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Ethical Awareness and Ethical Judgment
Among Auditors in Lebanon

By

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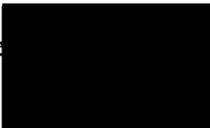
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*To My parents who gave me my life,
I dedicate this work...*

Ethical Awareness and Ethical Judgment Among Auditors in Lebanon

Rola Hassan El-Cheikh

Abstract

The auditor has often been regarded as “the guardian of the market”. However, several scandals in recent times have resulted in an increase in the public’s suspicion of auditor ethics, hence, an investigation of ethical awareness and ethical judgment among auditors is warranted. The aim of this thesis was to investigate the factors that affect the ethical awareness and ethical judgment of auditors practicing in Lebanon, based on an extensive literature review coupled to deductive and quantitative research methods. A questionnaire comprising five ethical dilemmas to test auditor’s ethical sensitivity was provided to practicing auditors in Lebanon and 136 responses were gathered. The proposed hypotheses attempted to examine the influence of the national culture, the size of the audit firm, the gender, age, education and length of work experience on the ethical sensitivity of auditors. The results of the survey revealed that the audit firm’s size and the education of the auditor (university degree and CPA certificate) are the most influential factors that shape an auditor’s ethical sensitivity. Other factors including age, gender, and length of work experience have a trivial effect on auditor’s ethical sensitivity.

Keywords: Auditor, Ethical Judgment, Ethical Sensitivity, Independence, National Culture, Moral Reasoning Ability

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CHAPTER I

1. Introduction

The first chapter begins with an overview of the problem in question, states the objective of the research paper and briefly describes the research methodology.

1.1. Overview

The rapid growth of international trade, and particularly in the last decade, has changed the outlook of business for many businesses. The technological advancement has made it possible to conduct business without worrying about local borders. Consequently, small as well as multinational corporations own overseas business ventures. This trend is expected to grow in the future (Marilyn et al. 2010). Not only business and trade are moving towards globalization, but the globalization process reaches beyond trade and involves cultural and sociological issues (Paul, Diaconu, Nicoleta, Coman, Liliana and Dobroteaunu, 2009).

Nevertheless this crisis illuminates the role of auditors as the controlling body in the best interest of the public and as the guardian of truth in financial markets.

Auditors should ensure that consistent and reliable financial reporting is maintained. They are bound to exercise professional care which requires to question and critically assess the audit evidence (Duska, 2005).

The International Federation of Accountants, IFAC, is a global organization which has as a primary goal to bring together the professional accountancy organizations, to share experience, resources

and ideas for the sole purpose of improving the profession. IFAC has extensively collaborated with regional accountancy organizations in order to promote and develop the profession and to stress the need for the convergence towards international standards (IFAC, 2012).

Another major player in this area is the IASC, International Accounting Standard Committee, which was founded in 1973 as a non-profit private sector organization working for the public interest. It has established a standard-setting body called IASB, International Accounting Standards Board, in order to develop an enforceable and internationally accepted financial reporting system. This reporting system is called IFRS, International Financial Reporting System. The main purpose of this standard-setting is to standardize the reporting system and raise it to a high quality system.

The significant development of global capital markets as well as global economy has resulted in the need for a uniform set of accounting and auditing standards. Consequently IFAC has evolved international standards on auditing, ISAs, an ethical code and guidelines concerning the education and competence level of professionals in order to harmonize the high quality auditing (Paul et al. 2009).

IFAC has attempted to encourage harmonization. Nevertheless, such attempts are blocked by the deep divergences in international accounting and auditing practices in different countries, in addition to the fact that this body has no enforcement power (Harding F., 2000).

Obviously, different countries use different accounting systems with different purposes. A functional view which was developed by Nobes and Parker (2008) has explained these differences by analyzing the

causative factors, which include culture, legal systems, financing sources, impact of taxation, accounting practices, level of inflation and history (Nobes and Parker, 2008).

On the other hand diversification for example in national legislation and culture has resulted in the divergence in accounting and auditing practices in different countries. Diversification in turn resulted in difficulties for users of financial information in a global capital market. Consequently, the need for setting global accounting and auditing standards has increased with the globalization of businesses and corporations. Also calls for broader, more intensive and targeted information about a performance which is transparent has been met with the adoption of reliable and internationally comparable financial disclosures (Harding, 2000). It is essential to take into account not only the aforementioned challenges but also the fact that potential financial crises are almost always at bay, hence the importance of audit exercises and the role of the auditor become more crucial. Even more significantly, the auditor is required to be a watchdog of financial markets, acting in the best interest of the public, and exercising “professional skepticism” (Duska, 2005).

1.2. Need for the Study

The incredible growth of the global audit market in recent years has resulted in the need of harmonization of auditing standards. Efforts towards harmonization have not gone unnoticed by the public. However, the fact that the results were of limited success has somewhat disappointed the advocators. The obstacles on the road to standardization are thought to originate from differences in culture and

environment among different countries (Wood, 1996). A study of cultural impacts on the auditing profession is, therefore, warranted.

The globalization of trade and the presence of different sets of governing rules make it difficult to guarantee the credibility of information. Regulators recognized the urgent need of a core set of international standards several decades ago. As a result, ISAC and IFAC were established in the 1970s with the main purpose of the “achievement of harmonized-ultimately globalized- professional standards to the highest technical and ethical levels” (Harding, 2000).

According to Marilyn (2001), accountants all over the world share the common values of ethics requirements of the profession, concerning the integrity and objectivity principles. Therefore, a need of uniform auditing standards as well as a global ethics code, in order to “strengthen the accounting profession and protect the public interest in all countries around the world”, has been of increasing concern recently (Marilyn, Urbach and Werlin, 2001). Thus, in relation to increasing quality in audit and enhancing ethical awareness, IFAC has dedicated appreciable efforts to develop and maintain global professional standards and a Code of Ethics.

In order to assess the globalization process of auditing practices, the outlook must be extended to the international dimensions of auditing practices. Ample evidence was provided by several previous studies suggesting that culture has a great effect on the auditor’s decision making process. Specifically culture affects auditor’s ethical reasoning (Tsui and Windsor, 2001). Hence it is very important to understand the

varying cultural dimensions across countries in order to assess the synchronization process of national accounting and auditing standards.

It is widely argued that accountants are not capable to make good decisions when solving ethical problems. At least, they do not act in a consistent manner with professional values and with the expectations of the community. The growing external control placed on accountants by governments and regulatory bodies throughout the world could be seen as evidence in support of this argument. Moreover, this growing control is not commensurate with the concept of professionalism as the increasingly regulated environment is putting limitations on an accountant's ability to exercise professional judgment. However, rules and regulation alone are not sufficient to protect the interests of the external users of accounting information. The accountant should be able to develop sound ethical judgment to guarantee reliable information about the financial reports of a company. Accountants are supposed to possess knowledge of both fundamental ethical principles and rules of disclosures in order to exercise sound judgment (Flanagan and Clarke, 2007).

The code of professional conduct imposed by the IFAC defines the code of practice that governs the auditing and the accounting profession and provides guidance for accountants around the world to act in accordance with generally accepted rules and regulations. However, it is important to assess the ethical reasoning capabilities of the auditors in order to understand their manners in ethical decision making.

1.2.1. The Case of Lebanon

Lebanon is located on the eastern boarder of the Mediterranean Sea, with 225km of shoreline. The country has a long history of being a commercial center, acting as a convenient trade link between Europe and North America and the countries of the Middle East. The country's strategic location qualifies it as the gateway to the Arab world and has helped it play an important role throughout history in regional politics and trade.

The total area of Lebanon is about 10,400 sq. km with a population of about 4.2 million. The official language is Arabic but English and French are widely used. Lebanon's population consists of 95% Arabs. The local time is GMT+2 hours (World Bank, 2010).

The country enjoys the key characteristics of a liberal economy, offering free trade and investments in all business segments without major restrictions, with the exception of the limitations imposed on the ownership of real estate properties. The country's economy is mostly service-based, driven by the private sector. The government encourages investment and has taken many steps to create an environment conducive to investors establishing or bringing operations to the country. Lebanon's economy is a typical open economy with a large banking sector. Liberalization of the Lebanese economy through the alleviation of trade and non-trade barriers and the potential launch of privatization of public utilities constitute promising developments in Lebanon (Deloitte, 2010).

Lebanon has an estimated GDP of USD 39 billion (for a population of 4.2 million). The economy is primarily dependent on its service sector and

it currently contributes to about 74 percent of Lebanon's GDP, with the banking and insurance sectors representing a significant proportion (World Bank, 2010).

The recent history of Lebanon and the specific circumstances of capitalist development made the economic situation more and more complex, beginning with the Ottoman rule, progressing through the French mandate, and then the Independence followed by the civil war which lasted 15 years with its repercussions lasting until today. After the long civil war (1975-1990), the conditions of foreign aid and the difficulties of reconstruction adversely influenced the place of Lebanon in the global economy and challenged the evolution of commercial and economic legislation and professional practice. The French colonial domination in Lebanon lasted for more than three decades in the early 20th century; a clear French influence is still noticeable in commercial and professional matters though it was challenged by a less visible British influence. The latter has been enhanced and transformed with the growing internationalization of audit and accountancy. "The history of the development and structuring of accountancy in Lebanon offers in fact a unique example of a competition between two models, the model of the French occupying power, and the model of the dominant commercial power in the Middle East for half a century since the end of the nineteenth century, Great Britain". And after more than 50 years of independence, the professional field has undergone deep changes and new agendas have come to the front as adjustment policies and foreign investments which tend to impose the generalization of international standards (Longuenesse, 2006).

The most recent available statistics shows that there are 11 companies and 2 investment funds listed on the Beirut Stock Exchange (BSE) with a market capitalization of US\$1.4 billion as of April 2003, which represents less than 10 percent of gross domestic product. As of April 2003, there were 63 banks operating in the Lebanese banking system, of which the ten largest banks held some 75 percent of the total banking assets (US\$52 billion). There were 63 insurance companies, of which the top 15 accounted for 70-75 percent of the insurance business. In 2002, insurance companies in total issued approximately US\$400 million in premiums. (World Bank, 2003)

1.3. Objective of the Study

The research will examine the ethical awareness among auditors practicing in Lebanon. The study aims to test the effect of sex, age, education level, holding a CPA degree, years of experience, and the size of the audit firm on the ethical sensitivity of the auditor regarding several ethical dilemmas.

The main purpose of this research is to describe ethical awareness and behaviors of auditors in Lebanon. The central research question is: "what are the factors that affect the ethical awareness and ethical judgment of auditors in Lebanon?"

1.4. Research method

It is generally known that there are two different research approaches: deductive and inductive. With respect to the former approach, hypotheses are developed from existing theories and then tested to be either falsified or not falsified. In contrast, the latter approach entails a reverse process starting with observed phenomena or empirical

finding, and the hypotheses are eventually deduced based on the collected data (Hussey and Hussey, 1997).

In relation to the research strategy, deductive approach is often linked to a quantitative approach, while inductive approach to qualitative methods. The qualitative approach is subjective in nature, whereas quantitative research is objective in nature. As causality is one of the main characteristics, quantitative method is concerned with not only describing how things are but also strongly focusing on explaining the way the situation happens, whereas the former tries to understand the world through its participants. Besides, in quantitative research, generalization beyond the particular context is often possible (Hussey and Hussey, 1997).

The data collected in quantitative research ranges from simple counts such as frequency of occurrence to the more complex types such as analysis of variances or regression analysis. For this data to be useful it needs to be analyzed and interpreted through quantitative analysis techniques. Diagrams and tables are created to visualize and establish the relationship between variables (Hussey and Hussey, 1997).

The aim of this research is to examine the situation of ethical awareness, and ethical judgment among auditors in Lebanon through the construction of hypotheses, which will then be tested using quantitative data. Hence the use of quantitative and deductive research methodology is a proper choice.

The two dimensions of the ethical behavior among auditors will be tested using one behavioral variable which is auditor's independence.

CHAPTER II

2. Literature Review

This chapter presents a review of the auditing profession with a note on auditor's independence. In addition, previous studies related to each factor claimed to affect the ethical judgment of the auditor were reviewed. The presented theories were used to construct the hypotheses.

To investigate ethical awareness and ethical judgment among audit professionals, it is necessary to determine the factors which can influence the auditing profession in general and in Lebanon in particular. These factors include gender, age, educational level, years of experience, and the audit firm size. Moreover, familiarization with the code of professional conduct regulating the auditing profession is also required. Hence an extended review of the pertinent literature is warranted.

2.1. The Auditing Profession

In order to become a certified auditor, an auditor should satisfy three general requirements which dominate the area of licensing. "Nearly in all countries at least one of three requirements- Education, Experience, and Examination- is a licensing requirement" (Wood, 1996). Professional accountants are required to comply with the Code of Ethics for Professional Accountants issued by the regulatory institutions of their countries.

In order to analyze the effect of cross-cultural and environmental factors on auditing, it is essential to understand the audit

characteristics. According to Wood, 1996, the five general audit characteristics which are intended to measure auditor's ability are:

1. **“Auditor Requirements for Licensing**
2. **The Attest Function-** is the process of rendering an opinion on the financial statements taken as a whole.
3. **Ethical standards** – is what constitutes the auditor's ethical behavior.
4. **Independence-** which lend credibility and reliability in the audit report; independence is usually secured by means of restrictions placed upon the auditor-client relationship.
5. **The Audit Report-** it represents the conclusion of the audit process and it is the statement on which interested parties rely” (Wood, 1996).

The IFAC code provides a common ethics language for accountants and auditors all over the world. The visibility of The International Federation of Accountants Code of Ethics for Professional Accountants in the U.S. has grown in recent years as business has become increasingly global and as the AICPA, American Institute of Certified Public Accountants, has begun the process of converting its Code of Professional Conduct with the IFAC guidance. “If you think global ethics rules are irrelevant for your practice, you may be surprised to learn that CPA firms of all sizes are being asked to confirm their compliance with global standards”. The IFAC code uses a conceptual framework approach to evaluate relationships or circumstances that raise ethical issues. It requires in many situations that professionals identify and analyze threats to their independence and apply appropriate "safeguards" that eliminate those threats or reduce threats to an

acceptable level. The IFAC code addresses most of the same areas as the AICPA code, such as objectivity, independence, due care and confidentiality, IFAC's conceptual framework approach suggests safeguards that may reduce threats in particular circumstances (Allen and Bunting, 2008).

Figure 2.1: IFAC facts and figures

IFAC Facts and Figures
Founded in 1977
Chief role is establishing global standards for auditing, ethics and independence, quality control, education and governmental accounting.
<i>*157 member bodies and associates in 123 countries /jurisdictions.</i>
<i>*Represents more than 2.5 million accountants</i>
<i>*Organizations in 100 jurisdictions have converged or, like the U.S., are in the process of converging their codes with the IEAC, Code of Ethics for Professional Accountants</i>
<i>*Standard-setting boards are:</i>
<i>• International Accounting Education Standards Board</i>
<i>• International Auditing and Assurance Standards Board</i>
<i>• International Ethics Standards Board for Accountants</i>
<i>• International Public Sector Accounting Standards Board</i>

2.2. Auditing Profession in Lebanon

After years of civil war in Lebanon, the Lebanese Government made vigorous efforts to align corporate financial reporting requirements with International Accounting Standards (IAS).

“In November 1995, and according to law n. 364 of 1994, a new professional association was created under the name “Niqa’bat khubara’ al-muha’saba al-muja’zi’n fi’ Lubna’n”, In English, Lebanese Association of Certified Public Accountant (LACPA). Its objectives were defined as follows:

“To protect the profession and strive for its improvement...; to develop a spirit of mutual support...; to realize scientific studies...;to prepare and propose accountancy principles and audit standards....”

The LACPA was the outcome of a long struggle for professional recognition and replaced the previously existing “Union of Licensed Accountants” (Niqa`bat al-Muha`sibi`n al-Muja`zi`n fi`Lubna`n), under the supervision of the ministry of labor”. Nevertheless, the licensing requirement for the accounting and the auditing professions were not settled for many years after 1995 (Longuenesse, 2006).

However, all applicants for the Lebanese Association for Certified Public Accountants who pursued license to practice were certified without examination. More prominently, no enforcement mechanism exists to ensure IAS compliance, except in the banking sector. Even though, “in 1996, the Minister of Finance adopted IAS (with exceptions) as the national standards to be followed by all entities in the preparation of financial statements. High-quality financial reporting is essential in public interest entities in order that investors and customers can make informed decisions about these entities. While IAS is highly adapted to these public interest entities, it is generally more complicated than necessary for small- and medium-size enterprises, placing an excessive burden on them”. Although many audit firms make effort to perform audits in accordance with International Standards on Auditing (ISA), quality of audits varies significantly. The Order on Auditing, issued by the Minister of Finance, does not cover regulation or supervision of the auditing profession and does not mention enforcement regulations or the monitoring of ISA compliance (World Bank, 2003).

“In Lebanon as elsewhere, the evolution of the market, the new regulations, the development of new technologies and new products, their consequences on modes of production and commercialization, created a new demand for consultancy and business services, mainly in management, fiscal issues, and computer development. To respond to this demand, accountants developed new activities, new services and new products” (Longuenesse, 2006).

International Standards on Auditing are applicable for the audit of listed companies and banks. The rules of the Beirut Stock Exchange and the Banking Control Commission require that the financial statements of all listed companies and all local banks should be audited in accordance with ISA.

A recent study by Yusuf Sidani in Lebanon in (2007) about the auditing profession in Lebanon and how society looks at the role of the revealed a significant difference in the perceptions of the role of the auditor in respect of fraud detection. This expectation gap was in terms of auditor roles and responsibilities which reflects the fact that many users do not have a proper understanding of the profession. This facts along with others leads to a continuous pressure on auditing professionals in Lebanon “to serve the proper image of an auditor being an independent, autonomous and ethical figure, free from undue pressures and unjustifiable demands” (Sidani, 2007).

2.3. Auditor’s independence

As the most important variable of auditor’s ability, I chose auditor’s independence and attempted to measure it in this study.

Investors, governments, regulators and all the society rely on the independence of the auditor in auditing the financial statements of publicly traded companies

as well as millions of privately held firms. Auditor's independence is evidence of his integrity and objectivity (Marilyn et al., 2010).

The IFAC Ethics Committee defines independence as independence of mind, which permits professional judgment and the exercise of objectivity and professional skepticism, and independence in appearance which is the avoidance of facts that would lead a reasonable third party to conclude that auditor's independence is impaired (Marilyn et al., 2010).

However, several threats that could impair auditor's independence are identified and over the last several years, the accounting profession and the regulatory bodies have developed strong safeguards to protect and maintain the independence of the audit firm. "These safeguards include education and training requirements for entry to the profession, professional standards and disciplinary processes, external reviews of quality control systems, and corporate governance". Also, auditors should recognize that the public is relying on their work, on their integrity and objectivity (Marilyn et al., 2010).

"Threats to independence are circumstances that could impair independence. Whether independence is impaired depends on the nature of the threat and whether it would be reasonable to expect that the threat would compromise the member's professional judgment" (Hansen, 2010).

Some of the identified threats are:

1. **Self-interest threat-** "occurs when a firm or a member of an assurance team could benefit from a financial interest in or other self-interest conflict with a client" (Marilyn et al., 2010).

2. **Familiarity threat-** occurs when a firm or a member of the assurance team becomes too sympathetic to the client's interests by virtue of a close relationship with the assurance client (Marilyn et al., 2010).
3. **Undue influence threat-** "attempts by an attest client's management or other interested parties to coerce or exercise excessive influence over the member" (Hansen, 2010).
4. **Financial self-interest threat-** "potential benefit to a member from a financial interest in, or from some other financial relationship with, an attest client" (Hansen, 2010).

Besides, auditor's independence is an indicator of Audit Quality. Jean Bedard included auditor independence as one of the aspects that define audit quality alongside adherence to professional standards and auditor effort (Bedard, Johnstone and Smit, 2010). Also, Colbert included auditor independence as one of five components that constitute a quality control system for audits (Colbert and Murray, 1998). Likewise, the guidelines and measures for audit quality and auditor's performance as set in generally accepted auditing standards include: competence, independence, and exercise of due professional care (Lin and Hwang, 2010).

The auditor's independence is a very important measure that divulges the quality of the audit provided by the auditor. Independence is a must to ensure trustworthy audit reports by external auditors. In this research an assessment of the ethical sensitivity of the auditors toward their independence of mind and independence in appearance shall be attempted. An audit failure will occur in case the auditor is not independent. "Less independent auditor is less likely to issue a negative report in order to avoid losing clients that are more likely to switch after receiving a going-concern report" (Francis, 2011). Prior studies

argue that high fees paid by an auditee to an external auditor may impair the auditor's independence as high fees increase the economic bond between the auditor and the client (Lin et al, 2010).

2.6. Moral Reasoning Development

Lawrence Kohlberg, the architect of the modern moral development paradigm, argues that people progress in moral reasoning through a hierarchy of stages; and that people in all cultures pass from lower to higher stages of moral reasoning. He offers a model of three moral development levels, each level containing two stages. "At the lowest *pre-conventional* level, egocentric individuals see the value of human life as a means to their own needs and they exhibit obedience and punishment orientation, an egocentric defense to superior power or prestige, and a trouble avoiding attitude. At the *conventional* stage, individuals see the value of human life through the empathy and affection of family members. They conform to stereotypical images of the majority and avoid disapproval and dislike by others. At the highest *post-conventional* level, human life is sacred and a universal right. An individual develops moral autonomy and avoids violating the rights of others" (White, 1999).

Moral development is seen as an evolution, where three levels of development can be identified as follows:

1. At the first level of moral development, a person considers social expectations to be external to him or her. It is considered to be more of a self-serving stage of moral development. Thus, an ethical behavior at this level is motivated by individual's desire to

avoid punishment or because it serves his or her self-interests (Eynon, Hill and Stevens, 1997).

2. As the individual reaches the second level of maturity, he or she is concerned about the well-being of others, the society and the perception of others as to his or her morality. At this level the individual is more vulnerable to peer-pressure which can be typically seen in teenagers (Eynon et al., 1997).
3. Individuals at the third level of moral development “are concerned and will act on behalf of others in the society”. They believe in acting for the public good and that the rights of the individual exist independently of society (Eynon et al., 1997).

Using the above-mentioned development theory, a test has been devised whose participants are subjected to different ethical dilemmas in order to measure their moral reasoning abilities. This test is based on the perception that morality is determined by decision and not by behavior; however the decision later determines behavior. The test score is called “P” score, Principal Morality score, and it provides a measure of the respondent’s moral reasoning ability. It also provides a tool for comparing different groups and their Moral Reasoning Abilities (MRAs), including accountants (Eynon et al., 1997).

Several studies have been conducted to examine the mean P score among auditors both in small and big firms. The P score for auditors is closer to the P score identified for adults in general with the same level of education. Surprisingly, it was found that the MRA of small-firm CPAs is lower than other accounting practitioners and lower than average college students (Eynon et al., 1997).

Also, various studies have shown that MRA increases with age and educational level. However studies conducted among auditors reveal that the opposite is true and that younger accountancy professionals score higher than their superior managers (Eynon et al., 1997).

The impact of gender on moral reasoning ability has been shown to have slight effect on the P score, however, the group of females in accountancy score higher than their male counterparts (Eynon et al., 1997).

2.7. Auditor's Size

It is widely questioned if the audit quality is influenced by auditor type (governmental vs. private auditors) and by auditor size (big auditors vs. non-big auditors). An empirical study showed that financial statements audited by governmental auditors contain smaller discretionary accruals than those audited by private audit firms. The higher quality of government auditors probably stems from the fact that they enjoy more independence and more resources (Dehkordi and Makarem, 2011).

On the other hand, numerous prior studies indicate that auditor's size is positively related to audit quality. Audit-quality was defined by De Angelo (1981) as a probability of detection and revelation of anomalies in financial statements. Alternately, the probability of detection is related to auditor competence and probability of revelation is associated with auditor independence and both are linked to auditor size. In fact, the reputation that a brand name auditor enjoys will grant him with the ability of favoring a client. Also, big auditors have better technology and employees which enable them to outperform smaller ones. Thus, it could be assumed that Big-Four auditors possess more

independence and competence. However, empirical studies showed that audits provided by big-auditors are not higher in quality than those provided by non-big ones (Dehkordi and Makarem, 2011).

Indeed, and from a theoretical perspective, Deegan (2002) stated that societies expect organizations to conform to the laws, regulations, norms and common values. Moreover, an organization in a professional context cannot survive in the society unless it satisfies all the social requirements regarding legitimacy. "Legitimacy is considered to be a source on which an organization is dependent for survival". This theoretical argument verifies the results of the previous study in which no difference in audit quality was found between big auditors and small auditors. It is argued that small organizations will mimic big ones in order to survive in society (Deegan, 2002).

On the other hand, other researchers argue that there is a positive association between audit quality and audit office size. An empirical study of audit quality, using a large sample of U.S audit client firms over five years, showed that the office size has significantly positive relations with both audit quality and audit fees, supporting the view that large offices provide higher quality audits compared with small offices. Large audit firms are thought to have international brand names, Big Four Auditors, and industry expertise. Thus, they are able to provide higher-quality audit services than small audit firms which lack such brand names or industry expertise (Choi, Kim, Kim, and Zang, 2010).

A two-year study based on a sample of 6,568 U.S firms audited by 285 Big Four offices claimed that on average audit quality is higher in large Big Four offices, however no claims suggest that audit quality in smaller

offices is unacceptably low (Francis and Yu, 2009). Overall, it is suggested that regulators should pay attention to the audit reports issued by small offices because they are more likely to be economically dependent on a particular client, and thus to compromise audit quality (Choi et al, 2010).

Two different arguments exist concerning the effect of audit office size on audit quality. The first is that audit quality is homogeneous among audit offices of all sizes due to a social endeavor based on the Legitimacy theory. The second argument is based on empirical data and suggests that higher audit quality is associated with larger office size. This argument is supported by the fact that big auditors enjoy more independence, competence and expertise.

2.8. Development of hypotheses

It can be argued that newly established or small organizations tend to copy the structure and mode of operation of well-established organizations in order to be considered legitimate and thus acceptable in the industry and the society, hence:

H1: The level of ethical awareness and ethical judgment is homogeneous in audit firms of all sizes.

Moral reasoning abilities are the core of ethical judgment. The level of moral development explicitly affects the ethical decisions made by an individual. Several studies by Ponemon and Gabhart 1993, Eynon 1997, and White 1999 have been carried out utilizing a test which confronts the professionals with different ethical dilemmas and allows the determination of the MRA of individuals. Surveys conducted among accountancy professionals revealed that age, gender, educational level,

and the length of work experience were determinants of MRA. A number of assumptions can arise from these findings which are integrated in the following hypotheses:

H2: The level of ethical awareness and ethical judgment is different among auditors since MRA of individuals depend on their gender.

H3: The level of ethical awareness and ethical judgment is different among auditors since MRA of individuals depend on education.

H4: The level of ethical awareness and ethical judgment is different among auditors since MRA of individuals depend on length of work experience.

H5: The level of ethical awareness and ethical judgment is different among auditors since MRA of individuals depend on their age.

CHAPTER III

3. Research Methodology

This chapter discusses the methodology used for the analysis together and the definition of the variables used to construct the analysis. The questionnaire design is also briefly described.

Questionnaires were chosen to obtain data since it was not feasible to conduct lengthy interviews with individual auditors. The questionnaires were self-administered and served as the primary source of data collection method.

3.1. Population and Sample

Sampling means selecting a subset of the population to work with in order to save time and cost. There are different subtypes of sampling. Systemic random sampling means selecting one unit on a random basis and choosing additional units at evenly spaced intervals until the desired number is obtained. For this thesis, systematic random sampling was chosen since we are looking for audit firms using the registry of the Lebanese Association of Certified Public Accountant (LACPA). The generated audit firms thereafter were picked through systematic random sampling to ensure a wide range of audit firm from big size offices to middle and small offices, until 14 firms were obtained. This number was chosen from Lebanon in order to guarantee a sufficient number of respondents (at least total of 100 respondents). Accordingly, to ensure a high response rate the data from the audit firms was collected personally rather than through e-mail.

The sample was composed of auditors working in private audit firms of different sizes in Lebanon. The firms included three of the Big Four: “Ernst and Young”, “Deloitte & Touch” and “Price WaterHouse Coopers”, and five small and middle sized audit firms: “Abousleiman & Co”, “HLB”, “Hikmat Sleem & Associates”, “Talal Abu-Ghazaleh & Co”, “A.C.A”, “Grant Thorton”, “Merheb & Co”, “United For Accounting and Auditing”, “Menaf”, “Yafi Bros & Co”, and “Horwath Abouchakra & Co”.

A total of 200 questionnaires were distributed and 136 (68%) responses were received, all of the respondents were of Lebanese nationality.

Table 3.1: Sampling Information in Lebanon:

Audit Firms/ Auditors	
Population (Firms)	56
Chosen Sample	14 firms, 25% of the population
Total practicing auditors	1144
Chosen Sample	114 auditors, 10% of the population
Surveys Distributed	200
Surveys Received	136
Response Rate	68 %

3.2. Questionnaire Design

A questionnaire was designed to gather information from the predetermined respondents. It contained ten questions which were divided into two parts. The first section consisted of six questions which solicited background information about the respondent. In the second half, there were five ethical dilemmas. The ethical dilemmas were modified cases from ICPAI (Ethical dilemmas for auditors, discussion paper 2006). These dilemmas were individually formulated in a fashion that the ethical awareness and ethical judgment become the core issue. The respondent was asked to relate to each dilemma

using a numerical scale, from 1 to 7, corresponding to the level of agreement with respect to the issue of impairment of independence given the circumstances in each dilemma (Business Research Methods).

The questionnaires were delivered to auditors in their offices. Even though the official language in Lebanon is Arabic, but English is widely used in conducting businesses. Thus the questionnaire was designed in English.

3.3. Defining the Variables

As it has been explained in the aforementioned section, the questionnaire contained two parts. The first section dealt with personal information regarding the respondent's background. Age, gender, years of experience, the educational level, and the office the auditor was working for represented the attribute or independent variables.

The second part consisted of ethical dilemmas which tried to assess the attitude and behavior of the respondents, classified as behavioral variables, which assess the respondent's behavior, beliefs and attitudes in the past and the present, and might be used to predict his future stance.

With respect to the questions related to ethical dilemmas, the variables in the questionnaire could be divided into dependent and independent variables. The dependent variables are the effects of independent variables. In this research the dependent variables represent the impairment level of auditor's independence in each ethical dilemma. By providing five ethical dilemmas, the aim was to investigate the perceived impact on auditor's independence in different and difficult ethical situations. As for auditors, independence is of high importance

and it can be considered as an index which can be measured to explore the level of ethical awareness and ethical judgment among auditors.

With respect to a specific response for each ethical dilemma, the higher the choice of the participant is, the higher is the level of awareness he possesses and the higher is his ethical sensitivity. The ethical dilemmas provided in the questionnaire relate to situations in which the independence of the auditor might be impaired. The aim of the questionnaire was to measure the level of auditors' awareness in relation to the attribute variables.

In relation to independent variables there were five factors taken into account, namely age, gender, education, years of experience, and the size of the audit firm.

The five dilemmas mentioned in the survey included:

Ethical Dilemma 1: Financial self-interest threat

"If I have one client, who makes up 12% of the annual income of my firm, my independence would be impaired? Not impaired?"

This dilemma shows the situation, in which the independence of an auditor might be threatened due to financial interest. This threat mentions the potential benefit that the auditor can receive from the direct or indirect financial interest with the client (ICPAI, 2006). In this case, the threat comes from the economic benefit brought by the attest client, which is 12% of the annual fee income of the firm. Some people may believe that this figure is material and that the independence of the auditor might be impaired. Others will think that it is immaterial. The risk of being impaired, therefore, is thought not to be high.

This dilemma can be seen as a direct financial interest from the relationship with the client (Hansen, 2010).

Ethical Dilemma 2: Undue influence threat

“A client is offering holiday deals. If I purchase this holiday without being offered a special discount, my independence would be impaired? Not impaired?”

This dilemma refers to an undue influence threat. This question explicitly shows that there is no harm to the independence. If the auditor decides to purchase the holiday tickets, there is no influence on his independence, because the deals follow the normal procedure. However, people with too high sense of suspicion may consider it as a significant threat. Thus, this question is designed to measure the level of sensitivity of auditors (ICPAI, 2006).

This dilemma could be seen as involving a gift from the client to the auditor and it is clearly insignificant to the auditor (Hansen, 2010).

Ethical Dilemma 3: Familiarity threat

“If I have the same audit client for more than 10 year, my independence would be impaired? Not impaired?”

According to the principles of auditing, familiarity threat occurs when “an auditor becomes sympathetic to the client’s interest” due to a close relationship with the client. It is supposed that, in this situation, the relationship between auditor and the particular client becomes closer as compared to other clients. Consequently, independence would be impaired if the audit firm does not have any appropriate safeguards against this threat (ICPAI, 2006).

This dilemma could be seen as a threat since the firm has provided the client with attest services for a prolonged period (Hansen, 2010)

Ethical Dilemma 4: Familiarity and financial self-interest threat

“If my client is establishing a new company and I am going to buy some of its shares and I will also be commissioned to do the audit for the company, then my independence would be impaired? Not impaired?”

This question shows clearly a threat of familiarity as well as a financial self-interest threat. Audit professionals are not permitted to have either a close relationship or a financial interest with their attest clients (IFAC code of professional conduct). The standard is clear to this point, the audit firm, any partner in the firm, or any person in a position to influence the conduct and outcome of the audit should not hold any shares in the client’s company (ICPAI, 2006).

Herein, the threat occurs explicitly.

Ethical Dilemma 5: Financial self – interest threat

“I am planning on opening my own audit firm. Considering the financial crisis, I was worried that I will not get a client. Luckily today I landed on an audit deal. If it provides 20% of my annual income the first year, my independence would be impaired? Not impaired?”

Similar to dilemma 1, the financial interest appears again. Independence seems to be impaired if there is a client who brings more than 15% of total revenues for an auditing firm, since it implies that the firm will rely significantly on one client. This dilemma attempts to determine how many participants would judge the situation to have a significant impact on auditor’s independence (ICPAI, 2006).

This dilemma shows an excessive reliance on revenue from a single attest client (Hansen, 2010).

3.4. Limitations of the Questionnaire

It is often true that people will not necessarily do exactly what they think and what they are supposed to. Hence, there could be differences between auditor's replies and their real actions. Also, differences may exist in replies between auditors who are CPAs and those who are non-CPAs. However, these limitations may not significantly influence the results of the research especially that confidentiality of the respondents was protected so that they could answer honestly. A question was added to the attribute variables in order to differentiate between CPAs and non-CPAs.

3.5. Instrumentation

Descriptive statistics was provided using a statistical tool called Mega-Stat, an add-in to Microsoft Excel that performs statistical analysis.

SPSS, a statistical and mathematical program solution was used in testing the hypotheses.

All pertinent data are available in the CD provided herewith.

CHAPTER IV

4. Data Analysis and Results

This chapter deals with the statistical analysis of the data collected. Explanations for descriptive statistics are presented. Then the hypotheses are tested.

4.1. Descriptive Statistics

The questionnaire was provided to a sample of auditors practicing in Lebanon. A response rate of 68% resulted in the collection of 136 surveys. All surveys were valid.

In the following section the demographic profile of the sample will be presented. This profile includes gender, age group, educational level and length of work experience. The percentage of the population holding a CPA degree shall be indicated and auditors will be separated into two groups based on the audit office where they are working namely, Big Four vs. Non Big Four.

Table 4.1: Frequency of Genders

	Frequency	Percent
Male	96	70.6
Female	40	29.4
Total	136	100

In regard to the gender of the respondents, males represented 70.6 % of the sample and females 29.4 %.

This difference may be attributed to the fact that the auditor's job requires rotations between offices and occasional traveling which impose additional obligations that females may find impracticable or unacceptable, hence the disparity between the sexes.

Figure 4.1: Gender Distribution

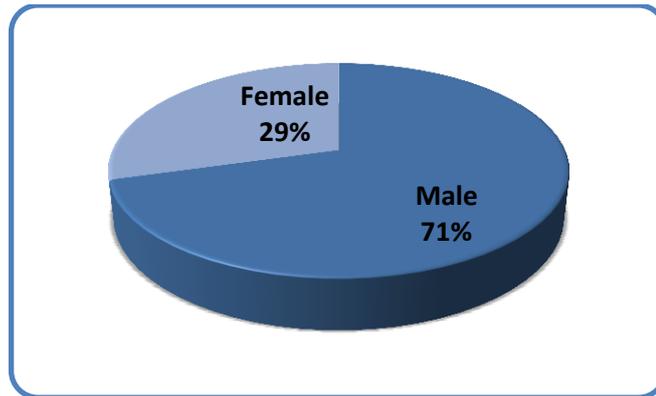


Table 4.2: Frequency of age groups

	Frequency	Percent
less than 25 years	40	29.4
Between 25 and 35	66	48.5
Above 35 years	30	22.1

The table above reveals that 29.4% of respondents are fresh graduates aged less than 25 years, 48.5 % are between 25 and 35 years old, and the smaller fraction, 22%, is above 35 years. This age distribution could be related to the fact that the auditing profession is a young and fast expanding profession in Lebanon. The number of practicing auditors increased 50% in the last decade.

Figure 4.2 : Age Distribution

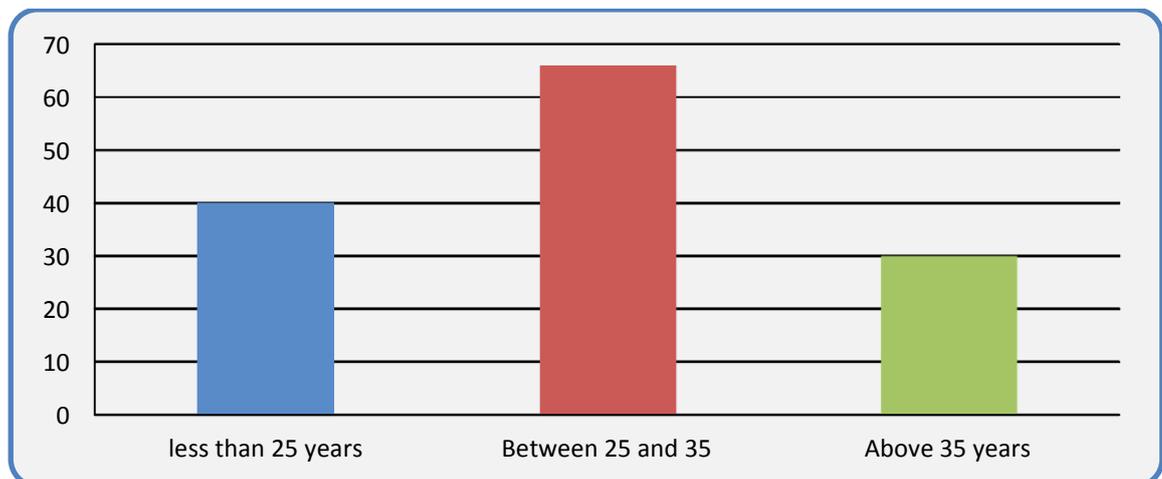
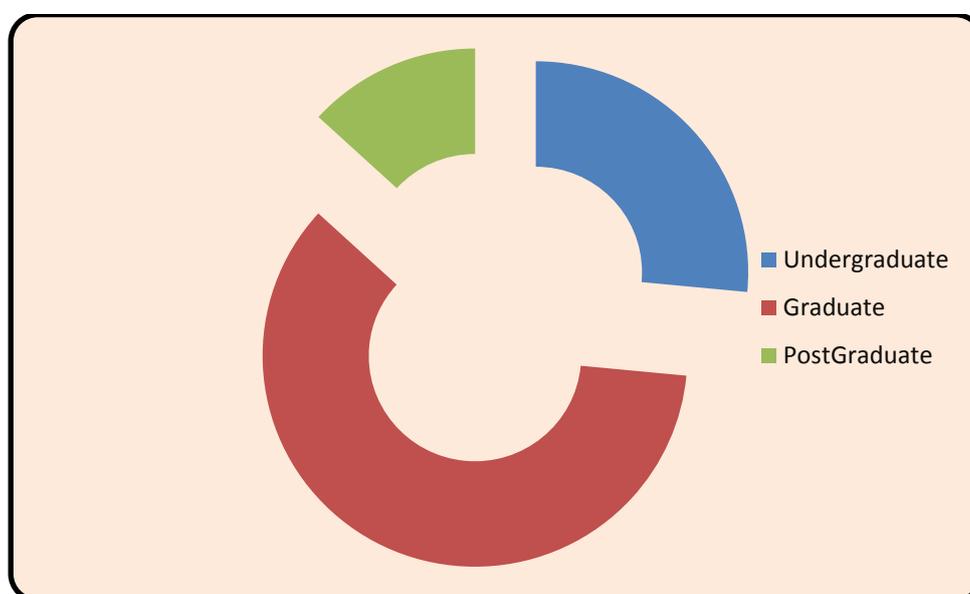


Table 4.3: Frequency of Educational Level

	Frequency	Percent
Undergraduate	36	26.5
Graduate	82	60.3
Postgraduate	18	13.2

Concerning the level of education of the auditors, 26.5% holds an undergraduate degree, 60.3% has a graduate degree and 13.2% has a postgraduate degree indicating that practicing auditors in Lebanon are educationally quite qualified.

Figure 4.3: Education Level of Auditors



Some auditors are holders of the Certified Public Auditor degree which enhances further their professional career. 41.2% hold a CPA degree whereas 58.8% do not as shows in table 4.4.

Table 4.4: Holders of CPA degree

	Frequency	Percent
CPAs	56	41.2
Non CPAs	80	58.8

The higher percent of Non CPAs may be due to the fact that until 2011 the CPA examinations were held only in the USA which implied travelling abroad and imposed financial obligations which may have constituted an obstacle for many auditors who would otherwise have been willing and capable to pass the CPA examinations.

Table 4.5: Length of work experience

	Frequency	Percent
Less than 5 years	66	48.5
Between 5 and 10 years	42	30.9
Above 10 years	28	20.6

Analyzing the auditor's years of experience, table 4.5 shows that 48.5% of the surveyed practitioners have less than 5 years of work experience, 30.9% between 5 and 10 years, and only 20.6% are practicing for more than 10 years. This distribution could be linked to several facts. First of all, it was already noted that a major fraction of the sample is aged less than 35 years, 78% of the sample. Secondly, the majority (60.3%) are holding a graduate degree which means probably that they joined the profession in their mid to late twenties. And finally, in an audit office auditors of more than 5 years of experience are usually promoted to managers and those of more 10 years are promoted to partners; however our target sample were in-charge auditors (who typically have less than 5 years of work experience).

The surveyed auditors were separated into two groups, auditors practicing in Big-Four audit firms, which are large in size, and those working in local private firms, which are of middle and small size. The size of the audit firm is based on the CPA Firm's market share in

Lebanon and the number of its employees compared to other firms. It should be noted that in Lebanon the size of the audit firm is highly correlated to the brand of the firm: Big-Four vs. Non Big-Four. Thus it is possible to link the two variables together, the size of the firm and its brand name. Table 4.6 shows the distribution of auditors between Big-Four and Non Big-Four audit firms.

Table 4.6: Audit Office Size

	Frequency	Percent
Big Four	74	54.4
Non Big Four	62	45.6

These relatively comparable percentages allow the use of the audit office size as an attribute variable.

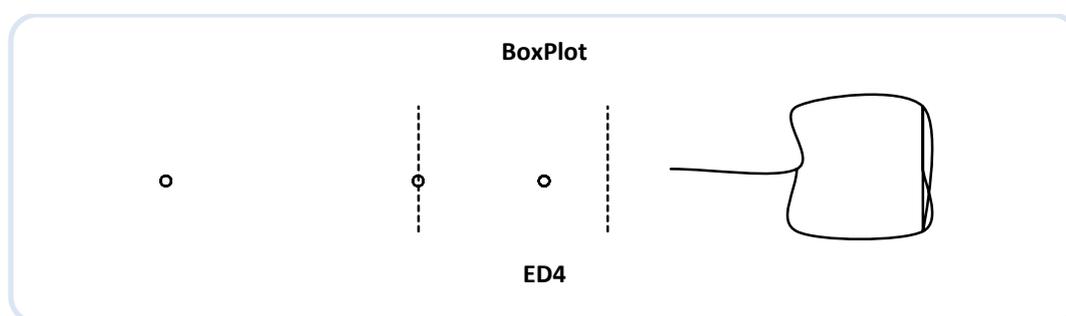
Table 4.7 refers to the ethical Dilemmas from ED1 to ED5. The scoring system assigned a minimum of 1 and a maximum of 7. A score 1 corresponds to the ethical judgment “not impaired” and 7 corresponds to the ethical judgment “impaired”.

Table 4.7: Descriptive table

	<i>ED1</i>	<i>ED2</i>	<i>ED3</i>	<i>ED4</i>	<i>ED5</i>
count	136	136	136	136	136
mean	2.28	1.75	3.54	5.91	4.24
sample variance	2.34	1.91	4.52	2.90	4.60
sample standard deviation	1.53	1.38	2.13	1.70	2.14
minimum	1	1	1	1	1
maximum	7	7	7	7	7
1st quartile	1.00	1.00	1.00	6.00	3.00
median	2.00	1.00	4.00	7.00	4.00
3rd quartile	3.00	2.00	5.00	7.00	6.00
interquartile range	2.00	1.00	4.00	1.00	3.00
mode	1.00	1.00	1.00	7.00	7.00
low extremes	0	0	0	8	0
low outliers	0	0	0	20	0
high outliers	2	8	0	0	0
high extremes	0	6	0	0	0

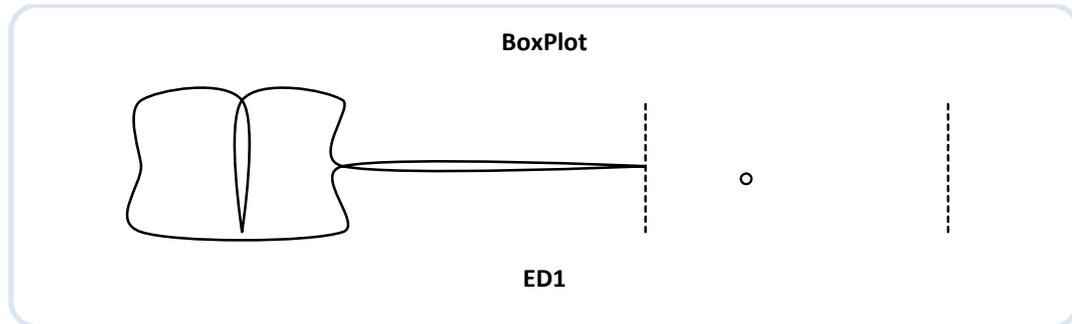
ED4 has the highest mean value, 5.91, with a standard deviation of 1.7. The Boxplot shows three low outliers: 1, 3 and 4. The quartiles show that 25% of the respondents scored below 6 with a high dispersion and 50% of the respondents scored less than 7 with a high dispersion.

Figure 4.4: Boxplot ED4



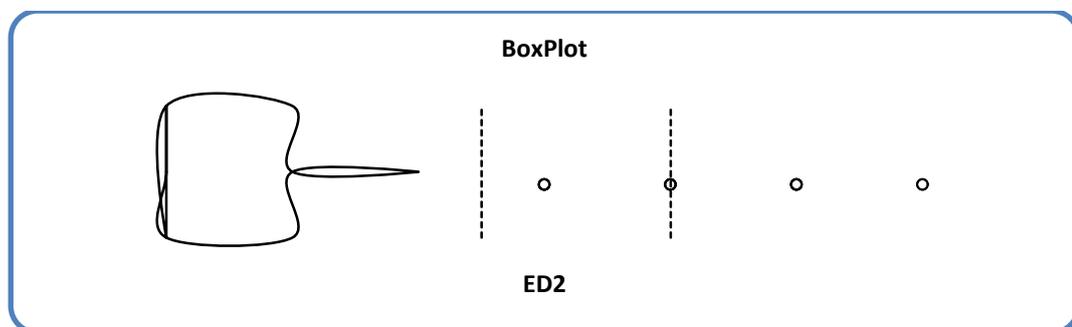
ED1 has a mean value of 2.28 with a standard deviation of 1.53. The Boxplot shows one high outlier of 7. The quartiles show that 25% of the respondents scored one, 50% of the respondents scored less than two in low dispersion, and 75% of the respondents scored less than 3.

Figure 4.5: Boxplot ED1



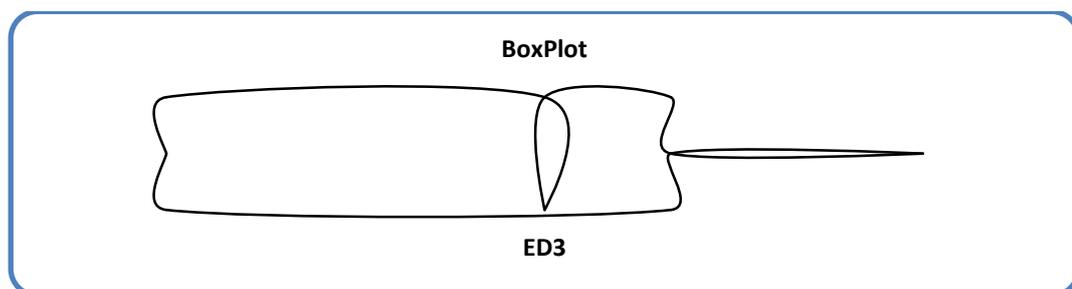
ED2 has the lowest mean value, 1.75, with a standard deviation of 1.91. The Boxplot shows four high outliers: 4, 5, 6 and 7. The quartiles show that 50% of the respondents scored less one and 75% of the respondents scored less than 2.

Figure 4.6: Box plot ED2



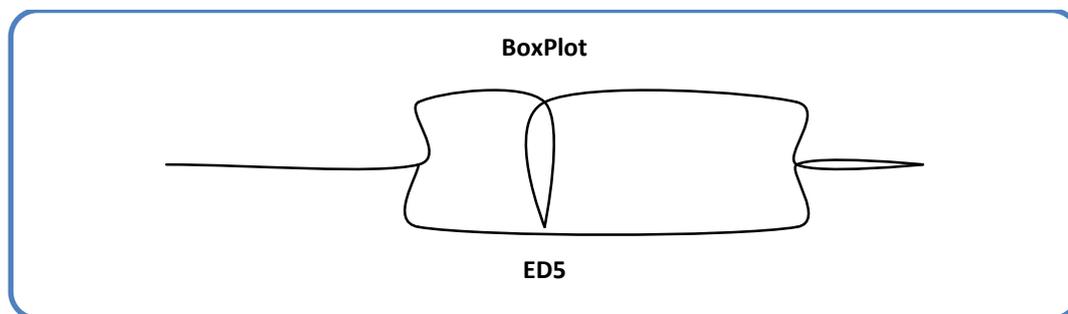
ED3 has a mean value of 3.54 with a standard deviation of 2.13. The Boxplot shows no outliers. The quartiles show that 25% of the respondents scored less than 1, 50% less than 4 and 75% scored less than 5 with varying dispersions.

Figure 4.7: Boxplot ED3



ED5 has a mean value of 4.24 with a standard deviation of 2.14. The Boxplot shows no outliers. The quartiles show that 25% of the respondents scored less than 3, and 50% scored less than 4 and 75% of the respondents scored less than 6.

Figure 4.8: Boxplot ED5



4.2. Correlation Analysis

A correlation analysis between all variables was carried out through Mega Stat. The computer results are summarized in table 4.8.

Table 4.8: Correlation Matrix

	<i>Gender</i>	<i>Age</i>	<i>EduLev</i>	<i>CPA</i>	<i>FirmSize</i>	<i>Experience</i>	<i>ED1</i>	<i>ED2</i>	<i>ED3</i>	<i>ED4</i>	<i>ED5</i>
<i>Gender</i>	1.000										
<i>Age</i>	-.205*	1.000									
<i>EduLev</i>	-.333**	.179*	1.000								
<i>CPA</i>	-.116	-.128	.014	1.000							
<i>FirmSize</i>	-.008	.301**	-.235**	-.014	1.000						
<i>Experience</i>	-.223**	.805**	.320**	-.070	.251**	1.000					
<i>ED1</i>	-.055	-.198*	-.102	.095	.142	-.206*	1.000				
<i>ED2</i>	-.023	-.109	-.195*	.000	.359**	-.078	.602**	1.000			
<i>ED3</i>	.185*	.007	-.362**	-.251**	.350**	-.059	.258**	.435**	1.000		
<i>ED4</i>	.034	-.261**	-.124	-.290**	-.353**	-.284**	-.104	-.180	.243**	1.000	
<i>ED5</i>	.035	.089	-.289**	-.090	.494**	.057	.355**	.340**	.710**	.209	1.000

Legend

* Correlation is significant at level 0.05

** Correlation is significant at level 0.01

Concerning the attributes or independent variables it is noticed that age and gender are correlated. Auditor's educational level is correlated with gender and age. The size/type of the audit firm is correlated with age and educational level. Length of work experience is correlated with gender, age, education level, and firm size

Concerning the behavioral or dependent variables, ethical dilemma one is correlated with age and length of work experience. Ethical dilemma

two is correlated with auditor's educational level, audit firm's size and ethical dilemma one. Ethical dilemma three is correlated with auditor's gender, educational level, holding a CPA degree, the size of the audit firm, and ethical dilemmas one and two. Ethical dilemma four is correlated with auditor's age, holding CPA degree, the size of the audit firm, the length of work experience and ethical dilemma three. Ethical dilemma five is correlated with auditor's educational level, the size of the audit firm and ethical dilemmas one, two and three.

4.3. Cross Tabulation

A cross tabulation analysis is useful since it allows the examination of the relation between two categorical or attribute variables. In this research there are six categorical variables which are gender, age, educational level, length of work experience, holding a CPA degree and the size of the audit firm. In the following section the relation between these attribute variables will be examined. The p-value is a statistical measure that describes the significance of the relation between the two variables.

Table 4.9: Age and Gender

		Age				
		less than 25	between 25 and 35	above 35	Total	
Gender	Male	Observed	22	50	24	96
		% of row	22.9%	52.1%	25.0%	100.0%
	Female	Observed	18	16	6	40
		% of row	45.0%	40.0%	15.0%	100.0%
	Total	Observed	40	66	30	136
		% of row	29.4%	48.5%	22.1%	100.0%
			6.81	chi-square		
			2	df		
			.0332	p-value		

Table 4.9 indicates that 45% of the females are in the group age of less than 25 years whereas only 22.9% of males are within this group. The highest percentage of males (52.1%) is in the age group between 25 and 35 years. Also, the percentage of males aged above 35 years is higher than that of females (25% vs. 15%). The p-value (0.0332) shows that a significant relationship exists between gender and age group at a 95% confidence level.

Table 4.10: Gender and Education Level

		Education Level				
		Undergraduate	Graduate	Post-Graduate	Total	
Gender	Male	Observed	16	64	16	96
		% of row	16.7%	66.7%	16.7%	100.0%
	Female	Observed	20	18	2	40
		% of row	50.0%	45.0%	5.0%	100.0%
	Total	Observed	36	82	18	136
		% of row	26.5%	60.3%	13.2%	100.0%
		16.95	chi-square			
		2	df			
		.0002	p-value			

Table 4.10 shows that the highest percent of males (66.7%) has a graduate degree whereas the highest percent of females (50%) has an undergraduate degree. Figures for postgraduate level indicate that 16.7% of males completed their higher education compared to a lower percentage (5%) for females. The p-value of 0.002 shows a significant association between gender and educational level at a 99% confidence level.

Table 4.11: Gender and Holding a CPA degree

		CPA			
		yes	no	Total	
Gender	Male	Observed	36	60	96
		% of row	37.5%	62.5%	100.0%
	Female	Observed	20	20	40
		% of row	50.0%	50.0%	100.0%
	Total	Observed	56	80	136
		% of row	41.2%	58.8%	100.0%
		1.82	chi-square		
		1	df		
		.1771	p-value		

The above table shows that 37.5% of males and 50% of the females hold a CPA degree. This could be explained by the preceding results. A higher percentage of males chose to pursue graduate and postgraduate

studies whereas a higher percentage of females chose to do CPA examinations. However, the p-value shows that there is no significant relation between gender and holding a CPA degree.

Table 4.12: Gender and the Audit Firm

		Audit Firm			
			Big four	non Big four	Total
Gender	Male	Observed	52	44	96
		% of row	54.2%	45.8%	100.0%
	Female	Observed	22	18	40
		% of row	55.0%	45.0%	100.0%
	Total	Observed	74	62	136
		% of row	54.4%	45.6%	100.0%
			.01 chi-square		
			1 df		
			.9292 p-value		

Around 54% of the males and 55% of the females are working for a Big-Four audit firm while 45.8% of the males and 45% of the females are working for a non-Big four firm. These results suggest that no gender discrimination exists in choosing the audit staff in any audit firm in Lebanon. The p-value supports this conclusion by showing that no relation exists between the two variables: Gender and the Audit Firm.

Table 4.13: Gender and Length of work experience

		Experience				
			less than 5 years	between 5 and 10 years	above 10 years	Total
Gender	Male	Observed	40	32	24	96
		% of row	41.7%	33.3%	25.0%	100.0%
	Female	Observed	26	10	4	40
		% of row	65.0%	25.0%	10.0%	100.0%
	Total	Observed	66	42	28	136
		% of row	48.5%	30.9%	20.6%	100.0%
			6.89 chi-square			
			2 df			
			.0319 p-value			

Table 4.13 shows that a high percentage of females (65%) have less than 5 years of work experience compared to a moderate percentage (41.7%) of males. However the percentage of females who have more than 10 years of work experience is low (10%) compared to that of the males (25%). The p-value of 0.0319 indicates a significant relation between age and length of work experience at 95% confidence level.

Table 4.14; Age and Education level

		Education Level				
		Undergraduate	Graduate	Post-Graduate	Total	
Age	less than 25	Observed	14	24	2	40
		% of row	35.0%	60.0%	5.0%	100.0%
	between 25 and 35	Observed	16	40	10	66
		% of row	24.2%	60.6%	15.2%	100.0%
	above 35	Observed	6	18	6	30
		% of row	20.0%	60.0%	20.0%	100.0%
	Total	Observed	36	82	18	136
		% of row	26.5%	60.3%	13.2%	100.0%
			4.97	chi-square		
			4	df		
			.2904	p-value		

The above table shows that in each age group 60% of the respondents have a graduate degree with varying percentages holding an undergraduate or postgraduate degree. The p-value indicates that no significant relation exists between age and educational level.

Table 4.15: Age and Holding a CPA degree

		CPA			
			yes	no	Total
Age	less than 25	Observed	10	30	40
		% of column	17.9%	37.5%	29.4%
	between 25 and 35	Observed	34	32	66
		% of column	60.7%	40.0%	48.5%
	above 35	Observed	12	18	30
		% of column	21.4%	22.5%	22.1%
	Total	Observed	56	80	136
		% of column	100.0%	100.0%	100.0%
			7.25	chi-square	
			2	df	
			.0266	p-value	

Table 4.15 shows that 60.7% of the auditors holding a CPA degree are aged between 25 and 35 years, the lowest percentage includes those who are less than 25 years (17.9%). The p-value indicates that a significant relation exists between age and being a CPA at the 95% confidence level.

Table 4.16: Age and Length of work experience

		Length of work Experience				
			less than 5 years	between 5 and 10 years	above 10 years	Total
Age	less than 25	Observed	40			40
		% of row	100.0%	0.0%	0.0%	100.0%
	between 25 and 35	Observed	24	40	2	66
		% of row	36.4%	60.6%	3.0%	100.0%
	above 35	Observed	2	2	26	30
		% of row	6.7%	6.7%	86.7%	100.0%
	Total	Observed	66	42	28	136
		% of row	48.5%	30.9%	20.6%	100.0%
			153.36	chi-square		
			4	df		
			3.89E-32	p-value		

Table 4.16 shows a significant relation between age and work experience, the p-value indicates that this relation is significant at a

99% confidence level. This finding increases the reliability of the collected data and the trust in the respondents' answers.

Table 4.17: Age and Firm Type

		Audit Firm Type			
		Big four	non Big four	Total	
Age	less than 25	Observed	24	16	40
		% of row	60.0%	40.0%	100.0%
		% of column	32.4%	25.8%	29.4%
	between 25 and 35	Observed	46	20	66
		% of row	69.7%	30.3%	100.0%
		% of column	62.2%	32.3%	48.5%
above 35	Observed	4	26	30	
	% of row	13.3%	86.7%	100.0%	
	% of column	5.4%	41.9%	22.1%	
Total	Observed	74	62	136	
	% of row	54.4%	45.6%	100.0%	
	% of column	100.0%	100.0%	100.0%	
		27.13	chi-square		
		2	df		
		1.29E-06	p-value		

The p-value in the above table indicates that a significant relation at a 99.9% confidence level exists between the age group and the type of the audit firm wherein the respondent works. It is noted that 60% of young auditors (age less than 25 years) are working for a Big Four firm and 86.7% of the oldest group (age above 35 years) are working for a non-Big Four audit firm. Concerning the group of auditors working in a Big Four firm, around 70% are aged between 25 and 35 and only 13% are above 35 years. For the group working for non-Big-Four firms the highest percentage includes those above 35 years (41.9%) and the lowest percentage those below 25 years.

Table 4.18: Education Level and holding a CPA degree

		CPA			
		yes	no	Total	
Education	Undergraduate	Observed	20	16	36
		% of row	55.6%	44.4%	100.0%

Level					
Graduate	Observed	24	58	82	
	% of row	29.3%	70.7%	100.0%	
Post-Graduate	Observed	12	6	18	
	% of row	66.7%	33.3%	100.0%	
Total	Observed	56	80	136	
	% of row	41.2%	58.8%	100.0%	
			12.70	chi-square	
			2	df	
			.0017	p-value	

Table 4.18 shows that 55.6% of the undergraduate respondents hold a CPA degree, 70.7% of the graduate respondents do not hold a CPA degree and 66.7% of the postgraduate respondents hold a CPA degree. The p-value indicates that a significant relation at a 99% confidence level exists between educational level and holding a CPA degree.

Table 4.19: Education Level and Type of Audit firm

		Audit Firm Type			
			Big four	non Big four	Total
Education Level	Undergraduate	Observed	14	22	36
		% of row	38.9%	61.1%	100.0%
		% of column	18.9%	35.5%	26.5%
	Graduate	Observed	46	36	82
		% of row	56.1%	43.9%	100.0%
		% of column	62.2%	58.1%	60.3%
	Post-Graduate	Observed	14	4	18
		% of row	77.8%	22.2%	100.0%
		% of column	18.9%	6.5%	13.2%
Total	Observed	74	62	136	
	% of row	54.4%	45.6%	100.0%	
	% of column	100.0%	100.0%	100.0%	
			7.55	chi-square	
			2	df	
			.0229	p-value	

The above table shows that 61.1% of the undergraduate respondents are working for non-Big-Four audit firms, 56.1% of the graduate

respondents are working for Big-Four audit firms, and 77.8% of the postgraduates are working for Big-Four audit firms. On the other hand, within the group of auditors working in the Big-Four, 18.9% are undergraduates, 62.2% are graduates and 18.95 are postgraduates. For the group working for local audit firms, 35.5% are undergraduates, 58.1% are graduates and 6.5% are postgraduates. Finally, the p-value of 0.229 indicates that a significant relation exists between the educational level of the auditor and type of the audit firm wherein he/she is working for at a 95% confidence level. The Big-Four audit firms require higher educational level for practicing auditors than local audit firms.

Table 4.20: Education Level and Length of work experience

		Length of work Experience			Total	
		less than 5 years	between 5 and 10 years	above 10 years		
Education Level	Undergraduate	Observed	24	8	4	36
		% of row	66.7%	22.2%	11.1%	100.0%
	Graduate	Observed	40	26	16	82
		% of row	48.8%	31.7%	19.5%	100.0%
	Post-Graduate	Observed	2	8	8	18
		% of row	11.1%	44.4%	44.4%	100.0%
	Total	Observed	66	42	28	136
		% of row	48.5%	30.9%	20.6%	100.0%
			16.19	chi-square		
			4	df		
			.0028	p-value		

The p-value of 0.028 in the above table indicates that the educational level and the length of work experience are significantly related at a 95% confidence level. It is clear that the higher the educational level of the respondent, the higher is the length of work experience.

Table 4.21: Holding a CPA degree and Type of Audit firm

		Audit Firm Type			
		Big four	non Big four	Total	
CPA	yes	Observed	30	26	56
		% of row	53.6%	46.4%	100.0%
		% of column	40.5%	41.9%	41.2%
	no	Observed	44	36	80
		% of row	55.0%	45.0%	100.0%
		% of column	59.5%	58.1%	58.8%
	Total	Observed	74	62	136
		% of row	54.4%	45.6%	100.0%
		% of column	100.0%	100.0%	100.0%
		.03	chi-square		
		1	df		
		.8692	p-value		

The table 4.21 indicates that no significant relation exists between being a CPA and the type of audit firm employed by. It shows that 53.6% of CPAs work for Big-Four firms and 46.4% work for local audit firms. Within the group of auditors working for the Big Four only 40.5% are CPAs and within the group working for local audit firm only 41.9 of auditors are holders of a CPA degree.

Table 4.22: Firm Type and Length of Work Experience

		Length of	work	experience		
			less than 5	between 5 and	above 10	Total
			years	10 years	years	
Big four	Observed		40	28	6	74
	% of row		54.1%	37.8%	8.1%	100.0%
	% of column		60.6%	66.7%	21.4%	54.4%
non Big four	Observed		26	14	22	62
	% of row		41.9%	22.6%	35.5%	100.0%
	% of column		39.4%	33.3%	78.6%	45.6%
Total	Observed		66	42	28	136
	% of row		48.5%	30.9%	20.6%	100.0%
	% of column		100.0%	100.0%	100.0%	100.0%
			15.84	chi-square		
			2	df		
			.0004	p-value		

Table 4.22 indicates that a significant relation exists between the length of auditor's work experience and the type of the audit firm where he works, as the p-value is significant at the 99% confidence level. The highest percentage of auditors (60.6%) who have less than 5 years of working experience are practicing in Big Four audit firms.

Within the group of auditors who have a work experience ranging between 5 and 10 years, 66.7% are working for Big-Four audit firms and 33.3% are working for local audit firms. 78.6% of the auditors who have more than 10 years of work experience are working for local audit firms. In Big Four offices the highest percentage of auditors (54.1%) have less than 5 years of work experience, 37.8% have between 5 and 10 years of experience and 8.1% have more than 10 years of experience. In local audit firms, 41.9% of auditors have less than 5 years of working experience, 22.6% have between 5 and 10 years of experience, and 35.5% have more than 10 years of work experience.

4.4. Testing Hypotheses - Differences in Means

The following analysis tests the effect of each of the attribute variables on the behavioral variables. The effect of individual variables on each ethical dilemma will be studied through a hypothesis test. The collective result from the five ethical dilemmas reflects the level of ethical awareness of the auditors.

In the following section, each ethical dilemma is considered as a behavioral variable and the respondents are divided in two groups based on their ethical sensitivity score. The low sensitive group has scores below the mean score and the high sensitive group has scores above the mean score. "Low sensitive" auditors consider that their independence will not be impaired in the light of the corresponding

ethical dilemma, while “high sensitive” auditors consider that their independence could be impaired.

4.4.1. Ethical dilemma One

“If I have one client, who makes up 12% of the annual income of my firm, my independence would be impaired? Not impaired?”

This dilemma presents a financial self-interest threat to auditor’s independence. However the risk of impairment is thought to be low in this case.

Table 4.23: Gender Distribution – ED1

Gender					
<i>low ethical sensitivity</i>			<i>High ethical sensitivity</i>		
	<i>frequency</i>	<i>percent</i>		<i>frequency</i>	<i>percent</i>
Male	62	68.9	Male	34	73.9
Female	28	31.1	Female	12	26.1
	90	100.0		46	100.0

Table 4.23 shows that a higher percentage of males are high sensitive to this dilemma and a higher percentage of females are low sensitive. A hypothesis test is carried out to check the relation between gender and the ethical sensitivity to dilemma one.

Figure 4.9: Hypothesis Test for masculine gender and ED1

Hypothesis test for two independent proportions			
$p1$	$p2$	p_c	
0.689	0.739	0.7059	p (as decimal)
62/90	34/46	96/136	p (as fraction)
62.01	33.994	96.004	X
90	46	136	n
	-0.05		difference
	0.		hypothesized difference
	0.0826		std. error
	-0.61		z
	.5449		p-value (two-tailed)

The research claim is that the population of males in the low sensitive group and the high sensitive group are the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The obtained p-value is greater than 0.05 which means that the test is not significant and H_0 is not rejected. We conclude that the population of males is the same in the two groups.

Figure 4.10: Hypothesis Test for feminine gender and ED1

Hypothesis test for two independent proportions			
<i>p1</i>	<i>p2</i>	<i>p_c</i>	
0.3111	0.2609	0.2941	p (as decimal)
28/90	12/46	40/136	p (as fraction)
28.	12.	40.	X
90	46	136	n
	0.0502		difference
	0.		hypothesized difference
	0.0826		std. error
	0.61		z
	.5429		p-value (two-tailed)

The research claim is that the population of females in the low sensitive group and the high sensitive group are the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The obtained p-value in figure 4.10 is higher than 0.05 which means that the test is not significant and H_0 is not rejected. We conclude that the population of females is the same in the two groups.

Based on the previous results it can be concluded that gender type does not affect the ethical sensitivity of the auditors on ethical dilemma one.

Figure 4.11; Age Distribution – ED1

		Age					
		<i>low ethical sensitivity</i>		<i>High ethical sensitivity</i>			
		<i>frequency</i>	<i>percent</i>	<i>frequency</i>	<i>percent</i>		
less than 25		22	24.4	less than 25	18	39.1	
between 25 and 35		44	48.9	between 25 and 35	22	47.8	
above 35		24	26.7	above 35	6	13.0	
		90	100.0			46	100.0

The percentage of auditors aged less than 25 years in the low sensitive group is 22.4% compared to 39.1% in the high sensitive group. For the group of auditors who are between 25 and 35 years old 48.9% are in the low sensitive group and 47.8% are in the high sensitive group. The percentage of auditors aged above 35 years is 26.7% in the low sensitive group and 13% in the high sensitive group. A hypothesis test is carried out to check the relation of age group and the ethical sensitivity of the auditor.

Figure 4.12: Age group and ED1

Hypothesis test for two independent proportions			
<i>p</i> 1	<i>p</i> 2	<i>p</i> c	
0.2444	0.3913	0.2941	p (as decimal)
22/90	18/46	40/136	p (as fraction)
22.	18.	40.	X
90	46	136	n
	-0.1469	difference	
	0.	hypothesized difference	
	0.0826	std. error	
	-1.78	z	
	.0754	p-value (two-tailed)	

The research claim is that the population of the auditors aged less than 25 years in low sensitive group and high sensitive group are not the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The obtained p-value in figure 4.12 is less than 0.05 which means that the test is not significant and H0 is not rejected. Thus the research claim is falsified and it can be concluded that the population of auditors aged less than 25 years is the same in the two groups.

Figure 4.13: Age group and ED1

Hypothesis test for two independent proportions			
<i>p1</i>	<i>p2</i>	<i>p_c</i>	
0.4889	0.4783	0.4853	p (as decimal)
44/90	22/46	66/136	p (as fraction)
44.	22.	66.	X
90	46	136	n
	0.0106	difference	
	0.	hypothesized difference	
	0.0906	std. error	
	0.12	z	
	.9066	p-value (two-tailed)	

The research claim is that the population of the auditors aged between 25 and 35 years in low sensitive group and high sensitive group are the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The obtained p-value in figure 4.12 is more than 0.05 which means that the test is no significant and H0 is not rejected. Thus the research claim is not falsified and it can be concluded that the population of auditors aged less than 25 years is the same in the two groups.

Figure 4.14: Age Group and ED1

Hypothesis test for two independent proportions			
<i>p1</i>	<i>p2</i>	<i>p_c</i>	
0.2667	0.1304	0.2206	p (as decimal)
24/90	6/46	30/136	p (as fraction)
24.	6.	30.	X
90	46	136	n

0.1362	difference
0.	hypothesized difference
0.0752	std. error
1.81	z
.0699	p-value (two-tailed)

The research claim is that the population of auditors aged above 35 years in low sensitive group and high sensitive group are not the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The p-value obtained in figure 4.13 is greater than 0.05 which means that the test is not significant and H₀ is not rejected. Thus, the research claim is falsified and the population of auditors aged above 35 years is the same in the two groups.

We can conclude that there is no relation between the age group and the ethical sensitivity of the auditor on ethical dilemma one as H₀ was rejected for the three age groups.

Table 4.24: Education Level- ED1

Education Level					
<i>low ethical sensitivity</i>			<i>High ethical sensitivity</i>		
	<i>frequency</i>	<i>percent</i>		<i>frequency</i>	<i>percent</i>
Undergraduate	26	28.9	Undergraduate	10	21.7
Graduate	50	55.6	Graduate	32	69.6
Post-Graduate	14	15.6	Post-Graduate	4	8.7
	90	100.0		46	100.0

The percentage of the undergraduates in the low sensitive group is 28.9% and in the high sensitive group is 21.7%. The percentage of graduates in the low sensitive group is 55.6% and 69.6% in the high sensitive group. The percentage of post-graduates in the low ethical group is 15.6% and 8.7% in the high sensitive group.

Figure 4.15: Education Level and ED1

Hypothesis test for two independent proportions			
p_1	p_2	p_c	
0.2889	0.2174	0.2647	p (as decimal)
26/90	10/46	36/136	p (as fraction)
26.	10.	36.	X
90	46	136	n
	0.0715		difference
	0.		hypothesized difference
	0.08		std. error
	0.89		z
	.3712		p-value (two-tailed)

The research claim is that the population of undergraduates in low sensitive group and high sensitive group are not the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The p-value obtained is higher than 0.05 which means that the test is not significant and H_0 is not rejected. The research claim is falsified and we conclude that the undergraduate population in both groups is the same.

Figure 4.16: Education Level and ED1

Hypothesis test for two independent proportions			
p_1	p_2	p_c	
0.5556	0.6957	0.6029	p (as decimal)
50/90	32/46	82/136	p (as fraction)
50.	32.	82.	X
90	46	136	n
	-0.1401		difference
	0.		hypothesized difference
	0.0887		std. error
	-1.58		z
	.1142		p-value (two-tailed)

The research claim is that the population of graduates in low sensitive group and high sensitive group are not the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The p-value obtained is higher than 0.05 which means that the test is not significant and H_0 is not rejected. The research claim is falsified and it is concluded that the graduate population in both groups is the same.

Figure 4.17; Education Level and ED1

Hypothesis test for two independent proportions			
$p1$	$p2$	p_c	
0.1556	0.087	0.1324	p (as decimal)
14/90	4/46	18/136	p (as fraction)
14.	4.	18.	X
90	46	136	n
	0.0686		difference
	0.		hypothesized difference
	0.0614		std. error
	1.12		z
	.2640		p-value (two-tailed)

The research claim is that the population of postgraduates in low sensitive group and high sensitive group are not the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The p-value obtained is higher than 0.05 which means that the test is not significant and H_0 is not rejected. The research claim is falsified and it is concluded that the postgraduate population in both groups is the same.

Table 4.25: Holding a CPA – ED1

		CPA				
		low ethical sensitivity		High ethical sensitivity		
		<i>frequency</i>	<i>percent</i>	<i>frequency</i>	<i>percent</i>	
yes		42	46.7	yes	14	30.4
no		48	53.3	no	32	69.6
		90	100.0		46	100.0

The percentage of certified public auditors is 46.7% in the low sensitive group and 30.4% in the high sensitive group. And, the percentage of non CPAs is 53.3% in the low sensitive group and 69.6% in the high sensitive group.

Figure 4.18: CPA and ED1

Hypothesis test for two independent proportions			
<i>p1</i>	<i>p2</i>	<i>p_c</i>	
0.4667	0.3043	0.4118	p (as decimal)
42/90	14/46	56/136	p (as fraction)
42.	14.	56.	X
90	46	136	n
	0.1623		difference
	0.		hypothesized difference
	0.0892		std. error
	1.82		z
	.0688		p-value (two-tailed)

The research claim is that the population of certified public auditors in low sensitive group and high sensitive group are not the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The p-value obtained is higher than 0.05 which means that the test is not significant and H_0 is not rejected. The research claim is falsified and it is concluded that the CPA population in both groups is the same.

Table 4.26; Audit Firm Size – ED1

Audit Firm Size					
<i>low ethical sensitivity</i>			High ethical sensitivity		
	<i>frequency</i>	<i>percent</i>		<i>frequency</i>	<i>percent</i>
Big four	50	55.6	Big four	24	52.2
non Big four	40	44.4	non Big four	22	47.8
	90	100.0		46	100.0

The percentage of auditors who are practicing in Big Four firms is 55.6% in the low sensitive group and 52.2% in the high sensitive group. The percentage of auditors who are practicing in local audit firms is 44.4% in the low sensitive group and 47.8% in the high sensitive group.

Figure 4.19: Audit Firm Size and ED1

Hypothesis test for two independent proportions			
<i>p1</i>	<i>p2</i>	<i>p_c</i>	
0.5556	0.5217	0.5441	p (as decimal)
50/90	24/46	74/136	p (as fraction)
50.	24.	74.	X
90	46	136	n
	0.0338		difference
	0.		hypothesized difference
	0.0903		std. error
	0.37		z
	.7079		p-value (two-tailed)

The research claim is that the population of auditors working for Big Four audit firm in low sensitive group and high sensitive group are the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The p-value obtained is higher than 0.05 which means that the test is not significant and H_0 is not rejected. The research claim is not falsified

and it is concluded that the population of auditors working for Big Four audit firm is the same in the two groups.

The same result was obtained for the population of auditors working for local audit firms and no significant difference was found between the two ethical groups.

Table 4.27: Length of work experience – ED1

Length of work experience					
<i>low ethical sensitivity</i>			<i>High ethical sensitivity</i>		
	<i>frequency</i>	<i>percent</i>		<i>frequency</i>	<i>percent</i>
less than 5 years	38	42.2	less than 5 years	28	60.9
between 5 and 10 years	28	31.1	between 5 and 10 years	14	30.4
above 10 years	24	26.7	above 10 years	4	8.7
	90	100.0		46	100.0

Table 4.27 shows that in the low ethical sensitive group 42.2% have less than 5 years of work experience, 31.1% have between 5 and 10 years, and 26.7% have more than 10 years of work experience. In the high sensitive group 60.9% have less than 5 years of experience, 30.4% between 5 and 10 years and 8.7% more than 10 years.

Figure 4.20: Length of work experience and ED1

Hypothesis test for two independent proportions			
<i>p1</i>	<i>p2</i>	<i>p_c</i>	
0.4222	0.6087	0.4853	p (as decimal)
38/90	28/46	66/136	p (as fraction)
38.	28.	66.	X
90	46	136	n
	-0.1865	difference	
	0.	hypothesized difference	
	0.0906	std. error	
	-2.06	z	
	.0395	p-value (two-tailed)	

The research claim is that the population of auditors of less than five years of experience in low sensitive group and high sensitive group are not the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The p-value obtained is less than 0.05 which means that the test is significant and H_0 is rejected. The research claim is not falsified and we conclude that the population of auditors having less than five years of experience is not the same in the two groups.

Figure 4.21: Length of work experience and ED1

Hypothesis test for two independent proportions			
$p1$	$p2$	p_c	
0.3111	0.3043	0.3088	p (as decimal)
28/90	14/46	42/136	p (as fraction)
28.	14.	42.	X
90	46	136	n
	0.0068		difference
	0.		hypothesized difference
	0.0837		std. error
	0.08		z
	.9356		p-value (two-tailed)

The research claim is that the population of auditors of five to ten years of experience in low sensitive group and high sensitive group are the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The p-value obtained is higher than 0.05 which means that the test is not significant and H_0 is not rejected. The research claim is not falsified

and it is concluded that the population of auditors of five to ten years of experience is the same in the two groups.

Figure 4.22: Length of work experience and ED1

Hypothesis test for two independent proportions			
$p1$	$p2$	p_c	
0.2667	0.087	0.2059	p (as decimal)
24/90	4/46	28/136	p (as fraction)
24.	4.	28.	X
90	46	136	n
	0.1797	difference	
	0.	hypothesized difference	
	0.0733	std. error	
	2.45	z	
	.0142	p-value (two-tailed)	

The research claim is that the population of auditors of above ten years of experience in low sensitive group and high sensitive group are not the same.

$$H_0: \mu_{\text{low}} = \mu_{\text{high}}$$

$$H_1: \mu_{\text{low}} \neq \mu_{\text{high}}$$

The p-value obtained is less than 0.05 which means that the test is significant and H_0 is rejected. The research claim is not falsified and it is concluded that the population of auditors of more than ten years of experience is not the same in the two groups.

The following table summarizes the previous results obtained from examining the relation between the attribute variables and the auditor's ethical sensitivity on ethical dilemma one. A significant relation appears only between the length of auditor's work experience and his ethical sensitivity in ethical dilemma one.

Table 4.28: Summary of Analysis – ED1

ED1		Frequencies		Hypothesis test		
Attribute Variables		Low Sensitive Group	High Sensitive Group	P-value	H0: μ low = μ high	Relation between variables
Gender	Males	68.9	73.9	0.5449	Accepted	Not Significant
	Females	31.1	26.1	0.5449	Accepted	Not Significant
Age Group	< 25 years	24.4	39.1	0.0754	Accepted	Not Significant
	25 - 35 years	48.9	47.8	0.9066	Accepted	Not Significant
	> 35 years	26.7	13	0.0699	Accepted	Not Significant
Education level	Undergraduate	28.9	21.7	0.3712	Accepted	Not Significant
	Graduates	55.6	69.6	0.1142	Accepted	Not Significant
	Postgraduates	15.6	8.7	0.2640	Accepted	Not Significant
Being a CPA	Yes	46.7	30.4	0.0688	Accepted	Not Significant
	NO	53.3	69.6	0.0688	Accepted	Not Significant
Firm Type	Big Four	55.6	52.2	0.7079	Accepted	Not Significant
	Local	44.4	47.8	0.0708	Accepted	Not Significant
Length of work experience	< 5 years	42.2	60.9	0.0395	Rejected	Significant
	5 - 10 years	31.1	30.4	0.9356	Accepted	Not Significant
	> 10 years	26.7	8.7	0.0142	Rejected	Significant

4.4.2. Ethical Dilemma Two

“A client is offering holiday deals. If I purchase this holiday without being offered a special discount, my independence would be impaired? Not impaired?”

This dilemma refers to an undue influence threat. This question explicitly shows that there is no significant impairment for auditor’s independence.

An analysis similar to that employed in the previous section is summarized in table 4.29 for this dilemma. The results show a

significant relation between age, educational level and type of the audit firm and the ethical sensitivity of the auditor, on a 95% confidence level.

H_0 represents the null hypothesis claiming that the population of the attribute variables is the same in the low sensitive and high sensitive groups. Rejecting H_0 means that the population of the attribute variable is not the same in the two groups.

Table 4.29: Summary of Analysis – ED2

		Frequencies		Hypothesis test		
Attribute Variables		Low Sensitive Group	High Sensitive Group	P-value	$H_0: \mu_{low} = \mu_{high}$	Relation between variables
Gender	Males	71.4	66.7	0.642	Accepted	Not Significant
	Females	28.6	33.3	0.642	Accepted	Not Significant
Age Group	< 25 years	25	50	0.015	Rejected	Significant
	25 - 35 years	55.4	16.7	0.001	Rejected	Significant
	> 35 years	19.6	33.3	0.142	Accepted	Not Significant
Education level	Undergraduate	25	33.3	0.401	Accepted	Not Significant
	Graduates	58.9	66.7	0.482	Accepted	Not Significant
	Postgraduates	16.1	0	0.048	Rejected	Significant
Being a CPA	Yes	42.9	33.3	0.390	Accepted	Not Significant
	NO	57.1	66.7	0.390	Accepted	Not Significant
Firm Type	Big Four	60.7	25	0.001	Rejected	Significant
	Local	39.3	75	0.001	Rejected	Significant
Length of work experience	< 5 years	46.4	58.3	0.290	Accepted	Not Significant
	5 - 10 years	33.9	16.7	0.097	Accepted	Not Significant
	> 10 years	19.6	25	0.556	Accepted	Not Significant

4.4.3. Ethical Dilemma Three

“If I have the same audit client for more than 10 year, my independence would be impaired? Not impaired?”

This dilemma could be seen as a familiarity threat however it does not impair auditor’s independence significantly.

Table 4.30 summarizes the statistical relation between the attribute variables and the ethical sensitivity of the auditor to this dilemma.

Table 4.30: Summary of Analysis – ED3

ED3		Frequencies		Hypothesis test		
Attribute Variables		Low Sensitive Group	High Sensitive Group	P-value	H0: μ low = μ high	Relation between variables
Gender	Males	75.8	65.7	0.1989	Accepted	Not Significant
	Females	24.2	34.3	0.1989	Accepted	Not Significant
Age Group	< 25 years	30.3	28.6	0.8247	Accepted	Not Significant
	25 - 35 years	51.5	45.7	0.4987	Accepted	Not Significant
	> 35 years	18.2	25.7	0.2897	Accepted	Not Significant
Education level	Undergraduate	15.2	37.1	0.0037	Rejected	Significant
	Graduates	63.6	57.1	0.4392	Accepted	Not Significant
	Postgraduates	21.2	5.7	0.0077	Rejected	Significant
Being a CPA	Yes	27.3	54.3	0.0140	Rejected	Significant
	NO	72.7	45.7	0.0140	Rejected	Significant
Firm Type	Big Four	72.7	37.1	0.0003	Rejected	Significant
	Local	27.3	62.9	0.0003	Rejected	Significant
Length of work experience	< 5 years	45.5	51.4	0.4860	Accepted	Not Significant
	5 - 10 years	33.3	28.6	0.5480	Accepted	Not Significant
	> 10 years	21.2	20	0.8613	Accepted	Not Significant

The preceding table shows that a significant relation exists between educational level, holding a CPA degree and the firm type and the ethical sensitivity of the auditor and ethical dilemma three. This relation is significant at a 95% confidence level. The null hypothesis H_0 was accepted for other attribute variables indicating that no difference exists in the population of auditors of the respective attribute variable in low sensitive and high sensitive groups.

4.4.4. Ethical Dilemma Four

“If my client is establishing a new company and I am going to buy some of its shares and I will also be commissioned to do the audit for the company, then my independence would be impaired? Not impaired?”

This question shows a threat of familiarity as well as a financial self-interest threat. Herein impairment of auditor’s independence is apparent. The group of low sensitive respondents is much smaller than that of the high sensitive respondents (32 vs. 104).

Table 4.31 summarizes the statistical relation between the attribute variables and the ethical sensitivity of the auditors to this dilemma. This relation is statistically significant at a 95% confidence level for the 25-35 and above 35 age groups, holding a CPA degree and the type of the audit firm. A significant difference exists between the populations of respondents corresponding to the aforementioned variables in the two ethical groups. The null hypothesis H_0 was accepted for the other attribute variables indicating that no significant relation exists between these variables and auditor’s ethical sensitivity in this dilemma. The population of respondents of the corresponding variable is the same in low sensitive and high sensitive groups.

Table 4.31: Summary of Analysis – ED4

ED4		Frequencies		Hypothesis test		
Attribute Variables		<i>Low Sensitive Group</i>	<i>High Sensitive Group</i>	<i>P-value</i>	<i>H0: μ low = μ high</i>	<i>Relation between variables</i>
<i>Gender</i>	<i>Males</i>	75	69.2	0.5311	Accepted	Not Significant
	<i>Females</i>	85	30.8	0.5311	Accepted	Not Significant
<i>Age Group</i>	<i>< 25 years</i>	31.3	28.8	0.7941	Accepted	Not Significant
	<i>25 - 35 years</i>	31.3	53.8	0.0253	Rejected	Significant
	<i>> 35 years</i>	37.5	17.3	0.0160	Rejected	Significant
<i>Education level</i>	<i>Undergraduate</i>	18.8	28.8	0.0253	Rejected	Significant
	<i>Graduates</i>	68.8	57.7	0.2636	Accepted	Not Significant
	<i>Postgraduates</i>	12.5	13.5	0.8884	Accepted	Not Significant
<i>Being a CPA</i>	<i>Yes</i>	18.8	48.1	0.0032	Rejected	Significant
	<i>NO</i>	81.3	51.9	0.0032	Rejected	Significant
<i>Firm Type</i>	<i>Big Four</i>	31.3	61.5	0.0026	Rejected	Significant
	<i>Local</i>	68.8	38.5	0.0026	Rejected	Significant
<i>Length of work experience</i>	<i>< 5 years</i>	37.5	51.9	0.1534	Accepted	Not Significant
	<i>5 - 10 years</i>	31.3	30.8	0.9589	Accepted	Not Significant
	<i>> 10 years</i>	31.3	17.3	0.0881	Accepted	Not Significant

4.4.5. Ethical Dilemma Five

“I am planning on opening my own audit firm. Considering the financial crisis, I was worried that I will not get a client. Luckily today I landed on an audit deal. If it provides 20% of my annual income the first year, my independence would be impaired? Not impaired?”

This dilemma shows a financial interest threat through excessive reliance on revenue from a single attest client. Herein, auditors independence is undoubtedly impaired.

Table 4.32 summarizes the results for the statistical analysis performed to examine the relation between the attribute variables and the ethical sensitivity of auditor’s to this dilemma.

Table 4.32: Summary of Analysis – ED5

ED5		Frequencies		Hypothesis test		
Attribute Variables		<i>Low Sensitive Group</i>	<i>High Sensitive Group</i>	<i>P-value</i>	<i>H0: μ low = μ high</i>	<i>Relation between variables</i>
<i>Gender</i>	<i>Males</i>	73	67.7	0.5049	Accepted	Not Significant
	<i>Females</i>	27	32.3	0.5049	Accepted	Not Significant
<i>Age Group</i>	<i>< 25 years</i>	32.4	25.8	0.3983	Accepted	Not Significant
	<i>25 - 35 years</i>	51.4	45.2	0.4719	Accepted	Not Significant
	<i>> 35 years</i>	16.2	29	0.0726	Accepted	Not Significant
<i>Education level</i>	<i>Undergraduate</i>	16.2	38.7	0.0031	Rejected	Significant
	<i>Graduates</i>	62.2	58.1	0.6267	Accepted	Not Significant
	<i>Postgraduates</i>	21.6	3.2	0.0016	Rejected	Significant
<i>Being a CPA</i>	<i>Yes</i>	37.8	45.2	0.3874	Accepted	Not Significant
	<i>NO</i>	62.2	54.8	0.3874	Accepted	Not Significant
<i>Firm Type</i>	<i>Big Four</i>	78.4	25.8	0.0008	Rejected	Significant
	<i>Local</i>	21.6	74.2	0.0008	Rejected	Significant
<i>Length of work experience</i>	<i>< 5 years</i>	54.1	41.9	0.1590	Accepted	Not Significant
	<i>5 - 10 years</i>	29.7	32.3	0.7506	Accepted	Not Significant
	<i>> 10 years</i>	16.2	25.8	0.1683	Accepted	Not Significant

The hypothesis testing was performed at a 95% confidence level. A significant statistical relation exists between auditor's ethical sensitivity to dilemma five and two attribute variables: educational level and type of the audit firm. For the other attribute variables the null hypothesis was accepted indicating no difference in the population of auditors corresponding to each variable between the low sensitive and high sensitive groups.

Figure 4.23 provides a summary of the above analysis screening the attribute variables that have a significant relation with auditor's ethical sensitivity.

Figure 4.23: Significant Relations

Ethical Sensitivity on	Attribute Variable	Relation between variables
ED1	Auditor's Length of work experience	Significant
		Significant
ED2	Auditor's Age Group	Significant
	Auditor's Educational level	Significant
	Audit Firm's Type	Significant
ED3	Auditor's Educational level	Significant
	Holding a CPA degree	Significant
	Audit Firm's Type	Significant
ED4	Auditor's Age Group	Significant
	Auditor's Educational level	Significant
	Holding a CPA degree	Significant
	Audit Firm's Type	Significant
ED5	Auditor's Educational level	Significant
	Audit Firm's Type	Significant

The length of work experience, the age group, the type of the audit firm and the educational level including holding a CPA degree are the attribute variables which have a significant relation with the ethical sensitivity of the auditor (at least to one ethical dilemma). Gender is the only variable which had no significant relation with auditor's ethical sensitivity in any dilemma. The type of the audit firm and the auditor's educational level affect the ethical sensitivity of auditors in four out of five ethical dilemmas. Auditor's age group and holding a CPA degree affect the ethical sensitivity of auditors in two out of five ethical dilemmas. Auditor's length of work experience affects the ethical sensitivity of auditors in ethical dilemma one only.

4.5. Testing Hypotheses- ANOVA

4.5.1. Hypothesis One

Hypothesis 1: The level of ethical awareness and ethical judgment is homogeneous in audit firms of all sizes.

This hypothesis assumes the homogenous character of all firms in ethical awareness and ethical judgment. It is assumed that the smaller firms mimic the well-established large firms in their quest for legitimacy. A counter-argument is that big audit offices are more competent and independent and thus provide higher quality audits than small offices. In Lebanon big offices are strictly Big four firms and small offices are those of the local firms.

A one way ANOVA test was employed to compare means. The use of ANOVA table is appropriate since the analysis involves a scale dependent variable (ED1) versus the categorical independent variables. The dependent variable was decided to be the ethical dilemma and the independent factor was the firm size. The null hypothesis is that the means of the Big Four group and Non Big Four group are the same and it is tested against the hypothesis that not all means are equal; i.e. there is a significant difference in the ethical judgment of auditors working for Big Four firms and of those working for local firms concerning each ethical dilemma.

$$H_0: \mu_{\text{Big4}} = \mu_{\text{Local}}$$

H₁: Not all means are equal

Table 4.33: One-way ANOVA ED1 ED2 ED3 ED4 ED5 by Firm size

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.

ED1	Between Groups	6.385	1	6.385	2.769	.09845
	Within Groups	308.997	134	2.306		
	Total	315.382	135			
ED2	Between Groups	33.266	1	33.266	19.880	.00002*
	Within Groups	224.234	134	1.673		
	Total	257.500	135			
ED3	Between Groups	74.893	1	74.893	18.764	.00003*
	Within Groups	534.842	134	3.991		
	Total	609.735	135			
ED4	Between Groups	48.692	1	48.692	19.064	.00003*
	Within Groups	342.249	134	2.554		
	Total	390.941	135			
ED5	Between Groups	151.166	1	151.166	43.162	.00000*
	Within Groups	469.304	134	3.502		
	Total	620.471	135			

* The difference between means is significant at the 0.05 level

In table 4.33 there is a significant difference in means of groups corresponding to ethical dilemmas 2, 3, 4 and 5. The null hypothesis is accepted for ethical dilemma one and rejected for the other four dilemmas. It is interpreted that the auditors in large and small firms are homogenous in judgment of ethical dilemma 1 but they are not homogenous in judgment of other ethical dilemmas.

Hence it is inferred that the first hypothesis is falsified. The firm size affects the ethical judgment of the auditor in Lebanon. This conclusion support the counter-argument discussed above.

4.5.2. Hypothesis Two

Hypothesis 3: The level of ethical awareness and ethical judgment of auditors is different among auditors of different sex.

Gender is regarded as a factor that can affect the ethical judgment of the auditor. However, prior researches failed to prove any significant relation between gender and audit quality.

A one way ANOVA test was employed to compare means. The dependent variable was decided to be the ethical dilemma and the independent factor was gender. The null hypothesis is that the means of the male group and female group are the same and it is tested against the hypothesis that not all means are equal, i.e. there is a significant difference in the ethical judgment of males and females concerning each ethical dilemma.

H₀: $\mu_{\text{males}} = \mu_{\text{females}}$

H₁: Not all means are equal

Table 4.34: One-way ANOVA ED1 ED2 ED3 ED4 ED5 by Gender

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
ED1	Between Groups	.949	1	.949	.404	.52589
	Within Groups	314.433	134	2.347		
	Total	315.382	135			
ED2	Between Groups	.142	1	.142	.074	.78635
	Within Groups	257.358	134	1.921		
	Total	257.500	135			
ED3	Between Groups	20.802	1	20.802	4.733	.03134*
	Within Groups	588.933	134	4.395		
	Total	609.735	135			
ED4	Between Groups	.441	1	.441	.151	.69783
	Within Groups	390.500	134	2.914		
	Total	390.941	135			
ED5	Between Groups	.746	1	.746	.161	.68868
	Within Groups	619.725	134	4.625		
	Total	620.471	135			

* The difference between means is significant at the 0.05 level

Table 4.34 shows a significant difference in means of the two groups concerning ethical dilemma 3 only. No significant variance was shown for other ethical dilemmas. The null hypothesis was accepted for ethical dilemmas 1, 2, 4 and 5 and rejected for ethical dilemma 3. This implies

that auditors' ethical judgment is homogenous among different sex groups.

Consequently, hypothesis three is falsified. Gender is not proven to have a significant effect on the ethical judgment of the auditor. This conclusion supports the results of prior researches.

4.5.3. Hypothesis Three

Hypothesis 4: The level of ethical awareness and ethical judgment among auditors depend on their educational level.

Education is regarded as a factor that can affect the ethical judgment of the auditor. Previous studies suggested a relation between education and the moral reasoning ability of an individual, and since MRA is linked to auditor's ethical judgment, it is predicted that auditor's educational level shall have an effect on his ethical judgment.

A one way ANOVA test was employed to compare means. The dependent variable was decided to be the ethical dilemma and the independent factor was the educational level. There are three educational levels: undergraduate, graduate, and postgraduate. The null hypothesis is that the means of all groups are the same and it is tested against the hypothesis that not all means are equal, i.e. there is a significant difference in the ethical judgment of undergraduates, graduates and postgraduates concerning each ethical dilemma.

$H_0: \mu_{\text{undergraduates}} = \mu_{\text{graduates}} = \mu_{\text{postgraduates}}$

$H_1: \text{Not all means are equal}$

Table 4.35: One-way ANOVA ED1 ED2 ED3 ED4 ED5 by Education level

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
ED1	Between Groups	5.277	2	2.638	1.132	.32562
	Within Groups	310.106	133	2.332		
	Total	315.382	135			
ED2	Between Groups	10.711	2	5.356	2.886	.05928
	Within Groups	246.789	133	1.856		
	Total	257.500	135			
ED3	Between Groups	79.890	2	39.945	10.027	.00009*
	Within Groups	529.846	133	3.984		
	Total	609.735	135			
ED4	Between Groups	6.031	2	3.015	1.042	.35565
	Within Groups	384.911	133	2.894		
	Total	390.941	135			
ED5	Between Groups	56.349	2	28.174	6.643	.00178*
	Within Groups	564.122	133	4.242		
	Total	620.471	135			

* The difference between means is significant at the 0.05 level

Table 4.35 shows a significant difference between means in two cases out of five. The null hypothesis was rejected for ethical dilemmas 3 and 5 and accepted for ethical dilemmas 1, 2 and 4. This evidence is not enough to either reject or accept hypothesis 4. The bivariate analysis performed in section 4.4 suggested that education does affect the ethical sensitivity of the auditor. This inference supports the hypothesis.

Further investigation was carried out to examine the differences in means. The following test shows in detail the variances in means between groups concerning each ethical dilemma.

Table 4.36: Post Hoc Test – Education

Dependent Variable	(I) Education Level	(J) Education Level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
ED1	Undergraduate	Graduate	0.047	0.335	0.999	-0.77	0.87
		Postgraduate	0.611	0.345	0.226	-0.24	1.46
	Graduate	Undergraduate	-0.047	0.335	0.999	-0.87	0.77
		Postgraduate	0.564	0.256	0.093	-0.07	1.2
	Postgraduate	Undergraduate	-0.611	0.345	0.226	-1.46	0.24
		Graduate	-0.564	0.256	0.093	-1.2	0.07
ED2	Undergraduate	Graduate	0.299	0.324	0.733	-0.5	1.1
		Postgraduate	.944*	0.3	0.009	0.2	1.69
	Graduate	Undergraduate	-0.299	0.324	0.733	-1.1	0.5
		Postgraduate	.645*	0.164	0	0.25	1.04
	Postgraduate	Undergraduate	-.944*	0.3	0.009	-1.69	-0.2
		Graduate	-.645*	0.164	0	-1.04	-0.25
ED3	Undergraduate	Graduate	1.221*	0.397	0.009	0.25	2.19
		Postgraduate	2.500*	0.461	0	1.36	3.64
	Graduate	Undergraduate	-1.221*	0.397	0.009	-2.19	-0.25
		Postgraduate	1.279*	0.407	0.01	0.26	2.3
	Postgraduate	Undergraduate	-2.500*	0.461	0	-3.64	-1.36
		Graduate	-1.279*	0.407	0.01	-2.3	-0.26
ED4	Undergraduate	Graduate	0.369	0.267	0.428	-0.28	1.02
		Postgraduate	0.667	0.625	0.643	-0.95	2.28
	Graduate	Undergraduate	-0.369	0.267	0.428	-1.02	0.28
		Postgraduate	0.298	0.624	0.949	-1.32	1.91
	Postgraduate	Undergraduate	-0.667	0.625	0.643	-2.28	0.95
		Graduate	-0.298	0.624	0.949	-1.91	1.32
ED5	Undergraduate	Graduate	0.701	0.393	0.216	-0.26	1.66
		Postgraduate	2.167*	0.538	0.001	0.82	3.52
	Graduate	Undergraduate	-0.701	0.393	0.216	-1.66	0.26
		Postgraduate	1.466*	0.501	0.02	0.2	2.73
	Postgraduate	Undergraduate	-2.167*	0.538	0.001	-3.52	-0.82
		Graduate	-1.466*	0.501	0.02	-2.73	-0.2

*. The mean difference is significant at the 0.05 level.

Table 4.36 shows that a significant mean difference exists between undergraduates and postgraduates and between graduates and postgraduates in ethical dilemma one. Also between undergraduates and graduates, undergraduates and postgraduates, and graduates and

postgraduates in ethical dilemma three, these differences were reflected in table 4.36, which additionally shows the difference in ethical dilemma five between undergraduates and postgraduates, and graduates and postgraduates. However the differences in ethical dilemma 2 were not reflected in table 4.36. The differences in means shown in three out of five ethical dilemmas support the hypothesis.

The CPA degree is certainly part of the auditor’s education. A significant relation between holding this degree and auditor’s ethical judgment is evidence that supports the hypothesis. This relation is tested by a one way ANOVA test. The dependent variable was decided to be the ethical dilemma and the independent factor was the CPA degree. The null hypothesis is that the means of the CPA group and the non CPA group are the same and it is tested against the hypothesis that not all means are equal, i.e. there is a significant difference in the ethical judgment of auditors holding a CPA degree against those who do not hold this degree.

$$H_0: \mu_{CPAs} = \mu_{non\ CPAs}$$

H₁: Not all means are equal

Table 4.37: One-way ANOVA ED1 ED2 ED3 ED4 ED5 by CPA

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
ED1	Between Groups	2.825	1	2.825	1.211	.27306
	Within Groups	312.557	134	2.333		
	Total	315.382	135			
ED2	Between Groups	.000	1	.000	.000	1.00000
	Within Groups	257.500	134	1.922		
	Total	257.500	135			
ED3	Between Groups	38.321	1	38.321	8.987	.00324*
	Within Groups	571.414	134	4.264		

	Total	609.735	135			
ED4	Between Groups	32.941	1	32.941	12.330	.00061*
	Within Groups	358.000	134	2.672		
	Total	390.941	135			
ED5	Between Groups	4.992	1	4.992	1.087	.29905
	Within Groups	615.479	134	4.593		
	Total	620.471	135			

* The difference between means is significant at the 0.05 level

The variances in means for the two groups, CPAs and non CPAs, do not differ significantly for ethical dilemmas 1, 2 and 5 since the significance level is greater than 0.05. The null hypothesis is accepted for these dilemmas. The variances in means for the two groups are significant for ethical dilemmas 3 and 4 as the significance level is less than 0.05 and the null hypothesis is rejected. This significant difference in means between groups suggests that holding a CPA degree affects the ethical judgment of auditors. Therefore, hypothesis 4 is not falsified. Education seems to have an effect on the ethical judgment of the auditor. This conclusion supports the results of prior studies.

4.5.4. Hypothesis Four

Hypothesis 5: The level of ethical awareness and ethical judgment among auditors depend on the length of work experience.

The number of years of experience that the auditor possesses is thought to have an effect on his ethical judgment. No previous evidence concerning the relation between the length of work experience of the auditor and his ethical judgment was found in previous researches.

A one way ANOVA test was employed to compare means. The dependent variable was decided to be the ethical dilemma and the independent factor was the length of work experience. There are three levels of experience: less than five years, between five and ten years,

and more than ten years. The null hypothesis is that the means of all groups are the same and it is tested against the hypothesis that not all means are equal, i.e. there is a significant difference in the ethical judgment of auditors based on the length of their experience.

$H_0: \mu_{<5} = \mu_{5-10} = \mu_{>10}$

H_1 : Not all means are equal

Table 4.38: One-way ANOVA ED1 ED2 ED3 ED4 ED5 by length of work experience

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
ED1	Between Groups	13.685	2	6.843	3.017	.05233
	Within Groups	301.697	133	2.268		
	Total	315.382	135			
ED2	Between Groups	3.855	2	1.927	1.011	.36675
	Within Groups	253.645	133	1.907		
	Total	257.500	135			
ED3	Between Groups	5.073	2	2.536	.558	.57373
	Within Groups	604.662	133	4.546		
	Total	609.735	135			
ED4	Between Groups	39.772	2	19.886	7.532	.00080*
	Within Groups	351.169	133	2.640		
	Total	390.941	135			
ED5	Between Groups	4.176	2	2.088	.451	.63820
	Within Groups	616.294	133	4.634		
	Total	620.471	135			

* The difference between means is significant at the 0.05 level

Among the five ethical situations covered by the survey, the p-value for dilemma 4 expresses a strong relation with the ethical judgment of the auditor at a 0.01 level. The null hypothesis was rejected for the fourth dilemma and accepted for the other dilemmas. Ethical dilemmas 1, 2, 3 and 5 show no significant difference in means between groups.

Hypothesis five is falsified. No evidence was provided to support the claim that the length of work experience has a significant effect on the ethical judgment of the auditor.

4.5.5. Hypothesis Five

Hypothesis 6: The level of ethical awareness and ethical sensitivity among auditors depend on their age group.

The influence of age on auditor's ethical judgment is thought to be significant. Studies conducted among auditors revealed that younger accountancy professionals have better ethical judgment than the supervising managers. The following test allows the inference of the significance of the relation between age and auditor's ethical sensitivity and not the direction of this relation.

A one way ANOVA test was employed to compare means. The dependent variable was decided to be the ethical dilemma and the independent factor was the age group of the auditor. There are three age groups: less than twenty five years, between twenty five and thirty five years, and more than thirty five years. The null hypothesis is that the means of the three groups are the same and it is tested against the hypothesis that not all means are equal, i.e. there is a significant difference in the ethical judgment of auditors based on their age.

$$H_0: \mu_{<25} = \mu_{25-35} = \mu_{>35}$$

H_1 : Not all means are equal

Table 4.39: One-way ANOVA ED1 ED2 ED3 ED4 ED5 by Age Group

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
ED1	Between Groups	12.485	2	6.243	2.741	.068

	Within Groups	302.897	133	2.277		
	Total	315.382	135			
ED2	Between Groups	11.115	2	5.558	3.000	.053
	Within Groups	246.385	133	1.853		
	Total	257.500	135			
ED3	Between Groups	5.869	2	2.934	.646	.526
	Within Groups	603.867	133	4.540		
	Total	609.735	135			
ED4	Between Groups	54.808	2	27.404	10.843	.000*
	Within Groups	336.133	133	2.527		
	Total	390.941	135			
ED5	Between Groups	17.746	2	8.873	1.958	.145
	Within Groups	602.724	133	4.532		
	Total	620.471	135			

* The difference between means is significant at the 0.05 level

Table 4.39 shows a significant difference between means in one case out of five. The null hypothesis was rejected for ethical dilemmas 4 and accepted for ethical dilemmas 1, 2, 3 and 5. This evidence is enough to reject hypothesis 6.

Further investigation was undertaken to inspect this difference in means. The following test shows in detail the variances in means between groups concerning each ethical dilemma.

Table 4,40 shows a significant difference in means in ethical dilemma 4 between the age groups:

- “less than 25 years” and “above 35 years”
- “between 25 and 35” and “above 35 years”

Table 4.40: Post Hoc Test - Age

		Multiple Comparisons					95% Confidence Interval	
Dependent Variable	(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound	

ED1	less than 25 years	between 25 and 35	0.488	0.361	0.449	-0.4	1.37
		above 35 years	0.833	0.36	0.071	-0.05	1.72
	between 25 and 35	less than 25 years	-0.488	0.361	0.449	-1.37	0.4
		above 35 years	0.345	0.234	0.369	-0.22	0.92
	above 35 years	less than 25 years	-0.833	0.36	0.071	-1.72	0.05
		between 25 and 35	-0.345	0.234	0.369	-0.92	0.22
ED2	less than 25 years	between 25 and 35	0.665	0.334	0.146	-0.16	1.49
		above 35 years	0.35	0.359	0.7	-0.53	1.23
	between 25 and 35	less than 25 years	-0.665	0.334	0.146	-1.49	0.16
		above 35 years	-0.315	0.222	0.404	-0.86	0.23
	above 35 years	less than 25 years	-0.35	0.359	0.7	-1.23	0.53
		between 25 and 35	0.315	0.222	0.404	-0.23	0.86
ED3	less than 25 years	between 25 and 35	0.367	0.432	0.78	-0.69	1.42
		above 35 years	-0.1	0.551	0.997	-1.45	1.25
	between 25 and 35	less than 25 years	-0.367	0.432	0.78	-1.42	0.69
		above 35 years	-0.467	0.484	0.707	-1.66	0.73
	above 35 years	less than 25 years	0.1	0.551	0.997	-1.25	1.45
		between 25 and 35	0.467	0.484	0.707	-0.73	1.66
ED4	less than 25 years	between 25 and 35	-0.233	0.245	0.715	-0.83	0.36
		above 35 years	1.367*	0.509	0.031	0.1	2.63
	between 25 and 35	less than 25 years	0.233	0.245	0.715	-0.36	0.83
		above 35 years	1.600*	0.487	0.007	0.38	2.82
	above 35 years	less than 25 years	-1.367*	0.509	0.031	-2.63	-0.1
		between 25 and 35	-1.600*	0.487	0.007	-2.82	-0.38
ED5	less than 25 years	between 25 and 35	0.311	0.39	0.81	-0.64	1.26
		above 35 years	-0.617	0.56	0.616	-2	0.77
	between 25 and 35	less than 25 years	-0.311	0.39	0.81	-1.26	0.64
		above 35 years	-0.927	0.536	0.244	-2.25	0.4
	above 35 years	less than 25 years	0.617	0.56	0.616	-0.77	2
		between 25 and 35	0.927	0.536	0.244	-0.4	2.25

***. The mean difference is significant at the 0.05 level.**

The results indicate that hypothesis six is falsified. The results failed to prove a significant relation between auditor’s age group and his ethical judgment.

4.5.6. Summary of Hypotheses –testing Results

The following figure summarizes the results of the hypotheses testing based on the analysis of variances in means between groups concerning each ethical dilemma.

The size of the audit firm, holding a CPA degree and the educational level of the auditor had a significant relation with auditor’s ethical judgment. Gender, age, and length of work experience could not be proven to have a significant effect on auditor’s ethical judgment.

Figure 4.24: Summary of Hypotheses Results

Hypthesis	Result
H1: The level of ethical awareness and ethical judgment is homogeneous in audit firms of all sizes.	Falsified
H2: The level of ethical awareness and ethical judgment is different among auditors since MRA of individuals depend on their gender.	Falsified
H3: The level of ethical awareness and ethical judgment is different among auditors since MRA of individuals depend on education.	Not Falsified
H4: The level of ethical awareness and ethical judgment is different among auditors since MRA of individuals depend on length of work experience.	Falsified
H5: The level of ethical awareness and ethical judgment is different among auditors since MRA of individuals depend on their age.	Falsified

4.6. Regression Analysis

As mentioned before, gender, age, length of work experience, educational level, size of the audit firm and holding a CPA degree are the independent variables. The ethical sensitivity of the auditor on each dilemma is the dependent variable.

This test shows not only the significance of the relation between variables but also the direction of this relation.

The model summary includes the multiple R which expresses the correlation between the dependent variable and all the independent variables collectively. The coefficient of determination, r^2 , provides an indication by how far the variation of the dependent variable is accounted for by the independent variables. The p-value suggests that the coefficients and the equation itself achieve a high level of statistical significance.

The coefficient (b) indicates the direction of the relation between the dependent variable and the independent factor.

4.6.1. Regression Analysis- ED1

The following table summarizes the model summary for ethical dilemma one. The score on the dilemma is taken as the dependent variable and the independent variables are the attributes of the auditor.

Table 4.41: Model Summary - ED1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.328	.108	.066	1.477

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.914	6	5.652	2.590	.021
	Residual	281.469	129	2.182		
	Total	315.382	135			

Coefficients								
Model		Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Beta	Lower Bound
1	(Constant)	4.438	.767		5.789	.000	2.921	5.955
	Gender	-.391	.302	-.117	-1.297	.197	-.988	.206
	Age	-.328	.309	-.154	-1.062	.290	-.939	.283
	Edu Lev	-.026	.242	-.011	-.108	.914	-.506	.453
	CPA	-.166	.263	-.054	-.633	.528	-.686	.353
	Firm Size	-.690	.283	-.226	-2.440	.016	-1.249	-.131
	Experience	-.307	.289	-.158	-1.063	.290	-.878	.264

The multiple R is 0.328 which means that the independent variables collectively are weakly correlated with ethical dilemma one. The R^2 value for the equation as a whole is 0.108 implying that only 10.8% of the variance in the ethical dilemma score is explained by the six variables in the equation.

The p-value indicates that the test as a whole is statistically significant.

Among the independent variables the firm size has a significant relation with ethical dilemma one.

Two of the independent variables are highly correlated: age and work experience. Only one of them should enter the regression equation, once the first variable is included, the added explanatory power of the second variable will be minimal. The procedure begins by computing

the simple regression model for each independent variable. The independent variable with the largest F-statistics (which in a simple regression model is the t-statistic squared) or equal to the smallest p-value is chosen as the first entering variable. This procedure is performed using the Mega-Stat tool. Stepwise regression is an interactive procedure that adds and deletes one independent variable at a time. It eliminates correlated independent variables. The computer output for the ethical dilemma is summarized in the following figure.

Figure 4.25: Stepwise Regression ED1

Regression Analysis -- Stepwise Selection displaying the best model of each size											
136 observations ED1 is the dependent variable											
Nvar	Gender	Age	EduLev	CPA	FirmSize	Experience	s	Adj R ²	R ²	Cp	p-value
1						.0162	1.501	.035	.042	6.418	.0162
2		.0029			.0119		1.474	.070	.084	2.425	.0030
3	.1867	.0014			.0096		1.470	.075	.096	2.681	.0039
4	.1533	.2489			.0089	.2594	1.468	.077	.105	3.414	.0056
5	.1868	.2908		.5254	.0097	.2498	1.472	.073	.107	5.012	.0106
6	.1968	.2902	.9141	.5277	.0160	.2899	1.477	.066	.108	7.000	.0211

Out of the six independent variables, the length of work experience was the first variable included in the equation for ethical dilemma one. The next two variables were age and the firm size. When more than three variables were included, the audit firm size had the most significant contribution to the variances in the dependent variable.

4.6.2. Regression Analysis- ED2

The following table summarizes the regression output for ethical dilemma two.

Table 4.42: Model Summary ED2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.441	.194	.157	1.268

ANOVA							
Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	50.062	6	8.344	5.189	.000	
	Residual	207.438	129	1.608			
	Total	257.500	135				

Coefficients								
Model		Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Beta	Lower Bound
1	(Constant)	4.029	.658		6.121	.000	2.727	5.332
	Gender	-.314	.259	-.104	-1.213	.227	-.827	.198
	Age	-.542	.265	-.281	-2.043	.043	-1.067	-.017
	Edu Lev	-.224	.208	-.100	-1.078	.283	-.636	.187
	CPA	.104	.226	.037	.462	.645	-.342	.550
	Firm Size	-1.122	.243	-.406	-4.624	.000	-1.602	-.642
	Experience	.092	.248	.052	.370	.712	-.398	.582

The multiple R is 0.441 which means that the independent variables collectively are correlated with ethical dilemma two. The R^2 value for the equation as a whole is 0.194 implying that only 19.4% of the variance in the ethical dilemma score is explained by the six variables in the equation.

The p-value indicates that the test as a whole is statistically significant.

Among the independent variables firm size and age have a significant relation with ethical dilemma two.

However, these results are limited since two of the independent variables are highly correlated, thus stepwise regression is applied to the data in order to find the best model of each size. The computer output is as follows:

Figure 4.26: Stepwise Regression ED2

Regression Analysis -- Stepwise Selection displaying the best model of each size											
136 observations											
ED2 is the dependent variable											
Nvar	Gender	Age	EduLev	CPA	FirmSize	Experience	s	Adj R ²	R ²	Cp	p-value
1					.0000		1.294	.123	.129	7.445	1.73E-05
2		.0044			.0000		1.259	.169	.181	1.165	1.73E-06
3	.3701	.0030			.0000		1.260	.167	.186	2.366	5.23E-06
4	.2448	.0071	.3087		.0000		1.260	.168	.192	3.336	1.14E-05
5	.2262	.0066	.3110	.6553	.0000		1.264	.163	.194	5.137	3.21E-05
6	.2274	.0431	.2829	.6452	.0000	.7121	1.268	.157	.194	7.000	.0001

Out of the six independent variables, the size of the audit firm was the first variables included in the equation for ethical dilemma two. The next two variables were age and the firm size. When more than three variables were included, the audit firm size and the age of the auditor continued to have the most significant effect on the variances in the dependent variable.

4.6.3. Regression Analysis- ED3

The following table presents the computer output for the regression model for ethical dilemma three.

Table 4.43: Model Summary ED3

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.521	.272	.238	1.855

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	165.703	6	27.617	8.023	.000
	Residual	444.033	129	3.442		
	Total	609.735	135			

Coefficients								
Model		Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Beta	Lower Bound
1	(Constant)	5.394	.963		5.601	.000	3.488	7.299
	Gender	.288	.379	.062	.760	.449	-.462	1.038
	Age	-.095	.388	-.032	-.246	.806	-.863	.672
	Edu Lev	-.857	.304	-.249	-2.814	.006	-1.459	-.254
	CPA	1.042	.330	.242	3.156	.002	.389	1.694
	Firm Size	-1.306	.355	-.307	-3.679	.000	-2.008	-.604
	Experience	-.091	.362	-.034	-.252	.802	-.808	.626

The multiple R is 0.521 which means that the independent variables collectively are correlated with ethical dilemma three, since R is nearer to one than to zero. The R² value for the equation as a whole is 0.272 implying that only 27.2% of the variance in the ethical dilemma score is explained by the six variables in the equation.

The p-value indicates that the test as a whole is statistically significant.

Among the independent variables the firm size, educational level and holding a CPA degree have a significant relation with ethical dilemma three.

However, since two of the independent variables are highly correlated, stepwise regression was performed and the computer output was summarized in the following figure.

Figure 4.27: Stepwise Regression ED3

Regression Analysis -- Stepwise Selection displaying the best model of each size											
136 observations											
ED3 is the dependent variable											
Nvar	Gender	Age	EduLev	CPA	FirmSize	Experience	s	Adj R ²	R ²	Cp	p-value
1			.0000				1.989	.124	.131	21.938	1.50E-05
2			.0003		.0006		1.908	.194	.206	10.721	2.25E-07
3			.0002	.0015	.0004		1.843	.248	.264	2.300	7.62E-09
4	.3812		.0013	.0022	.0003		1.845	.246	.269	3.536	2.33E-08
5	.4303		.0056	.0019	.0003	.4900	1.849	.243	.271	5.060	7.01E-08
6	.4486	.8061	.0057	.0020	.0003	.8018	1.855	.238	.272	7.000	2.28E-07

Out of the six independent variables, the educational level of the auditor was the first variable included in the equation for ethical dilemma three. The next two variables were educational level and the audit firm size. When more than three variables were included, the audit firm size, the educational level of the auditor and holding a CPA degree had the most significant contribution to the variances in the dependent variable.

4.6.4. Regression Analysis- ED4

The following table summarizes the regression output for ethical dilemma four.

Table 4.44: Model Summary ED4

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.540	.292	.259	1.465		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	114.203	6	19.034	8.873	.000
	Residual	276.738	129	2.145		
	Total	390.941	135			
Coefficients						

Model		Coefficients		Standardized	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	7.183	.760		9.448	.000	5.679	8.687
	Gender	-.422	.299	-.113	-1.409	.161	-1.013	.170
	Age	-.261	.306	-.110	-.851	.396	-.867	.345
	Edu Lev	-.514	.240	-.187	-2.141	.034	-.990	-.039
	CPA	1.125	.261	.326	4.317	.000	.609	1.640
	Firm Size	1.173	.280	.345	4.187	.000	.619	1.728
	Experience	-.212	.286	-.098	-.739	.461	-.778	.355

The multiple R is 0.540 which means that the independent variables collectively are correlated with ethical dilemma four, since R is nearer to one than to zero. The R² value for the equation as a whole is 0.292 implying that only 29.2% of the variance in the ethical dilemma score is explained by the six variables in the equation.

The p-value indicates that the test as a whole is statistically significant.

Among the independent variables the firm size, educational level and holding a CPA degree have a significant relation with ethical dilemma four.

However, since two of the independent variables are highly correlated, stepwise regression was performed and the computer output for this dilemma was summarized in the following figure.

Figure 4.28: Stepwise Regression ED4

Regression Analysis -- Stepwise Selection displaying the best model of each size											
136 observations ED4 is the dependent variable											
Nvar	Gender	Age	EduLev	CPA	FirmSize	Experience	s	Adj R ²	R ²	Cp	p-value
1					.0000		1.598	.118	.125	27.538	2.51E-05
2				.0002	.0000		1.522	.200	.212	13.648	1.34E-07
3				.0001	.0002	.0034	1.479	.245	.261	6.591	9.90E-09
4			.0815	.0001	.0000	.0436	1.467	.256	.278	5.498	1.00E-08
5	.1598	.0277	.0139	.0000	.0000		1.462	.262	.289	5.547	1.55E-08
6	.1612	.3962	.0341	.0000	.0001	.4611	1.465	.259	.292	7.000	4.20E-08

Out of the six independent variables, the audit firm size was the first variable included in the equation for ethical dilemma four. The next two variables were holding a CPA degree and the audit firm size. When more than three variables were included, the audit firm size, the length of work experience and holding a CPA degree had the most significant contribution to the variances in the dependent variable. With five variables in the equation, the age and the educational level of the auditor entered the equation in addition to holding a CPA degree and the firm size. With six variables, the educational level, holding a CPA degree and the audit firm size had the most significant contribution to the variances in the scores of ethical dilemma four.

4.6.5. Regression Analysis- ED5

The following table summarizes the regression output for ethical dilemma five.

Table 4.45: Model Summary ED5

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.534	.285	.252	1.855		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	176.806	6	29.468	8.568	.000

	Residual	443.665	129	3.439				
	Total	620.471	135					
Coefficients								
Model	Coefficients	Standardized		t	Sig.	95.0% Confidence Interval for B		
		B	Beta			Lower Bound	Upper Bound	
1	(Constant)	6.863	.963	7.129	.000	4.958	8.767	
	Gender	-.198	.379	-.042	-.523	.602	-.948	.551
	Age	-.218	.388	-.073	-.561	.576	-.985	.550
	Edu Lev	-.685	.304	-.198	-2.253	.026	-1.287	-.083
	CPA	.396	.330	.091	1.201	.232	-.256	1.049
	Firm Size	-1.953	.355	-.455	-5.503	.000	-2.655	-1.251
	Experience	.132	.362	.048	.365	.716	-.585	.849

The multiple R is 0.534 the independent variables collectively are correlated with ethical dilemma five, since R is nearer to one than to zero. The R² value for the equation as a whole is 0.285 implying that only 28.5% of the variance in the ethical dilemma score is explained by the six variables in the equation.

The p-value indicates that the test as a whole is statistically significant.

Among the independent variables the firm size and educational level have a significant relation with ethical dilemma five.

However, these results are limited since two of the independent variables are highly correlated thus stepwise regression is applied to the data in order to find the best model of each size. The computer output is as follows:

Figure 4.29: Stepwise Regression ED5

Regression Analysis -- Stepwise Selection displaying the best model of each size											
136 observations											
ED5 is the dependent variable											
Nvar	Gender	Age	EduLev	CPA	FirmSize	Experience	s	Adj R ²	R ²	Cp	p-value
1					.0000		1.871	.238	.244	4.455	1.02E-09
2			.0170		.0000		1.839	.265	.275	.714	4.95E-10
3			.0175	.2757	.0000		1.837	.266	.282	1.538	1.60E-09
4	.6432		.0173	.2568	.0000		1.843	.261	.283	3.325	6.63E-09
5	.6010	.6607	.0257	.2361	.0000		1.848	.257	.284	5.133	2.37E-08
6	.6015	.5759	.0260	.2319	.0000	.7158	1.855	.252	.285	7.000	7.68E-08

Out of the six independent variables, the audit firm size was the first variable included in the equation for ethical dilemma five. When more than two variables were included, the audit firm size, and the educational level of the auditor had the most significant contribution to the variances in the scores in ethical dilemma five.

The following table summarizes the regression results concerning the relation between variables:

Table 4.46: Regression Analysis - Summary

Summary of Regression Analysis		
Dependent Variable	Independent Variable	Relation between Variables
Ethical Dilemma One	Auditor's Gender	Not significant
	Auditor's Age Group	Significant
	Auditor's Educational Level	Not significant
	Holding a CPA degree	Not significant
	Auditor's Firm Size	Significant
	Auditor's Length of work experience	Significant
Ethical Dilemma Two	Auditor's Gender	Not significant
	Auditor's Age Group	Significant
	Auditor's Educational Level	Not significant
	Holding a CPA degree	Not significant
	Auditor's Firm Size	Significant
	Auditor's Length of work experience	Not significant
Ethical Dilemma Three	Auditor's Gender	Not significant
	Auditor's Age Group	Not significant
	Auditor's Educational Level	Significant
	Holding a CPA degree	Significant
	Auditor's Firm Size	Significant
	Auditor's Length of work experience	Not significant
Ethical Dilemma Four	Auditor's Gender	Not significant
	Auditor's Age Group	Significant
	Auditor's Educational Level	Significant
	Holding a CPA degree	Significant
	Auditor's Firm Size	Significant
	Auditor's Length of work experience	Significant
Ethical Dilemma Five	Auditor's Gender	Not significant
	Auditor's Age Group	Not significant
	Auditor's Educational Level	Significant
	Holding a CPA degree	Not significant
	Auditor's Firm Size	Significant
	Auditor's Length of work experience	Not significant

CHAPTER V

Summary and Conclusion

Chapter five presents a discussion of the empirical findings, the limitations of the research, recommendations for future studies, and the conclusion.

5.1. Discussion

In order to answer the research question several statistical tools and tests were used. A discussion of the demographic profile of the respondents was followed by tests of the relations between the attribute variables, also called categorical or independent variables. Only two variables, age and length of working experience, were highly correlated.

The average score of each ethical dilemma was discussed and presented in a box plot to show the dispersion of the data. The scores of ED1 and ED2 were scattered around 2, the impairment of auditor's independence was considered insignificant for these dilemmas. The scores of ED3 were varying around 3 indicating that the impairment of auditor's independence was moderate. The scores of ED4 and ED5 were scattered around 4.5 and the impairment of auditor's independence was high. The ethical sensitivity of the auditors was assessed via the score which they assigned to the dilemma. Low ethically sensitive group assigned a score lower than the mean score of the corresponding dilemma.

The respondents were divided into two groups: low sensitive group and high sensitive group, and the effect of each categorical variable on the ethical sensitivity of auditors was determined. Gender was the only

variable which had no significant relation with auditor's ethical sensitivity in any dilemma. The other five variables exhibited a relation with auditor's ethical sensitivity in at least one dilemma. The type of the audit firm and the auditor's educational level affect the ethical sensitivity of auditors in four out of five ethical dilemmas. Auditor's age group and holding a CPA degree affect the ethical sensitivity of auditors in two out of five ethical dilemmas. Auditor's length of work experience affects the ethical sensitivity of auditors in ethical dilemma one only.

The analysis of variances test was applied to test the relation between the categorical and behavioral variables. The one way ANOVA was employed to test the hypotheses of the research. The following results were obtained:

- Gender has a significant relation with ethical dilemma three.
- The length of working experience has a significant relation with ethical dilemma four.
- Holding a CPA degree has a significant relation with ethical dilemmas three and four.
- The educational level of the auditor has a significant relation with ethical dilemmas three and five.
- The age of the auditor has a significant relation with ethical dilemma four.
- The audit firm size has a significant relation with ethical dilemmas two, three, four and five.

It can be concluded that the most important factors in shaping auditor's ethical judgment are the audit firm size and the educational level of the auditor. Gender, age and the length of working experience exert minimal effects on auditor's ethical judgment.

Of the six hypotheses proposed, four were falsified, one was accepted and one could not to be tested. The first hypothesis, based on the theory of legitimacy assumed the homogenous character of auditor's ethical awareness and ethical judgment regardless of the size of the audit firm. The assumption was that auditors of small firms imitate the behavior of those in large, well-established firms. This assumption was rejected, as all tests revealed a significant difference in mean scores between the two groups concerning the five ethical dilemmas, and indicated a significant relation between the firm type and each ethical dilemma in the regression analysis.

Regression analysis was performed to further assess the relation between the dependent and independent variables. The following results were obtained:

- Gender has no significant relation with any of the five ethical dilemmas.
- Auditor's age group has a significant relation with ethical dilemmas one, two and four.
- Auditor's educational level has a significant relation with ethical dilemmas three, four and five.
- Holding a CPA degree has a significant relation with ethical dilemmas three and four.
- The audit firm size has a significant relation with all the ethical dilemmas.
- The length of work experience has a significant relation with ethical dilemmas one and four.

Based on the regression analysis it can be concluded that the audit firm size is the most important factor that affects auditor's ethical

sensitivity. Second in rank are two factors: the auditor's age group and the auditor's educational level. The length of working experience occupies the third rank. Gender failed to show any significant relation with auditor's ethical sensitivity.

5.2. Conclusion

This research focused on investigating the differences of ethical awareness and ethical judgment among auditors in Lebanon. It was assumed that theoretically the main influencing factors include audit firm type, gender, age, education and experience. The results indicated that the more significant factors included the audit firm type (Big four vs. non big four) and the educational level of the auditors (university degree and CPA certificate). Less significant factors involved the age group of the auditor, and the length of work experience. Gender could not be proven to have any significant relation with auditor's ethical sensitivity.

Given the fact that there is a difference in the ethical awareness between auditors working in the Big Four firms and non-Big Four firms, it follows that regulatory bodies in Lebanon should inspect the audit work in the small audit firms in order to assure their audit reports. The educational level of the auditor and especially holding a CPA degree also affect the auditor's ethical awareness and influences ethical decision making. The length of the work experience and the age of the auditor exert a fair influence in shaping his ethical awareness. Gender could not be proven to have any significant effect on auditors' ethical awareness.

5.3. Limitations of the Research

The purpose of the study as initially proposed was to determine to what extent the ethical awareness among auditors in Lebanon is in harmony with the global code of ethics. However, since it was not feasible to gather the needed empirical data, the research objective was changed to investigating the effect of gender, age, educational level, length of working experience and size of the audit firm on the ethical sensitivity of the auditors practicing in Lebanon.

5.4. Recommendations for Future Research

Future research may attempt to compare the results obtained in Lebanon to those of other countries in order to assess the extent of harmony between the ethical awareness of Lebanese auditors and international standards.

The educational level of the auditor including university degree and CPA certificate has an effect on auditor's ethical awareness. Further analysis is needed in order to check which of the two variables has a more significant effect on the ethical sensitivity of the auditor, hence determining if an undergraduate degree, a graduate degree or a CPA certificate should be a prerequisite for an auditor to be licensed to practice in Lebanon.

Additional research may be required to determine if the ethical sensitivity of auditors increases or decreases with age and work experience.

The present research proved a significant effect of the audit firm type/size on the ethical sensitivity of auditors, however, the

homogeneity of the level of ethical sensitivity of auditors working in the same audit firm remains to be tested.

The failure of hypotheses three, five and six, which referred to the divergence in ethical sensitivity of auditors based on gender, age and length of work experience reflects a flaw in this research, though the assumptions seemed reasonable and were based on strong arguments. Future research relating the impact of gender, age, and length of working experience of auditors on ethical sensitivity is warranted.

References

- Allen, Catherine, and Robert Buntin. "A Global Standard for Professional Ethics". *Journal of Accountancy* (2008). 46-52. *Business Source Complete*. Web. 8 May 2012.
- Bedard, Jean, Karla Johnstone, and Edward Smith. "Audit Quality Indicators: A Status Update on Possible Public Disclosures and Insights from Audit Practice". *Current Issues in Auditing* 4.1 (2010): C12-C19. *Business Source Complete*. Web. 8 May 2012.
- Choi, Jong-Hag, Chansog Kim, Jeong-Bon Kim, and Yoonseok Zang. "Audit Office Size, Audit Quality, and Audit Pricing". *Auditing: A Journal of Practice & Theory* 29.1 (2010): 73-9. *Business Source Complete*. Web. 8 May 2012.
- "Code of Professional Conduct". *IFAC*. Web. 22 May 2012. <www.ifac.org/sites/default/files/publications/files/ifac-code-of-ethics-for.pdf>
- Deegan, Graig. "Introduction: The Legitimizing Effect of Social and Environmental Disclosures- a Theoretical Foundation". *Accounting, Auditing and Accountability Journal* 15.3 (2002): 282-311. *Business Source Complete*. Web. 8 May 2012.
- Dehkordi, Hassan, and Naser Makarem. "The Effect of Size and Type of Auditor on Audit Quality". *International Research Journal of Finance and Economics* 80 (2011): 122-137. *Business Source Complete*. Web. 8 May 2012.
- Duska, Ronald. "The Good Auditor – Skeptic or Wealth Accumulator? Ethical Learned from the Arthur Andersen Debacle". *Journal of Business Ethics* 67 (2005): 17-29. *Business Source Complete*. Web. 12 May 2012.
- Eynon, Gail, Nancy Hill, and Kevin Stevens. "Factors that Influence the Moral Reasoning Abilities of Accountants: Implications for Universities and the

Profession". *Journal of Business Ethics* 16 (1997): 1297-1309. *Business Source Complete*. Web. 12 May 2012.

"Ethical Dilemmas for Auditors". *The Institute of Certified Public Accountants in Ireland (ICPAI)*. Web. May 2012. <<http://www.cpaireland.ie/UserFiles/File/Technical%20Resources/Ethics/Ethical%20Dilemmas%20-%20FAQs%20May%202006.pdf>>

Flangan, Jack, and Kevin Clarke. "Beyond a code of Professional Ethics: A Holistic Model of Ethical Decision Making for Accountants". *Abacus* 43.4 (2007): 488-518. *Business Source Complete*. Web. 12 May 2012.

Francis, Jere and Michael Yu. "The Effect of Big Four Office Size on Audit Quality". *The Accounting Review* 84.5 (2009): 1521-1552. *Business Source Complete*. Web. 12 May 2012.

Francis, Jere. "A Framework for Understanding and Researching Audit Quality". *Auditing: A Journal of Practice & Theory* 30.2 (2011):125-152. *Business Source Complete*. Web. 12 May 2012.

Giroux, Gary. "What Went Wrong? Accounting Fraud and Lessons from the Recent Scandals". *Social Research* 75.4 (2008): 1205-1238. *Business Source Complete*. Web. 13 May 2012.

Hansen, Gaylen. "Audit Fees and Engagement Profitability: A Threats and Safeguards Approach to Strengthen Compliance with Standards of Ethical Behavior". *NASBA*. Web. 12 May 2012. <www.nasba.org/files/2011/03/Ethics_and_Strategic_Issues_Discussion-22Oct20.pdf>

Harding, Frank. "What is the Role of Europe in an Increasingly Harmonized World?". *The European Accounting Review* 9:4 (2000): 593-601. *Business Source Complete*. Web. 13 May 2012.

- Lin, Jerry and Mark Hwang. "Audit Quality, Corporate Governance, and Earnings Management: A Meta-Analysis". *International Journal of Auditing* 14 (2010): 57–77. *Business Source Complete*. Web. 18 May 2012.
- Longuenesse, Elisabeth. "Accountants and Economic Governance in a Dependent Country: Conflicting Legacies and New Professional Issues in Lebanon". *Society and Business Review* 1.2 (2006):106-121. *Business Source Complete*. Web. 18 May 2012.
- Pendergast, Marilyn, Kahn, Urbach, and Werlin. "Harmonization of Independence Standards for Accountants around the Worlds". *IFAC Press center*. Web. 12 May 2012. <http://ebtekarnovin.com/Editor/UploadFiles/PDF%20Articles/Harmonization_of_Independen.pdf>
- Nobes, Christopher and Robert Parker. *Comparative International Accounting*. 10th ed. New Jersey: Prentice Hall, 2008. Print.
- Paul, Diaconu, Coman Nicoleta, Dobroteanu C. Liliana, Dobroteanu Laurentiu, and Minu Mihaela. "Harmonization in Auditing Profession". *Journal of Modern Accounting and Auditing* 5.5 (2009): 30-41. *Business Source Complete*. Web. 8 June 2012.
- "Report on the Observance of Standards and Codes (ROSC), Republic of Lebanon". *World Bank*. Web. 22 May 2012. <<http://search.worldbank.org/all?qterm=lebanon>>
- Sidani, Yusuf. "The Auditor Expectation Gap: Evidence from Lebanon". *Managerial Auditing Journal* 22.3 (2007): 288-302. *Business Source Complete*. Web. 8 June 2012.
- Tsui, Judy, and Carolyn Windsor. "Some Cross-Cultural Evidence on Ethical Reasoning". *Journal of Business Ethics* 31 (2001): 143-150. *Business Source Complete*. Web. 12 June 2012.

White, Richard. "Are Women More Ethical? Recent Findings on the Effect of Gender upon Moral Development". *Journal of Public Administration Research and Theory* 9.3 (1999): 459-471. *Business Source Complete*. Web. 8 June 2012.

Wood, Rahl. "Global Audit Characteristics across Cultures and Environments: An Empirical Examination". *Journal of International Accounting, Auditing & Taxation* 5.2 (1996): 215- 223, 1996. *Business Source Complete*. Web. 8 June 2012.

Appendices

Survey

This survey aims to investigate the divergences of professional judgment in ethical dilemmas among audit professions across borders. We would like to express our sincere thanks for your help by answering this survey.

Part one: Demographic Variables

1. Please specify your gender:
 - Male
 - Female
2. Please specify your age:
 - Less than 25
 - Between 25 and 35
 - Above 35
3. Please specify your highest education level
 - Undergraduate
 - Graduate
 - Post-graduate
4. Do you hold a CPA/CA?
 - Yes
 - No
5. Which audit firm are you working for?
 - One of the Big Four
 - A private firm
 - Other:
6. How long have you been working as an auditor?
 - Less than 5 years
 - Between 5 and 10 years
 - Above 10 years

Part two: Ethical Dilemmas

The cases given below here are used to judge your ethical sensitivity. You will decide the level of impairment on your independence. The scale will range from 1 to 7 with the increasing level from “not impaired” to “impaired”.

Ethical dilemma 1: If I have one client, who particular makes up 12% of the annual fee income of my firm, my independence would be:

1 2 3 4 5 6 7
Not impaired Impaired

Ethical dilemma 2: A client is offering holiday deals in their brochure. If I purchase this holiday as long as they do not offer me a special discount, my independence would be:

1 2 3 4 5 6 7
Not impaired Impaired

Ethical dilemma 3: If I have the same audit client for more than 10 years, my independence would be:

1 2 3 4 5 6 7
Not impaired Impaired

Ethical dilemma 4: If my client is establishing a new company where I am going to buy some shares and I will also be commissioned to do the audit for it as well, my independence would be:

1 2 3 4 5 6 7
Not impaired Impaired

Ethical dilemma 5: I have already established my own audit firm. Considering the financial crisis, I am worrying that I will get a client. Luckily today I landed on an audit deal. If it provides 20% of my annual income in the first year, my independence would be:

1 2 3 4 5 6 7
Not impaired Impaired