least one significant difference in mean effects of academic and professional qualifications of auditor on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*

H3.5: *There is at least one significant difference in mean effects of evidence consistency on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*

H3.6: *There is at least one significant difference in mean effects of amount of evidence on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*

4.19.4 Hypothesis 4: Study Variables and Auditor Gender

Arabic nations such as Libya are culturally dominated by traditional attitudes and behaviour towards the different genders according to Pratten and Mashat (2009). Female auditors according to Gold *et al.* (2009) are more likely to be influenced by a male client and less influenced by a female client than male auditors.

This main hypothesis links with part of Objective 3 which was to assess the independent variables of gender and how this variable potentially effects the participant's perceptions towards audit evidence.

A. The Main Hypothesis: Study Variables and Auditor Gender

H4: ***There is at least one significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by gender of auditors in auditing.***

From this hypothesis in relation to gender the sub-hypotheses below were developed for each individual study factor for audit evidence.

B. The Sub-Hypothesis: Study Variables and Auditor Gender

H4.1: *There is at least one significant difference between male and female auditors in their opinions about effects of source of evidence on sufficiency and appropriateness of evidence.*

H4.2: *There is at least one significant difference between male and female auditors in their opinions about effects of directness of evidence on sufficiency and appropriateness of evidence.*

H4.3: *There is at least one significant difference between male and female auditors in their opinions about effects of type of evidence on sufficiency and appropriateness of evidence.*

H4.4: *There is at least one significant difference between male and female auditors in their opinions about effects of academic and professional qualifications of auditor on sufficiency and appropriateness of evidence.*

H4.5: *There is at least one significant difference between male and female auditors in their opinions about effects of evidence consistency on sufficiency and appropriateness of evidence.*

H4.6: *There is at least one significant difference between male and female auditors in their opinions about effects of amount of evidence on sufficiency and appropriateness of evidence.*

All of the hypotheses and the component sub-hypotheses will tested through the use of a large scale survey study.

4.20 Qualitative Research

Qualitative techniques allow researchers to share in the understanding and perceptions of others and to explore how people structure and give meaning to their daily lives (Berg, 2007). Creswell and Clark (2007) indicate that a key idea of qualitative research is to provide detailed views.

Qualitative types of data might be categorised in terms of their sources: as open-ended interviews, and open-ended observations (Creswell and Clark, 2007). These options represent data in the form of text or images, and the possibilities continue to expand into new forms such as text messages (Creswell and Clark, 2007).

4.21 Interviews

Interviewing is defined simply as a conversation with a purpose. Specifically, the purpose is to gather information (Berg, 2007). The interview is an especially effective method of collecting information for certain types of research questions and for addressing certain types of assumptions particularly when investigators are interested in understanding the perceptions of participants or learning how participants come to attach certain meanings to phenomena or events (Berg, 2007). Furthermore, this type of survey generally attempts to obtain detailed in-depth evidence from a relatively small number of informants through a series of interviews (Remenyi *et al.*, 2002).

There are three types of interviews, namely, unstructured, semi-structured and structured interview (Bernard, 2000; Sekaran and Bougie, 2009; Ghauri and Gronhaug, 2010). Table 4.29 on page 185 summarises the contrasts between all these types.

In situations where the researcher will not get more than one chance to interview someone, and according to Bernard (2000) this is where a semi-structured interview should be used. Moreover, semi-structured interviewing works very well in projects where the researcher is dealing with managers, bureaucrats, and elite members of a community; people who are accustomed to efficient use of their time (Bernard, 2000). Therefore, in this study, semi-structured interviews were used to collect data from participants in order to get in-depth information about the effects of the study variables on sufficiency and

appropriateness of audit evidence and to enhance and supplement the results of questionnaires.

Table 4.29: Comparison of the three types of interview

Source: Courage and Baxter (2005: 260)

Ghauri *et al.* (1995) advised that before contacting the interviewee: (a) the researcher has to decide how much time the interview should take, how the information will be recorded, (b) the researcher has to inform the respondent whether or not s/he will be using tape or video recorders, (c) the researcher has to create a reason or a reward for the respondent, and (d) the researcher has to consider all the costs such as travelling costs. Therefore, the researcher considered all these issues when interviews of this study were conducted.

According to Bernard (2000), the advantages of semi-structured interviews are:

- Allow in-depth coverage of a topic and can raise issues that may not have previously been considered.
- Participant is able to enlighten researcher about actual experiences.
- Produce incredibly rich, detailed data

On the other hand, Berg (2007) mentioned some disadvantages of semi-structured interviews, these include:

- Length of interviews depends on researcher but it is generally a very time consuming method of data generation.
- Because of the time needed, it may be difficult to gain access to your participants.
- The 'control' over the interview is reduced; the respondent can bring up any issues important to the topic.
- At times, you may need to guide the respondent back to the topic at hand (or, alternatively, their digression may prove very useful).

4.21.1 Interview Procedures

As stated above, semi-structured interviews were used in this study to obtain information from external, internal, state, and taxation auditors regarding study variables. More specifically, the interview process was designed in order to enhance and confirm the findings of the study Objective 1 which is to explore the effect of the study variables on quality and quantity of evidence collected by Libyan auditors.

The main purposes of the interviews were to supplement the responses of the questionnaire and to enhance the credibility and reliability of the research findings. Therefore, it was decided to conduct the semi-structured interviews

with 12 Libyan auditors to obtain a more in-depth understanding of effects of the source reliability, directness of evidence, types of evidence, professional qualifications of the auditor, consistency of evidence, and amount of evidence on sufficiency and appropriateness of audit evidence obtained by Libyan auditor.

Similar procedures to those were used in preparing the questions in the questionnaire were followed in preparation and designing of the questions for the interview. These include wording, relevance, and clarity of the questions. Based on the feedback from the supervisory team and some of the PhD accounting students at Liverpool John Moores University, several amendments were made.

The following interview procedures were adopted (See Figure 4.6 on page 188):

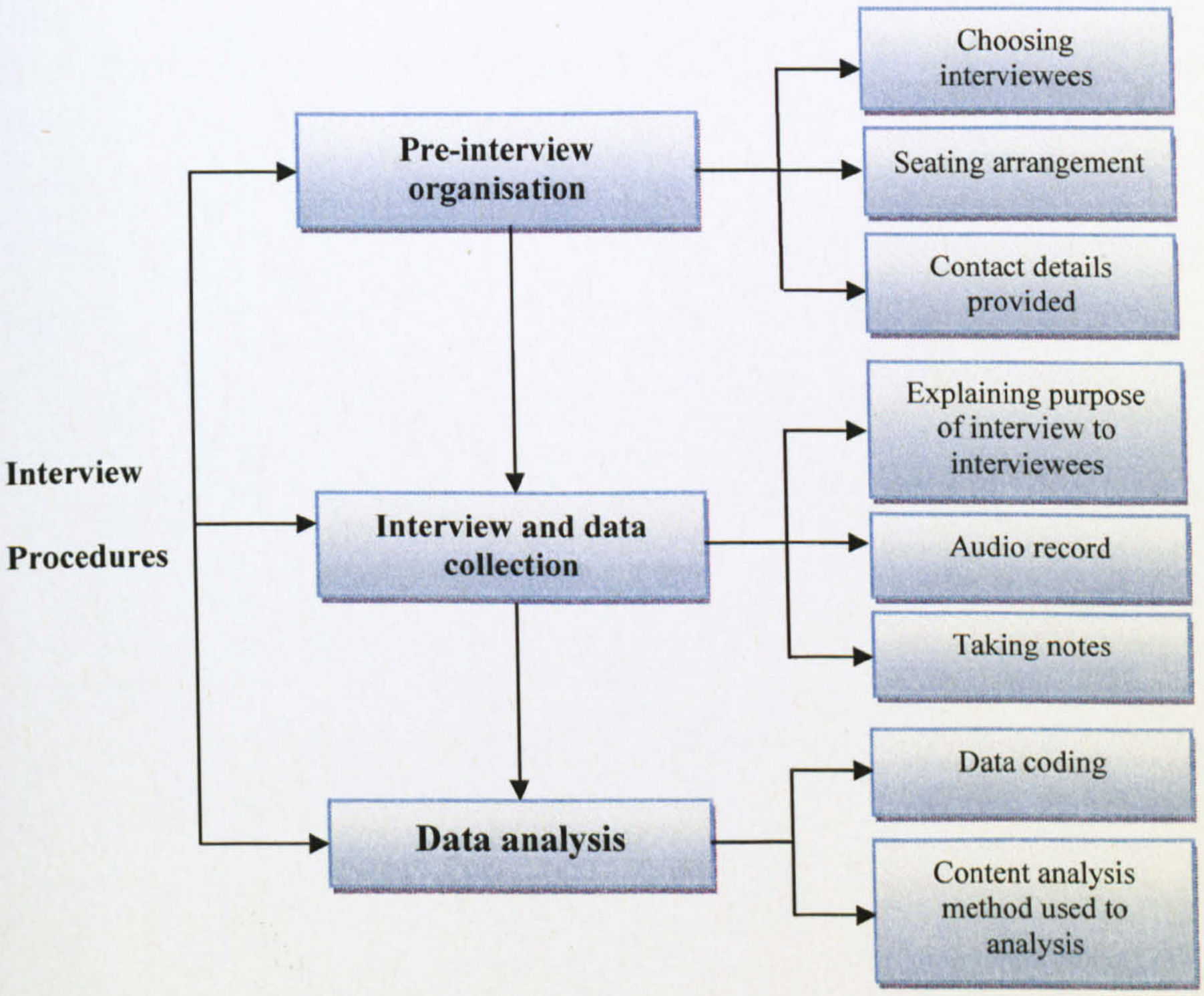
1. After selecting a sample, telephone calls were made to each interviewee to arrange suitable dates and times of interview. Furthermore, telephone calls one day before the interviews were made to confirm the interviewee's availability at the scheduled time.
2. The researcher provided contact details in case the interviewee wished to change the time of the interview.
3. At the beginning of interviews, the researcher explained to each interviewee the purpose of interview and informed them that the information obtained will be used just for the study.
4. Each interviewee was asked to permit the interviews to be taped. In this regard, 10 interviews were recorded on tape while 2 interviewees objected

to taping their interviews. However, the responses of those who had refused were written down during the interviews.

5. At end of interviews, the interviewees were asked to sign a consent form. In this regard, all consent forms were signed.

6. All interviews were conducted face-to-face in interviewees' work places during November and December 2008.

Figure 4.6: Interview procedures



Additional notes were made after the completion of the two untapped interviews to ensure that as much information was retained. The notes of the interview were promptly written up. The transcription of the taped interviews was carried out as soon as possible after the completion of the interview to help in the management

of the information and to lessen the chances of accidental tape erasing and the potential loss of interview data. Each interview took between 30 minutes to one hour.

4.21.2 Interview Analysis

As noted earlier, the purposes of conducting interviews are to enhance and confirm the questionnaire findings. Thus the twelve interviews were conducted face-to-face. To analyse the interviews, the content analysis technique was used. Thereafter, the key themes emerged.

According to Sekaran and Bougie (2009), content analysis is a technique for making inferences by systematically and objectively identifying special characteristics of messages. From this perspective, photographs, videotape, or any item that can be made into text are amenable to content analysis. Berg (2001: 238) defined content analysis as:

> "a research technique for making replicable and valid inferences from data according to their context".

In content analysis, researchers examine artifacts of social communication. Typically, these are written documents or transcriptions of recorded verbal communications (Creswell and Clark, 2007).

The most important advantage of content analysis is that content analysis is useful when analysing interview data (Berg, 2007). On the other hand, the major weakness of content analysis may be in locating unobtrusive messages relevant to the particular research questions (Sekaran and Bougie, 2009).

4.22 Summary

This chapter discussed the methodology and methods adopted to achieve the study objectives. It has also justified research philosophies (positivist and interpretivist paradigms). A comprehensive description for the process undertaken for the development of questionnaire and interview was explained. The development of the sample groups and the selection process for the target groups for the pilot and final study has been described along with the reasons why certain decisions were made about the procedure. In addition, the information from the pilot test was evaluated and discussed in relation to how it impacted on the final study roll out. The rationale behind the development of the hypotheses was outlined and how these hypotheses fit into the research model was described for the reader.

CHAPTER FIVE
THE RESEARCH FINDINGS

5.1 Introduction

The aim of this chapter is to present and discuss the quantitative and qualitative results of the study. The data collected is presented in two sub-sections reflecting the two methodological approaches utilised to collect the data. The first section data from the quantitative survey are presented and discussed based around the objectives of the research, which are:

- ***To explore the effect of the study variables on quality and quantity of evidence collected by Libyan auditors.***

- ***To analyse the Libyan auditors' perceptions regarding the influence of the study factors on the sufficiency and appropriateness of audit evidence.***

- ***To assess independent variables (educational level, years of experience, and gender of auditors) which may affect the participants' perception about the factors concerning audit evidence***

The second findings section is where the qualitative data from the interviews are presented. The interview only focused on objective 1 and seeks to gain confirmation and further explanation about how the study variables impact on the quality and quantity of evidence collected.

5.2 Quantitative Results

This sub-section on quantitative findings begins by presenting the results of reliability tests then moves on to present a profile of the survey respondents. The collected data in the survey of 187 randomly selected auditing participants was entered into Statistical Package for the Social Sciences [SPSS] software program. The sample participants were randomly selected from four Libyan

auditors group which were external, internal, state, and taxation auditors. Descriptive statistics were used to analyse the background information of participants such as gender, age, years of experience. In addition to the descriptive biographical additional statistical analysis was undertaken of the primary research data including statistical analysis of the sample population though the use of Cronbach's Alpha (α) to test the reliability of the findings.

5.2.1 Findings of Reliability Test (Cronbach's Alpha)

By using a Cronbach's Alpha test the reliability was tested for all items in the scales. Cronbach Alpha was used to measure internal consistency for the study survey and variables, based on the sample estimation. Although George and Mallery (2003) suggest 0.7 as the accepted level, a value more than 0.6 is regarded as a satisfactory level (Pallant, 2007). Table 5.1 provides details of the alpha of pilot and final survey scores for the six variables of the study.

Table 5.1: Cronbach's Alpha test result (variables)

Variables	No. of Items	No. of Cases	Cronbach's Alpha (Main Study)	Cronbach's Alpha (Pilot Study)
Source of evidence	8	187	.692	.843
Directness of evidence	3	187	.698	.842
Type of evidence	5	187	.688	.844
Academic and professional qualifications of the auditor	10	187	.691	.848
Consistency of evidence	4	187	.689	.843
Amount of evidence	8	187	.693	.840
Total	**38**	**178**	**.703**	**.840**

The reliability test was conducted for all retained items (38 items), i.e. academic and professional qualifications of the auditor variable included 10

items, while 3 questions were used to measure directness of evidence factor.

According to Sekaran (1992: 173),

> "The reliability of a scale indicates the stability and consistency with which the instrument is measuring the concept and helps to assess the goodness of a measure"

After coding all answers from completed questionnaires, the reliability test using Cronbach's alpha was conducted. Table 5.1 illustrates the final results of this test. In this Table, Cronbach's alpha for the 6 variables was 0.703; this is acceptable in social science research (Field, 2009). Thus, the Inter-item Consistency Reliability [ICR] of the measures used in this study can be considered to be very acceptable. Table 5.1 also shows that the Cronbach's alpha reported in the pilot study was over 0.60. When these two alpha values are compared together, thus it can be suggested that the study instruments' reliability is stable over the time (For more details see Appendix 3).

5.2.2 Respondents' Profile

Descriptive statistics were used to analyse the background information of participants such as gender, age, years of experience. 90.9 % of the survey participants are males aged between 21 to 50 years, while there was only 9.1% female participants. It is interesting to note that the majority of the female respondents were less than 40 years of age (See Table 5.2 on page 195 and Appendix 7 for more detail).

Table 5.2: Percentage distribution of auditors by qualification achieved, subject, experience and sector

	External Auditor		Internal Auditor		State Auditor		Taxation Auditor		Total	
	No	%	No	%	No	%	No	%	No	%
Auditors' gender										
Male	49	96.1	47	92.2	35	79.5	39	95.1	170	**90.9**
Female	2	3.9	4	7.8	9	20.5	2	4.9	17	**9.10**
Total	**51**	**100**	**51**	**100**	**44**	**100**	**41**	**100**	**187**	**100**
Auditors' age										
21- 29 years	17	33.3	17	33.3	18	40.9	15	36.6	67	35.8
30- 39 years	17	33.3	20	39.2	23	52.3	20	48.8	80	42.8
40-50 years	11	21.6	11	21.6	3	6.8	6	14.6	31	16.6
Over 50 years	6	11.8	3	5.9	0	0	0	0	9	4.8
Total	**51**	**100**	**51**	**100**	**44**	**100**	**41**	**100**	**187**	**100**
Auditors' education level										
High School	1	20.0	11	21.6	5	11.4	1	2.4	18	**9.6**
First University Degree	33	64.7	35	68.6	28	63.6	36	87.8	132	**70.6**
Masters Degree	12	23.5	4	7.8	10	22.7	4	9.8	30	**16.0**
PhD	5	9.8	1	2.0	1	2.3	0	0.0	7	**3.7**
Total	**51**	**100**	**51**	**100**	**44**	**100**	**41**	**100**	**187**	**100**
Auditors' education subject										
Accounting	50	**98.0**	43	**84.3**	28	**63.7**	28	**68.3**	149	79.7
Management	1	2.0	3	5.9	6	13.6	3	7.3	13	**7.0**
Economics	0	0.0	5	9.8	10	22.7	10	24.4	25	**13.3**
Total	**51**	**100**	**51**	**100**	**44**	**100**	**41**	**100**	**187**	**100**
Auditors' years of experience										
Under 5 years	9	17.6	8	15.7	3	6.8	6	14.6	26	**13.9**
5- 9 years	10	19.6	19	37.3	11	25.0	14	34.1	54	**28.9**
10- 14 years	11	21.6	9	17.6	21	**47.8**	14	34.1	55	**29.4**
15-19 years	8	15.7	7	13.7	7	15.9	5	12.2	27	**14.4**
20-24 years	13	25.5	8	15.7	2	4.5	2	4.9	25	**13.4**
Over 24 years	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	**51**	**100**	**51**	**100**	**44**	**100**	**41**	**100**	**187**	**100**
Auditors' sector job										
Private Sector	51	100	0	0.0	0	0.0	0	0.0	51	27.3
Banking Sector	0	0.0	51	100	0	0.0	0	0.0	51	27.3
Institute of Public Control	0	0.0	0	0.0	44	100	0	0.0	44	23.5
Taxation Sector	0	0.0	0	0.0	0	0.0	41	100	41	21.9
Total	**51**	**100**	**51**	**100**	**44**	**100**	**41**	**100**	**187**	**100**

Table 5.2 reveals the highest qualification achieved by respondents. 70.6% of auditors held a First University Degree, 16.0% held a Masters Degree, while 9.6% held a High School and only 3.7% held a PhD Degree. Furthermore, this Table indicated that the 98.0% of the external auditors and 84.3% of the internal auditors had an accounting specialism, as did more than 60% of the state auditors and tax experts. However, 13.3% of the respondents had an economics specialism and 7% had a management specialism.

In Table 5.2, 57.2% of the total respondents had more than 10 years experience, with the highest component being state auditors (47.8%), while 28.9% of the total respondent groups had experience between 5 to 9 years and only 13.9% had experience less than five years. It should be noted that all the external auditors were working in private audit firms, all the internal auditors in the banking sector, all the state auditors in the IPC and the taxation auditors in specialist taxation firms. This absolute demarcation between the roles follows the legislative requirements of Libyan State Law.

5.2.3 Key Findings of Objective 1: Effect of Study Variables on Sufficiency and Appropriateness of Audit Evidence

The first objective of this study was ***to explore the effect of the study variables on quality and quantity of evidence collected by Libyan auditors.***

In order to achieve this objective, the second part of the study questionnaire was designed to examine the effect of source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence on audit evidence. For Section Two the questionnaire the same Likert-type scale was utilised for all questions so that there was familiarity and consistency between the question responses. The likert-type scale was started with 1 as [STUE] for Strongly Undermines Evidence, [SLUE] for Slightly Undermines Evidence (2), [N] for Neither (3) as the midpoint for no feelings or responses, item 4 was Slightly Enhances Evidence [SLEE] with the final response feeling as [STEE] for Strongly

Enhances Evidence or item 5 of the scale. The results for Section Two of the questionnaire are as follows.

5.2.3.1 The Effect of Source of Evidence Variable

Table 5.3: Frequency and means of evidence source items

No	*The Statements*	STUE		SLUE		N		SLEE		STEE		μ
		No	%	No	%	No	%	No	%	No	%	
1	The auditor obtains evidence from independent sources	1	.5	9	4.8	20	10.7	42	**10.7**	115	**61.5**	4.40
2	The information is collected from different sources	3	1.6	11	5.9	8	4.3	51	**27.3**	114	**61.0**	4.40
3	The source of evidence is not knowledgeable	79	**42.2**	33	**17.6**	74	39.6	1	.5	0	0	1.98
4	The auditor uses evidence obtained from previous audits	8	4.3	11	5.9	18	9.6	86	**46.0**	64	**34.2**	4.00
5	The auditor uses information originating from other audit team members	3	1.6	11	5.9	12	6.4	76	**40.6**	85	**45.5**	4.22
6	The auditor obtains evidence from fellow auditors in other firms	10	5.3	17	9.1	49	26.2	85	**45.5**	26	**13.9**	3.53
7	The auditor uses data generated by the accounting system of the entity as evidence	0	0	2	1.1	20	10.7	44	**23.5**	121	**64.7**	4.52
8	The auditor uses data produced by computerized information systems	0	0	1	.5	24	12.8	89	**47.6**	73	**39.0**	4.25
Overall mean												**3.91**

Reliability = .692 **Sample Size = 187** **μ = Mean**
STUE = Strongly Undermines Evidence (1) **N = Neither (3)** **SLEE = Slightly Enhances Evidence (4)**
SLUE = Slightly Undermines Evidence (2) **STEE = Strongly Enhances Evidence (5)**

Table 5.3 illustrates the results of means, frequency and percentage for evidence source items. The overall mean (μ=3.91) indicated that sufficiency and appropriateness of evidence were perceived by Libyan auditors to be enhanced such as statements no. 1, 2, 7 and 8.

At least 60% of participants' answers were between '*slightly enhances evidence'* [SLEE] and '*strongly enhances evidence'* [STEE] categories, such seen in items no. 1, 2 and 8.

5.2.3.2 The Effect of Directness of Evidence Factor

The overall mean (μ=4.13) of the directness of evidence items in Table 5.4 revealed that quality and quantity of evidence were perceived by participants to be strongly enhanced, such as items no 1 and 3. With exception of statement no. 2, it has showed that Libyan auditors to have a lower mean in response to receiving evidence indirectly. This could be a result of the spread of the percentages across the Likert scale. Item 2 has a slightly positive total of 54.5% for enhancing evidence when compared to neither and undermining evidence which has a total of 46.6%.

Table 5.4: Frequency and means of directness of evidence items

No	*The Statements*	STUE		SLUE		N		SLEE		STEE		μ
		No	%	No	%	No	%	No	%	No	%	
1	Auditor has collected the evidence directly from a source	0	0	0	0	7	3.7	43	**23.0**	137	**73.3**	4.70
2	The auditor has received the evidence indirectly	14	7.5	31	16.6	42	22.5	82	**43.9**	18	9.6	3.32
3	The information is from the third party outside the entity	1	.5	1	.5	21	11.2	65	**34.8**	99	**52.9**	4.39
Overall mean												**4.13**

Reliability = .698 **Sample Size = 187** **μ = Mean**
STUE = Strongly Undermines Evidence (1) **N = Neither (3)** **SLEE = Slightly Enhances Evidence (4)**
SLUE = Slightly Undermines Evidence (2) **STEE = Strongly Enhances Evidence (5)**

At least 70% of respondents were perceived audit evidence to be strongly or slightly enhanced with first and third items in the directness of evidence variable.

5.2.3.3 The Effect of Type of Evidence Factor

Table 5.5 demonstrates the means, frequency and percentage for evidence type items. The result of overall mean (μ=3.24) indicated that quality and quantity of evidence were perceived by participants to be enhanced by type of evidence such as original documents (item 2) and expert written representations (Item 4).

Table 5.5: Frequency and means of type of evidence items

No	*The Statements*	STUE		SLUE		N		SLEE		STEE		μ
		No	%	No	%	No	%	No	%	No	%	
1	There is oral information that is given to the auditor as audit evidence	68	**36.4**	34	**18.2**	44	23.5	33	17.6	8	4.3	2.35
2	The audit evidence is provided by original documents	0	0	0	0	8	4.3	15	8.0	164	**87.7**	4.83
3	The audit evidence is provided by copy documents	69	**36.9**	34	**18.2**	38	20.3	46	24.6	0	0	2.33
4	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	0	0	3	1.6	34	18.2	79	**42.2**	71	**38.0**	4.17
5	The auditor obtains audit evidence from a single type	47	**25.1**	62	**33.2**	21	11.2	45	24.1	12	6.4	2.53
Overall mean												**3.24**

Reliability = .688 **Sample Size = 187** **μ = Mean**
STUE = Strongly Undermines Evidence (1) **N = Neither (3)** **SLEE = Slightly Enhances Evidence (4)**
SLUE = Slightly Undermines Evidence (2) **STEE = Strongly Enhances Evidence (5)**

Furthermore, At least 50% of respondents' answers were between '*slightly undermines evidence'* [SLUE] and '*strongly undermines evidence'* [STUE] categories for items no. 1 (oral evidence) and 5 (single type of evidence), while 87.7% of participants perceived audit evidence to be strongly enhanced by statement no. 2 where *'The audit evidence is provided by original documents'*.

5.2.3.4 The Effect of Academic and Professional Qualifications of the Auditor Variable

The overall mean (μ=3.55 in Table 5.6) indicates that sufficiency and appropriateness of evidence were perceived by Libyan auditors to be enhanced by academic and professional qualification of the auditor through their experience (Item 1), qualifications (Item 2), auditor independence (Item 3) and the analytical skills demonstrated by the auditor (Item 5).

Table 5.6: Frequency and means of academic and professional qualifications of the auditor items

No	*The Statements*	STUE		SLUE		N		SLEE		STEE		μ
		No	%	No	%	No	%	No	%	No	%	
1	The experience of auditor	0	0	0	0	12	6.4	23	**12.3**	152	**81.3**	4.75
2	The academic qualifications of the auditor	1	.5	2	1.1	15	8.0	50	**26.7**	119	**63.6**	4.52
3	Independence of auditor	0	0	0	0	13	7.0	26	**13.9**	148	**79.1**	4.72
4	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	5	2.7	21	11.2	33	17.6	71	**38.0**	57	**30.5**	3.82
5	The analytical skills of the auditor	0	0	0	0	6	3.2	38	**20.3**	143	**76.5**	4.73
6	Questions are clear	0	0	4	2.1	42	22.5	47	**25.1**	94	**50.3**	4.24
7	The errors in auditor perception	115	**61.5**	53	**28.3**	19	10.2	0	0	0	0	1.49
8	The bias in auditor perception	147	**78.6**	33	**17.6**	7	3.7	0	0	0	0	1.25
9	The techniques of obtaining evidence	2	1.1	5	2.7	22	11.8	59	**31.6**	99	**52.9**	4.33
10	The deviations from expectations of auditor	80	**42.8**	87	**46.5**	20	10.7	0	0	0	0	1.68
Overall mean												**3.55**

Reliability = .691 **Sample Size = 187** **μ = Mean**
STUE = Strongly Undermines Evidence (1) **N = Neither (3)** **SLEE = Slightly Enhances Evidence (4)**
SLUE = Slightly Undermines Evidence (2) **STEE = Strongly Enhances Evidence (5)**

Furthermore, at least 50% of item statements are perceived by respondents to strongly enhance audit evidence. Item 4 which was a statement about professional scepticism received a total of 68.5% believing that it enhanced evidence.

5.2.3.5 The Effect of Consistency of Evidence Variable

Table 5.7: Frequency and means of consistency of evidence items

N	*The Statements*	STUE		SLUE		N		SLEE		STEE		μ
		No	%	No	%	No	%	No	%	No	%	
1	One item of evidence conflicts with another item obtained over long periods from different sources	72	**38.5**	89	**47.6**	26	13.9	0	0	0	0	1.75
2	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	8	4.3	14	7.5	37	19.8	64	**34.2**	64	**34.2**	3.87
3	The evidence obtained is commensurate with the audit objectives	0	0	3	1.6	25	13.4	60	**32.1**	99	**52.9**	4.36
4	If procedures of auditing are not in place	126	**67.4**	34	**18.2**	27	14.4	0	0	0	0	1.47
Overall mean												**2.86**

Reliability = .689 **Sample Size = 187** **μ = Mean**
STUE = Strongly Undermines Evidence (1) **N = Neither (3)** **SLEE = Slightly Enhances Evidence (4)**
SLUE = Slightly Undermines Evidence (2) **STEE = Strongly Enhances Evidence (5)**

Table 5.7 indicates the results of means, frequency and percentage for consistency of evidence items. The overall mean (μ=2.86) revealed that sufficiency and appropriateness of evidence were perceived by Libyan auditors to be undermined by consistency of the evidence.

For this variable, there was a difference in the distribution of frequencies where the responses to the first and last items leaned more towards slightly undermines or strongly undermines evidence thus suggesting that evidence

presented to auditors can be inconsistent. Items no. 2, auditor reassessment of reliability, and Item 3, evidence commensurate with audit objectives were positively responded to and these enabled a more even spread of frequencies for this section of statements.

5.2.3.6 The Effect of Amount of Evidence Factor

The overall mean (μ=3.25, Table 5.8) indicated that sufficiency and appropriateness of evidence were perceived by Libyan auditors to be enhanced by the amount of evidence through their assessment of significance in the audit process (sensitivity to fraud or role in the process – Item 1), risk factors (Item 2), perception of the effectiveness of the internal control (Item 4) and receiving evidence to support a specific assertion about reality (Item 8).

Table 5.8: Frequency and means of amount of evidence items

No	*The Statements*	STUE		SLUE		N		SLEE		STEE		μ
		No	%	No	%	No	%	No	%	No	%	
1	If the significance of the findings is higher	0	0	0	0	14	7.5	36	**19.3**	137	**73.3**	4.66
2	If the risk of material misstatement of financial statements is higher	2	1.1	1	.5	40	21.4	56	**29.9**	88	**47.1**	4.21
3	If the cost of obtaining evidence is higher	47	**25.1**	79	**42.2**	60	32.1	1	.5	0	0	2.09
4	If the effectiveness of internal control is higher	1	.5	1	.5	13	7.0	30	**17.1**	140	**74.9**	4.65
5	Time constraints	64	**34.2**	74	**39.6**	49	26.2	0	0	0	0	1.92
6	If the evidence is needed for negative findings	1	.5	32	17.1	87	**46.5**	35	18.7	32	17.1	3.35
7	If the size of samples that the auditor would choose is small	78	**41.7**	64	**34.2**	24	12.8	20	10.7	1	.5	1.94
8	If the auditor obtains evidence for a specific assertion about reality	0	0	2	1.1	39	20.9	60	**32.1**	86	**46.0**	4.23
Overall mean												**3.25**

Reliability = .693 **Sample Size = 187** **μ = Mean**
STUE = Strongly Undermines Evidence (1) **N = Neither (3)** **SLEE = Slightly Enhances Evidence (4)**
SLUE = Slightly Undermines Evidence (2) **STEE = Strongly Enhances Evidence (5)**

Additionally at least 70% of respondents perceived audit evidence to be strongly enhances by items no. 1, significance of the findings, and item no.4 the perceptions about internal control in this variable. At least 40% of the respondents find that amount of evidence enhances by assessment of risk for material mismanagement and evidence to prove specific assertions.

5.2.3.7 Overall Frequency and Means of Responses to Items in Study Variables

The table below provides a summary of frequency of responses to items in each of the individual variables. There is a clear, pattern of responses with responses in the *'slightly enhances evidence'* category being most popular followed by responses in the *'neither'* category. Very few responses fell into the *'strongly undermines evidence' category* while no response was found in the *'strongly undermines evidence'*.

Table 5.9: Average frequency of responses to items in study variables

No.	Variable	STUE (%)	SLUE (%)	N (%)	SLEE (%)	STEE (%)
1	Source of evidence	0	1.5	12.7	**73.2**	12.6
2	Directness of evidence	0	0.5	14.0	55.0	30.5
3	Type of evidence	0	11.7	49.3	39.0	0
4	Academic and professional qualification of auditor	0	0	31.4	**68.6**	0
5	Consistency of evidence	0	19.1	**68.0**	12.9	0
6	Amount of evidence	0	0	61.5	38.5	0

Sample Size = 187
STUE = Strongly Undermines Evidence (1) **N = Neither (3)** **SLEE = Slightly Enhances Evidence (4)**
SLUE = Slightly Undermines Evidence (2) **STEE = Strongly Enhances Evidence (5)**

The only variable where there was a very strongly variation in weightings of responses was the source of evidence where fewer responses fell in the *'slightly*

undermines evidence' category and more responses fell in the *'slightly enhances evidence'* category than the rest of the variables.

5.2.4 Key Findings of Objective 2: Study Variables and External, Internal, State and Taxation Auditors

The second objective of this research is to explore and analyse the potential effects of the auditors' occupation (external, internal, state, and taxation) has on their perceptions towards evidence. The first hypothesis of this study was designed to analyse the objective 2 of the study.

5.2.4.1 Hypothesis 1: Study Variables and Auditors

The main hypothesis 1 was that ***there is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of study variables on sufficiency and appropriateness of evidence.***

To test this hypothesis, ANOVA and post hoc test were used to assess if the sub-hypotheses were found to be significant.

5.2.4.1.1 Hypothesis 1.1: Auditors' Perceptions and Evidence Source

H0: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of source of evidence on sufficiency and appropriateness of evidence.

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of source of evidence on sufficiency and appropriateness of evidence.

ANOVA test is used to test the first sub-hypothesis, hypothesis 1.1 of the study. From Table 5.10 it can be seen that 5 items (1, 2, 3, 4, 5) have a significant difference as their values are all below 0.05. As $p<.05$ the hypothesis is supported. However, only 3 statements of the scale are not significant. Hence, there is a significant difference between the perception of four Libyan auditor groups for the effect of the source of evidence on sufficiency and appropriateness of evidence. Therefore, the results of the ANOVA test ($p<.05$) rejected the null hypothesis:

H0: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of source of evidence on sufficiency and appropriateness of evidence.

Thus, the alternative hypothesis is accepted:

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of source of evidence on sufficiency and appropriateness of evidence.

Table 5.10: Results of ANOVA test of auditors' perceptions about effects of evidence source on sufficiency and appropriateness of evidence

No.	The Statements	F Value	Sig.	Hypothesis supported
1	The auditor obtains evidence from independent source	4.981	.002*	**H1**
2	The information is collected from different sources	4.314	.006*	**H1**
3	The source of evidence is not knowledgeable	4.258	.006*	**H1**
4	The auditor uses evidence obtained from previous audits	4.129	.007*	**H1**
5	The auditor uses information originating from other audit team members	4.864	.003*	**H1**
6	The auditor obtains evidence from fellow auditors in other firms	1.109	.347	H0
7	The auditor uses data generated by the accounting system of the entity as evidence	2.059	.107	H0
8	The auditor uses data produced by computerized information systems	1.243	.296	H0
***Significant at the 5% level**				

A post hoc test is used to explain which groups of respondents have different perceptions about the effects of evidence source on sufficiency and appropriateness of audit evidence. The results in Table 5.11 indicated that the

differences are between internal auditors and state auditors with respect to statement (1), between internal, external auditors and state auditors regarding statement (2, 3), between external, taxation auditors and state auditors in terms of statement (4), and between external auditors and state auditors with regard statement (5).

Table 5.11: Results of Post hoc test of auditors' perceptions about effects of evidence source on sufficiency and appropriateness of evidence

	No.	Subset for alpha = .05		
		1	2	3
(1) The auditor obtains evidence from independent sources				
Internal auditor	51	**4.06**		
Taxation auditor	41	4.39	4.39	
External auditor	51	4.43	4.43	
State auditor	44		**4.75**	
(2) The information is collected from different sources				
Internal auditor	51	**4.16**		
External auditor	51	**4.27**		
Taxation auditor	41	4.44	4.44	
State auditor	44		**4.80**	
(3) The source of evidence is not knowledgeable				
External auditor	51	**1.76**		
Internal auditor	51	**1.80**		
Taxation auditor	41	2.10	2.10	
State auditor	44		**2.34**	
(4) The auditor uses evidence obtained from previous audits				
Taxation auditor	41	**3.73**		
External auditor	51	**3.76**		
Internal auditor	51	4.14	4.14	
State auditor	44		**4.36**	
(5) The auditor uses information originating from other audit team members				
External auditor	51	**3.90**		
Taxation auditor	41	4.15	4.15	
Internal auditor	51		4.29	4.29
State auditor	44			**4.59**
Sample size= 187				

5.2.4.1.2 Hypothesis 1.3: Auditors' Perceptions and Evidence Type

Ho: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of type of evidence on sufficiency and appropriateness of evidence.

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of type of evidence on sufficiency and appropriateness of evidence.

Table 5.12: Results of ANOVA test of auditors' perceptions about the effects of evidence type on sufficiency and appropriateness of evidence

No.	The Statements	F Value	Sig.	Hypothesis supported
1	There is oral information that is given to the auditor as audit evidence	6.801	.000*	**H1**
2	The audit evidence is provided by original documents	1.348	.260	H0
3	The audit evidence is provided by copy documents	8.116	.000*	**H1**
4	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	4.310	.006*	**H1**
5	The auditor obtains audit evidence from a single type	9.209	.000*	**H1**
***Significant at the 5% level**				

To test this hypothesis, the ANOVA test was used. The results of this test are presented in Table 5.12. According to the results, four variables have significant values while only the second variable had non-significant difference. Hence, there is a significant difference between the views of auditors regarding the effect of evidence type on sufficiency and appropriateness of audit evidence. Therefore, the results of the ANOVA test rejected the null hypothesis:

H0: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of type of evidence on sufficiency and appropriateness of evidence.

As a result of the rejection of the null hypothesis the alternative hypothesis is accepted:

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of type of evidence on sufficiency and appropriateness of evidence.

A post hoc test is used to show which groups of respondents have differences in their opinions about the effects of evidence type on sufficiency and appropriateness of audit evidence. The results indicated that differences are between state auditors and other auditors regarding statements (1, 3, 5), between state, internal auditors and taxation auditors in terms of statement (4) (See Table 5.13).

Table 5.13: Results of Post hoc test of auditors' perceptions about the effects of evidence type on sufficiency and appropriateness of evidence

	No.	Subset for alpha = .05		
		1	2	3
(1) There is oral information that is given to the auditor as audit evidence				
State auditor	44	**1.66**		
External auditor	51		**2.47**	
Internal auditor	51		**2.53**	
Taxation auditor	41		**2.73**	
(2) The audit evidence is provided by copy documents				
State auditor	44	**1.66**		
Internal auditor	51		**2.25**	
External auditor	51		**2.65**	
Taxation auditor	41		**2.73**	
(3) The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence				
State auditor	44	**3.84**		
External auditor	51	4.14	4.14	
Internal auditor	51		**4.33**	
Taxation auditor	41		**4.34**	
(4) The auditor obtains audit evidence from a single type				
State auditor	44	**1.80**		
External auditor	51		**2.53**	
Internal auditor	51		2.71	2.71
Taxation auditor	41			**3.12**
Sample size= 187				

5.2.4.1.3 Hypothesis 1.4: Auditors' Perceptions and Academic and Professional Qualifications of the Auditor

H0: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of academic and professional qualifications of the auditor on sufficiency and appropriateness of evidence.

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of academic and professional qualifications of the auditor on sufficiency and appropriateness of evidence.

Table 5.14: Results of ANOVA test of auditors' perceptions about the effects of academic and professional qualifications of the auditor on sufficiency and appropriateness of evidence

No.	The Statements	F Value	Sig.	Hypothesis supported
1	The experience of auditor	2.370	.072	H0
2	The academic qualifications of the auditor	3.140	.027*	**H1**
3	Independence of auditor	1.127	.340	H0
4	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	.274	.844	H0
5	The analytical skills of the auditor	4.874	.003*	**H1**
6	Questions are clear	11.783	.000*	**H1**
7	The errors in auditor perception	8.535	.000*	**H1**
8	The bias in auditor perception	2.511	.060	H0
9	The techniques of obtaining evidence	6.140	.001*	**H1**
10	The deviations from expectations of auditor	3.564	.015*	**H1**
***Significant at the 5% level**				

To examine this hypothesis again an ANOVA was used. The findings of the ANOVA are presented in Table 5.14.

It could be seen that 6 items in the scale are significant while 4 items do not have a significant difference such as statements (1, 3, 4, 8). However, this result indicated that there is significant difference between auditors' views about the effects of academic and professional qualification of the auditor on sufficiency and appropriateness of audit evidence. Therefore, the results of the ANOVA test rejected the null hypothesis:

Ho: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of academic and professional qualifications of the auditor on sufficiency and appropriateness of evidence.

And the alternative hypothesis is accepted:

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of academic and professional qualifications of the auditor on sufficiency and appropriateness of evidence.

Table 5.15: Results of Post hoc test of auditors' perceptions about the effects of academic and professional qualifications of the auditor

	No.	Subset for alpha = .05		
		1	2	3
(1) The academic qualifications of the auditor				
External auditor	51	**4.35**		
Internal auditor	51	**4.47**		
Taxation auditor	41	**4.49**		
State auditor	44		**4.80**	
(2) The analytical skills of the auditor				
External auditor	51	**4.59**		
Internal auditor	51	**4.63**		
Taxation auditor	41		**4.85**	
State auditor	44		**4.91**	
(3) Questions are clear				
State auditor	44	**3.61**		
Internal auditor	51		**4.33**	
External auditor	51		**4.47**	
Taxation auditor	41		**4.49**	
(4) The errors in auditor perception				
State auditor	44	**1.11**		
Internal auditor	51		**1.43**	
Taxation auditor	41		1.66	1.66
External auditor	51			**1.73**
(5) The techniques of obtaining evidence				
External auditor	51	**3.96**		
Taxation auditor	41	4.24	4.24	
State auditor	44		4.48	4.48
Internal auditor	51			**4.63**
(6) The deviations from expectations of auditor				
State auditor	44	**1.41**		
Internal auditor	51		**1.71**	
External auditor	51		**1.78**	
Taxation auditor	41		**1.80**	
Sample size= 187				

The results of post hoc test (Table 5.15) showed that the differences of auditors' views are between external, internal auditors and taxation, state auditors and state auditors about the effect of statement (5), between state auditors and other groups of auditors regarding statement (2, 6, 7, 9, 10).

5.2.4.1.4 Hypothesis 1.5: Auditors' Perceptions and Consistency of Evidence

H0: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of consistency of evidence on sufficiency and appropriateness of evidence

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of consistency of evidence on sufficiency and appropriateness of evidence.

An ANOVA was utilised to test this hypothesis whose results are presented in

Table 5.16. It could be seen that three variables in the scale are significant while only variable no. 3 is not significant. This result indicates that there is a significant difference in auditors' views about the effects of consistency of evidence on sufficiency and appropriateness of audit evidence. Therefore, the results of the ANOVA test rejected the null hypothesis:

Ho: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of consistency of evidence on sufficiency and appropriateness of evidence.

In addition, the alternative hypothesis is accepted:

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of consistency of evidence on sufficiency and appropriateness of evidence.

Table 5.16: Results of ANOVA test of auditors' perceptions about the effects of consistency of evidence on sufficiency and appropriateness of evidence

No.	The Statements	F Value	Sig.	Hypothesis supported
1	One item of evidence conflicts with another item obtained over long periods from different sources	18.516	.000*	**H1**
2	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	15.621	.000*	**H1**
3	The evidence obtained is commensurate with the audit objectives	2.398	.069	H0
4	If procedures of auditing are not in place	3.600	.015*	**H1**
***Significant at the 5% level**				

In Table 5.17, The results of post hoc test showed that the differences in auditors' views were between state auditors and other auditors about the effect of items (1, 2), between state auditors and external auditors about the effect of statement (4).

Table 5.17: Results of ANOVA test of auditors' perceptions about the effects of consistency of evidence on sufficiency and appropriateness of evidence

	No.	Subset for alpha = .05			
		1	2	3	4
(1) One item of evidence conflicts with another item obtained over long periods from different sources					
State auditor	44	**1.27**			
External auditor	51		**1.65**		
Internal auditor	51			**1.92**	
Taxation auditor	41				**2.20**
(2) The auditor reassesses the reliability of early evidence in the light of more recently collected evidence					
State auditor	44	**2.98**			
External auditor	51		**4.06**		
Internal auditor	51		**4.18**		
Taxation auditor	41		**4.20**		
(3) If procedures of auditing are not in place					
State auditor	44	**1.20**			
Taxation auditor	41	1.44	1.44		
Internal auditor	51	1.51	1.51		
External auditor	51		**1.69**		
Sample size= 187					

5.2.4.1.5 Hypothesis 1.6: Auditors' Perceptions and Amount of Evidence

H0: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of amount of evidence on sufficiency and appropriateness of evidence.

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of amount of evidence on sufficiency and appropriateness of evidence.

From Table 5.18 it could be noticed that five variables in the scale have a significant difference while three variables have no significant values. This result revealed that there is difference between Libyan auditors in their views about the effects of the amount of evidence on sufficiency and appropriateness of audit evidence. Therefore, the results of the one-way ANOVA test rejected the null hypothesis:

Ho: There is no significant difference between external, internal, state, and taxation auditors in their opinions about the effects of amount of evidence on sufficiency and appropriateness of evidence.

Whereas the alternative hypothesis is accepted:

H1: There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about the effects of amount of evidence on sufficiency and appropriateness of evidence.

Table 5.18: Results of ANOVA test of auditors' perceptions about the effects of amount of evidence

No.	The Statements	F Value	Sig.	Hypothesis supported
1	If the significance of the findings is higher	2.307	.078	H0
2	If the risk of material misstatement of financial statements is higher	2.411	.068	H0
3	If the cost of obtaining evidence is higher	3.474	.017*	**H1**
4	If the effectiveness of internal control is higher	3.085	.029*	**H1**
5	Time constraints	13.154	.000*	**H1**
6	If the evidence is needed for negative findings	4.311	.006*	**H1**
7	If the size of samples that the auditor would choose is small	8.127	.000*	**H1**
8	If the auditor obtains evidence for a specific assertion about reality	1.203	.310	H0
***Significant at the 5% level**				

In the ANOVA, Item 4 which referred to the internal control had the highest significance response of p=.029. The rest of the supporting values for items 3 (p=.017), 5 (p=.000), 6 (p=.006) and 7 (p=.000) were considerable lower indicating the higher strength of their significance. The result close to or at p=.000 indicates that there is a higher proportion of significant probability for this event.

Table 5.19: Results of Post hoc test of auditors' perceptions about the effects of amount of evidence on sufficiency and appropriateness of evidence

	No.	Subset for alpha = .05		
		1	2	3
(1) If the cost of obtaining evidence is higher				
State auditor	44	**1.91**		
Taxation auditor	41	**1.98**		
Internal auditor	51	**2.04**		
External auditor	51		**2.37**	
(2) If the effectiveness of internal control is higher				
Internal auditor	51	**4.51**		
External auditor	51	**4.59**		
Taxation auditor	41	**4.63**		
State auditor	44		**4.91**	
(3) Time constraints				
State auditor	44	**1.34**		
Internal auditor	51		**2.02**	
External auditor	51		**2.12**	
Taxation auditor	41		**2.17**	
(4) If the evidence is needed for negative findings				
State auditor	44	**3.05**		
Internal auditor	51	**3.16**		
Taxation auditor	41		**3.59**	
External auditor	51		**3.61**	
(5) If the size of samples that the auditor would choose is small				
State auditor	44	**1.32**		
External auditor	51		**2.12**	
Taxation auditor	41		**2.12**	
Internal auditor	51		**2.16**	
Sample size= 187				

The results of post hoc test in Table 5.19 indicated that the differences of auditors' perceptions were between external auditors and other auditors about the effect of statement (3), between state auditors and other auditors about the effect of statement (4, 5, 7), between state, internal auditors and taxation, external auditors about the effect of statement (6).

5.2.4.1.6 Summary of the Hypothesis 1 Results

From the results of the ANOVAs and post hoc test the summary Table 5.20 presents if the hypothesis was supported.

Table 5.20: Summary results for the hypothesis 1 test

	Hypotheses	Results
H1	***There is at least one significant difference between external, internal, state and taxation auditors in their opinions about effects of study variables on sufficiency and appropriateness of evidence.***	**Yes**
H1.1	*There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of* ***source of evidence*** *on sufficiency and appropriateness of evidence.*	**Yes**
H1.2	*There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of* ***directness of evidence*** *on sufficiency and appropriateness of evidence.*	**No**
H1.3	*There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of* ***type of evidence*** *on sufficiency and appropriateness of evidence.*	**Yes**
H1.4	*There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of* ***academic and professional qualifications of the auditor*** *on sufficiency and appropriateness of evidence.*	**Yes**
H1.5	*There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of* ***consistency of evidence*** *on sufficiency and appropriateness of evidence.*	**Yes**
H1.6	*There is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of* ***amount of evidence*** *on sufficiency and appropriateness of evidence.*	**Yes**
Yes = Hypothesis supported	**No = Hypothesis not supported**	

Hypothesis 1.2 was not supported as only one item statement out of three items was found to have any significance. See Appendix 5.1 for the full details relating to this sub-hypothesis.

Since in Table 5.20 5 out of the 6 sub-hypothesis for hypothesis 1 was supported we can say that Hypothesis 1 which states that there is at least one significant difference between external, internal, state, and taxation auditors in their opinions about effects of study variables on sufficiency and appropriateness of evidence was supported and thus found to be true.

5.2.5 Key Findings of Objective 3: Study Variables and Educational Level, Experience and Gender of Auditors

The third objective of this study is to assess the independent variables which are educational level, years of experience, and gender of auditors and how these variables potentially effects the participant's perceptions towards audit evidence.

Hypotheses 2, 3 and 4 of this study were developed to investigate whether education level, experience and gender of Libyan auditors have effect on their opinion regarding study variables. To test the relationship between auditors' educational level, and years of experience in the auditing profession and their views about the effect of study factors on sufficiency and appropriateness of evidence an ANOVA was used. Additional the T-test was utilised to examine the relationship between auditors' gender (male, female) and study variables.

5.2.5.1 Hypothesis 2: Study Variables and Auditor Educational Level

The main hypothesis 2 was:

H2: ***There is at least one significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by educational level.***

The results from the various ANOVAs for each of the sub-hypothesis indicate that there is no significant result. Due to this lack of significance the result Tables can be found in Appendix 5.2. No additional post hoc testing was undertaken as there was no significance in the results. The Summary of the results for hypothesis 2 is listed below in Table 5.21.

Table 5.21: Summary results for the hypothesis 2 test

	Research Hypotheses	Results
H2	***There is at least one significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by educational level.***	**No**
H2.1	*There is at least one significant difference in mean effects* ***of source evidence*** *on sufficiency and appropriateness of evidence when factored by educational level.*	**No**
H2.2	*There is at least one significant difference in mean effects of* ***evidence directness*** *on sufficiency and appropriateness of evidence when factored by educational level.*	**No**
H2.3	*There is at least one significant difference in mean effects of* ***evidence type*** *on sufficiency and appropriateness of evidence when factored by educational level.*	**No**
H2.4	*There is at least one significant difference in mean effects of* ***academic and professional qualifications of auditor*** *on sufficiency and appropriateness of evidence when factored by educational level.*	**No**
H2.5	*There is at least one significant difference in mean effects of* ***evidence consistency*** *on sufficiency and appropriateness of evidence when factored by educational level.*	**No**
H2.6	*There is at least one significant difference in mean effects of* ***amount of evidence*** *on sufficiency and appropriateness of evidence when factored by educational level.*	**No**
Yes = Hypothesis supported	**No = Hypothesis not supported**	

As none of the sub-hypothesis was supported the alternative option of the null hypothesis must be accepted for Hypothesis 2 that there was no significant difference in mean effects of the study variables on the sufficiency and appropriateness of evidence when factored by educational level.

5.2.5.2 Hypothesis 3: Study Variables and Auditor Experience

The main hypothesis 3 was:

H3: ***There is at least one significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.***

Similar to the sub-hypotheses for Hypothesis 2 the ANOVAs for the various sub-hypotheses for Hypothesis 3 again found no significant result. The Tables demonstrating this lack of significance can be found in Appendix 5.3. As there was no significance in the results, no additional post hoc testing was undertaken. In Table 5.22 below the summary of the results for Hypothesis 3 are listed.

Table 5.22: Summary results for the hypothesis 3 test

	Research Hypotheses	Results
H3	***There is at least one significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.***	**No**
H3.1	*There is at least one significant difference in mean effects of* ***source of evidence*** *on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*	**No**
H3.2	*There is at least one significant difference in mean effects of* ***directness of evidence*** *on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*	**No**
H3.3	*There is at least one significant difference in mean effects of* ***type of evidence*** *on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*	**No**
H3.4	*There is at least one significant difference in mean effects of* ***academic and professional qualifications of auditor*** *on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*	**No**
H3.5	*There is at least one significant difference in mean effects of* ***evidence consistency*** *on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*	**No**
H3.6	*There is at least one significant difference in mean effects of* ***amount of evidence*** *on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.*	**No**
Yes = Hypothesis supported	**No = Hypothesis not supported**	

The null hypothesis is the alternative which must be accepted for this hypothesis as none of the sub-hypothesis for Hypothesis 3 was supported indicating that there was no significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by experience of auditors in auditing.

5.2.5.3 Hypothesis 4: Study Variables and Auditor Gender

The main hypothesis 4 was:

H4: ***There is at least one significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by gender of auditors in auditing.***

5.2.5.3.1 Hypothesis 4.3: Auditors' Gender and Evidence Type

H0: There are no significant differences between male and female auditors in their opinions about the effects of evidence type on sufficiency and appropriateness of evidence.

H1: There is at least one significant difference between male and female auditors in their opinions about the effects of evidence type on sufficiency and appropriateness of evidence.

To test this hypothesis a t-test was used. The results of the test are presented in Table 5.23. It should be noted that 3 variables in the scale are significantly different while only 2 have no significant values. However, this result indicated that there is a significant difference between the male and female respondents regarding their views about the effects of evidence type on sufficiency and appropriateness of audit evidence. Therefore, the results of the T-test rejected the null hypothesis:

H0: There are no significant differences between male and female auditors in their opinions about the effects of evidence type on sufficiency and appropriateness of evidence.

And the alternative hypothesis is accepted:

H1: There is at least one significant difference between male and female auditors in their opinions about the effects of evidence type on sufficiency and appropriateness of evidence.

Table 5.23: Results of T-test of the effects of evidence type factored by auditors' gender

No.	The Statements	F Value	Sig.	Hypothesis supported
1	There is oral information that is given to the auditor as audit evidence	.018	.893	H0
2	The audit evidence is provided by original documents	4.350	.038*	**H1**
3	The audit evidence is provided by copy documents	8.403	.004*	**H1**
4	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	5.891	.016*	**H1**
5	The auditor obtains audit evidence from a single type	.011	.916	H0
***Significant at the 5% level**				

5.2.5.3.2 Summary of the Hypothesis 4 Results

Only one of the sub-hypotheses was found to be supported for the research hypothesis 4. Table 5.24 below list the summaries of the result findings for each of the sub-hypothesis. The detailed responses and reports for the rest of the sub-hypotheses can be found in Appendix 5.4.

Table 5.24: Summary results for the hypothesis 4 test

	Research Hypotheses	Results
H4	***There is at least one significant difference in mean effects of study variables on sufficiency and appropriateness of evidence when factored by gender of auditors in auditing.***	**No**
H4.1	*There is at least one significant difference between male and female auditors in their opinions about effects of **source of evidence** on sufficiency and appropriateness of evidence.*	**No**
H4.2	*There is at least one significant difference between male and female auditors in their opinions about effects of **directness of evidence** on sufficiency and appropriateness of evidence.*	**No**
H4.3	*There is at least one significant difference between male and female auditors in their opinions about effects of **type of evidence** on sufficiency and appropriateness of evidence.*	**Yes**
H4.4	*There is at least one significant difference between male and female auditors in their opinions about effects of **academic and professional qualifications of auditor** on sufficiency and appropriateness of evidence.*	**No**
H4.5	*There is at least one significant difference between male and female auditors in their opinions about effects of **evidence consistency** on sufficiency and appropriateness of evidence.*	**No**
H4.6	*There is at least one significant difference between male and female auditors in their opinions about effects of **amount of evidence** on sufficiency and appropriateness of evidence.*	**No**
	Yes = Hypothesis supported **No = Hypothesis not supported**	

As there was only minor support of the hypothesis the null hypothesis for Hypothesis 4 must be accepted that there is no significant difference in mean

effects of study variables on sufficiency and appropriateness of evidence when factored by gender of auditors in auditing.

5.2.6 Factor Analysis Technique

According to Sekaran (1992), factor analysis is not designed to test hypotheses or to tell whether one group of the sample is significantly different to another. It is included in the SPSS package as a data reduction technique. It takes a large set of variables and looks for a way that the data may be reduced or summarised using a smaller set of factors or components. To use factor analysis, Pallant (2007) suggested that overall sample size should be 150 or over, statistically significant should be at $p<.05$, and the statistical reliability value should be 0.60 or above. However, Field (2009) pointed out.40 is on acceptable value for statistical reliability. Therefore, in this study.50 was used as a value to evaluate statistical reliability.

Factor analysis is used in this study as a technique to identify potential underlying dimensions of the set of data containing two categories of factors (See Tables 5.25, 5.26). Specifically, this technique is utilised to group the items that tend to have been considered by respondents as:

1. Factors referring to the auditor.
2. Factors referring to evidence.

Table 5.25: Factors referring to evidence

No.	The Statements
1	The auditor obtains evidence from independent sources
2	The information is collected from different sources
3	The source of evidence is not knowledgeable
4	The auditor uses evidence obtained from previous audits
5	The auditor uses information originating from other audit team members
6	The auditor obtains evidence from fellow auditors in other firms
7	The auditor uses data generated by the accounting system of the entity as evidence
8	The auditor uses data produced by computerized information systems
9	Auditor has collected the evidence directly from a source
10	The auditor has received the evidence indirectly
11	The information is from the third party outside the entity
12	There is oral information that is given to the auditor as audit evidence
13	The audit evidence is provided by original documents
14	The audit evidence is provided by copy documents
15	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence
16	The auditor obtains audit evidence from a single type

Table 5.26: Factors referring to auditor

No.	The Statements
1	The experience of auditor
2	The academic qualifications of the auditor
3	Independence of auditor
4	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence
5	The analytical skills of the auditor
6	Questions are clear
7	The errors in auditor perception
8	The bias in auditor perception
9	The techniques of obtaining evidence
10	The deviations from expectations of auditor
11	One item of evidence conflicts with another item obtained over long periods from different sources
12	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence
13	The evidence obtained is commensurate with the audit objectives
14	If procedures of auditing are not in place
15	If the significance of the findings is higher
16	If the risk of material misstatement of financial statements is higher
17	If the cost of obtaining evidence is higher
18	If the effectiveness of internal control is higher
19	Time constraints
20	If the evidence is needed for negative findings
21	If the size of samples that the auditor would choose is small
22	If the auditor obtains evidence for a specific assertion about reality

Principal components factor analysis with varimax rotation using SPSS was utilised in this study. In each of the two mentioned categories, the reliability test Cronbach's Alpha was used. The result is presented in Table 5.27 below. According to this result, the reliability of the first category is acceptable (above .50) and the second category is .656 which too is acceptable. In addition, the sample of study is 183 participants (above 150). Therefore, the two categories of factors were analysed separately to reveal any common characteristics of set factors that were strongly identified by the respondents. Moreover, the two categories of factors were analysed regarding to four target groups (internal, external, taxation and state auditors).

Table 5.27: Cronbach's Alpha test of two groups

	Total No. of cases	Cronbach's Alpha
Factors referring to auditor	22	.591
Factors referring to evidence	16	.656

Results of factor analysis using the principal components approach with varimax rotation are presented in Tables (5.28, 5.29). These tables indicate that factors referring to auditor and to evidence labelled as suggested by factor analysis. Only variables with factor loading greater that the cut-off point of .50 are reported.

From Table 5.28, it could be noted that the variables are classified into six main factors. The first factor, which accounted for 23.53% of the total variance, suggests that it is gathering together some variables that may be named as academic and professional qualifications and skills of the auditor. These

variables include the academic qualifications, the experience and skills of auditors, and the techniques of obtaining evidence. With this factor, the highest the academic qualifications of the auditor has the highest loading of 0.75.

The second factor, Comparing evidence, accounted for 23.53% of the total variance. This factor focuses on the evidence obtained is commensurate with the audit objectives, reliability of evidence, questions are clear, and one item of evidence conflicts with another item obtained over long periods, from different sources. The first variable has the highest loading of 0.72.

Table 5.28: Auditor factor groupings

	Factor loading
Factor 1: Academic and professional qualifications and skills of auditor	
• The academic qualifications of the auditor	**.75**
• The experience of auditor	**.73**
• The analytical skills of the auditor	**.73**
• The techniques of obtaining evidence	**.52**
Factor 2:Comparing evidence	
• The evidence obtained is commensurate with the audit objectives	**.72**
• The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	**.71**
• Questions are clear	**.60**
• One item of evidence conflicts with another item obtained over long periods, from different sources	**.51**
Factor 3: Evidence and significance, and risk of accounts	
• If the risk of material misstatement of financial statements is higher	**.79**
• If the significance of the findings is higher	**.74**
• If the auditor obtains evidence for a specific assertion about reality	**.60**
Factor 4: The perception of auditor	
• The errors in auditor perception	**.80**
• The bias in auditor perception	**.70**
Factor 5:Evidence and professional scepticism	
• If the evidence is needed for negative findings	**.68**
• The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	**.61**
Factor 6:Expectations of auditor and cost	
• If the cost of obtaining evidence is higher	**.82**
• The deviation from expectations of auditor	**.61**

The third factor, Evidence and significance, and risk of accounts, explains 17.65% of the variance. This factor focuses on high risk of material misstatement of financial statements, significance of the findings, and the auditor obtains evidence for a specific assertion about reality. The high risk of material misstatement of financial statements variable has the highest loading of 0.79.

The perception of auditor factor (factor 4) accounted for 11.76% of the total variance. This factor includes the errors and bias in auditor perception. The highest weighted variable was the errors in auditor perception with a loading of .80.

Evidence and professional scepticism factor (factor 5) explained 11.76% of the total variance. This factor focuses on the evidence is needed for negative findings, and the uses of professional scepticism in evaluating the quantity and quality of audit evidence. The first variable of this factor has the highest loading of 0.68.

The final factor, Factor 6 Expectations of auditor and cost, explains 11.76% of the total variance. This factor includes the high cost of evidence collection, and the deviation from expectations by the auditor. The cost of evidence has the highest loading of 0.82.

With regard to factors referring to evidence, as could be seen from Table 5.29 that the first factor, Auditors as source of evidence, illustrates 20% of the total variance and contains variables related to evidence collecting from other

auditors. The highest weighted variables of this factor are those using information originating from other audit team members with a loading of 0.76.

The second factor presents 26.67% of the total variance, this factor appears to pertain to what might be labelled the *'evidence and accounting system'*, focusing on the variables that tend to attach to the accounting system. These variables include those generated by the accounting system as evidence, the auditor uses data produced by computerized information systems, the audit evidence is provided by original documents, and auditor has collected the evidence directly from a source. With this factor, the data generated by the accounting system as evidence has the highest loading of .66.

Table 5.29: Evidence factor groupings

Factor 1: Auditors as source of evidence	***Factor loading***
• The auditor uses information originating from other audit team members	**.76**
• The auditor uses evidence obtained from previous audits	**.74**
• The auditor obtains evidence from fellow auditors in other firms	**.70**
Factor 2:Evidence and accounting system	
• The auditor uses data generated by the accounting system of the entity as evidence	**.66**
• The auditor uses data produced by computerized information systems	**.60**
• The audit evidence is provided by original documents	**.57**
• Auditor has collected the evidence directly from a source	**.57**
Factor 3: Document and oral evidence	
• There is oral information that is given to the auditor as audit evidence	**.70**
• The audit evidence is provided by copy documents	**.60**
• The auditor obtains audit evidence from a single type	**.60**
• The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	**.60**
• The information is from the third party outside the entity	**.60**
Factor 4:Received evidence and different sources	
• The information is collected from different sources	**.70**
• The has received the evidence indirectly	**.66**
• The auditor obtains evidence from independent sources	**.59**

The document and oral evidence factor accounted for 33.33% of the total variance and embraces variables that tend to be affected by aspects of documentary and oral evidence such as oral information as evidence, copy documents, and expert's written representation. The highest weighted variable of this factor is oral information as evidence. It has a loading of 0.70.

The fourth factor accounts for 20% of the variance. This factor focuses on collecting evidence from different sources, indirectly evidence, and the auditor obtains evidence from independent sources. The first variable which is concerned with the different sources of information has the highest loading of 0.70.

The same factor analysis for the two categories was also undertaken for each of the specific auditor groups using the varimax rotation. The tables of these results are included in Appendix 6. The additional factor analysis for each of the groups was to ensure that there was some similarity between the different groups. Each of the specific groups responded in a different manner so the new subgroups cannot be applied consistently. As a result of this the total group analysis was kept.

5.3 Qualitative Findings

This section presents the findings of interviews conducted with Libyan auditors to obtain more in-depth information about the effects of the source of evidence, the directness of evidence, the type of evidence, the academic and professional qualifications of the auditor, the consistency of evidence, and the amount of

evidence on sufficiency and appropriateness of audit evidence. This sub-section of the findings chapter focuses on the qualitative data analysis to support the results of objective 1 of the study which was:

- ***To explore the effect of the study variables on quality and quantity of evidence collected by Libyan auditors.***

The data collected from the interviews was analysed using content analysis. The purpose for conducting the interview process was to expand and extend the understanding of the factors while gathering additional confirmation that the study variables affect the quality and quantity of the evidence collected by Libyan auditors. The interview were conducted with individuals' who are in the same groups of internal, external, state and taxation auditors but these participants were not part of the survey participants. The rational for utilising these individuals was that they were in management roles and had many years experience they would be able to explain and clarify any questions that the survey process brought to light as well as confirming the information collected within the survey process.

5.3.1 Participants Profile of Interviews

The participants for the interview process were selected through the use of Quota sampling method (non-random sampling). This sampling method enabled the researcher to have the characteristics of experience and position in the organisational structure as part of their selection. From the original 28 potential individuals only 12 auditors (three auditors from each group) were willing to be interviewed. The profile of the interview participants are listed

below in Table 5.30 with their characteristics and the code name for identification.

Table 5.30: The profile of interviews participants

Code	Date	Years of experience	Highest Qualification	Time (minute)	Position	Organisation
AE1	09/11/08	32	Masters Degree	43	Senior auditor	Abdo's Audit Office
AE2	25/12/08	11	Masters Degree	56	Senior auditor	Tarek's Audit Office
AE3	21/12/08	17	First University Degree	60	Senior auditor	Fathe's Audit Office
AS4	18/12/08	12	Masters Degree	38	Manager of public companies auditing department	Institute of Public Central
AS5	24/11/08	16	Masters Degree	55	Manager of private companies auditing department	Institute of Public Central
AS6	19/11/08	21	Masters Degree	40	Manager of banks auditing department	Institute of Public Central
AI7	10/11/08	6	Masters Degree	54	Director of internal auditing	Arabic External bank
AI8	28/12/08	9	First University Degree	60	Director of internal auditing	Junzur Alahli Bank
AI9	4/12/08	17	First University Degree	58	Director of internal auditing	Aloma Bank
AT10	11/12/08	7	Masters Degree	52	Director of taxation office	Salah den Taxation Office
AT11	02/12/08	9	First University Degree	47	Director of companies department	Tripoli Taxation Office
AT12	27/11/08	9	First University Degree	60	Director of taxation office	Sog Guma Taxation Office
		13.88	**Overall mean (μ) of participant's experience**			
(12) Total No. of interviews						

5.3.2 Interview Limitations

The researcher encountered some problems when undertaking the interview process. There was some reluctance by individuals to participate in the interview process which could be explained due to cultural concerns as the interview can be an intrusive process. This reluctance for participation in interview could also be explained from the formal political and social history of Libya and the use of tape recordings by state authorities. For those participants

who agreed to take part in the interview process there was some reluctance and second thoughts about participating as there were concerns that interview information could be used against the individual or their organisation. Due to this nervousness in the potential interviewees there were many cancelled appointment and repeated negotiations to assure potential participants that the interview was for post-graduate research purposes only. During the interview process some individuals were reluctant to mention problems and the process on occasion was interrupted by the interviewee's workload.

5.3.3 The Effect of the Study Variables on Quality and Quantity of Audit Evidence

The study variables were used as the thematic keywords when undertaking the content analysis of the interview transcripts and notes from the two interviews which were not recorded. The interview process utilised the questionnaire structure but provided opportunities to ask clarification and extension questions to expand, confirm and elucidate the survey information. The themes used were source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence; on the sufficiency and appropriateness of evidence obtained by the Libyan auditor which were the identified factors in Chapter 1.

5.3.3.1 The Effect of Source of Evidence Factor

The first theme investigated in detail through an examination of the external, internal, taxation, and state auditors' perceptions was the reliability of audit

evidence source. Three key points (themes) were addressed in the interviews as follows:

- The audit evidence from independent, unknowledgeable, and different sources.
- The evidence obtained from previous audits, from other audit team members, and from fellow auditors in other firms.
- The data generated by the accounting system of the entity as evidence.

Regarding the first point, most interviewees explained that the source of evidence is a very important issue which should be considered when the auditor collects and evaluates audit evidence. They suggested that evidence could be collected from internal or external sources, each type of which has different effects on the sufficiency and appropriateness of evidence. In this aspect, seven interviewees agreed that independence and external evidence is more reliable than internal evidence. Commenting on this issue, one of the external auditors stated that:

> "As an external auditor, and from my past experience, the reliability of evidence source is a very important factor affecting the quality of evidence. Thus I think that evidence obtained from third parties such as bank confirmations is more independent and reliable than that collected from client is records. Therefore, for me, I rely on evidence obtained from third parties rather than internal evidence" (Interview AE1).

However, a third of the interviewees (4/12) indicated that in some cases, the external and independent source is not credible, and fair. Therefore, they suggested that the auditors should collect evidence from different sources. For example:

> "Regarding the reliability of external sources of evidence, in some cases, I noticed that the expert's written representations were not fair, because it was inconsistent with the information that I collected from the reliable sources" (Interview AI 8).

> "The multi-sources of evidence give the auditor more confidence to draw his/her opinion about the reliability of financial statements of clients audited" (Interview AE 2).

With regard to the knowledge of the source of evidence, all interviewees pointed out that the auditors should obtain evidence from a source that is knowledgeable and supported by the laws.

> "The internal auditors in the banking sector rely on evidence from legal sources such as the laws issued by Libyan Central Bank" (Interview AI 8).

The second point discussed in the issue of source of evidence was the evidence obtained from previous audits, from other audit team members, and from fellow auditors in other firms. 11 interviewees explained that these sources have a high level of persuasiveness and quality. Thus, they stressed that the auditors rely on evidence collected from previous audits, from other audit team members, and from fellow auditors. The following are some quotations in this area:

> "As an external auditor, I know, most of the evidence obtained from auditing area as last years' workpapers are more objective. I think that is because that most of the external auditors work has a high level of credibility" (Interview AE 2).

> "From my prior experience in auditing, the work of auditors of internal department of the bank is a great source of evidence" (Interview AI 8).

> "Like most of the banks in Libya, we believe that the internal audit report is a better source of evidence for errors by the bank accountants" (Interview AI 9).

> "I do not strongly agree that the work of fellow auditors in other firm is a strong source for evidence but it could be used as evidence" (Interview AT 11).

The third theme that was covered in the interview was regarding the reliability of the accounting systems, a large proportion of the interviewees (9/12) agreed

that the accounting system of a client is an acceptable source of evidence. For example:

> "Like most banks in Libya, the accounting system of the bank is the important source for collecting evidence to support the internal auditor report" (Interview AI 9).

> "As an internal auditor, I think that the accounting system of a client is an available and is a better source for collecting evidence about the extent of the validity of accounting' operations" (Interview AI 8).

One of the external auditors mentioned that:

> "In my opinion, the information collected from the accounting system of the entity is a primary source of evidence for external auditors" (Interview AE 3).

However, other three interviewees stressed that the auditors should not completely rely on the evidence generated by the accounting system of entity in their opinion about fairness of financial statements before testing the accounting and internal control systems. The following are some comments on this issue:

> "For me I can say that before relying on the accounting system as evidence source, I have to obtain an understanding of the internal control system and evaluate to what extent this system is effective" (Interview AT 12).

> "I cannot place complete reliance on the evidence generated by the accounting system, because, the accounting system is under the control of the client's management. Thus, as a tax expert, I do not feel more confident when I rely on this type of evidence in evaluate the tax" (Interview AT 10).

> "The external auditor should test the accounting system of the client before reliance is placed on any data collected from it" (Interview AE 2).

The evidence from these interviewees indicates that Libyan auditors used the data generated by the accounting system as audit evidence to support their view about the credibility of financial statements. Interviewees agreed that the

sufficiency and appropriateness is enhanced when the evidence was collected from a strong accounting system.

5.3.2.2 The Effect of Directness of Evidence Variable

The next theme highlighted the external, internal, taxation, and state auditors' perceptions in respect of the effects of directness of evidence on sufficiency and appropriateness of audit evidence. To seek further clarification of the responses in the survey additional probing questions regarding this issue, direct and indirect evidence were asked so that clarification and confirmation was gained in the interviews.

In general, the interviewees were in an agreement about the effects of the directness of evidence on sufficiency and appropriateness of evidence. Seven interviewees explained that the evidence collected directly by the auditor has more credibility and reliability than indirect. For example, two interviewees stated:

> "When the evidence is obtained directly from the source, the risk of possibility of errors and fraud is less that when it collected by other person and delivered to auditor" (Interview AT11).

> "From my experience in auditing, the evidence sent to the auditor directly from third parties is more reliable and fair than that sent to client management and then given to the auditor" (Interview AE 2).

However, five interviewees indicated that indirect evidence has the same effect as direct evidence. They added that the source of evidence is a more important issue than its directness. Commenting on this issue, two of the interviewees mentioned that:

"In some cases, indirect evidence has a good persuasiveness, and in other cases, the information obtained direct has less quality. Thus, as tax expert, I do not care if the evidence collected was direct or indirect" (Interview AT10).

"For the taxation auditors, the important issue to collect sufficient and appropriate evidence rather than the source of evidence. From my experience, because the direct evidence is lower quality even when collected from incorrect source, while indirect reliable sources provide evidence with greater quality" (Interview AT 12).

In conclusion, all interviewees agreed that the sufficiency and appropriateness of evidence to be enhanced when the evidence gathered was direct or indirect.

5.3.2.3 The Influence of Type of Evidence Factor

Three key points were discussed in the interviews in relation to the type of evidence used as audit evidence:

- Oral information given to the auditor used as audit evidence.
- Audit evidence provided by original or copy documents.
- Physical evidence.

With regard to oral information, all interviewees agreed that in some cases the oral evidence is less persuasive, sufficient, and appropriate. In addition, they suggested that the auditor if they are relying on the oral information needs to ensure that this information is reliable and correct through other means. For example:

"I think that oral information collected to support and enhance internal auditors' report is very weak evidence, because it is not easy to keep it as material evidence. Thus, it is less persuasive than other material evidence" (Interview AI 7).

"In some cases, the oral evidence which I obtained was a key to finding out errors or bias in some accounts in the financial statements" (Interview AT 11).

The second issue discussed in the interviews was original and copy documents. All interviewees agreed that documentary evidence has a high level of sufficiency and persuasiveness when it is original, legal, and without errors and biases. Ten interviewees stressed that original documents are more reliable than copies. Following are some quotations on these issues:

"In fact, accounting documents are a very important type of evidence to support auditors' opinions about the extent of the reliability and fairness of financial statements. From my experience, I think most external auditors of private firms rely on accounting documents in the majority of their decisions, after testing accounting and internal control systems" (Interview AE 3).

"As tax experts, we usually prefer to use accounting documents and records of companies as a basis to evaluate the tax. However, we should make sure that these documents are true and persuasive to evaluate the tax" (Interview AT10).

"Regarding accounting documents as audit evidence, the internal auditor should use the original documents, because they are legal and difficult to falsely. on the other hand, the copy documents could be used in some cases as evidence, but after checking them with the same original documents to make sure they are correct" (Interview AI 7).

However, one interviewee explained that the type of document (original/ copy) used as evidence is not automatically enough to evaluate the level of quality of documentary evidence.

> "From my past experience, in some cases, I find out that the original documents which are used as evidence are incorrect or untrue" (Interview AT 12).

For the last point, the majority of interviewees (11/12) explained that the expert's written representation to determine quality, condition or value based on the physical evidence was highly persuasive evidence. In addition, they suggested that the auditor should consider the source of written representations.

If they are provided by state experts they have more integrity and reliability than if from a private expert.

> "As tax expert, I completely rely on the state experts' report as evidence for some issues that need a specialists' opinion" (Interview AT 10).

5.3.2.4 The Effect of Academic and Professional Qualifications of the Auditor Variable

In this theme the interviews addressed three sub-themes of:

- Qualifications (experience, knowledge) of auditor.
- Independence and skills of auditor.
- Errors and biases in auditor perception.

Regarding the first thematic point, all interviewees agreed that the experience and education of the auditor are important elements for collecting and evaluating audit evidence. 7 interviewees explained that auditor's experience is more useful in evaluate audit evidence than education. However, they suggested that both have an effect on the sufficiency and appropriateness of audit evidence. For example:

> "The more years of experience and high level of education of an auditor leads to him obtaining greater evidence. Because I think that the high experience and education are very helpful for the auditor to gather the best evidence" (Interview AS 4).

> "In my opinion, the experience is more important than education. Because experience is a key to discovering the errors in accountants work. However, in some cases, the education is a good base in evaluating audit evidence obtained" (Interview AI 8).

In terms of independence and skills of auditor, all interviewees agreed that auditors need to be independent in collecting audit evidence. The interviewees added that the more independent the auditor, the greater the confidence in

collecting and evaluating evidence. Regarding auditors' skill, four interviewees explained that the skill factor does not have a major effect on sufficiency and appropriateness of audit evidence. Commenting on these issues, two interviewees mentioned that:

> "The independence of the state auditor is a major factor influencing obtaining audit evidence. Moreover, we feel more confident when we have independence in work" (Interview AS6).

> "From my past experience, the auditor's skill has an effect on the quality of audit evidence obtained. Because the skills in obtaining and determining evidence lead to an increase in the quality of evidence" (Interview AI 8).

The last point discussed in the issue of academic and professional qualifications of auditor was errors and bias in auditor perception. With the exception of one interviewee, all agreed that errors and bias in auditor perception reduces the quality and reliability of audit evidence. For example:

> "When the tax expert includes errors or biases in evidence, the evaluation of tax is incorrect. Moreover, the tax will be reduced or increased depending on the value of error or bias. Thus, the errors and biases lead to undermine the quality and fairness of audit evidence" (Interview AT10).

5.3.2.5 The Effect of Consistency of Evidence Factor

The fifth theme which was investigated was the consistency of evidence used in audits. With respect to this issue, all interviewees agreed that the consistency of evidence increases the quality and persuasiveness of evidence obtained. In addition, the interviewees explained that the reliability of evidence will be reduced if one item of evidence conflicts with another item obtained for the same issue. For example:

> "From my past experience, if the evidence obtained were inconsistent this is because there are errors in evidence" (Interview AI 8).
>
> "The quality and reliability of evidence increase when the each single item of evidence obtained was consistent with evidence set" (Interview AS 4).

One interviewee explained that in some cases, evidence collected is inconsistent with the some laws for Libyan banks. Thus, the evidence gathered which is not to the official standards and conflicts within the evidence set.

> "In fact, the main reason for [*the*] inconsistent evidence set obtained by internal auditor who work in banking sector is [*the*] conflict of evidence collected with laws" (Interview AI 8).

Interviewee AI 8 identified that there are times when internal auditors in the banking sector collect evidence which does not meet the legislative requirements. This non standard evidence should be ignored to maintain the consistency of the evidence set. The internal auditor according to interviewee AI 8 should be following the internal and external regulations and collect the appropriate standard of evidence as defined in the regulations.

5.3.2.6 The Effect of Amount of Evidence Variable

The last theme investigated through the interview process was an examination of the external, internal, taxation, and state auditors' perceptions regarding the effect of the amount of evidence collected on the sufficiency and appropriateness of evidence. Three sub-themes that were addressed in the interviews are as follows:

- The significance of findings and risk of material misstatement of financial statement
- The cost of the time in obtaining evidence

- The effectiveness of internal control and sample size

The first issue discussed under the amount of evidence factor was the significance of findings and risk of material misstatement of financial statement. All interviewees agreed that the significance and risk have a major effect on amount of evidence that should be obtained by the auditor. They explained that if there is a high level of risk, the auditor should collect more of evidence. Commenting on this issue, two interviewees stated that:

> "For the tax expert, there are some important accounts that have a major risk (e.g. sales accounts, expenses accounts). Therefore, the taxation auditor should obtain more evidence to reduce the risk" (Interview AT 11).

> "As an internal auditor, I focus on cash accounts. Because it has a high level of risk, I should collect more evidence to make sure it is true and correct" (Interview AI 8).

The second point discussed in the issue of amount of evidence was the cost and the time spent of obtaining evidence. Four interviewees explained that the high cost and the long time decreases the amount of evidence required. However, five of the interviewees indicated that the cost of collecting and determining evidence has no effect on amount of evidence. Two external auditors mentioned that:

> "As external auditor, the cost and the time are very important issues for me. Because I must finish my report on time and with less cost" (Interview AE 1).

> "The cost of evidence is considered when the external auditor collecting evidence to support his/her opinion. In some cases, because of a high evidence cost, I rely on small amount of evidence. Thus, this leads to a reduction the quality and quantity of evidence" (interview AE 3).

Another internal auditor stated that:

> "In term of evidence cost, most internal auditors in banks do not consider the cost when they collect audit evidence" (Interview AI 7).

Regarding the effectiveness of internal control, most interviewees (10/12) stressed that internal control plays major role in determine amount of evidence required. They added that when the level of effectiveness of internal control is higher, the evidence collected from accounting systems of client is reliable and credible. With regard to sample size, eleven interviewees explained that the small sample size, the more evidence obtained. Thus, the quality of evidence is increased. Following some opinions about these issues:

> "Before starting to collect evidence from the accounting system, I must test and evaluate internal controls in order to make sure they are strong and have high level of reliability. Additionally, the amount of evidence depends on the results of evaluation" (Interview AE 1).

> "From my experience, I think that small sample size leads to an increase in the amount of evidence. Because there is a likely risk with small size of sample" (Interview AS 4).

The interview results regarding the effect of internal control and sample size factors on amount of evidence showed that strong internal controls and big sample sizes leads to an increase in the quality and reliability of audit evidence. When querying the interviewees over their sample sizes it was noted that these auditors are not using computerised statistical analysis applications or computational selection processes. If a random sample was undertaken by an auditor it would be on their random selection of items and the number of items would depend on their opinion of the organisation rather than just whim. If the internal control appeared to be weak some auditors indicated that this was a prime example of when they ask for a large samples size.

5.4 Summary of the Study Findings

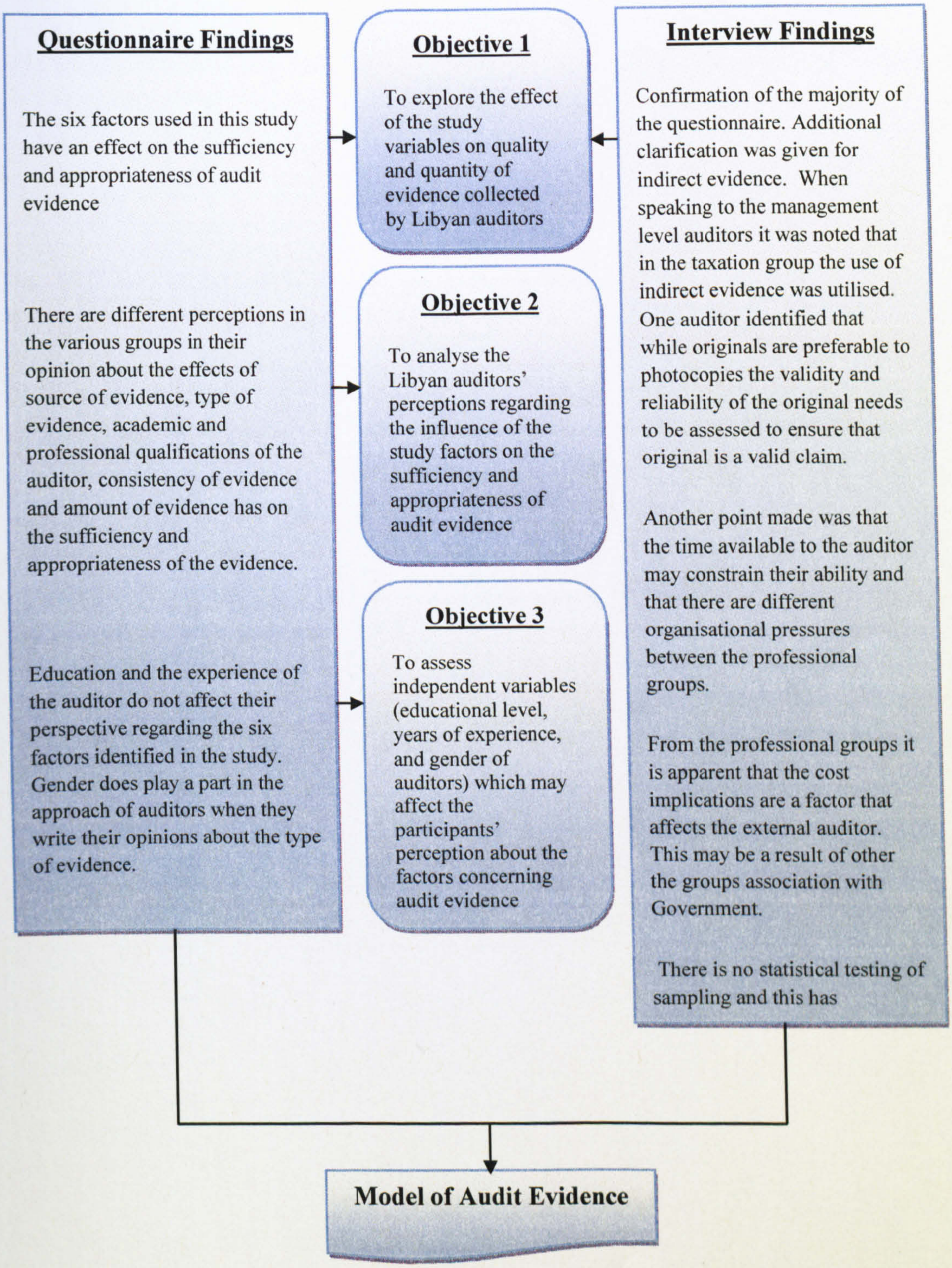
The questionnaire identified that the study variables of source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence have an effect on the sufficiency and appropriateness of evidence obtained by the Libyan auditor. The questionnaire findings for the six factors having an effect were confirmed and clarified by the interview findings. Taxation auditors identified that when looking at the directness of evidence also consider indirect evidence as just as important as directive evidence. While there was an overall preference for original documents in the type of evidence one of the auditors identified that the originality of the document is not enough but rather the validity of the transaction that the document is being used for also needs to be assessed. Time and cost of undertaking an audit for the majority of the groups was not a concern except for the external auditors and this could be a result of the organisational relationships. While sampling is undertaken the selection for sampling is general done from the previous experiences of the auditor and their perceptions about the internal controls with the organisation they are sampling. There is no evidence to suggest that statistical approaches to sampling are undertaken and this has implications on the validity and internal reliability of the sampling process.

When looking at the Libyan auditors' perceptions the different groups vary in their opinions about the effects that the five of the six study factors have on the sufficiency and appropriateness of evidence. The attitudes towards the

directness of evidence were the same in all the groups. Why the groups have these different opinion biases will need further investigation and analysis.

It was expected that education and experience would be an effect on the perspectives that auditors have towards the study factors but it was found that these two independent variables have no effect on the participants' perceptions. While gender does impact on the auditors it only had a significant impact on how the auditors write up their opinions about the type of evidence presented in the audit process. How the various findings are linked to the study objectives is displayed in the Figure 5.1 on page 244.

Figure 5.1: Research objectives, and summary of findings



CHAPTER SIX
THE RESEARCH FINDINGS DISCUSSION

6.1 Introduction

This chapter aims to discuss the results of questionnaire and interviews in line with the first three research objectives as well as the literature on audit evidence. This will allow the research to be positioned in terms of its contribution to knowledge.

The chapter addresses each of the research objectives in turn, analysing the results for that particular objective and evaluating them with respect to the existing literature and identifies the impact of the results in relation to development opportunities in Libya along with opportunities for further research. Through the discussion of these first three objectives opportunities for further research and development recommendations will be identified.

6.2 The Effect of Study Variables on Quality and Quantity of Audit Evidence

The first objective of the study was ***to explore the effect of the study variables on quality and quantity of evidence collected by Libyan auditors.*** This objective was to investigate the effect of the study variables which are: source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence, and amount of evidence; on the sufficiency and appropriateness of evidence obtained by the Libyan auditor. The purpose of this objective is to enable the research study to answer *"How does the six study variables influence the sufficiency and appropriateness of audit evidence when gathered by a Libyan auditor"*.

To answer this main question and the first objective this question statement must be broken down into the individual factors.

6.2.1 Source of Evidence

Regarding source of evidence, part one of section two of the study questionnaire examined the effect of evidence source on sufficiency and appropriateness of evidence. Source of evidence was investigated by the independence, competence, integrity, various sources (internal, external), other members of the audit team, and computerised systems. In the literature review several studies including Marris (2010) indicated that the competence and the objectivity of the source is an important determinate for the persuasive power of evidence.

From the questionnaire results the respondents indicated that 72.2% of auditors agreed that it is necessary for the auditor to obtain evidence from independent sources while large percentage (88.3%) confirmed that information must be collected from different sources to provide a range of evidence types and an overview of the organisation being audited. For the complete breakdown of the various question items for source of evidence please see Table 5.3.

The questionnaire respondents perceived that the sufficiency and appropriateness of audit evidence is enhanced when the evidence was obtained from independent and different sources. These findings are consistent with the results of Caster and Pincus (1996) in their study of Bentham's (1827) theory of persuasiveness, who found that the persuasive value of evidence perceived by

participants (senior auditors) increased, when evidence was provided by an independent party and not by client personnel. Gronewold (2006) and Missah (2008) both highlight that persuasiveness or quality of evidence is dependent on the reliability of its source. In this context, Janvrin (2001) suggested that auditors should assign greater persuasiveness to evidence from external parties than to evidence from internal parties. The interview participants confirmed this previous research and the questionnaire results for the independent and different sources with a 70% agreement that independent and different sources. However while there was agreement that external evidence is require there are issues in the collection of this evidence. Joshi and Deshmukh (2009) identified that it can be difficult in developing Arab countries to gather external evidence due to delays, reliability and infrastructure limitations.

A total of 59.8% of the respondents in the questionnaire expressed that they believe that the lack of knowledge ability of the source impacts on the quality of the evidence. Yet on this same question the respondents indicated that 39.6% provided a neutral comment. This response in the questionnaire reflects the ISA 500 (2010) standard that states that if the source of the evidence is not knowledgeable the evidence may not be reliable. The interview response confirmed the questionnaire with 100% of respondents stating that evidence is undermined when it is collected from unknowledgeable sources. This result is consistent with several studies which have found that evidence collected from external independent sources is more objective than evidence obtained from internal and unknowledgeable sources and indicated that the competence and the objectivity of the source is an important determinant of persuasive power of

the evidence (Payne, 2004; Marris, 2010). The lack of a strong majority in the questionnaire agreeing that the lack of knowledge of the source of evidence impacts on the quality of evidence raises some concerns about reliability and validity of the evidence used in audits in Libya and thus raises some concerns about the quality of audits which are undertaken. The mean of the response for this question was low (μ=1.98). In order for Libyan practice to meet the International Standard on Auditing [ISA 500] greater emphasis is needed by auditors to use evidence which comes from knowledgeable sources. The possible reason why Libyan auditors may be not able to access knowledgeable sources of evidence could be a result of the infrastructure difficulties that Libya has with large distances and difficulties with travel. The ability of auditors in Libya trying to access the knowledgeable source could be limited not only due to the developing country infrastructure but it could also be a result of the structural organisational culture or social culture. Hassan (2008), Askary *et al.* (2008) and Al-Akra *et al.* (2009) all indicated that the Arab social culture has a strong impact on business within these countries. Hofstede (1991) portrayed Arab countries as highly masculine and uncertainty avoidant with a large power distance and a low individualism or collectivist perspective on life. The unwillingness to cross social boundaries by questioning the knowledge of individuals and business who are providing audit information could be due to the low levels of individual suggests Hofstede (1991) who also suggests that this may also be a result of Islamic philosophy. The strong family and clan hierarchy according Ritchie and Khorwatt (2007) and Agnaia (1996) could be another potential reason why an auditor is not willing to question the

knowledge of the information provider. With this cultural background influence the interviewees who are all senior auditors and have position of power in the system according to Hofstede may be more confident in their ability to question the source about their knowledge. Again the reason why the interviewees were so strong in their support of the necessity of having knowledgeable sources of evidence could be their cultural place within Arab society. The managers with many years experience fit into the social structure as an elder who is respected and is able to ask probing questions. The older auditor (the elder) is more likely to gain a response than a junior auditor who is does not have the cultural and organisational respect.

The second point addressed in the source of evidence was the evidence obtained from previous audits, from other audit team members, and from fellow auditors in other firms. The survey results showed that the sufficiency and appropriateness of evidence perceived to be enhanced by 80.2% when the evidence is obtained from previous audits and 86.1% perceive that information originating from other audit team members is highly valued in the audit process. The interviewees (92%) stressed that the auditors rely on evidence collected from previous audits, from other audit team members, and from fellow auditors. The high percentage for the response was consistent for previous audits and other audit team members. There was a discrepancy in the results between the questionnaire and the interview for obtaining evidence from fellow auditors in other firms. The survey response was only 59.4% for evidence from auditors in other firms. The survey response was consistent with previous studies in this area (e.g. Salterio and Koonce, 1997; Anderson *et al.*,

2001) who found that auditors considered evidence from a fellow auditor and from previous audits to be more persuasive than evidence from client management, and they put more weight on information originating from other audit team members than information from client personnel.

From the responses of the interviewees it appears that it is their years of experience which is influencing their perception. It was only one taxation auditor who did not agree and this could be as a result of with professional working area. Taxation auditors in Libya have legislative support with gives them the authority to demand information from other external organisations, also the role of a taxation auditor may over time through their experiences in assessing taxation may make them less trusting of anyone due to the nature of the work through their professional scepticism. Taxation authorities in Australia according to Tyler (2001) have a low level of trust (negativity) in relation to the citizen's unwillingness to pay their taxation responsibilities. Due to the negative experiences of the Libyan auditors' work place it is possible that they have increased in their scepticism and have lower levels of trust when compared to the other professional groups due to their increased levels of response to professional assessed risks. The ISA 330 (2010) indentifies that auditors need to maintain an attitude of professional scepticism and they should include that in their management of information for auditing judgements.

The previous studies about auditors' perception of evidence generated from the accounting system of the entity indicated that auditors were more willing to rely on evidence from the accounting system of the client when there is internal

control effectiveness (Salterio and Koonce, 1997; Agoglia *et al.*, 2009). Kizirian *et al.* (2005) indicated that audit evidence that is generated internally is more reliable when the related controls imposed by the entity are effective. The results indicated that most questionnaire respondents (88.2%) perceived that data generated from the accounting system as a source of evidence while respondents (86.6%) regarded data produced by computerised information systems to produce evidence which provides high quality and quantities of information to produce highly reliable and valid auditing reports. A large percentage (75%) of the interviewees confirmed that the use of the accounting system and computerised systems were an important source for collecting evidence. This high reliance on the accounting systems within organisations for evidence is inconsistent with the auditing professional standards from the ISA 500 (2010) which suggests that accounting records alone do not provide sufficient audit evidence on which to base an audit opinion. Joshi and Deshmukh (2009) highlighted that within Bahrain there are issues in the audit due to the poor accounting background of clients and inadequate internal control. If the system which the auditor is auditing has underlying issues such as poor accounting knowledge this is likely to create a marker for the auditor to question the internal control systems within the organisation.

The inconsistency between the Libyan auditors and the ISA 500 may be the result of the differences between developing and developed nations. Currently the majority of the accounting systems in Libya are not predominately computer based. The technology access has been limited by the economic embargo and accounting technology and know-how has been imported from

other counties through the influence of international oil exploration companies (Mahmud and Russell, 2003; Ahmad and Gao, 2004; Al-Badre, 2007; Alfaitori, 2007; Pratten and Mashat, 2009) With the lifting of the embargo in the 2004 (Otman and Karlberg, 2007) there has been infrastructure developments such as the implementation of computers in the workplace but the technological advances has not expanded into all settings. Not all employees have access to a computer on their work desk and this means that information may be recorded in traditional systems such as ledger books which are later transferred to a computer system for the whole of company accounts. The institutions which are fully computerised are those who are more likely to have direct contact with the international companies and their need to meet the international standards for accounting. Saleh (2004) identified that thanks to the Embargo there has been a lack of access to technology and delay in development. The accessibility and access to computer networks like the internet is not standard part of everyday life or workplaces (Khorwatt, 2006). Managers may have a computer on their desk but there are still legal requirements that means traditional manual ledgers must be used for the recording of accounts. This lack of uniformity of access thanks to infrastructure underdevelopment and the legal requirements from a previous technological age could lead to a lack of familiarity with the issues that can occur in computerised systems or applications such as fraudulently electronic transactions. The auditors appear to be more willing to accept computerised information as evidence but when questioned why they are willing to accept this as evidence the auditors appear to be accepting this evidence because of its modernity and are not as aware of the issues or risks this

type of record could have such as data input mistakes. Ahmad and Gao (2004) identified that professional education needs to be developed to reflect the challenges professionals are facing in daily practice. ISA 500 (2010) advises that with respect that the audit evidence is more reliable when it is obtained from independent and different sources outside the entity the auditors in Libya need to be encouraged not to look at computerisation as a genuine rationale that provides internal evidence that is valid and reliable. Awareness of the risks that computerised systems can have needs to be developed within the Libyan audit profession and this can only be done through education and additional training.

From the results there are a number of areas for source of evidence which needs additional research into why the Libyan auditors are responding in the manner in which they are. Anderson *et al.* (2001) states that auditors rely more heavily on the evidence of a more competent source yet for the Libyan auditors there was not the support that would have been expected. Why this occurs could be due to a number of reasons and through the study of organisational culture in Libya we may be able to answer why this aspect of source of evidence is not supported enough. The impact of organisational structures and cultures again was a possible reason why some Libyan auditors appear not to strongly support the evidence obtained from fellow auditors in other firms. Von Wielligh (2006) identifies that professional creditability and validity of the expert needs to be considered yet other studies indicated that similar professional membership made the auditor more likely to respect the opinion of fellow auditors in another firm (Anderson *et al.*, 2001; Agoglia *et al.*, 2009). The professional bias of one group, the Taxation auditors, needs to be investigated as why they were the

group who seemed to be the most sceptical when interviewed. This scepticism could be because of their organisational culture or the nature of their work in the Libya context. Further study is needed to investigate the underlying reasons why this group appears to have greater scepticism than the other professional auditing groups in Libya. Additionally, the impact of the Embargo also needs to be investigated as it appears to have delayed the development of professional practice and accounting education. If the Embargo had this impact on these areas it is possible to suggest that it impacted on other aspects of Libyan society and organisations but further research is needed to assess how this political situation impacted on the socio-economic aspects of the Libyan nation.

6.2.2 Directness of Evidence

ISA 500 (2010) suggested that audit evidence should be obtained directly by the auditor (for example, observation of the application of a control) is more reliable than evidence obtained indirectly or by inference (for example, inquiry about the application of a control) (Para.9). In a tax-related context, Magro (2003) found both tax experts and students considered directly relevant information from different tax-authorities for the decision of a specific estate tax issue.

Part two of Section two of the questionnaire investigated the effect of the directness of evidence on the auditors' perception that the evidence was sufficient and appropriate. In the questionnaire the survey participants responded strongly that evidence collected directly from a source (μ=4.70) and from an external third party (μ=4.39) enhanced the audit process. These

findings are compatible with Cosserat (2000) who concluded that direct evidence was of more persuasive value than indirect evidence because alternative hypotheses can be ruled out. Moreover, they were in line with the interview results that a large group of the interviewees (7/12) suggested that the evidence collected directly by the auditor has more credibility and reliability than indirect. This consensus in the auditor groups about direct evidence is different from a previous study by Kalel (2000) who argues that external and state auditors have different perceptions about extent quality of direct evidence. A possible reason why there is a difference in the perceptions of auditors from Kalel (2000) and this study is the impact of the systematic changes which have occurred in the accounting and auditing procession in Libya. With the establishment of the market structure and the presence of the Big 4 accounting and auditing (Alfaitori, 2007; Faraj and Akbar, 2010) there have been improvements in the professional standards and approaches. The Big 4 have impacted on the LAAA (external auditors) and there is greater awareness through competition of the International Standards and the requirements of international companies who are undertaking business in Libya.

Auditors when asked about the receiving of evidence from an indirect source indicated that 53.5% (μ=3.32) of respondents perceived that sufficiency and appropriateness is enhanced. With over half the survey respondents indicating a neutral response there is some concerns about why the auditors are responding in this manner. This neutrality to indirect evidence was partially explained by 5 of the interviews who explained that indirect evidence can have the same effect as directed evidence and this opinion perspective is contrary to Caster and

Pincus (1996) along with the most recent guidance from IFAC (2010) in ISA 500 who advises that direct evidence is more relevant to indirect. It was interesting to note that it was all the taxation auditors and one other auditor who revealed that indirect evidence could be as persuasive as they felt that sometimes the information obtain from direct evidence had a lower level of quality. One taxation auditor (interviewee AT10) made the emphatic statement "*...as tax expert, I do not care if the evidence collected was direct or indirect*". Another taxation auditor indicated that this could be from their role as the individuals who evaluate the citizen or business for the purpose of setting the taxation levy for those whom they are auditing. Interviewee AT12 indicated that it was from their experience that when evidence is collected from reliable indirect sources it is beneficial to their ability to audit individuals or businesses.

When considering the responses from the Taxation auditors it is possible that Libya has a taxation avoidance culture and this could potentially explain the high levels of professional scepticism demonstrated by taxation auditors when discussing evidence. Further investigation into the taxation culture within Libya needs to be undertaken as well as the organisational culture of taxation auditors. Is it the environment that they are working in or is it the organisation which is influencing the high levels of scepticism.

For Libyan practitioners on a whole with their neutral response to this question in the questionnaire was inconsistent to a large number of the interviewees who supported the literature which advises that direct evidence should have greater reliance than indirect evidence (IFAC, 2010b, ISA500). It could be argued that

this topic is not seen as a concern within Libyan auditors in the junior ranks and this may come from their experience when compared to the interviewees who had more professional experience. The influence of the taxation auditors on the use of indirect evidence needs to considered and investigated as to what impact this has on the rest of the professional groups. Further research needs to undertaken as to why there was ambivalent neutral response on indirect evidence. Is it from their experience or lack of experience of fraud as auditors or does this attitude comes from their education and training programmes again it could be from the organisational cultural (Sim, 2010) and function of the different groups of auditors within Libya? Martin (2007) indicates that auditors should rely on direct evidence but Missah (2008) warned that auditors need to verify by additional processes. Taxation auditors may have direct evidence of a share certificate but who actual owns it needs to be reviewed by other means. This scepticism about the ownership and the transference of funds could be the reason why taxation auditors also rely on indirect evidence to assess direct evidence. If the auditors in the survey questionnaire are applying a similar level of professional scepticism as the taxation auditors in the interview about the direct evidence presented to them within the auditor process this needs to be investigated why this occurring. Further studies may need to investigate why Libyan auditors are so sceptical in some situations about direct evidence and therefore want to use indirect evidence to assess this direct evidence. One reason why there could be such a high neutral response from auditors that needs to be considered is if the result potential be because of system failures such as

not been able to trust direct evidence due to a high incidence of fraud and corruption.

6.2.3 Type of Evidence

Audit evidence is dependent on information that provides a factual basis to enable the auditor to develop an audit opinion. Kaptein *et al.* (2009) and Agoglia *et al.* (2009) state that auditors document a range of information types that provide evidence to support their opinion. It is the information documented by the auditors and obtained through observing conditions, interviewing people, examining records, and testing documents (Kaptein *et al.*, 2009; Agoglia *et al.*, 2009; Marris, 2010).

6.2.3.1 Oral Evidence

When surveyed about oral evidence it appears that this type of evidence is not strongly supported as an evidence type as it appears the auditors perceive that it slightly undermines the evidence they collect through method (μ=2.35). The IFAC (2010) in ISA 330 *'The Auditor's Responses to Assessed Risks'* advises that professional scepticism should be applied during management and employee interviews. Oprean and Span (2009) point out that oral evidence is frequently used in audits by auditors to obtain specific knowledge of the entity, its working environments and to review internal control. The interviewees provided additional confirmation and clarification about why Libyan auditors are not confident in oral information when they highlighted the need to consider the bias of the information providers along with confirming that it is primarily

used to gather additional information and evidence about organisations that they believe have weak internal controls.

6.2.3.2 Documentary Evidence

The use of original documents as part of the audit evidence is strongly supported in the Libyan context (μ=4.83) while there is a reluctant or negative impression by auditors in relation to copy documents (μ=2.33). A total of 36.9% of auditors strongly believe that copies strongly undermine evidence. This approach to documents follows the literature of Ross and McHugh (2006), Gronewold (2006), and Marris (2010) who discuss the implications and need for documentary evidence to convince the auditor of it reliability. The interviewees (83.33%) emphasised the need to use original documents preferably to copies. While there was triangulation agreement about the use of originals between the three sources, literature, interviewees and survey respondents again the taxation auditors added a codicil about original documents. It appears that the taxation auditors are aware of fraudulent originals and advise that all originals should be assessed for their persuasiveness and if they are true originals presenting valid and reliable information. The ISA 500 (2010) states that external documents such as confirmations from third party entities are more credible than documents created inside the entity. When seeking clarification about the level of queries and why they query original documents, interviewee AT12 confirmed that from their experience they have encountered "... *original documents which are used as evidence* [that] *are incorrect or untrue*". This statement has potential

implications for auditors about the detection of fraud and the level of corruption in official and external agencies. If official documents which according to Joshi and Deshmukh (2009) are difficult to fraudulently obtain then the question remains is there a high level of deviance currently in the Libyan system and this could explain the high levels of scepticism found in the Libyan taxation auditor perceptions and guidance about ensuring that additional verification is undertaken to confirm the details on the original document when it is used as supporting evidence in the audit report. The implications for practice is that additional research should be undertaken to discover the rate of deviance so that a range of procedural practices can be developed for Libyan auditors so that they can confirm the validity and reliability of the original document which is presented in the audit process.

6.2.3.3 Confirmations

The respondents of the survey believe that external written representation was perceived a strongly persuasive (μ=4.17) confirmation evidence source for the audit reports. The majority of interviews (91.67%) supported the persuasiveness of written representations. It was interesting to note that 100% of the taxation auditors rated the state expert report more highly than the private expert.

> "As tax expert, I completely rely on the state experts' report as evidence for some issues that need a specialists' opinion" (Interview AT 10).

This discrepancy in opinion and perception about official and original documents leads to some additional questions. Why would a taxation auditor be so sceptical about original document but be more willing to accept an

official expert report from a state agency? Is it a case of respect of other professionals as seen in Anderson *et al.* (2001) or is because of another reason unknown at this stage. In Bahrain, Joshi and Deshmukh (2009) identified that auditors had difficulties in gathering confirmations from third party organisations and issues in the trustworthiness of third party information providers. Additional research in to the taxation auditors has already been suggested in relation to their organisational culture and the effect of the environment has on their work practices. Faraj and Akbar (2010) identified that further studies of organisational culture need to be undertaken in Libya and the region as this may be impacting on the development of Libyan auditing. It may be necessary to consider why there is such a difference between original documents and the expert report when future studies on deviance in the Libyan context or if there is a taxation avoidance culture is undertaken. To address the concerns about the potential that there is some deviance in the system it is important for auditors in practice assess the potential bias that expert representative may have though the use of guidance such as ISA 505 (2010). Janvrin *et al.* (2010), Marris (2010), Oprean and Span (2009), Caster *et al.* (2008) all emphasise that independent of the sources needs to considered and that any response from an official entity should be directly obtained from the third party to the auditor.

6.2.4 Academic and Professional Qualifications of the Auditor

6.2.4.1 Experience and Knowledge of the Auditor

There is triangulation between the literature and the primary research of the interview and the survey as all confirm that the experience and knowledge of the auditor are important elements that effect the collection and evaluation of audit evidence. The experience of the auditor affect on the collection of evidence in the survey has a very high mean (μ=4.75). This strong result of 93% agreeing that experience impacts on the audit evidence supports literature (Arthur, 2001; Qing, 2006; Bruynseels *et al.*, 2007; Hao and Wen-Ming, 2007; Marris, 2010) who advise that the experience of the auditor impacts on the their ability to deal with problems, to search and collecting evidence and make quality decisions about the evidence obtained. As one state auditor (AS4) advised in the interview process the higher the qualifications and the wider the range of professional experience the better the quality of the audit evidence. From the responses particularly from the taxation auditors in the interviews about the types of evidence consideration of the organisational culture needs to be measured in a future studies. Sim (2010) observed that group thinking may be present in auditors who have experience in their organisational practices and policies. The consistent high level of scepticism and attitudes towards indirect evidence could be representative of organisational cultural thinking.

6.2.4.2 Independence and Skills of Auditor

Boynton and Johnson (2005), Arens *et al.* (2006) and Soltani (2007) all state that the role of the auditor is to be an independent assessor of the financial statements of an individual or business organisation.

In terms of independence and skills of auditor, all interviewees agreed that auditors need to be independent in collecting audit evidence. The interviewees added that the more independent the auditor, the greater the confidence in collecting and evaluating evidence. This literature view about the independence of the auditor is reflected strongly in the survey (μ=4.72). This independence of the auditor was supported in the interviews but was clarified with comments about the skills of an auditor. A total of 68.5% of the survey respondents believe that the skills of the auditor impact on their ability to conduct an audit while 75% of the interviewees perceive that analytical skills impact on the audit evidence. Oprean and Span (2009) and ISA 520 (2010) both advise that without strong analytical skills auditors are not able to gain assurance that accounts are fair representation of the actual financial status of the organisation, assist in fraud and error detection and provide evidence to support audit objectives. There is not as strong as support for skills in the Libyan context but this could be a reflection of the low number of higher degrees amongst participants (19.7%) of the questionnaire while there was greater support in the interviewees who had a higher number of advanced higher education qualifications (58.33%) and as a group the interviewees averaged over 10 years (μ=13.88) professional experience. The lower than expected

reaction about the skills of the auditor in the questionnaire could be a reflection of the experience or educational levels of the respondents. The recent political history described by Khorwatt (2006) could have impacted on the development of professionals in their accounting education (Mashat *et al.*, 2005). Ahmad and Gao (2004) identified that education development had been delayed in Libya thanks to embargo and this lack of development could be a reason why the skills of the auditor may not have such as strong response as would be expected from the literature for developed countries such as Bruynseels *et al.* (2007) and, Marietta and Arnold (2008). Further research into the actual skill levels of auditors could be undertaken to see if the auditor perceptions that the skill level does not impact on the audit process. Current education programs and awareness of the development education programs need to be investigated.

Michas (2010) found that auditors who are involved in the Big 4 organisations such as external auditors in Libya who work for Big 4 regional offices are likely to have incentives through these organisations to conduct higher quality audits. The multinational organisations have a global reputation and they are likely to use internal control procedures to ensure that audits undertaken in the company name maintain the global company reputation. As Lopez and Smith (2010) indentified there are differences in the perceptions of the auditors of Big 4 and non-Big 4 audit firms due to their concerns over professional risk and potential litigation. International organisations investing in Libya are more likely to use a Big 4 firm as they want to catch trust the reputation of the firm and maintain the Libyan enterprise is operating and held to their investors' home country expectations and international standards. Also the current

accounting standards for Libya are based on upon *Financial Law* of 1967 while the auditing professional standards are covered in the *Organisation of the Accounting and Auditing Professions in Libya Law No. 116* (1974) and these statutory instruments could be seen as lacking modern international standards and the necessary requirements for professional practice. Faraj and Akbar (2010) discovered that current non-availability of auditing standards in Libya is major factor that undermines Libyan auditor independence. The perception of deficiency in the current Libyan professionality is likely to impact on international stakeholders desire to have audit evidence which is sufficient to their needs (Joshi and Deshmukh, 2009).

6.2.4.3 Errors and Biases in Auditor Perception

There is strong consensus in the primary data with that of literature concerning bias and the detection of errors has an impact on the techniques for obtaining evidence within the audit. Marietta and Arnold (2008) and Ohta (2009) emphasises the importance of the judgemental decisions of the auditor to consider bias when assessing evidence and help in the identification of errors. This ability of auditors to maintain their independence and to use their experience to review the evidence according to Abou-Seada and Abdel-Kader (2003) has a significant impact on auditing decisions and especially in the evidence process. This emphasis on professional objectivity is supported in the interviews when the majority of the respondents (93%) confirmed that bias and errors undermine the quality and fairness of audit evidence.

6.2.5 Consistency of Evidence

With regard to the professional literature, ISA 500 (2010) indicated that if audit evidence obtained from one source appears inconsistent with that obtained from another, the reliability of each remains in doubt until further work has been done to resolve the inconsistency (Para. 17). The interviewees and the survey respondents (86.1%) supported the opinion that evidence which conflicts with another items undermines the evidence collected. While the survey respondents (μ=4.360) state that evidence collected is appropriate for the audit objectives the internal auditor interviewees from the banking sector indicated that was some discrepancies between the various legislative requirements and government policy documents. Interview AI8 identified that auditors may have inconsistent evidence as there is conflict within the laws about the evidence and purpose for the collection of this evidence. To address this inconsistency the internal auditors recommended that the auditor verifies what the latest policy directive is and ensures that the latest legislative requirements are being followed and then gathers the most appropriate evidence to meet these requirements. To clarify what is causing the inconsistent legislation, polices and official guidance for the banking sector further study needs to be undertaken. The inconsistency could be a direct reflection of the recent systematic changes within Libya such as the transiting from a planned economy to the open market economy. The inconsistency in the appropriateness for the audit objectives described by the interviewees is further supported by the survey respondents (85.6%) who indicated that the audit process is undermined by the lack of audit procedures in place. Marietta and Arnold (2008) identifies when there are clear

standards in place for practice, the professional practice of the auditor is enhanced. Malkawi *et al.* (2010) stressed that the reliability of information flows impact on the professional. In the Libya the communication infrastructure difficulties may be impacting on the information that the auditor has access to ensure that they are meeting the most current legislative regulations and government policies relating to their industry sector. While Alfaitori (2007) identified there was strong infrastructure development in the Central Bank of Libya [CBL] smaller agencies such as independent banks do not have the same access to the infrastructure network. As Libya has a large geographical area it is difficult to communicate easily between the various regions (Pratten and Mashat, 2009) and this means that it takes time for latest official policy and legislation to be communicated with the regional branches and offices for all industrial sectors including the banking sector. Marashdeh and Shrestha (2010) revealed that further infrastructure development was a key component required in Arab countries. With improved transport and communication infrastructure some of the difficulties encountered by Libyan accountants and auditors related to the collection of evidence in various sectors are likely to be resolved due to the ease of communication and the sharing of information.

6.2.6 Amount of Evidence

6.2.6.1 Significance of Findings and Risk of Material Misstatement of Financial Statement

On the survey there was strong response to the significance of account item (μ=4.66), risk of material misstatement (μ=4.21), and the amount of evidence

need to support negative findings (μ=3.35). All the interviewees support the perception that the quantity of evidence collected was affected by the type of account item the evidence collected was for, if for example the account item was cash the auditor would undertake larger investigation and collection process than when compared with other account items. Rittenberg *et al.* (2009) supports the collection of evidence to confirm the validity and reliability of the financial statements. The significance of the evidence is a result of the risks that the account item has for material misstatement or deviance. Interviewees from different auditing sectors identified that if they perceive a high level of risk for particular items related to their role they would collect more evidence to ensure that there is no misstatement. This also ties in with the viewpoint that auditors believe they need a high level of confidence to support their negative findings and thus prove that misstatement or deviance has occurred. The respondents in the interview and questionnaire are demonstrating characteristics which Bowlin (2009) identified that auditors need to have in place when considering the effect of risk.

6.2.6.2 The Cost of the Time in Obtaining Evidence

While there were similarities between the literature and the auditor's attitude to risk when it came to the cost of obtaining evidence and time need to gather this evidence there was a difference between the current literature and the perceptions within the Libyan professional groups interviewed. Morariu *et al.* (2008) identified that the cost of collecting evidence is a factor which impacts on the amount of evidence collected and the survey respondents agreed that it

impacts on their evidence collection (67.3%) however there was a large neutral response (32.1%) which included all the state auditors. The state auditors in the interview suggested that cost and time was not a factor which impacts on their cost and the time spent of obtaining evidence. The professional grouping of the auditor in the interview differentiated whether they considered cost or time factors that impacted on their evidence collection. It appears from the interview that only the external auditor is affected by these factors when collecting evidence. This response could be the result of the organisational culture or structural culture of the other auditors. The external auditor is working in competition and running an independent business while the other auditors are all employed in some manner by a government agency. Further investigation of the organisational culture needs to be undertaken. The culture in government agencies is likely to change as further development of the government activities is undertaken to bring current practices up to the current world best practice. There is pressure on Libya as a developing economy to develop its processes and procedures in line with developed countries practice as part of the foreign investment process. It is foreign investment which helps to bring technology, skills and development to Libya which is likely to impact on the local professional practices and government standards. The impact of global investment can be observed in the recent developments in the Gulf States [UAE (Elbanna, 2010); Bahrain (Ramadhan, 2009)] who further into the development of their economic structures when compared to Libya. As the various Libyan organisations are changed by development through their access to technology and improved professional practices the attitudes are likely to

change in relation to cost and the time it takes to gather evidence. With the western development influence it is likely that the concept that governments should be using modern accounting practices and greater levels of accountability for the utilisation of government resources will be introduced. With these new attitudes it will impact on the evidence collection process as time and cost will become considerations for Government auditors. With the instability of income from oil revenues Libya cannot afford spending its government recourses haphazardly so there needs to be more internal control within government agencies over the costs that auditors' occur when undertaking audits. The time that it takes to complete audits will also need to decrease in the future as there will be further demands by stakeholders such as foreign investment companies to have reporting which is judicious, appropriate and timely.

6.2.6.3 The Effectiveness of Internal Control and Sample Size

The survey respondents (92.0%) emphasised that the effectiveness of internal control enhanced audit evidence (μ=4.65). This was supported by the interviewees and the literature (Janvrin, 2001; O'Leary *et al.*, 2006; Sarens and De-Beelde, 2006; Kaplan *et al.*, 2008; Owojori and Asaolu, 2009; Ali *et al.*, 2010; Malkawi *et al.*, 2010; Sim, 2010) who point out that if the internal control is high the auditor is not required to collect a large evidence sample. In the interview process it was clarified by the auditors that they are not using sophisticated processes when selecting their sample sizes. The interviewees reported that it was based on the experience on how they selected the sample

size and the sample items. They key factors which they expressed which influenced their decision making process in relation to sample size was their observations about the internal control within the organisation they were auditing. The survey respondents (75.9%) indicated that a small sample size undermines the audit evidence. Marris (2010) advises the if the quality of the evidence is high the amount of evidence that is needed to be collected in the audit process can be reduced while Morariu *et al.* (2008) observed that auditors needs to consider at the start of the audit process the dimensions of the audit sample. Bowlin (2009) argues that the sampling needs to reflect the material risk observed. The current process of using just the professional experience judgement of the auditor is not enough as there is no guarantee that the amount of evidence collected is a representation of the population of the audit. To improve the validity and reliability of the sampling the sample size selected by the Libyan auditor it is recommended that analytical statistics be utilised to generate the required sample size to ensure the probability of a true reflection of the population of the financial transactions of an organisation. Use of ISA530 recommends the use of statistical sampling selection rather than individual auditor judgements.

6.3 Study Variables and External, Internal, State and Taxation Auditors

The second objective was to explore the Libyan auditors' perceptions regarding the effect of study factors of the source of evidence, directness of evidence, type of evidence, academic and professional qualifications of the auditor,

consistency of evidence, and amount of evidence on quality and quantity of evidence have on sufficiency and appropriateness of evidence.

From the ANOVAs testing the six study factors it was found that for five of the variables that there was at least one significant difference between external, internal, state and taxation auditors in their opinions about the effects that the study variables have on the sufficiency and appropriateness of evidence. The only factor where this was no difference between the professional groups was the auditors perceptions about the directness of evidence.

The main group who held the different perceptions was the state auditors. This group were the main individuals who held a different perception in relation to the source of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of the evidence and the amount of evidence. When comparing the various group biographical details to the other groups it was interesting to note that 93.2% of the state auditors were aged under 40 and only 25% of this group had higher degree qualifications. While there was a lower number of a higher degree it must be noted that this group had the highest number of professionals with 10 or more years professional experience at 71.2%. Therefore, it could be interpreted that the lack of higher level degree has been compensated by the number of years working in the professional. Why this group responded differently could be a result of their education or it could be a result of their organisational workplace as they all work in the Institute of Public Control and are responsible for the auditing of government non-profit enterprises such as the electricity company. Morrill and

Morrill (2003), Haron *et al.* (2004), Michas (2010) and Lopez and Smith (2010) all suggest that the different job roles will impact on the auditor but while the research has confirmed that there is differences between the group it is not possible to definitely say that is the job role implicitly which is creating the differences between the groups. While Kalel (2000) found that there was a significant difference between external and state auditors perceptions in relation to the directness of evidence the reasoning why was still unknown. The current study has confirmed that there are still differences between the groups and in particular with state auditors and the rest of the professional groups but the rationale why this is occurring is still unclear. Further research into the perceptions of state auditors may wish to investigate the organisational culture, specific of their job role or their skills and training needs.

Ali *et al.* (2010) found that internal auditors working in state and local Malaysian governmental bodies faced some problems such as skills and training shortages in their attempts to perform their duties such as searching audit evidence. Jarboh (2005) revealed that external auditors can provide a greater depth of professional experience due to the range of companies whom they are involved with and this have a wider range of skills when compared to government auditors who only work in one professional setting. The lack of variation experience could be a reason for why the state auditors hold different perceptions than the other groups. When considering the work organisation within the Institute of Public Control [IPC] the state auditors are restricted to a limited number of government companies who they are responsible for auditing year after year. This workflow setting may create familiarity with the

enterprises (Joshi and Deshmukh, 2009) but it does not provide a greater range of experience that they can call upon when they encounter challenges similar to what Ali *et al.* (2010) described in the Malaysia.

With the differences between the groups the role of the state auditors can be questioned as they are government employees who are investigating government non-profit organisations. The independence of these auditors can be questioned thanks to the age of the Libyan legislation covering auditing profession and the cultural nature of organisations within Libya. Joshi and Deshmukh (2009) indicated that there is a secretive business environment in the Middle East and this impacts on the audit practices. Faraj and Akbar (2010) identified that there are concerns over the independence of auditors in Libya due to the deficiency in the development of professional standards and the absence of International Standards on Auditing [ISA] within current professional practice. Joshi and Deshmukh (2009) identified that the use of auditors from the Big 4 is perceived as a risk minimisation strategy due to the use of ISA by foreign organisations when working in Libya. To improve the professional credibility and improve the reliability and validity of current audit practice in Libya there needs to be legislative changes which reflect the international standards on accounting and auditing. The review of the current legislation and implementation of international standards potentially has an opportunity to improve Libyan businesses access to global markets if they are perceived as a less risk adverse supply organisation in the market sector and thus part of the current State Development Plan (2008) which aims to reduce the dependence on oil revenues and improve the access of Libyan businesses to

global market sectors could be achieved through improving the risk assessment of Libyan organisations.

6.4 Study Factors and Independents Variables (Educational Level, Experience and Gender)

The third objective of this study was to explore the independent variables of the Libyan auditors' educational level, their years of professional experience and if their gender impacted on their perceptions regarding the specific study factors.

6.4.1 Study Variables in Relation to the Educational Level and Experience of Auditors

The hypotheses of education level and auditor experience were not found to have an effect on the six study factors. The ANOVA and post hoc testing indicated that no significance difference in the results and thus these hypotheses had to accept the null and reject the postulated hypotheses that these independent variables would impact on the study factors. This was an unexpected result and does not correspond to the current literature such as Gronewold (2006) who indicated that auditor experience affects their judgements regarding audit evidence while Mahmud and Russell (2003), Ahmad and Gao (2004), and Abofars (2008) recommended that there be improvements in the current accounting education within Libya to reflect the current professional challenges. Bruynseels *et al.* (2007) and Abou-Seada and Abdel-Kader (2003) that auditor's professional experience as a working accountant and then as an auditor develops their awareness for potential issues

and processes through an operational context rather than just theoretical understanding of the newly qualified accountant.

While 80.2% of the survey participants had lower qualifications when looking at the breakdown of their experience there was 64.2% of the participants who had 30 or more years work experience. Yet according to all the interviewees there is a perception that experience and qualifications impact on the auditor's skills and ability to collect and interpret evidence. When analysis was undertaken about the potential bias that qualification and experience levels could have on the sample there was not statistics indicating sample bias. According to Magro (2003) it is the lack of auditing experience which impacts on the ability of auditors to distinguish between indirectly relevant and irrelevant information. Further research is needed to investigate why the survey respondents appear to be unaffected by their education and work experience in their perceptions about the six study factors as they are dissimilar to the expectation from literature and the responses from interviewees.

This contrary outcome in Libya could be a result as a long term impact from the Embargo and the development delay of Libya. Saleh (2004) identified that the many years of isolation have created technological, skill and infrastructure development delays and this could be why the education level was inadequate but the experience level was high. Studies in the future may find a change where education and work experience becomes a variable influencing the six study factor as the Libyan economy develops and starts to implement new ideas from other countries.

6.4.2 Study Variables and Auditor Gender

While the null hypothesis for the study variables and gender had to be accepted it is interesting to note for one sub-hypothesis for the type of evidence gender impacted on the study factor. Gold *et al.* (2009) suggested that gender was likely to impact on the various factors particularly in male-dominated cultural organisations and societies. From Hofstede (1991) it could be suggested that gender could be an issue in a strong male-dominated country or Arab nation. The fact that the null hypothesis had to be declared for gender and the study variables was interesting and further investigation needs to be considered as why this result occurred cannot be explained by bias in the sample. It was acknowledged that there was 9:1 male to female ratio but analytical testing confirmed that this was not creating a bias in the sample (See Chapter 4, Section 4.16 for additional details).

6.5 Summary

The chapter has addressed each of the first three research objectives in turn and through the analysis of the results evaluated the existing literature to identify and assess where possible the current situation for auditors and their professional practice within Libya. From this discussion process recommendations have been developed along with the identification of future research opportunities.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This thesis examined the extent of sufficiency and appropriateness of audit evidence obtained by Libyan auditors by investigating the views and perceptions of external, internal, taxation and state auditors. To achieve this, six variables which are: source of obtaining evidence, directness of evidence, type of evidence, academic and professional qualifications of auditor, consistency of evidence, and amount of evidence; were utilised to evaluate the quality and quantity of evidence.

The chapter provides some recommendations for Libyan auditors and suggestions for future research which are objectives 4 and 5 of the study. The previous discussion of objectives 1 to 3 developed these recommendations and potential areas for future research and this chapter aims to clarify and summarise the discussion outcomes. Finally, the chapter provides a conclusion for the research.

7.2 Summary of Findings and Research Questions

The research sought to answer three questions: the first question relates to how the study variables affect the sufficiency and appropriateness of audit evidence gathered by the Libyan auditor. The six study factors which were developed from the literature were supported by the questionnaire and interview respondents as having an effect on the sufficiency and appropriateness of audit evidence. From the interview process there was some additional clarification about attitudes and application for indirect evidence. It appears that there is

some trust issues between the different professional branches along with concerns about official documentation and the reliability of originals which are stamped and dated. This issue about the validity and reliability of original documents in the Libyan practice will required further investigation as it implies that there is potential issues that practitioners within Libya face that may not be occurring in more developed audit environments. Cost and time do not appear to be a factor that concerns government auditors and there is a difference in attitude between public and private auditors. A key issue identified by interviewees was that currently there is no statistical sampling approach utilised by Libyan auditor to ensure the validity and reliability of their sampling process.

The second question, concerns to what extent are the perceptions of Libyan auditors affected by the study factors on quality and quantity of evidence. From the questionnaire the various professional groups have different perceptions in relation to the effects of source of evidence, type of evidence, academic and professional qualifications of the auditor, consistency of evidence and amount of evidence have on the sufficiency and appropriateness of the evidence. Possible reasons why this difference was occurring has been identified in the discussion and the recommendations below include areas for further researcher to investigate the differences between the professional groups.

The Final question relates to how educational level, years of experience and gender of Libyan auditors influence their perceptions regarding the study factors. The statistical analysis of the questionnaire response revealed that there

was no effect by education and the experience of the auditor regarding the six factors identified in the study. This was unexpected and why this could be occurring has been discussed earlier but further research is required to clarify and confirm this situation. The study has highlighted a number of new research areas which needs to be investigated so that greater understanding of the independent variables and their effect on the perception of professional auditors are developed. Gender according to the statistical results only impacts on the way they write their opinions about the type of evidence. Again why Gender did have an effect and why it did not on the other factors requires further research. This study has identified area for further development and provides recommendations to enhance professional auditing practice within Libya.

7.3 Contribution to Knowledge

Through this research, several contributions are made to the existing body of knowledge in auditing field. These are split into contributions to audit evidence theory and contributions to auditing practice.

7.3.1 Contributions to Theory

A number of contributions to audit evidence theory are made through this research. Initially, it is important to note that most previous audit evidence studies are based on quantitative methods. However this research has used both quantitative and qualitative method to ensure that *'triangulation'* occurred in order to gain a clearer picture of how audit evidence is sufficient and reliable in supporting the auditor's decisions. Thus, this research adds a broader

dimension to current audit evidence literature by the use of an additional technique to support future studies.

Many of the previous audit evidence studies discussed the effect of single factor on evidence while this study brought together a group of variables to develop a unifying framework of audit evidence in order to give a more comprehensive picture of the relevant issues on audit evidence. Bentham (1827) theory of persuasiveness uses only four variables: the source, the directness, the consistency, and the amount of evidence but this study has extended this group to six factors with addition of the academic and professional qualifications of the auditor, and the type of evidence. This explanation of the variables was suggested by Caster and Pincus (1996) but it appears according to Gronewold (2006) that this exploration has not occurred in the 10 years since the Caster and Pincus (1996) study. While an extensive literature research was undertaken there appears to be little extension work in the area of knowledge in relation to the factors or variables which contribute to persuasiveness of evidence. This study expands the current knowledge by using the interaction of the different types of evidence and personal characteristics of the auditor in relation to persuasiveness of evidence in the audit process.

Recently Joshi and Deshmukh (2009) investigated the reliability and validity of each type of evidence used by Bahraini auditors. The results of the survey part of this study confirmed the Joshi and Deskmukh (2009) study findings that physical and documentary evidence was more reliable than the other types of

evidence which may be utilised such as oral evidence. Yet it was found in the interview process that within the Libyan context there is some questioning about the documentary evidence presented to the auditor.

These are not the only areas where the perceptions of the Libyan auditors are different to what was expected according to literature for developed and developing countries. It should also be noted that taxation auditors indicated that there was no difference in their usage between direct and indirect evidence. This is different from literature and the current international standards which emphasises that direct evidence should be given greater prominence in the assessment and decision-making process that occurs in the audit. According to Caster and Pincus (1996) direct evidence has the least risk of manipulation and therefore provides truthful snap shot of an organisations transaction history.

Libyan auditors responded that education and professional experience did not impact on the auditor unlike other studies which indicated that there is a effect from the education and work experience of the auditor on their audit (Mahmud and Russell, 2003; Abou-Seada and Abdel-Kader, 2003; Ahmad and Gao, 2004; Bruynseels *et al.*, 2007; Abofars, 2008, Marris, 2010). The earlier Ahmad and Gao (2004) Libyan based study was actually contradicted by the survey respondents who reported that education and professional experience is not a factor impacting on their opinions. Yet the interview respondents provided a contrary opinion which supported Ahmad and Gao (2004) previous findings.

Another contribution to this study is that state auditors hold different professional perceptions to the rest of the audit community within Libya. Previous studies such as Kalel (2000), Jarboh (2005), and Ali *et al.* (2010) had examined at a small number of groups but none had investigated all the groups in the auditing sector at the same time. Additionally the study has confirmed that the different perceptions have been present within Libya for over 10 years from Kalel's (2000) earlier study. From this discrepancy between the professional groups further questions have been developed and lead to further research implications.

Von Wielligh (2006) revealed that professional creditability and validity of the expert needs to considered and if another auditor in the Libyan sector has a similar level of qualification and necessary experience to be an expert as an auditor this study found that there appears to be lack of willingness to trust the expert. This was contrary to the previous studies by Anderson *et al.* (2001) and Agoglia *et al.* (2009) which indicated that common professional understanding was more likely to increase the respect of fellow professionals. Taxation auditors appeared to be less willing to trust the professional expert opinion of the other groups of auditors.

This study identified that the current legislation used within Libya was found to be at least 36 years old. The *Organisation of the Accounting and Auditing Professions in Libya Law No. 116* (1974) and *Financial Law* of 1967 is affecting the development of the accounting and auditing professions within Libya due to it restrictive practices and thus could be impacting on the

development of the country and the development. Currently there is a requirement under *Financial Law* of 1967 that manual handwritten ledgers are kept as official records for transactions. This legislation does not support the current development policies of the Libyan state. This study confirmed the results of Faraj and Akbar (2010) and supported their recommendation that the Libyan Government needs to address the legislation to improve national standards so that they reflect current International Standards on Auditing (ISAs) and Accounting (IASs).

This study confirmed Abulgasem and Alukel (2007) study that there is only one body that represents auditors which is the Libyan Accountants and Auditors Association [LAAA] unfortunately internal, state and taxation auditors are excluded from this professional body. The IPC only organises the workflow of State Auditors it does not provide guidance or regulation of professional practice.

Similar to Joshi and Deshmukh (2009) this study found that external evidence was difficult to collect. The main reason cited by the participants was the infrastructure difficulties within Libya and this could be postulated to other developing countries within the region. The infrastructure development delay as a result of the Embargo was identified by Saleh (2004) and Khorwatt (2006). This development delay is still causing problems within Libya as it attempts to participate in the Global economy (Khorwatt, 2006). The entry of the Big 4 firms has increased the competition with Libyan external auditors (Faraj and Akbar, 2010) but the development of practice is being delayed due

to legislation constraints. Joshi and Deshmukh (2009) found that in Bahrain that their external confirmations were not as reliable as they would like in line with ISA 500. This was not the case for this study however, the interviewees provided additional information about the attitude and decision making process which all the professional groups make when considering external confirmations including identifying the potential bias that the confirmation party may have. This consideration about the bias of the information provider is reflected in the interviewees discussions confirming a similar practice concept to what are found in the ISA 505 *'External Confirmations'*.

This study found that there are potential deviance issues which need further investigation for clarification. Joshi and Deshmukh (2009) advise that official documentation is difficult to manipulate yet the respondents and interviewees indicated that they have concerns over official documentation. From the interviewee comments it appears that they have experienced official documentation which was questionable in its legality and thus they are more likely to seek additional confirmation about the information provided on official documentation.

This study has added a new resource for other Islamic or Arab countries as it is providing an overview of the current extent of Libyan auditing. These countries could adopt this study to help create a base point for the analysis of their current auditing practices. While development has been slowed by the Embargo against Libya there are similar stage of development occurring in Arab countries such a Syria who established their stock market in 2009

(Abdmoulah, 2010). There are also similarities between Libya and other Middle Eastern countries with the opening up of foreign investment opportunities and the desire to diversify from single reliance oil revenue (Obaidat, 2007; Askary *et al.*, 2008; Al-Akra *et al.*, 2009; Farag, 2009; Michas, 2010).

In addition to contributing to Islamic and Arab countries the study has increased the knowledge and understanding of Libyan practitioners and academics as by undertaking the research the researcher has attempted to address some of the criticism about the lack of Libyan research. This study provides a baseline overview of Auditing practice that can be utilised for future comparison by Libyan researchers and also makes a number of recommendations for further areas of research. The study has provided an overview for Libyan academics that will help improve their understanding of the quality and quantity of audit evidence. For practitioners, it may help to solve the practical problems facing the Libyan auditors regarding quality and value of evidence and its persuasiveness while also encouraging them to develop their professional practice by undertaking some of the recommendations.

This study has also confirmed that within Libya there is a similar situation which consists of lack of established standards or stable concepts impacting on the profession in environment of recurring change similar to that in Al-Akra *et al.* (2009) who found in Jordon and Farag (2009) found in Egypt. The use of some of the ISAs such as ISA 500 and ISA 505 has provided Libyan auditors

with a comparison of current practice to international standards identifying similarities and inconsistencies. This has contributed to auditing practice as it provides guidance for professionals in relation to areas of concerns which could be impacting on international investment opportunities. Thus the study has enhanced the current knowledge about perceptions which could be impacting on investment decisions and potentially assist policy makers to understand why Libyan investment may be seen as high risk by foreign investors.

A copy of this study will be sent to the LAAA and it is envisaged that it will assist this body in the development of policy and future strategies. This it will contribute to the development of theory and practice of accountancy within Libya.

7.3.2 Implications for Libyan Auditing Practice

This section deals with the auditing implications arising out of the study and is structured around each of the six variables that were identified as potentially having an effect on sufficiency and appropriateness audit evidence.

The study also provided additional confirmation to the recent Faraj and Akbar (2010) which identified that further professional development of Libyan auditors needs to be undertaken including the implementation of International Standards on Auditing [ISA]. The study has provided additional evidence identifying the issues and conditions which need to be addressed and can be addressed by implementing the current best practice for auditors as contained

in the ISA documents. Considerations of the current developed best practice which is ISA 500 and other professional standards such as 501 and 520 needs to be reviewed as these standards can help provide a basis to give confidence in the independence, skills and competence of the audit along with developing greater trust and consistency in audit practice. Additionally by implementing an international standard Libya would gain further benefits such as the perceptions of foreign investment organisations as this would increase the trust of Libyan organisations in the global marketplace (Faraj and Akbar, 2010) and thus could impact on the development of local industry and greater export opportunities. With more confidence in Libyan business environment through the audit rigorousness external organisations from Libya potentially could view Libya as less of a risk market than other developing nations in the region. Professionally, if Libyan auditors have greater knowledge and respect for their capabilities and trustworthiness as auditors they are more likely to compete with the Big 4 companies and become more employable. This could also have the implications were outsourced audit services for companies in the Middle East could be undertaken by Libyan contractors thus exporting the skill set to other regional developing countries.

The current legislation needs to be reviewed and updated to face the recent challenges and requirements that are impacting on Libya thanks to the impact on globalisation. During the last forty years there has been a massive technological advance throughout the world and yet the current legislation within Libya has not been altered (Salama and Flanagan, 2005; Francis and Wang, 2008). The current legislation is inconsistent with ISA and does not

allow for development or implementation of modern accounting practices such as computerised systems or accrual accounting in government agencies. Faraj and Akbar (2010) identified that lack of regulatory standards was the strongest factor undermining Libyan auditor's independence. It has been observed that in developing countries where legislation has been reviewed and updated these countries are more prepared able to respond to the challenges that the international markets are creating and there are greater opportunities to develop the local economy (Joshi and Deshmukh, 2009). Within Arab oil producing nations it has been observed that those economies which have undertaken rapid changes of the legislation to address the systematic problems have and developed a greater rate than those which have not yet updated their legislation (Marashdeh and Shrestha, 2010). This most evident in the Gulf States such as UAE and Bahrain which are now leading economic players in the region unlike Syria which recently established a stock exchange in 2009 (Abdmoulah, 2010). If Libya wants to compete as an equal partner in the local regional economy it needs to address the legislative requirements as they have potential long term implications on the economic and technological development of the country.

The respondents in the study indicated that they had identified the need to address the lack of development in the legislation but as the interview respondents indicated it is the parliamentary will that needs to be developed to change these laws. To enable the development of profession and improve the legislation there needs to be greater lobbying of the parliamentary structure. Faraj and Akbar (2010) advised that legislators should focus seriously on the

current policies and address the limitations identified in the accounting and auditing systems such as the lack of modern standards.

One way to increase the presence and the professionalism of auditors would be the creation of national body that represents all groups of auditors to lobby for legislative reform, develop professional education and improve regulation of the profession. With a formal professional institute who is proactive and effective in the profile of Libyan auditors could be increased and this has the potential to improve the independence of the auditor along with raising the profession's confidence and trust in the capabilities of auditors. Additionally, the professional organisation could work with education centres to improve the current curriculum (Ahmad and Gao, 2004) and develop new professional development options to address knowledge gaps (Pratten and Mashat, 2009) such as the naivety towards issues in computerised systems. As new challenges are encountered in the profession a professional institute could lead research and development and lobby parliament to make the appropriate changes required to facilitate the profession to maintain international standards. Currently the LAAA has the power to issues and revoke professional accreditation for external auditor (Libyan State, 1974; Buzied, 1998) but appears that this agency has only provided additional education and control to a limited group of just external auditors. By expanding the control of the LAAA and the activities undertaken by the LAAA greater confidence in the profession can potentially be developed especially if the maintenance the professional standing and professionalism is a key tenement of the organisation's ethos. With greater integration with international standards for

accounting and auditing according to Faraj and Akbar (2010) the LAAA would be provided with greater opportunities to improve the regulation of auditors. Again a strong professional agency representing all groups of the profession would be able to lobby legislators and other agencies to enhance the professional. The single professional body through a strong Professional Development Program [PDP] program could ensure that all the professional groups have the same approach to audit evidence and thus address some of the issues identified in this study. The final version of this study will be sent to the LAAA so the recommendations and discussions about the implications for practice can inform this organisation and thus help in the development of this professional body.

This study revealed that State Auditors hold different perceptions to the other professional groups and from the analysis of this groups response there is an implication on the practice that potentially this group are not performing audits to a high enough standard and lack credibility with the other professional groups. The reason why it was perceived that these auditors could be performing at a lower standard of practice was from the literature which suggested that it was the auditors' experience and education which impacts on their performance (Arthur, 2001; Bruynseels *et al.*, 2007; Marietta and Arnold, 2008; Marris, 2010). Regarding state auditors, it was found to have a limited range of professional experience due to their job allocation to a number of companies over repeated years. This group of auditors had less than 20 years experience as auditors only a quarter of them held higher degree qualifications. It was identified by a State Auditor Manager in the interview process that the

education and experience of the auditor impacts on the quality of the audit evidence.

It was also identified that taxation auditors where less willing to accept the expert professional opinion of auditors in the other professional groups such as external auditors. The lack of trust between the professional groups could be an indication of the taxation avoidance culture within Libya and this reluctance to trust external auditor report could be result of cultural pressure that the taxation auditors perceive these auditors are at risk of such as customer pressure to alter final reports or it could be symptomatic of a high level of deviance such fraud, reluctance to pay taxation or official corruption. The developed country perception of Arab nations often hold a stereotype that there is a high level of inefficiency and deviant behaviour with Arab societies. The level of deviance is currently unknown but if is high and supports the stereotype this has significant implications about the risk assessment that foreign investment companies will make in relation to Libya and thus impact on the future development of Libya.

Without international funding and the involvement of foreign organisations bringing new skills, technologies and professional practices to Libya, the country will struggle to complete in the complex global market structure. With the opening up of the market structure and the current State Development Plan (2008) to reduce the reliance on oil revenue there is strong emphasis from government to develop the business sectors and develop greater export opportunities.

The current infrastructure issues identified in Libya has the potential to continue to impact on the development of the country. This infrastructure includes education, public services such as postal and communication systems, transportation and technology. There are difficulties identified in relation to the access of technology for professionals and along with professional naivety in relation to the problems that computerised systems are susceptible to in particular electronic deviance such as fraudulent transactions. The study found that the current legislation is restricting the implementation of modern technology into accounting and audit systems due to the traditional ledger requirement and completion of manual handwritten forms.

Lack of a reliable postal or communication infrastructure impacts on the communication of regulation and new policy documents. It was identified in the study that there are information blockages between regional centres and knowledgeable sources and thus it was possible that audits are completed using outdated information and procedures. Organisations over the diverse areas need to improved communication support so that there are stronger procedures in place that enable regional auditors to meet central government changes. The current initial education of professionals was identified as not providing the education that professionals need to address modern challenges in the workplace. As the current education system is focused on the regulation requirements which have not been updated for a number of years modern issues such as modern management accounting practices and the use of technology are not included (Ahmad and Gao, 2004) and thus the education system is not skilling new professionals. The willingness to trust computerised

system in the interviews appears to because of the modernity of the accounting system rather than from confidence about the systems and the use of checks to ensure validity and reliability. Further research along with professional education will be needed if and when the current legislative regulations are changed to support the use of Information Technology [IT] within accounting and auditing.

The current education issues were identified by Ahmad and Gao (2004) as issue which has an impact on the development of professionals and the study participants identified that there is some issues between the education providers and the professional groups. Abofars (2008) recommended that there be improvements in the current accounting education within Libya to reflect the current professional challenges as this development was delayed due to the recent political history and the ongoing impact of the Embargo. One method which had previously identified in the literature was if the current academics undertake greater research of current industry requirements and address this within the current professional curriculum (Ahmad and Gao, 2004; Abofars, 2008; Pratten and Mashat, 2009)

Lack of trust by Libyan auditors between the professional groups is also extended to lack of trust for official documents. The lack of trust in official documents could be the result of deviance in the system. Some interviewees indicated that they had been presented with official documents that were fraudulent in nature. Between the document and professional trust issues there are implications for professional practice to be aware that there is a risk of

deception and items such as official documentation which needs to be reviewed and supported with other evidence sources.

During the research process the researcher has participated in academic conferences where the findings have been discussed with other developing country researchers and thus has helped in the development of ideas and practical solutions for other research studies. The implications of the participation of knowledge sharing events for practice is through discussion and enquiry individuals' ideas are developed and thus expanded undertake further investigation. With greater development of understanding and knowledge practice in developing countries can be improved and initiatives to address challenges developed.

7.4 Recommendations

This study has a number of recommendations for Libya and some of these can also be applied in Arab countries with similar issues for auditing to improve professional practice and standards. The first recommendation is actually a keystone to a number of other recommendations as without addressing this issue other recommendations cannot be implemented. Libyan State legislation needs to be updated to meet the challenges that professionals are encountering and address the requirements of ISAs and IASs. It is recommended that policy guidance and the legislative instruments are altered to use the direct evidence standards as per ISA 500 as currently there is a neutral response by various groups involved in auditing in relation to direct evidence. Libyan auditors should pay more attention to identifying and assessing audit evidence in order

to obtain complete and strong evidence. The current legislation such as Financial Law (1967) is restricting the development of modern practices including the use of information technology. This also impacts on the ability to undertake true random sampling of the potential evidence items. Currently professional report that they are using their personal perceptive judgements to decide the amount and types of evidence sampling they require to test the information for confirmation of system robustness. The use of manual records impacts on auditor's ability to undertake modern testing techniques and cross referencing.

Developing countries that are experiencing the similar challenges where legislation is reducing the ability of practitioners to meet the challenges of the globalised economy would also benefit from using the current international standards to upgrade their legislation. A secondary benefit of having a strong supportive legislative environment for professional practice is the perceptions of the risk that foreign investors may have for developing economies. With the development of professional practice and standards Libya and other Arab nations can reduce the perceived business risk that international investors have when considering undertaking business in developing countries.

The current naivety of trusting of computer systems due to their computerised nature as found by this study also needs to be addressed by auditors. This can be done through professional awareness and development courses but to do this there first needs to be a national body concerned with the whole of the profession to develop it. Currently the LAAA only is involved with external

auditors. Improving professional education to meet the challenges from computerisation and learn skills in identifying issues in computer systems would be enhanced with cross professional group input.

From the findings that education and experience do not affect the auditors' practice which is contrary to what is found in the rest of the world. This could indicate that education is not meeting the need of auditors in their workplace roles. From this finding it is recommended the further development of a professional auditing agency is undertaken. Professional auditing and accounting companies should play an important role in developing their employees' knowledge for auditors in particular, such as providing suitable training courses, subscribing to specialised journals, and organising seminars and conferences. One way in which professional accounting and auditing companies could improve their employee practice is through the requirement to participate in professional development and hold a professional membership of an officially recognised professional body. The professional body should represent all branches of auditors as the different practice areas can contribute to the knowledge development of the other branches. The LAAA could be expanded to include other professional groups. The professional body needs to develop stronger political and professional guidance for practitioners. While the other professional groups need to believe that membership will benefit them and their practice areas. The results where education and academic qualifications were not seen to be an effect on auditors indicates that there are issues in accounting education including continuing professional development

which would be normally are promoted by professional organisations such as the LAAA.

Furthermore, Business schools in Libya should conduct programmes to educate students to be aware of potential environmental liabilities and risks. One area of benefit would be new PDP program developed with support from academic institutions to reflect the challenges found in daily practice and as a result of the changes to the Libyan market structure. A strong professional body could also lobby and advise the current undergraduate professional accounting providers to alter the curriculum to address the specific needs of the profession. With a strong professional agency further research and support for the development of the professional practice could increase the wide business perception of auditors in Libya and thus improve Libya's status in the region as less risk adverse business partner. The curriculum in the undergraduate courses needs to be developed along with the development of further postgraduate and professional development. Ahmad and Gao (2004) identified that there was no PhD programs available at the time for the accounting industry within Libya along with a lack of academic research processes. There have been some recent developments for the provision of PhD but this still only a new development (Academy of Graduate Studies, 2010). There appears that there is not enough development of junior auditors as they purport to believe that they are not affected by their education and experience while Managers in the interview support literature which advises that auditors are affected by their education and professional experience. The current education and training of professionals in Libya needs to reflect the issues that are found in practice and are likely to

occur in practice with the development of the economy and any future developments of accounting practice.

The infrastructure within Libya needs to be developed to meet the changes of the market structure and the demands of global business. The infrastructure changes also include improvements of the links between accounting education and practice such as improving the auditing curriculum to reflect the challenges encountered in accounting and auditing practice as a result of the change to the market structure. The auditing curriculum changes are dependent on legislative change. The current legislation has restricted the implementation of modern accounting techniques (Mahmud and Russell, 2003) and these impacts on auditing. Pratten and Mashat (2009) identified that there has not been an active research community within Libya and this again will impact on professional education. There needs to be a strong research practice within Libya to enable the specific challenges of auditing practice within the country to be addressed and thus further improvement can be made to the education of new professionals.

This study has provided a background and an overview of the current status of the four groups of auditors that are found in Libya and discovered factors and pressures that influence their perceptions towards the six study factors. When undertaking an audit sample the use of statistical sampling needs to be undertaken to ensure that the sample taken is true representation of the population and thus increase the confidence in the audit report. By using the guidance from ISA 530 which supports statistical approaches in sampling this

could address some of inter-professional trust issues. It was noted that between the auditors there is some professional distrust and through the use of analytical techniques it is possible to increase the confidence in the auditor's final report and thus improve the professional trust issues observed. This distrust impacts on the ability for other auditors to provide confirmation reports and thus experts are not been efficiently utilised in the confirmation process and again the analysis of direct evidence can be impacted on. Through the use of ISAs and in particular ISA 500 direct evidence collection could be improved and thus intra-professional trust addressed. The development of intra-professional trust and the various branches knowledge base could also be enhanced through a professional body which coordinates all the branches.

Currently there is a difference in attitude between external auditors and the government auditors regarding cost and time. As there is a strong desire not to be reliant on oil revenue the expenditure of government resources needs reviewed and considered in relation to efficiency and effectiveness of expenditure. The current practices with in Government agencies need to be reviewed to consider what practices they use and accountability for the spending of resources. This may mean that the Libyan Government possibly will need to implement further internal controls and develop legislation that increases public official accountability for the spending of resources. Auditors within the public sector need to improve their use of resources to gather evidence and be more accountable for the time and costs when undertaking an audit and government auditors can learn from external auditors' experiences. Through greater cooperation within a professional organisation knowledge and

skill transfer can be improved. How interagency trust can be developed needs further research as the real reason why the different professional groups do not cooperate with each other or trust other professional group members' audit reports.

There has been reporting in the interviews about deviant official documentation and the concerns that this documentation creates when investigating direct evidence. There are trust issues for official documentation so the auditor needs to ensure that they are confident in the information provided. This means considerations about the provider and the information provided needs to be judged for their trustworthiness. An assessment of the provider needs to be undertaken in conjunction with additional supplementary evidence gathering to confirm the information supplied. The auditor when in this situation should use the guidance from External Conformations Standard [ISA 505] to improve their confidence about evidence and increase the detection of deviance such as fraudulent alteration of receipts. An additional recommendation can be made from ISA 505 and encourage auditors to receive external reports and confirmations directly from the originating source not via the company management they are auditing.

There were some concerns from the survey response about the use of knowledgeable source of evidence as this did not have a strong as response as literature would suggest. It is recommended to auditors that they should be using knowledgeable sources in line with the professional guidance from ISA500.

7.5 Limitations of the Study

In any research, there are limitations and this research is no different. The data source focused on the perceptions and opinions of different Libyan auditors groups. In this study, the most obvious limitation was the small number of interviewees. This limitation was created due to a cultural aspect Libyans by nature generally refuse to give their opinions in any opinion poll (a) because of fear as a result of previous political instability, and (b) they are not used to be asked to give their opinions as standard cultural practice. There is strong tradition social culture which has a high respect for seniors' people and thus a younger person will not openly contradict senior or present an alternative opinion. Therefore, very few Libyan internal, taxation, state, and external auditors were willing to be interviewed. Hence, the results of the data of interviews could not be generalised (out of 28 auditors contacted; only 12 were interviewed).

The questionnaire was personally distributed; however, the researcher was merely acting as a postman. That is, in most of the cases, the questionnaire was handed out in the targeted firms, banks and state offices and collected at a later time. Therefore, the influences of the personally administered questionnaire could exist in this study but it was necessary to do this as there were infrastructure limitations that impacted on the study. Communication and the unreliability of the postal infrastructure created delays and this impacted on the number of participants and the access to potential participants that the researcher was able to contact. Difficulties in contacting potential interviewees

were exacerbated through telecommunication limitations. The use of modern surveying techniques such as web surveys could not be used due to the infancy of Libya's internet networks and this impacted on the total number of respondents accessed. The infrastructure issues combined with the large geographical area was a limiting factor for the scope of the study. Libya's infrastructure issues include roads and transport links. This difficulty in accessing regional areas created by the geographical terrain and transportation issues created cost and access considerations. The study did not include other areas besides Tripoli the capital due to the infrastructure limitations and difficulties encountered.

7.6 Further Research

From the investigation of all the professional groups within Libyan sector it was found that there were a number of areas which needed further investigation through research. One area was why the various groups of auditors seem to be unwilling to trust auditing professionals from other groups or even in other organisations while practicing in the same field of auditing. For example in some of the interviewees with taxation auditors stated that they do not trust the document evidence including audit reports from other auditor groups such as external and state auditors. This is contradiction and lack of trust in the professional opinion could be as a result of the job role, the working environment, and the organisational culture of the Taxation Department. Taxation auditors have greater legal powers than those in the other professional groups and this power dynamic along with the organizational practices could be

impacting on their perceptions. Further investigation could also be undertaken in the taxation avoidance culture of Libya to study if this is impacting on the attitudes and cultural behaviour demonstrated by this group of auditors. Additionally, the taxation auditors were the ones who questioned the authenticity of documentary evidence the most and were willing to use indirect evidence to support their conclusions. This willingness to utilise indirect evidence is contrary to ISA 500 and other professional guidelines and could indicate a rate of deviance in the current economic system within Libya and thus the lack of trust that this group of auditors have could be a result of environmental factors.

The trust issues from taxation auditors extended into other groups when considering direct evidence such as official documentation. There have been suggestions in the interview process that there are some types of irregularities that are commonplace in certain sectors and this leads to the recommendation that further studies needs to be undertaken to investigate the extent and nature of these irregularities with Libya so that professionals can address the incidence as it occurs.

The need for state auditors requires further research. From the interview process there are some concerns over the quality of state auditor practice and the education that they have to enable them to produce reports. This group in the survey did not perceive that education and experience affected their actions as auditors but one of the managers for state auditors (AS4) indicated that it did affect the quality of the reports. All the state auditor managers agreed that

education impacts on the collection of audit evidence and therefore the audit report. The reason for the inconsistency between survey participants and interviewees needs further investigation to understand why this group hold differing perceptions and why there this discrepancy between management and general staff members. In addition, when looking at the survey responses to the six factors of evidence State Auditors did not hold the same professional concepts as the other groups and repeatedly disagree to the ideas of the other professional groups. Why State auditors are different from the other auditor groups within Libya needs to be investigated. Is it the organisational culture of their workplace as government auditors or is it due to the education level of these professionals?

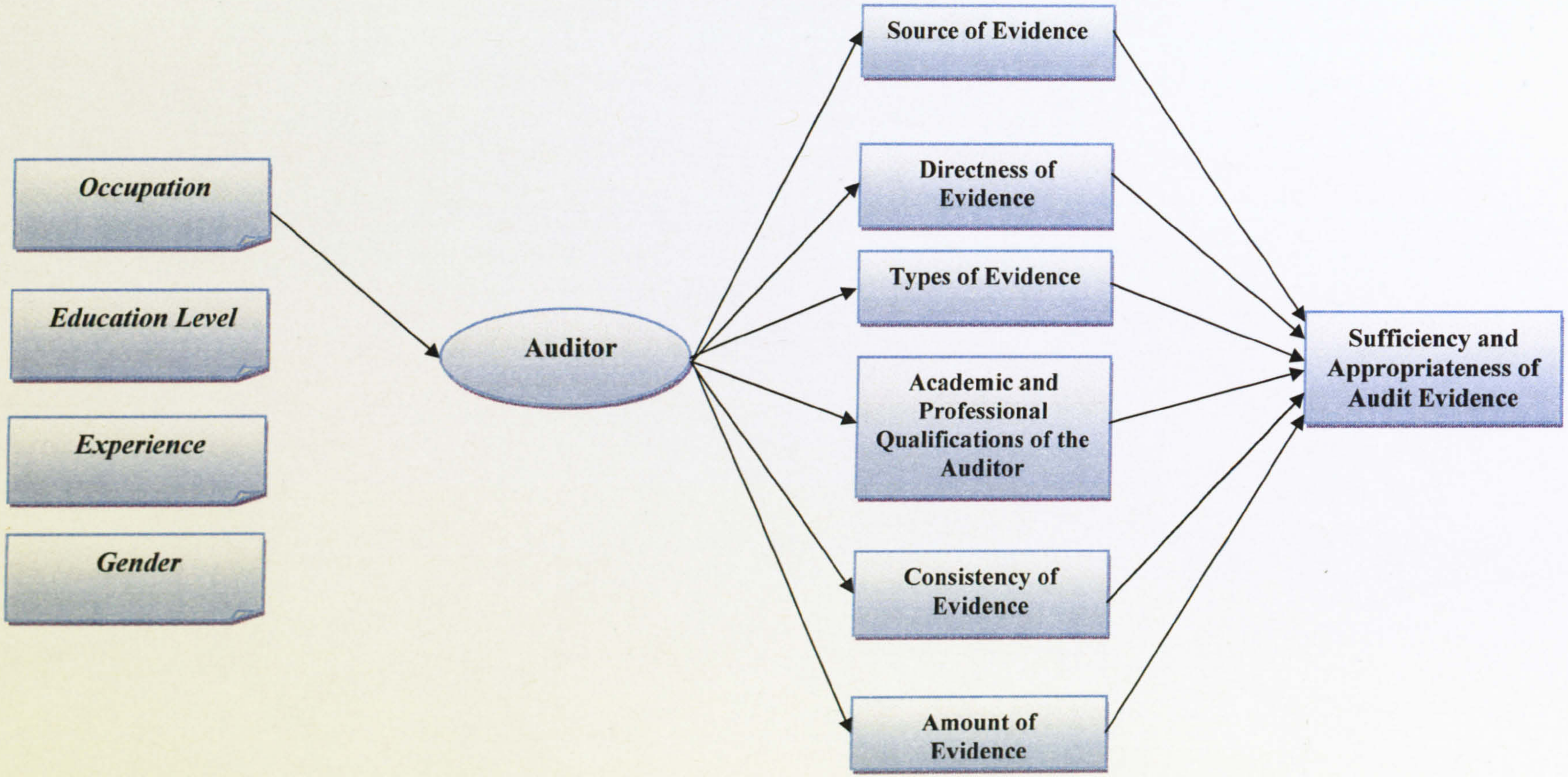
The professional development needs of professionals require further research as does the effect of the Embargo needs to be addressed this includes studies to investigate the current attitudes of professionals towards IT and how the observed naivety towards these accounting systems can be addressed amongst auditors. Pratten and Mashat (2009) identified that there has been a small amount of accounting or auditing research within Libya. Further research into accounting and auditing within Libya needs to be undertaken as this has potential implications for professional practice, education and the development of policy and practices. The long term effects from the Embargo also need to be investigated as this political and economic restriction appears to still create difficulties to the Libyan economy and education development.

Moreover, the organisational culture research into taxation auditors needs further investigation in the government agencies culture and practices due to the changing nature of the various job roles within the Libyan economy and the development which Libya is experiencing. In particular there needs to be further research into the cost and time attitudes of government employees not only just the auditors as this group reflects the attitudes of the whole government department that they work within. With better understanding about the potential difficulties for creating accountability for the spending of government revenue and resources this can impact on the skill development and training of Libyan auditors across all branches. Further research needs to be undertaken about Libyan auditors and sources. Is the reason why they are not questioning or challenging sources due to cultural difficulties or are these professional education issues?

The organisational issues identified for further research could also be compounded by the infrastructure difficulties identified in the limitations and other sections of this study. Further research needs to be undertaken within Libya to identify and develop solutions to address the limitations of the various infrastructure systems.

Based on the findings, the audit evidence model depicted in Figure 4.4, Chapter 4 is modified to be as shown in Figure 7.1. It is suggested that Figure 7.1 could be used as a research model for further study on quality and quantity of audit evidence.

Figure 7.1: Audit evidence obtained by Libyan auditors model (based on the study findings)



7.7 Conclusion

Libya would benefit from undertaking the recommendations to develop its legislation, professional bodies, accounting education, infrastructure and application of practice as this will lead to greater confidence of external International Investors thus creating new opportunities while providing greater access to technology, skills and knowledge that could help in the development of the Nation. By improving professional practice and meeting the challenges of the new developing economic market structure the recent development such as the stock market can be encouraged to develop and provide greater benefits to the population. Previous researchers such as Ahmad and Gao (2004), Pratten and Mashat (2009) and Faraj and Akbar (2010) have developed recommendations to develop Libya including addressing the current legislation and accounting education issues. Without parliamentary support to address the archaic legislation Libya's development will continued to be stifled and thus the professional challenges and issues identified in this study will continue to be persistent in auditing professional practice within the country. Arab nations can learn from the Libyan experience and utilise this research to improve their understanding of the issues that developing countries encounter in auditing.

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APPENDICES

APPENDIX 1.A

QUESTIONNIRE ON SUFICIENCY AND APPROPRIATENESS OF AUDIT EVIDENCE IN LIBYA

Reference No. [ ]

Dear Sir / Madam

I am a lecturer at Faculty of Accountancy Aljafara University and I am currently conducting a study on sufficiency and appropriateness of audit evidence obtained by Libyan auditors at Liverpool John Moores University in England.

I would be grateful if you could support me carry out my research by completing the attached questionnaire. Your response would be of significance to the completion of this study. I can assure you that all responses will be treated with complete confidentiality and will not be used for any other purposes than academic research.

Thank you for taking the time to help me in my research.

Your sincerely

Mohamed Zakari
PhD student
Liverpool John Moores University

Introduction:

- Information about your opinions and perceptions are sought in this questionnaire.
- If possible, please respond to each question, but do not spend too much time on any one question.

Definitions:

Audit evidence	All the information used by the auditor in arriving at the conclusions on which the audit opinion is based
Sufficiency	Quantity
Appropriateness	Quality

Section One: General Information

(Please answer by filling in or ticking as appropriate)

About you:

1- Please indicate your gender?

a. Male ☐ b. Female ☐

2- Please indicate your age?

a. 21- 29 years ☐ b. 30 to 39 years ☐
c. 40 to 50 years ☐ d. Over 50 years ☐

3- Please indicate your highest education level achieved?

a. High School ☐ b. First University Degree ☐
c. Masters Degree ☐ e. PhD ☐
f. Other (please specify) .....

4- Was your subject of study of studies at the highest level?

a. Accounting ☐ b. Management ☐
c. Economics ☐
d. Other (please specify).....

About your Job:

5- Which of the following statements describes your job?

a. External auditor (LAAA) ☐ b. Internal auditor ☐
c. State auditor (IPC) ☐ d. Tax expert ☐
g. Other (please specify) .....

6- Please indicate your job sector?

a. Private Sector ☐ b. Banking Sector ☐
c. Institute of Public Control ☐ d. Taxation Sector ☐
g. Other (please specify) .....

7- Please indicate your experience in your auditing job?

a. Under 5 years ☐ b. 5 to 9 years ☐
c. 10 to 14 years ☐ d. 15 to 19 years ☐
e. 20 to 24 years ☐ f. 25 years and over ☐

Section Two: Factors Affecting Audit Evidence

Please indicate the extent to which each of these statements in your personal opinion will affect sufficiency and appropriateness of audit evidence. Use the following scale below:

- ***Strongly undermines evidence***
- ***Slightly undermines evidence***
- ***Neither***
- ***Slightly enhances evidence***
- ***Strongly enhances evidence***

1- Source reliability :

No.	*The statements*	*Strongly undermines evidence*	*Slightly undermines evidence*	*Neither*	*Slightly enhances evidence*	*Strongly enhances evidence*
8.a	The auditor obtains evidence from Independent sources					
8.b	The information is collected from different sources.					
8.c	The source of evidence is not knowledgeable.					
8.d	The auditor uses evidence obtained from previous audits.					
8.e	The auditor uses information originating from other audit team members.					
8.f	The auditor obtains evidence from fellow auditors in other firms.					
8.s	The auditor uses data generated by the accounting system of the entity as evidence.					
8.k	The auditor uses data produced by computerised information systems.					

2- Directness of evidence :

No.	*The statements*	*Strongly undermines evidence*	*Slightly undermines evidence*	*Neither*	*Slightly enhances evidence*	*Strongly enhances evidence*
9 .a	Auditor has collected the audit evidence directly from a source (for example, observation of the application of a control).					
9 .b	The auditor has received the evidence indirectly (for example, inquiry about the application of a control).					
9.c	The information is from the third party outside the entity.					

3- Types of evidence:

No.	*The statements*	*Strongly undermines evidence*	*Slightly undermines evidence*	*Neither*	*Slightly enhances evidence*	*Strongly enhances evidence*
10 .a	There is oral information that is given to the auditor as audit evidence.					
10 .b	The audit evidence is provided by original documents.					
10 .c	The audit evidence is provided by copy documents.					
10 .e	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence.					
10. f	The auditor obtains audit evidence from a single type.					

4- Factors referring to the auditor:

No.	*The statements*	*Strongly undermines evidence*	*Slightly undermines evidence*	*Neither*	*Slightly enhances evidence*	*Strongly enhances evidence*
11 .a	The experience of auditor.					
11 .b	The academic qualifications of the auditor					
11 .c	Independence of auditor.					
11 .d	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence.					
11 .e	The analytical skills of the auditor.					
11 .f	Questions are clear.					
11 .g	The errors in auditor perception.					
11.s	The bias in auditor perception.					
11.k	The techniques of obtaining evidence.					
11.w	The deviations from expectations of auditor.					

5- Consistency of evidence:

No.	*The statements*	*Strongly undermines evidence*	*Slightly undermines evidence*	*Neither*	*Slightly enhances evidence*	*Strongly enhances evidence*
12 .a	One item of evidence conflicts with another item obtained over long periods, from different sources.					
12.b	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence.					
12 .c	The evidence obtained is commensurate with the audit objectives.					
12.d	If procedures of auditing are not in place.					

6- Amount of evidence:

No.	*The statements*	*Strongly undermines evidence*	*Slightly undermines evidence*	*Neither*	*Slightly enhances evidence*	*Strongly enhances evidence*
13 .a	If the significance of the findings is higher.					
13 .b	If the risk of material misstatement of financial statements is higher.					
13. c	If the cost of obtaining evidence is higher.					
13. d	If the effectiveness of internal control is higher.					
13.e	Time constraints					
13.f	If the evidence is needed for negative findings.					
13.h	If the size of samples that the auditor would choose is small.					
13.o	If the auditor obtains evidence for a specific assertion about reality.					

Section Four:

If you have any other comments, please feel free to write them down in the space provided below or attach any extra sheets

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Would you like to receive a summary of the findings, when available?

Yes ☐ No ☐

Thank you for completing this questionnaire.

APPENDIX 1.B

السلام عليكم ورحمة الله وبركاته

الأخ الكريم

دراسة حول مدى كفاية وملائمة أدلة المراجعة المتحصل عليها من قبل المراجع في ليبيا

المراجعة هي عملية فحص انتقادي مستقل للبيانات المسجلة في الدفاتر والسجلات والقوائم المالية للمنشاة وإبداء الراي المهني حول مدي صحة ودقة هده البيانات ودرجة الاعتماد عليها.

وبما أن أدلة الإثبات تعتبر ذات أهمية كبيرة في عملية المراجعة من خلال الاستناد إليها في إبداء الراي المهني فان هده الدراسة سوف تركز علي دراسة مجموعة من العوامل التي قد تؤثر في مدي كفاية وملائمة أدلة المراجعة التي تم جمعها بواسطة المراجع الليبي.

إن هده الدراسة هي من اجل الحصول علي درجة الدكتوراه في مجال المحاسبة من جامعة ليفربول جون مورس ببريطانيا.

إن مشاركتكم في هده الدراسة هو احد العوامل المهمة لإنجاحها فسوف أكون شاكرا لتعاونكم معنا.

محمد ابوالقاسم زكرى

m.a.zakari@2006.Ljmu.ac.uk

الجزء الأول:هذا الجزء يتعلق ببعض المعلومات الشخصية يرجى وضع علامة ( ) أمام الإجابة المناسبة

1 . الجنس:

(أ) ذكر ☐ (ب) انثى ☐

2 . الفئة العمرية:

(أ) اقل من 29 سنة ☐ (ب) 30 إلى 39 سنة ☐

(ج) 40 إلى 50 سنة ☐ (د) أكثر من 50 سنة ☐

3 . المؤهل العلمي:

(أ) شهادة ثانوية أو مايعادلها ☐ (ب) شهادة جامعية ☐

(ج) ماجستير ☐ (د) دكتوراه ☐

(و) أخرى ☐

إذا كانت إجابتك (و) الرجاء اذكر نوع المؤهل.....

4 . التخصص:

(أ) محاسبة ☐ (ب) إدارة ☐

(ج) اقتصاد ☐ (د) أخري ☐

إذا كانت إجابتك (د) الرجاء اذكر نوع التخصص.....

5 . هل أنت:

(أ) مراجع خارجي ☐ (ب) مراجع داخلي ☐

(ج) مراجع بجهاز الرقابة الشعبية ☐ (د) مراجع بإدارة الضرائب ☐

(و) أخري ☐

إذا كانت إجابتك (و) الرجاء اذكر نوع العمل.....

6 . مكان العمل:

(أ) مكتب مراجعة قانونية ☐ (ب) قسم المراجعة الداخلية ☐

(ج) جهاز الرقابة الشعبية ☐ (د) إدارة الضرائب ☐

(و) أخري ☐

إذا كانت إجابتك (و) الرجاء اذكر مكان العمل.....

7 . الخبرة العملية:

(أ) اقل من سنتين ☐ (ب) من 3 إلى 5 سنوات ☐

(ج) من 6 إلى 10 سنوات ☐ (د) من 11 إلى 20 سنة ☐

(ه) أكثر من 20 سنة ☐

الجزء الثاني: الأسئلة المذكورة أدناه تتعلق ببعض العوامل و التي من شأنها قد تؤثر في كفاية وملائمة أدلة المراجعة.

الرجاء اختيار درجة التأثير حسب الأتي:

- تضعف الادلة بدرجة كبيرة.
- تضعف الادلة بدرجة بسيطة.
- لايوجد تأثير علي الأدلة.
- يعزز الادلة بدرجة بسيطة.
- يعزز الادلة بدرجة كبيرة.

8 . فيما يلي بعض الحالات التي لها علاقة بمصدر أدلة المراجعة:

ت	الحالات	تضعف الادلة بدرجة كبيرة	تضعف الادلة بدرجة بسيطة	لايوجد تأثير علي الأدلة	يعزز الادلة بدرجة بسيطة	يعزز الادلة بدرجة كبيرة
8.أ	في حالة تجميع أدلة من مصدر مستقل.					
8.ب	في حالة تجميع أدلة من مصادر مختلفة.					
8.ج	في حالة تجميع أدلة من مصدر غير معروف.					
8. ر	في حالة استخدام أدلة قد جمعت من مراجعات سابقة.					
8.ز	في حالة استخدام أدلة قد جمعت بواسطة زملاء المراجع أو مساعديه داخل المنشاة.					
8.س	في حالة استخدام أدلة قد جمعت بواسطة زملاء المراجع في منشاة أخري.					
8.ش	في حالة اعتماد المراجع علي البيانات الواردة في النظام المحاسبي كأدلة إثبات عندما يكون نظام الرقابة الداخلية فعال.					
8.ص	في حالة الحصول علي الأدلة من النظام الألي للمنشاة كالمنظومات المالية.					

9 . فيما يلي بعض الحالات التي لها علاقة بكيفية استلام المراجع للأدلة:

ت	الحالات	تضعف الادلة بدرجة كبيرة	تضعف الادلة بدرجة بسيطة	لايوجد تاثير علي الأدلة	يعزز الادلة بدرجة بسيطة	يعزز الادلة بدرجة كبيرة
9.أ	في حالة تجميع أدلة المراجعة مباشرة من المصدر بواسطة المراجع بنفسه.					
9.ب	في حالة استلام المراجع للأدلة بطريقة غير مباشرة من المصدر.					
9.ج	في حالة تجميع الأدلة من خارج المنشاة كالمصارف والمدينون.					

10 . فيما يلي بعض الحالات التي لها علاقة بنوع الأدلة:

ت	الحالات	تضعف الادلة بدرجة كبيرة	تضعف الادلة بدرجة بسيطة	لايوجد تاثير علي الأدلة	يعزز الادلة بدرجة بسيطة	يعزز الادلة بدرجة كبيرة
10.أ	إذا كانت أدلة المراجعة المتحصل عليها في شكل شفوي.					
10.ب	إذا كانت أدلة المراجعة المتحصل عليها في شكل مستندات أصلية.					
10.ج	إذا كانت أدلة المراجعة المتحصل عليها في شكل مستندات غير أصلية.					
10. د	إذا اعتمد المراجع علي تقرير مكتوب لخبير من الدولة لتقييم الأصول الثابتة وبعض المسائل المتخصصة.					
10. و	إذا قام المراجع بتجميع كل الأدلة من مصدر واحد.					

11. الحالات التالية لها علاقة بالمراجع:

ت	الحالات	تضعف الادلة بدرجة كبيرة	تضعف الادلة بدرجة بسيطة	لايوجد تاثير علي الأدلة	يعزز الادلة بدرجة بسيطة	يعزز الادلة بدرجة كبيرة
11.أ	إذا كان المراجع مؤهلا مهنيا أي انه يملك خبرة عالية في مجال المراجعة.					
11.ب	إذا كان المراجع مؤهلا علميا أي انه علي درجة عالية من التعليم.					
11.ج	استقلالية المراجع.					
11.ح	إذا استخدم المراجع الشك المهني في تقييم كمية ونوعية الأدلة.					
11. د	إذا كان علي درجة عالية من المهارة.					
11.ر	إذا كانت الأسئلة التي يود المراجع التحقق منها واضحة.					
11.س	أخطاء المراجع.					
11.ش	إذا تحيز المراجع لجهة معينة.					
11.ص	إذا كان المراجع يتميز بالتنظيم في عملة.					
11.ض	إذا كان هناك انحراف في توقعات المراجع.					

12. فيما يلي قائمة ببعض الحالات التي لها علاقة بتوافق وانسجام أدلة المراجعة مع بعضها:

ت	الحالات	تضعف الادلة بدرجة كبيرة	تضعف الادلة بدرجة بسيطة	لايوجد تاثير علي الأدلة	يعزز الادلة بدرجة بسيطة	يعزز الادلة بدرجة كبيرة
12.أ	إذا كان احد الأدلة المتحصل عليها متضارب مع بعض الأدلة الاخري التي تم جمعها من مصادر مختلفة.					
12.ب	إذا قام المراجع بإعادة مقارنة الدليل مع أدلة تم الحصول عليها أخيرا.					
12. ج	إذا كانت الأدلة المتحصل عليها تتعلق بالهدف من المراجعة .					
12.د	إذا كانت الإجراءات المتبعة في تحصيل الأدلة غير صحيحة.					

13. فيما يلي قائمة ببعض الحالات التي لها علاقة بحجم الأدلة:

ت	الحالات	تضعف الادلة بدرجة كبيرة	تضعف الادلة بدرجة بسيطة	لايوجد تاثير علي الأدلة	يعزز الادلة بدرجة بسيطة	يعزز الادلة بدرجة كبيرة
13.أ	إذا كانت النتائج المراد الوصول إليها علي درجة عالية من الأهمية.					
13.ب	إذا كانت الأهمية النسبية عالية لبعض الحسابات تحت المراجعة .					
13.ج	إذا كانت درجة المخاطرة عالية لبعض الحسابات تحت المراجعة					
13. د	إذا كانت تكلفة الحصول علي الأدلة عالية.					
13.ر	إذا كان نظام الرقابة الداخلية فعال.					
13.ز	إذا كان الوقت الذي سوف يتم فيه الحصول علي الأدلة متاخرا.					
13.س	إذا كانت الغرض من تقرير المراجع هو لإثبات أو نفي مسائل سلبية .					
13.ش	إذا كان حجم العينة المختارة صغير.					
13.ص	إذا كان الغرض من المراجعة هو إثبات حقائق.					

الجزء الرابع: بإمكانك استخدام الفراغ المتاح في الأسفل أو بإرفاق أية أوراق إضافية للتعبير عن أية ملاحظات اخري ترون أنها مناسبة فيما يتعلق بموضوع الدراسة.

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- هل ترغب في الحصول علي ملخص لنتائج الدراسة عندما تكون جاهزة .

نع ☐ لا ☐

شكرا علي تعبئة الاستبيان .

APPENDIX 2

THE ETHIC COMMITTEE APPROVAL

Mohamed Zakari

Friday, 02 May 2008

Dear Mohammed,

With reference to your application for Ethical approval:

The Sufficiency and Appropriateness of Evidence Obtained by Libyan Auditors

Ref.: 08.44

Liverpool John Moores University Research Ethics Committee (REC) has reviewed the above application at the meeting held on Thursday 17th April 2008. I am happy to inform you that the Committee are content to give a favourable ethical opinion and recruitment to the study can now commence.

Approval is given on the understanding that:

- any adverse reactions/events which take place during the course of the project will be reported to the Committee immediately;
- any unforeseen ethical issues arising during the course of the project will be reported to the Committee immediately;
- any substantive amendments to the protocol will be reported to the Committee immediately.
- the LJMU logo is used for all documentation relating to participant recruitment and participation e.g. poster, information sheets, consent forms, questionnaires. The JMU logo can be accessed at www.ljmu.ac.uk/images/jmulogo

For details on how to report adverse events or amendments please refer to the information provided at http://www.ljmu.ac.uk/RGSO/RGSO_Docs/EC8Adverse.pdf

Please note that ethical approval is given for a period of five years from the date granted and therefore the expiry date for this project will be April 2013. An application for extension of approval must be submitted if the project continues after this date.

Yours sincerely

PP:

Brian Kerrigan

Chair of the LJMU REC

APPENDIX 3

RELIABILITY STATISTICS TEST

Appendix 3.1: Study Cronbach's Alpha Test (Main Study)

Source of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.692	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The auditor obtains evidence from independent sources	27.04	10.987	.072	.703
The information is collected from different sources.	27.06	10.722	.273	.693
The source of evidence is not knowledgeable.	29.60	10.939	-.010	.710
The auditor uses evidence obtained from previous audits.	27.59	8.717	.122	.702
The auditor uses information originating from other audit team members.	27.36	8.824	.232	.694
The auditor obtains evidence from fellow auditors in another firm.	28.05	9.115	.259	.692
The auditor uses data generated by the accounting system of entity as evidence.	27.07	10.269	.415	.685
The auditor uses data produced by computerised information systems.	27.34	11.246	.327	.690

Directness of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.698	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Auditor has collected the audit evidence directly from a source (for example, observation of the application of a control).	27.36	8.824	.196	.697
The auditor has received the evidence indirectly (for example, inquiry about the application of a control).	29.60	10.939	.368	.683
The information is from the third party outside the entity.	27.04	10.987	.069	.703

Type of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.688	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
There is oral information that is given to the auditor as audit evidence.	27.34	11.246	.315	.687
The audit evidence is provided by original documents.	11.38	8.484	.397	.691
The audit evidence is provided by copy documents.	29.60	10.939	.259	.693
The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence.	27.06	10.722	.361	.687
The auditor obtains audit evidence from a single type.	27.34	11.246	.224	.696

Academic and professional qualifications of the auditor items

Reliability Statistics

Cronbach's Alpha	N of Items
.691	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The experience of auditor.	29.60	10.939	.377	.690
The academic qualification of auditor	31.02	6.855	.286	.692
Independence of auditor.	27.06	10.722	.287	.693
The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence.	27.34	11.246	.129	.702
The analytic skills of auditor.	30.80	7.654	.195	.697
Questions are clear.	27.06	10.722	.464	.680
The errors in auditor perception.	34.05	8.885	-.048	.708
The bias in auditor perception.	34.28	8.817	.011	.704
The techniques of obtaining evidence.	31.21	7.144	.213	.696
The deviations from expectations of auditor.	33.86	9.060	-.053	.708

Consistency of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.689	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
One item of evidence conflicts with another item obtained over long periods, from different sources.	27.06	10.722	.114	.701
The auditor reassesses the reliability of early evidence in the light of more recently collected evidence.	27.34	11.246	.340	.686
The evidence obtained is commensurate with the audit objectives.	34.05	8.885	.206	.696
If procedures of auditing are not in place.	9.98	3.435	.041	.705

Amount of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.693	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
If the significance of the findings is higher.	22.39	6.863	.216	.696
If the risk of material misstatement of financial statements is higher.	22.83	6.354	.138	.700
If the cost of obtaining evidence is higher.	24.96	6.767	.030	.706
If the effectiveness of internal control is higher.	22.40	7.498	.233	.695
Time constraints	25.13	7.059	.035	.705
If the evidence is needed for negative findings.	23.70	5.641	.218	.695
If the size of samples that the auditor would choose is small.	25.11	6.236	.156	.700
If the auditor obtains evidence for a specific assertion about reality.	9.98	3.435	.367	.686

Appendix 3.2: Study Cronbach's Alpha Test (Pilot Study)

Source of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.843	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The auditor obtains evidence from independent sources	27.78	11.382	.450	.842
The information is collected from different sources.	27.90	12.334	.305	.845
The source of evidence is not knowledgeable.	29.97	10.275	.272	.846
The auditor uses evidence obtained from previous audits.	28.27	10.753	.413	.842
The auditor uses information originating from other audit team members.	28.15	11.442	.206	.847
The auditor obtains evidence from fellow auditors in another firm.	28.54	9.115	.451	.841
The auditor uses data generated by the accounting system of entity as evidence.	27.69	12.560	.371	.843
The auditor uses data produced by computerised information systems.	27.71	10.795	.467	.841

Directness of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.842	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Auditor has collected the audit evidence directly from a source (for example, observation of the application of a control).	8.00	1.690	.467	.841
The auditor has received the evidence indirectly (for example, inquiry about the application of a control).	8.00	1.483	.246	.846
The information is from the third party outside the entity.	7.29	2.381	.449	.841

Type of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.844	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
There is oral information that is given to the auditor as audit evidence.	17.07	5.995	.175	.849
The audit evidence is provided by original documents.	14.59	6.590	.533	.841
The audit evidence is provided by copy documents.	15.15	6.856	.067	.850
The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence.	15.22	4.347	.489	.839
The auditor obtains audit evidence from a single type.	15.86	3.568	.440	.842

Academic and professional qualifications of the auditor items

Reliability Statistics

Cronbach's Alpha	N of Items
.848	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The experience of auditor.	27.47	10.943	.437	.844
The academic qualification of auditor	27.42	11.041	.185	.847
Independence of auditor.	28.80	8.268	.269	.848
The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence.	27.66	10.607	.342	.845
The analytic skills of auditor.	28.31	9.802	.262	.846
Questions are clear.	30.98	9.396	-.104	.853
The errors in auditor perception.	31.03	9.206	.108	.849
The bias in auditor perception.	30.86	9.602	.057	.850
The techniques of obtaining evidence.	30.25	10.055	.183	.849
The deviations from expectations of auditor.	28.25	9.779	.230	.849

Consistency of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.843	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
One item of evidence conflicts with another item obtained over long periods, from different sources.	13.25	2.538	.395	.842
The auditor reassesses the reliability of early evidence in the light of more recently collected evidence.	13.20	3.303	.348	.844
The evidence obtained is commensurate with the audit objectives.	12.86	3.050	.396	.843
If procedures of auditing are not in place.	12.95	3.635	.331	.844

Amount of evidence items

Reliability Statistics

Cronbach's Alpha	N of Items
.840	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
If the significance of the findings is higher.	27.22	6.303	.517	.840
If the risk of material misstatement of financial statements is higher.	25.09	7.162	.281	.845
If the cost of obtaining evidence is higher.	25.70	7.703	.770	.839
If the effectiveness of internal control is higher.	25.61	7.490	.681	.839
Time constraints	25.77	7.151	.753	.838
If the evidence is needed for negative findings.	26.39	8.503	.464	.844
If the size of samples that the auditor would choose is small.	26.02	7.478	.601	.840
If the auditor obtains evidence for a specific assertion about reality.	25.84	7.076	.640	.840

APPENDIX 4

RESULTS OF ANOVA TEST AND MEANS

Appendix 4.1: Auditors' perceptions and *source of evidence*

No.	*The Statements*	*External auditors*	*Internal auditors*	*State auditors*	*Taxation auditors*	*F Value*	*Sig.*
1	The auditor obtains evidence from independent sources	4.43	4.06	4.75	4.39	4.981	.002
2	The information is collected from different sources	4.27	4.16	4.80	4.44	4.314	.006
3	The source of evidence is not knowledgeable	1.76	1.80	2.34	2.10	4.258	.006
4	The auditor uses evidence obtained from previous audits	3.76	4.14	4.36	3.73	4.129	.007
5	The auditor uses information originating from other audit team members	3.90	4.29	4.59	4.15	4.864	.003
6	The auditor obtains evidence from fellow auditors in other firms	3.33	3.55	3.59	3.71	1.109	.347
7	The auditor uses data generated by the accounting system of the entity as evidence	4.39	4.55	4.73	4.41	2.059	.107
8	The auditor uses data produced by computerized information systems	4.27	4.18	4.16	4.41	1.243	.296

Appendix 4.2: Educational level and source of evidence

No.	*The Statements*	*External auditors*	*Internal auditors*	*State auditors*	*Taxation auditors*	*F Value*	*Sig.*
1	The auditor obtains evidence from independent sources	4.22	4.36	4.70	4.14	1.622	.186
2	The information is collected from different sources	4.39	4.39	4.57	3.86	1.107	.348
3	The source of evidence is not knowledgeable	2.50	1.91	2.17	1.29	4.128	**.007**
4	The auditor uses evidence obtained from previous audits	3.72	4.08	3.87	3.71	1.069	.364
5	The auditor uses information originating from other audit team members	4.11	4.26	4.17	4.14	.202	.895
6	The auditor obtains evidence from fellow auditors in other firms	3.28	3.67	3.37	2.43	4.380	**.005**
7	The auditor uses data generated by the accounting system of the entity as evidence	4.67	4.55	4.30	4.57	1.225	.302
8	The auditor uses data produced by computerized information systems	4.22	4.24	4.27	4.43	.173	.914

Appendix 4.3: Experience of auditors in auditing and of evidence source

No.	*The Statements*	*Under 5 years*	*5 to 9 Years*	*10 to14 years*	*15 to 19 years*	*20 to 24 Years*	*F Value*	*Sig.*
1	The auditor obtains evidence from independent sources	4.35	4.35	4.64	4.22	4.20	1.601	.176
2	The information is collected from different sources	4.23	4.41	4.65	4.41	4.00	2.446	**.048**
3	The source of evidence is not knowledgeable	1.73	1.89	2.20	1.70	2.28	2.779	**.028**
4	The auditor uses evidence obtained from previous audits	3.69	4.20	4.22	3.74	3.68	2.856	**.025**
5	The auditor uses information originating from other audit team members	4.12	4.17	4.40	4.07	4.24	.818	.515
6	The auditor obtains evidence from fellow auditors in other firms	3.65	3.52	3.58	3.67	3.20	.910	.459
7	The auditor uses data generated by the accounting system of the entity as evidence	4.35	4.41	4.56	4.74	4.60	1.451	.219
8	The auditor uses data produced by computerized information systems	4.15	4.28	4.25	4.26	4.28	.158	.959

Appendix 4.4: Auditors' perceptions and directness of evidence

No.	*The Statements*	*External auditors*	*Internal Auditors*	*State auditors*	*Taxation Auditors*	*F Value*	*Sig.*
1	Auditor has collected the evidence directly from a source	4.76	4.65	4.70	4.66	.486	.693
2	The auditor has received the evidence indirectly	3.37	2.98	3.25	3.73	3.844	**.011**
3	The information is from the third party outside the entity	4.39	4.24	4.57	4.39	1.567	.199

Appendix 4.5: Educational level and evidence directness

No.	*The Statements*	*High school*	*First Uni. degree*	*Masters degree*	*PhD*	*F Value*	*Sig.*
1	Auditor has collected the evidence directly from a source	4.67	4.67	4.80	4.71	.464	.708
2	The auditor has received the evidence indirectly	3.06	3.30	3.60	3.14	1.091	.354
3	The information is from the third party outside the entity	4.11	4.39	4.53	4.43	1.208	.308

Appendix 4.6: Experience of auditors in auditing and evidence directness

No.	*The Statements*	*Under 5 years*	*5 to 9 years*	*10 to14 years*	*15 to 19 years*	*20 to 24 Years*	*F Value*	*Sig.*
1	Auditor has collected the evidence directly from a source	4.65	4.70	4.62	4.81	4.76	.747	.561
2	The auditor has received the evidence indirectly	2.96	3.19	3.42	3.74	3.28	2.068	.087
3	The information is from the third party outside the entity	4.27	4.41	4.51	4.33	4.28	.692	.599

Appendix 4.7: Auditors' perceptions and evidence type

No.	*The Statements*	*External auditors*	*Internal Auditors*	*State auditors*	*Taxation auditors*	*F Value*	*Sig.*
1	There is oral information that is given to the auditor as audit evidence	2.47	2.53	1.66	2.73	6.801	**.000**
2	The audit evidence is provided by original documents	4.80	4.92	4.86	4.73	1.348	.260
3	The audit evidence is provided by copy documents	2.65	2.25	1.66	2.73	8.116	**.000**
4	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	4.14	4.33	3.84	4.34	4.310	**.006**
5	The auditor obtains audit evidence from a single type	2.53	2.71	1.80	3.12	9.209	**.000**

Appendix 4.8: Educational level and evidence type

No.	*The Statements*	*High school*	*First Uni. degree*	*Masters degree*	*PhD*	*F Value*	*Sig.*
1	There is oral information that is given to the auditor as audit evidence	3.06	2.29	2.40	1.57	3.015	**.031**
2	The audit evidence is provided by original documents	4.83	4.82	4.87	5.00	.378	.769
3	The audit evidence is provided by copy documents	2.17	2.31	2.43	2.57	.284	.837
4	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	4.33	4.19	3.97	4.14	.982	.403
5	The auditor obtains audit evidence from a single type	2.78	2.59	2.13	2.57	1.302	.275

Appendix 4.9: Experience of auditors in auditing and evidence type

No.	*The Statements*	*Under 5 years*	*5 to 9 years*	*10 to14 years*	*15 to 19 years*	*20 to 24 Years*	*F Value*	*Sig.*
1	There is oral information that is given to the auditor as audit evidence	2.58	2.31	2.18	2.33	2.60	.715	.583
2	The audit evidence is provided by original documents	4.81	4.72	4.89	4.93	4.88	1.287	.277
3	The audit evidence is provided by copy documents	2.50	2.48	2.20	2.11	2.32	.718	.580
4	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	4.42	4.11	4.16	4.11	4.08	.891	.471
5	The auditor obtains audit evidence from a single type	2.65	2.50	2.40	2.44	2.88	.708	.588

Appendix 4.10: Auditors' perceptions and academic and professional qualification of the auditor

No.	*The Statements*	*External auditors*	*Internal Auditors*	*State auditors*	*Taxation auditors*	*F Value*	*Sig.*
1	The experience of auditor	4.59	4.78	4.89	4.76	2.370	.072
2	The academic qualifications of the auditor	4.35	4.47	4.80	4.49	3.140	**.027**
3	Independence of auditor	4.71	4.73	4.84	4.61	1.127	.340
4	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	3.80	3.73	3.91	3.88	.274	.844
5	The analytical skills of the auditor	4.59	4.63	4.91	4.85	4.874	**.003**
6	Questions are clear	4.47	4.33	3.61	4.49	11.783	**.000**
7	The errors in auditor perception	1.73	1.43	1.11	1.66	8.535	**.000**
8	The bias in auditor perception	1.31	1.29	1.07	1.32	2.511	.060
9	The techniques of obtaining evidence	3.96	4.63	4.48	4.24	6.140	**.001**
10	The deviations from expectations of auditor	1.78	1.71	1.41	1.80	3.564	**.015**

Appendix 4.11: Educational level and academic and professional qualifications of the auditor

No.	*The Statements*	*High school*	*First Uni. degree*	*Masters degree*	*PhD*	*F Value*	*Sig.*
1	The experience of auditor	4.94	4.73	4.67	5.00	1.472	.224
2	The academic qualifications of the auditor	4.67	4.49	4.57	4.43	.373	.773
3	Independence of auditor	5.00	4.67	4.80	4.71	1.960	.122
4	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	3.94	3.79	3.77	4.43	.897	.444
5	The analytical skills of the auditor	4.78	4.75	4.60	4.86	.907	.439
6	Questions are clear	4.28	4.24	4.17	4.29	.086	.968
7	The errors in auditor perception	1.39	1.51	1.50	1.29	.375	.771
8	The bias in auditor perception	1.33	1.24	1.20	1.43	.539	.656
9	The techniques of obtaining evidence	4.50	4.36	4.03	4.57	1.646	.180
10	The deviations from expectations of auditor	1.61	1.68	1.67	1.86	.236	.871

Appendix 4.12: Experience of auditors in auditing and academic and professional qualifications of the auditor

No.	*The Statements*	*Under 5 years*	*5 to 9 years*	*10 to14 years*	*15 to 19 years*	*20 to 24 Years*	*F Value*	*Sig.*
1	The experience of auditor	4.62	4.63	4.84	4.89	4.80	1.795	.132
2	The academic qualifications of the auditor	4.42	4.43	4.65	4.59	4.44	.931	.447
3	Independence of auditor	4.69	4.57	4.78	4.78	4.88	1.562	.186
4	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	3.65	4.02	3.69	3.78	3.92	.883	.475
5	The analytical skills of the auditor	4.69	4.81	4.73	4.63	4.72	.664	.618
6	Questions are clear	4.31	4.06	4.11	4.41	4.64	2.598	**.038**
7	The errors in auditor perception	1.42	1.46	1.44	1.67	1.52	.641	.634
8	The bias in auditor perception	1.19	1.31	1.13	1.33	1.36	1.561	.187
9	The techniques of obtaining evidence	4.23	4.37	4.38	4.26	4.28	.226	.924
10	The deviations from expectations of auditor	1.88	1.65	1.56	1.78	1.68	1.242	.295

Appendix 4.13: Auditors' perceptions and consistency of evidence

No.	*The Statements*	*External auditors*	*Internal Auditors*	*State Auditors*	*Taxation auditors*	*F Value*	*Sig.*
1	One item of evidence conflicts with another item obtained over long periods from different sources	1.65	1.92	1.27	2.20	18.516	**.000**
2	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	4.06	4.18	2.98	4.20	15.621	**.000**
3	The evidence obtained is commensurate with the audit objectives	4.47	4.31	4.14	4.54	2.398	.069
4	If procedures of auditing are not in place	1.69	1.51	1.20	1.44	3.600	**.015**

Appendix 4.14: Educational level and consistency of evidence

No.	*The Statements*	*High school*	*First Uni. degree*	*Masters degree*	*PhD*	*F Value*	*Sig.*
1	One item of evidence conflicts with another item obtained over long periods from different sources	1.78	1.75	1.73	1.86	.070	.976
2	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	3.67	3.89	3.70	4.71	1.848	.140
3	The evidence obtained is commensurate with the audit objectives	4.06	4.39	4.40	4.43	1.059	.368
4	If procedures of auditing are not in place	1.89	1.41	1.47	1.57	2.343	.075

Appendix 4.15: Experience of Auditors in auditing and consistency of evidence

No.	*The Statements*	*Under 5 years*	*5 to 9 years*	*10 to14 years*	*15 to 19 years*	*20 to 24 Years*	*F Value*	*Sig.*
1	One item of evidence conflicts with another item obtained over long periods from different sources	1.85	1.81	1.65	1.70	1.80	.577	.680
2	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	3.81	3.81	3.75	4.11	4.04	.698	.594
3	The evidence obtained is commensurate with the audit objectives	4.58	4.24	4.36	4.52	4.24	1.273	.282
4	If procedures of auditing are not in place	1.38	1.54	1.38	1.37	1.72	1.250	.291

Appendix 4.16: Auditors' perceptions and amount of evidence

No.	*The Statements*	*External auditors*	*Internal Auditors*	*State auditors*	*Taxation auditors*	*F Value*	*Sig.*
1	If the significance of the findings is higher	4.51	4.75	4.80	4.59	2.307	.078
2	If the risk of material misstatement of financial statements is higher	4.22	4.22	4.45	3.95	2.411	.068
3	If the cost of obtaining evidence is higher	2.37	2.04	1.91	1.98	3.474	**.017**
4	If the effectiveness of internal control is higher	4.59	4.51	4.91	4.63	3.085	**.029**
5	Time constraints	2.12	2.02	1.34	2.17	13.154	**.000**
6	If the evidence is needed for negative findings	3.61	3.16	3.05	3.59	4.311	**.006**
7	If the size of samples that the auditor would choose is small	2.12	2.16	1.32	2.12	8.127	**.000**
8	If the auditor obtains evidence for a specific assertion about reality	4.20	4.18	4.14	4.44	1.203	.310

Appendix 4.17: Educational level and amount of evidence

No.	The *Statements*	High school	First Uni. degree	Masters degree	PhD	F Value	Sig.
1	If the significance of the findings is higher	4.67	4.64	4.77	4.43	.660	.578
2	If the risk of material misstatement of financial statements is higher	4.50	4.15	4.33	4.14	1.075	.361
3	If the cost of obtaining evidence is higher	2.11	2.10	2.00	2.14	.147	.931
4	If the effectiveness of internal control is higher	4.83	4.61	4.70	4.71	.629	.597
5	Time constraints	2.17	1.90	1.90	1.71	.801	.495
6	If the evidence is needed for negative findings	2.94	3.42	3.30	3.14	1.438	.233
7	If the size of samples that the auditor would choose is small	2.00	1.97	1.83	1.71	.283	.838
8	If the auditor obtains evidence for a specific assertion about reality	4.11	4.27	4.20	4.00	.406	.749

Appendix 4.18: Experience of auditors in auditing and amount of evidence

No.	*The Statements*	Under 5 years	5 to 9 years	10 to14 years	15 to 19 years	20 to 24 Years	F Value	Sig.
1	If the significance of the findings is higher	4.65	4.54	4.75	4.67	4.72	.866	.485
2	If the risk of material misstatement of financial statements is higher	4.15	4.07	4.25	4.33	4.36	.705	.589
3	If the cost of obtaining evidence is higher	2.42	1.98	1.91	2.07	2.36	3.025	**.019**
4	If the effectiveness of internal control is higher	4.65	4.52	4.71	4.67	4.80	.910	.459
5	Time constraints	1.81	2.04	1.84	1.81	2.08	.994	.412
6	If the evidence is needed for negative findings	3.38	3.37	3.22	3.41	3.48	.395	.812
7	If the size of samples that the auditor would choose is small	1.88	2.15	1.85	1.67	2.04	1.250	.292
8	If the auditor obtains evidence for a specific assertion about reality	4.19	4.07	4.22	4.33	4.52	1.429	.226

APPENDIX 5

RESULT OF STUDY HYPOTHESES

Appendix 5.1: Hypothesis 1

Appendix 5.1.1: Hypothesis 1.2

Results of ANOVA test of auditors' perceptions about the effects of evidence directness on sufficiency and appropriateness of evidence

No.	The Statements	F Value	Sig.	Hypothesis supported
1	Auditor has collected the evidence directly from a source	.486	.693	H0
2	The auditor has received the evidence indirectly	3.844	.011*	**H1**
3	The information is from the third party outside the entity	1.567	.199	H0
*Significant at the 5% level				

Appendix 5.2: Hypothesis 2

Appendix 5.2.1: Hypothesis 2.1

Results of ANOVA of the effects of evidence source factored by educational level

No.	The Statements	F Value	Sig.	Hypothesis supported
1	The auditor obtains evidence from independent sources	1.622	.186	H0
2	The information is collected from different sources	1.107	.348	H0
3	The source of evidence is not knowledgeable	4.128	.007*	**H1**
4	The auditor uses evidence obtained from previous audits	1.069	.364	H0
5	The auditor uses information originating from other audit team members	.202	.895	H0
6	The auditor obtains evidence from fellow auditors in other firms	4.380	.005*	**H1**
7	The auditor uses data generated by the accounting system of the entity as evidence	1.225	.302	H0
8	The auditor uses data produced by computerised information systems	.173	.914	H0
*Significant at the 5% level				

Appendix 5.2.2: Hypothesis 2.2

Results of ANOVA test of the effects of evidence directness factored by educational level

No.	The Statements	F Value	Sig.	Hypothesis supported
1	Auditor has collected the evidence directly from a source	.464	.708	H0
2	The auditor has received the evidence indirectly	1.091	.354	H0
3	The information is from the third party outside the entity	1.208	.308	H0

Appendix 5.2.3: Hypothesis 2.3

Results of ANOVA test of the effects of evidence type factored by educational level

No.	*The Statements*	*F Value*	*Sig.*	*Hypothesis supported*
1	There is oral information that is given to the auditor as audit evidence	3.015	.031*	**H1**
2	The audit evidence is provided by original documents	.378	.769	H0
3	The audit evidence is provided by copy documents	.284	.837	H0
4	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	.982	.403	H0
5	The auditor obtains audit evidence from a single type	1.302	.275	H0
***Significant at the 5% level**				

Appendix 5.2.4: Hypothesis 2.4

Results of ANOVA test of the effects of academic and professional qualifications of the auditor factored by educational level

No.	The Statements	F Value	Sig.	Hypothesis supported
1	The experience of auditor	1.472	.224	H0
2	The academic qualifications of the auditor	.373	.773	H0
3	Independence of auditor	1.960	.122	H0
4	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	.897	.444	H0
5	The analytical skills of the auditor	.907	.439	H0
6	Questions are clear	.086	.968	H0
7	The errors in auditor perception	.375	.771	H0
8	The bias in auditor perception	.539	.656	H0
9	The techniques of obtaining evidence	1.646	.180	H0
10	The deviations from expectations of auditor	.236	.871	H0

Appendix 5.2.5: Hypothesis 2.5

Results of ANOVA test of the effects of consistency of evidence factored by educational level

No.	The Statements	F Value	Sig.	Hypothesis supported
1	One item of evidence conflicts with another item obtained over long periods from different sources	.070	.976	H0
2	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	1.848	.140	H0
3	The evidence obtained is commensurate with the audit objective	1.059	.368	H0
4	If procedures of auditing are not in place	2.343	.075	H0

Appendix 5.2.6: Hypothesis 2.6

Results of ANOVA test of the effects of amount of evidence factored by educational level

No.	The Statements	F Value	Sig.	Hypothesis supported
1	If the significance of the findings is higher	.660	.578	H0
2	If the risk of material misstatement of financial statements is higher	1.075	.361	H0
3	If the cost of obtaining evidence is higher	.147	.931	H0
4	If the effectiveness of internal control is higher	.629	.597	H0
5	Time constraints	.801	.495	H0
6	If the evidence is needed for negative findings	1.438	.233	H0
7	If the size of samples that the auditor would choose is small	.283	.838	H0
8	If the auditor obtains evidence for a specific assertion about reality	.406	.749	H0

Appendix 5.3: Hypothesis 3

Appendix 5.3.1: Hypothesis 3.1

Results of ANOVA test of the effects of evidence source factored by experience of auditors

No.	The Statements	F Value	Sig.	Hypothesis supported
1	The auditor obtains evidence from independent sources	1.601	.176	H0
2	The information is collected from different sources	2.446	.048*	**H1**
3	The source of evidence is not knowledgeable	2.779	.028*	**H1**
4	The auditor uses evidence obtained from previous audits	2.856	.025*	**H1**
5	The auditor uses information originating from other audit team members	.818	.515	H0
6	The auditor obtains evidence from fellow auditors in other firms	.910	.459	H0
7	The auditor uses data generated by the accounting system of the entity as evidence	1.451	.219	H0
8	The auditor uses data produced by computerised information systems	.158	.959	H0

***Significant at the 5% level**

Appendix 5.3.2: Hypothesis 3.2

Results of ANOVA test of the effects of evidence directness factored by experience of auditors

No.	The Statements	F Value	Sig.	Hypothesis supported
1	Auditor has collected the evidence directly from a source	.747	.561	H0
2	The auditor has received the evidence indirectly	2.068	.087	H0
3	The information is from the third party outside the entity	.692	.599	H0

Appendix 5.3.3: Hypothesis 3.3

Results of ANOVA test of the effects of evidence type factored by experience of auditors

No.	The Statements	F Value	Sig.	Hypothesis supported
1	There is oral information that is given to the auditor as audit evidence	.715	.583	H0
2	The audit evidence is provided by original documents	1.287	.277	H0
3	The audit evidence is provided by copy documents	.718	.580	H0
4	The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	.891	.471	H0
5	The auditor obtains audit evidence from a single type	.708	.588	H0

Appendix 5.3.4: Hypothesis 3.4

Results of ANOVA test of the effects of academic and professional qualifications of the auditor factored by experience of auditors

No.	The Statements	F Value	Sig.	Hypothesis supported
1	The experience of auditor	1.795	.132	H0
2	The academic qualifications of the auditor	.931	.447	H0
3	Independence of auditor	1.562	.186	H0
4	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	.883	.475	H0
5	The analytical skills of the auditor	.664	.618	H0
6	Questions are clear	2.598	.038*	**H1**
7	The errors in auditor perception	.641	.634	H0
8	The bias in auditor perception	1.561	.187	H0
9	The techniques of obtaining evidence	.226	.924	H0
10	The deviations from expectations of auditor	1.242	.295	H0
***Significant at the 5% level**				

Appendix 5.3.5: Hypothesis 3.5

Results of ANOVA test of the effects of consistency of evidence factored by experience of auditors

No.	The Statements	F Value	Sig.	Hypothesis supported
1	One item of evidence conflicts with another item obtained over long periods from different sources	.577	.680	H0
2	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	.698	.594	H0
3	The evidence obtained is commensurate with the audit objectives	1.273	.282	H0
4	If procedures of auditing are not in place	1.250	.291	H0

Appendix 5.3.6: Hypothesis 3.6

Results of ANOVA test of the effects of amount of evidence factored by experience of auditors

No.	The Statements	F Value	Sig.	Hypothesis supported
1	If the significance of the findings is higher	.866	.485	H0
2	If the risk of material misstatement of financial statements is higher	.705	.589	H0
3	If the cost of obtaining evidence is higher	3.025	.019*	**H1**
4	If the effectiveness of internal control is higher	.910	.459	H0
5	Time constraints	.994	.412	H0
6	If the evidence is needed for negative findings	.395	.812	H0
7	If the size of samples that the auditor would choose is small	1.250	.292	H0
8	If the auditor obtains evidence for a specific assertion about reality	1.429	.226	H0

***Significant at the 5% level**

Appendix 5.4: Hypothesis 4

Appendix 5.4.1: Hypothesis 4.1

Results of T-test of the effects of evidence source factored by auditors' gender

No.	The Statements	F Value	Sig.	Hypothesis supported
1	The auditor obtains evidence from independent sources	1.688	.196	H0
2	The information is collected from different sources	1.846	.176	H0
3	The source of evidence is not knowledgeable	.426	.515	H0
4	The auditor uses evidence obtained from previous audits	.207	.650	H0
5	The auditor uses information originating from other audit team members	.003	.955	H0
6	The auditor obtains evidence from fellow auditors in other firms	.670	.414	H0
7	The auditor uses data generated by the accounting system of the entity as evidence	.000	.995	H0
8	The auditor uses data produced by computerized information systems	.098	.755	H0

Appendix 5.4.2: Hypothesis 4.2

Results of T-test of the effects of evidence directness factored by auditors' gender

No.	The Statements	F Value	Sig.	Hypothesis supported
1	Auditor has collected the evidence directly from a source	.210	.647	H0
2	The auditor has received the evidence indirectly	.000	.983	H0
3	The information is from the third party outside the entity	.285	.594	H0

Appendix 5.4.3: Hypothesis 4.4

Results of T-test of the effects of academic and professional qualifications of the auditor factored by auditors' gender

No.	The Statements	F Value	Sig.	Hypothesis supported
1	The experience of auditor	5.047	.206	H0
2	The academic qualifications of the auditor	9.242	.003*	**H1**
3	Independence of auditor	2.859	.093	H0
4	The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	.095	.758	H0
5	The analytical skills of the auditor	18.199	.000*	**H1**
6	Questions are clear	1.067	.303	H0
7	The errors in auditor perception	17.532	.000*	**H1**
8	The bias in auditor perception	.713	.399	H0
9	The techniques of obtaining evidence	5.012	.026*	**H1**
10	The deviations from expectations of auditor	.369	.544	H0

***Significant at the 5% level**

Appendix 5.4.4: Hypothesis 4.5

Results of T-test of the effects of consistency of evidence factored by auditors' gender

No.	The Statements	F Value	Sig.	Hypothesis supported
1	One item of evidence conflicts with another item obtained over long periods from different sources	.034	.855	H0
2	The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	.799	.372	H0
3	The evidence obtained is commensurate with the audit objectives	.295	.588	H0
4	If procedures of auditing are not in place	25.145	.000*	**H1**

***Significant at the 5% level**

Appendix 5.4.5: Hypothesis 4.6

Results of T-test of the effects of amount of evidence factored by auditors' gender

No.	The Statements	F Value	Sig.	Hypothesis supported
1	If the significance of the findings is higher	6.695	.010*	**H1**
2	If the risk of material misstatement of financial statements is higher	2.295	.131	H0
3	If the cost of obtaining evidence is higher	3.382	.068	H0
4	If the effectiveness of internal control is higher	.018	.893	H0
5	Time constraints	.419	.518	H0
6	If the evidence is needed for negative findings	1.377	.242	H0
7	If the size of samples that the auditor would choose is small	.284	.595	H0
8	If the auditor obtains evidence for a specific assertion about reality	.814	.368	H0
***Significant at the 5% level**				

APPENDIX 6

RESULT OF FACTOR ANALYSIS TESTS

Appendix 6.1: Evidence factor groupings and external auditors

	Factor loading
Factor 1: Evidence from accounting system	**.82**
• The auditor uses data produced by computerized information systems	
• The auditor uses data generated by the accounting system of the entity as evidence	**.80**
• The audit evidence is provided by original documents	**.78**
Factor 2: Evidence from outside entity	
• The auditor uses information originating from other audit team members	**.78**
• The auditor uses evidence obtained from previous audits	**.78**
• The auditor obtains audit evidence from single type	**.60**
• The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	**.53**
Factor 3: Quality of evidence source	
• The auditor obtains evidence from independent sources	**.84**
• The information is collected from different sources	**.73**
• The auditor has received the evidence indirectly	**.68**
Factor 4: Different evidence sources	
• There is oral information that is given to the auditor as audit evidence	.77
• The source of evidence is not knowledgeable	.72
• The auditor obtains evidence from fellow auditors in other firms	.62
Factor 5: Types of evidence	
• Auditor has collected the evidence directly from a source	.82
• The information is from the third party outside the entity	.67
• The audit evidence is provided by copy documents	.67

Appendix 6.2: Evidence factor groupings and internal auditors

Factor 1: Different sources of evidence	***Factor loading***
• The auditor has received the evidence indirectly	**.74**
• The audit evidence is provided by original documents	**.67**
• The auditor uses information originating from other audit team members	**.67**
Factor 2: Types of evidence	
• The auditor obtains audit evidence from a single type	**.72**
• The audit evidence is provided by copy documents	**.68**
Factor 3: Reliability of evidence source	
• The auditor obtains evidence from independent sources	**.80**
• The information is collected from different sources	**.77**
Factor 4: Evidence from computerize system	
• The auditor uses data produced by computerized information systems	**.80**
• Auditor has collected the evidence directly from a source	**.66**
Factor 5: Evidence of third parties	
• The auditor relies on the expert's written representation to determine quality, condition or value based on the physical evidence	**.94**
• The auditor obtains evidence from fellow auditors in other firms	**.53**

Appendix 6.3: Evidence factor groupings and state auditors

	Factor loading
Factor 1: Evidence from third parties	**.93**
• The auditor uses evidence obtained from previous audits	
• The auditor uses information originating from other audit team members	**.83**
• The source of evidence is not knowledgeable	**.62**
• The auditor obtains evidence from fellow auditors in other firms	**.53**
Factor 2: Types of evidence	
• The audit evidence is provided by copy documents	**.87**
• There is oral information that is given to the auditor as audit evidence	**.85**
Factor 3: The methods of receiving evidence	
• Auditor has collected the evidence directly from a source	**.86**
• The auditor obtains evidence from independent sources	**.57**
• The auditor has received the evidence indirectly	**.61**

Appendix 6.4: Evidence factor groupings and taxation auditors

	Factor loading
Factor 1: Different sources of evidence	**.87**
• Auditor has collected the audit evidence directly from a source	
• The audit evidence is provided by original documents	**.71**
• The auditor uses data generated by the accounting system of entity as evidence	**.64**
• The information is collected from different sources	**.55**
• The auditor relies on the expert's written representation to determine quality , condition or value based on the physical evidence	**.53**
Factor 2: Reliability of evidence sources	
• The auditor obtains evidence from fellow auditors in other firms	**.76**
• The auditor uses data produced by computerized information systems	**.71**
• The auditor uses information originating from other audit team members	**.59**
• The auditor obtains evidence from independent sources	**.59**
Factor 3: Types of evidence	
• There is oral information that is given to the auditor as audit evidence	**.76**
• The auditor obtains audit evidence from a single type	**.69**
• The auditor has received the evidence indirectly	**.66**
Factor 4: Some issues of evidence	
• The audit evidence is provided by copy documents	**.87**
• The source of evidence is not knowledgeable	**.77**
Factor 5:Other evidence sources	
• The information is from the third party outside the entity	**.84**
• The auditor uses evidence obtained from previous audits	**.56**

Appendix 6.5: Auditor factor groupings and external auditors

	Factor loading
Factor 1: Auditor and requirements evidence	**.85**
• If significance of the findings is higher	
• If the auditor obtains evidence for a specific assertion about reality	**.65**
• Independence of auditor	**.62**
• If the evidence is needed for negative findings	**.61**
• The auditor reassesses the reliability of early evidence in light of more recently collected evidence	**.51**
Factor 2: Methods of evidence collection	
• The technique of obtaining evidence	**.83**
• The analytical skills of the auditor	**.68**
• Questions are clear	**.63**
Factor 3: Auditor experience	
• The errors in auditor perception	**.80**
• The bias in auditor perception	**.66**
• The deviations from expectations of auditor	**.53**
Factor 4: Auditors and evidence	
• The auditor exercises professional scepticism in evaluating the quality and quantity of evidence	**.82**
• The academic qualifications of the auditor	**.65**
• The experience of auditor	**.62**
Factor 5:Audit evidence and time	
• One item of evidence conflicts with another item obtained over long periods, from different sources	**.78**
• If procedures of auditing are not in place	**.75**
• Time constraints	**.51**

Appendix 6.6: Auditor factor groupings and internal auditors

	Factor loading
Factor 1: Amount of evidence and risk, and significance of specific assertion	**.85**
• If the auditor obtains evidence for a specific assertion about reality	
• If the risk of material misstatement of financial statements is higher	**.71**
• If the significance of the findings is higher	**.66**
• The techniques of obtaining evidence	**.53**
Factor 2:Auditor and internal control	
• Independence of auditor	**.84**
• If the effectiveness of internal control is higher	**.73**
Factor 3: Auditor skills	
• The auditor exercises professional scepticism in evaluating the quantity and quality of audit evidence	**.81**
• Questions are clear	**.53**
Factor 4: Auditor qualifications and evidence	
• The academic qualifications of the auditor	**.82**
• The experience of auditor	**.55**
Factor 5:Cost of evidence	
• If the cost of obtaining evidence is higher	**.73**
• One item of evidence conflicts with another items obtained over long periods, from different sources	**.67**

Appendix 6.7: Auditor factor groupings and state auditors

	Factor loading
Factor 1: Auditor and quality of internal control	**.92**
• The analytical skills of the auditor	
• Independence of auditor	**.87**
• The academic qualifications of the auditor	**.85**
• The techniques of obtaining evidence	**.60**
• If the effectiveness of internal control is higher	**.50**
Factor 2: Perceptions of auditor	
• The bias in auditor perception	**.84**
• The errors in auditor perception	**.78**
• If procedures of auditing are not in place	**.68**
• If the size of samples that the auditor would choose is small	**.66**
Factor 3: Experience of auditor	
• The evidence obtained is commensurate with the audit evidence	**.79**
• The experience of auditor	**.67**
• The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	**.60**
Factor 4: Risk and significance of accounts	
• If the significance of the findings is higher	**.82**
• If the risk of material misstatement of financial statements is higher	**.70**
Factor 5:Important of evidence	
• If the auditor obtains evidence for a specific assertion about reality	**.89**
• Questions are clear	**.55**

Appendix 6.8: Auditor factor groupings and taxation auditors

	Factor loading
Factor 1: Auditor and internal control	
• The experience of auditor	**.84**
• If the effectiveness of internal control is higher	**.83**
• Independence of auditor	**.60**
• The auditor reassesses the reliability of early evidence in the light of more recently collected evidence	**.54**
Factor 2: Risk and significance of specific assertions	
• If the risk of material misstatement of financial statements is higher	**.88**
• If the auditor obtains evidence for a specific assertion about reality	**.78**
• If the significance of the findings is higher	**.51**
Factor 3: Evidence and audit objectives	
• The evidence obtained is commensurate with the audit objectives	**.87**
• The techniques of obtaining evidence	**.74**
• Questions are clear	**.59**
Factor 4: Size of chosen sample and negative findings	
• If the sizes of samples that the auditor would choose is small	**.79**
• If the evidence is needed for negative findings	**.71**
Factor 5:Experience of auditor	
• The deviations from expectations of auditor	**.78**
• The academic qualifications of the auditor	**.64**
• The analytical skills of the auditor	**.55**
Factor 6:The errors of auditor and cost	
• The errors in auditor perception	**.79**
• If the cost of obtaining evidence is higher	**.63**

APPENDIX 7

PERCENTAGE DISTRIBUTION OF AUDITORS BY GENDER AND AGE GROUPS

Gender / Age	Male		Female		Total	
	No	%	No	%	No	%
21- 29 years	59	34.7	8	**47.1**	67	35.8
30- 39 years	72	42.4	8	**47.1**	80	42.8
40-50 years	30	17.6	1	5.8	31	16.6
Over 50 years	9	5.3	0	0.0	9	4.8
Total	170	100	17	100	187	100

APPENDIX 8

THE INTERVIEW QUESTIONS LIST

First, could you please tell us about yourself (e.g. age, level of education, experience, acceptation position)?

1. **Source of Evidence**

What effects would the independent, unknowledgeable, and different sources of audit evidence have on quality and quality of audit evidence?

Does the evidence obtained from previous audits, from other audit team members, and from fellow auditors in other firm affect the quality of audit evidence? If yes, Could you please tell us how?

To what extent does the accounting system of entity have effect on sufficiency and appropriateness of audit evidence obtained from it?

2. **Directness of Evidence**

Do you think that evidence collected directly or indirectly from source by auditors affects the quality of audit evidence?

3. **Type of Evidence**

Do you think that evidence obtained from oral information affects the quality of evidence?

Do you think that evidence provided by original or copy documents affect the quality of audit evidence?

Do you think that the expert's written representation to determine quality, condition or value based on the physical evidence affects the quality of audit evidence?

4. Academic and Professional Qualifications of Auditor

According to your experience, what effects do the qualifications (experience, knowledge) of auditor have on sufficiency and appropriateness of evidence?

Do you think that the auditors' independence and skills affects the quality and quantity of audit evidence?

Do you think that the biases and errors in perception of auditors affect the quality of audit evidence?

5. Consistency of Evidence

Do you think that consistency of evidence effect on the quality of audit evidence?

6. Amount of Evidence

Do you think that when amount of evidence gathered by the auditor is related to the materiality or significance of the account under consideration affects the quality of audit evidence?

Do you think that the cost and time of collecting evidence affects the quantity of audit evidence?

According to your experience, what effects do the effectiveness of internal control and sample size have on sufficiency and appropriateness of evidence?