The Islamic University of Gaza

High Studies Deanery

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Accounting & Finance Department

The Impact of E-Commerce on the External Auditor Work

"Applied Study on the International Accounting Firms Working in Palestine"

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بسم الله الرحمن الرحيم

((يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَأْكُلُوا أَمْوَالَكُم بَيْنَكُم بِالْبَاطِلِ إِلَّا أَن تَكُونَ تِجَارَةً عَن تَرَاضٍ مِّنكُمْ وَلَا تَقْتُلُوا أَنفُسَكُمْ إِنَّ اللَّهَ كَانَ بِكُمْ رَحِيمًا))

صدق الله العظيم

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Abstract

The study examines the Impact of E-Commerce on the External Auditor Work – Applied study on the International Accounting Firms working in Palestine. This study consists of all of the International Accounting Firms branches in Palestinian Authority areas. The research targets the Managers of Auditing, Senior Auditors, Assistant Auditors and Accountants.

The researcher used the descriptive analytical method and utilized both primary and secondary sources for data collection. The researcher reviewed 40 of all distributed questionnaires in Palestinian Authority areas, forming a recovery percentage of 100%.

The research results show that E-Commerce play a central role in showing the impact on the external auditor work of international accounting firms, because the international accounting firms have a reliable technology that organizes the huge information gathered from all sources in companies, banks or NGO's dealing with it and analysis the data to confirm the sample being subject to the purposes of achieving the objectives of this study. In addition, The evidences and procedures of audit process is documenting through reviewing operations in E-Commerce resulting from electronic information systems due to the quality of audit evidences and documentation and also the E-Commerce has an impact on the implementation risks of audit process, which these operations are not usual, therefore the need of wide effort in assessing audit risks related to E-Commerce processes and to obtain as much as possible to confirm these operations.

The researcher recommends necessity for the external auditors to updates their professional information about newer E-Commerce in the modern technology and its requirements, so that external auditors can deal with this type of activities efficiently and effectively. Also, increasing the scientific and professional experiences and technological capacity building to external auditors, that will positively reflect on auditing the fields of E-Commerce processes. In addition, more sophisticated current skills, knowledge and newer technology must be added to the qualification of Palestinian auditors to create a various experts staff professionally in the field of E-Commerce. Beside outweighed the risks of E-Commerce process and how to deal with during audit process and … etc.

ملخص الدراسة

تبحث الدراسة أثر التجارة الإلكترونية على عمل المراجع الخارجي – دراسة تطبيقية على شركات المراجعة الدولية العاملة في فلسطين. يتكون مجتمع الدراسة من كل فروع شركات المراجعة الدولية في مناطق السلطة الفلسطينية. حيث أن البحث يستهدف مدراء المراجعة، المراجعين الرئيسيين والمراجعين المساعدين والمحاسبين.

استخدم الباحث المنهج الوصفي التحليلي واستخدم كل من المصادر الأولية والثانوية لجمع البيانات. استرجع الباحث 40 من جميع الاستبيانات الموزعة في مناطق السلطة الفلسطينية، وتشكل نسبة الاسترداد 100%.

نتائج البحث تظهر أن التجارة الإلكترونية تلعب دورا محوريا في إظهار ذلك تأثير على عمل المراجع الخارجي في شركات المراجعة الدولية، وذلك لأن شركات المراجعة الدولية تمتلك تكنولوجيا ملائمة لتنظيم المعلومات الضخمة التي تم جمعها من جميع المصادر في الشركات والبنوك أو المنظمات الأهلية غير الحكومية التي تتعامل معها وتحليل البيانات لتأكيد عينة الدراسة والتي تخضع لأغراض تحقيق أهداف هذه الدراسة. بالإضافة إلى أدلة وإجراءات المراجعة موثقة خلال عمليات المراجعة في التجارة الالكترونية الناتجة من نظم المعلومات الالكترونية نظراً لجودة أدلة المراجعة والتوثيق وأيضا هناك أثر على مخاطر التنفيذ لعملية المراجعة، والتي هي عمليات ليست عادية، لذلك الحاجة لجهد واسع في تقييم مخاطر المراجعة المتعلقة بعمليات التجارة الالكترونية والحصول على أكبر قدر ممكن لتأكيد هذه العمليات.

يوصي الباحث بضرورة تحديث المعلومات المهنية للمراجعين الخارجين عن ما هو جديد في التجارة الالكترونية في التكنولوجيا الحديثة ومتطلباتها، بحيث يمكن لمراجعي الحسابات التعامل مع هذا النوع من الأنشطة بكفاءة وفعالية. أيضاً زيادة الخبرات المهنية والعلمية وبناء القدرات التكنولوجية لمراجعي الحسابات، بما سينعكس إيجابيا على مجالات المراجعة لعمليات التجارة الإلكترونية. بالإضافة إلى ذلك، مهارات حالية كثيرة، معرفة، وتكنولوجيا أجدد يجب أن تضاف لمؤهلات المراجع الخارجي الفلسطيني لخلق كوادر متنوعة من الخبراء مهنياً في مجال التجارة الالكترونية. إلى جانب دور مخاطر التجارة الإلكترونية وكيفية التعامل معها خلال عملية التدقيق و الخ.

DEDICATION

To my parents, brothers and sisters,
To my doctors, teachers and friends,
And to my lovely people that I know
I would like to take this opportunity
to dedicate this Master research
for all of you

ACKNOWLEDGMENTS

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List of Abbreviations

ACL	Audit Command Language
AICPA	American Institute of Certified Public Accountants
B2B	Business to Business
B2C	Business to Consumer
B2G	Business to Government
CAATs	Computer-Assisted Audit Techniques
CCR	Central Contractor Registration
CEO	Chief Executive Officer
CICA	Canadian Institute Chartered Accountants
CPA	Certified Public Accountants
C2C	Consumer to Consumer
C2B	Consumer to Business
C2G	Consumer to Government
DOD	Department of Defense
E-Auditing or EA	Electronic Auditing
eBay	Electronic Bay
E-Business	Electronic Business
E-Card	Electronic Card
E-Check	Electronic Check
E-Commerce or EC	Electronic Commerce
EDI	Electronic Data Interchange

EDP	Electronic Data Processing
EFT	Electronic Fund Transfer
E-Government	Electronic Government
EPSs	Electronic Payment Systems
E-Readiness	Electronic Readiness or Readiness Mail
E-Trade	Electronic Trade
GAAP	Generally Accepted Accounting Principles
GAAS	Generally Accepted Auditing Standards
GAO	Government Accountability Office
G2B	Government to Business
G2C	Government to Consumer
G2G	Government to Government
IA	Internal Auditors
ICT	Information & Communication Technology
IDEA	Interactive Data Extraction and Analysis
IFRS	International Financial Reporting Standards
IRS	Internal Revenue Service
IS	Information Systems
IT	Information Technology
PCAOB	The Public Company Accounting Oversight Board
SAS	Statement on Audit Standard
SBA	Small Business Administration
WWW	World Wide Web

Chapter One:

"General Framework of the Research"

1.1 Introduction:

The electronic commerce (E-Commerce) represents one of the challenges, which face both accountants and auditors, since many organizations have changed to adopt E-Commerce. The E-Commerce has been dramatically increased in the last few years. It also represents a new type of business economic patterns at the global level, in the information age, and advanced modern technology in this era where borders disappear and commas geography, and changed the concept of the determinants of capital. With E-Commerce has become imperative for the economic units that seek to strengthen its competitive position to adapt the electronic environment, by changing its accounting system radically or gradually and focusing on the so-called electronic accounting. After the emerge of new technologies in the business world as an extension of the electronic environment and development as one of the most important challenges in front of the new accounting and auditing. The modern revolution in Information Technology has become the backbone of E-Commerce. With the development of E-Business activities it becomes the perfect computer and communications networks to run, based on its strong dependence on computer systems, holds a huge threat to the control ineffective. Inappropriate use may result in disastrous consequences, and the existence of computer viruses and "hackers" wanton attack, computer crime, and so have led to the risk of E-Commerce information distortion (العميري, 2007).

Therefore, auditors need to audit reports and reliability of the received information; therefore it is important to know how to describe the E-Commerce of audit that affects audit evidence, audit documentation, identify issues for E-Commerce system and other specialized IT environment and improve the impact of E-Commerce on the external auditor's work of International Accounting Firms which works in Palestine.

1.2 Statement of the Problem:

There are many obstacles that limit the applications of E-Commerce audit in Palestine and these are either report and audit procedures or evidence and documentation. The main of problem can be represented as follow: What is the impact of E-Commerce on the external auditor work? This can summarize in the following points:-

1- Does E-Commerce exist in Palestine? And does the external auditor in Palestine able to audit financial statements data's for E-Commerce process, and face its challenges in light of his current skills?

2- What are the requirements needed by the external auditor in Palestine to face new risks associated with practice of E-Commerce?

3- What is the methodology use by the external auditor in Palestine to collect evidence from E-Commerce to perform the auditing process and ensure the quality of this process?

1.3 Research Variables:

In order to assess the validity of the hypotheses in this research, the researcher has a different sets of variables are used, as follows:

- ☒ Independent Variable: E-Commerce.
- ☒ Dependent Variables:
  - Current skills, knowledge and qualification of Palestinian auditors.
  - Audit report.
  - Quality audit evidence and documentation process.
  - Risks of audit process.

1.4 Research Hypotheses:

In order to assess the validity of the hypotheses is this research, the researcher has a different sets of hypotheses, as follows:

1. There is a significant statistical at 0.05 levels between E-Commerce and current skills, knowledge and qualification of Palestinian auditors in Palestine.
2. There is a significant statistical at 0.05 levels between E-Commerce and the audit report in Palestine.
3. There is a significant statistical at 0.05 levels between E-information systems and the quality of audit evidences and documentation process in Palestine.
4. There is a significant statistical at 0.05 levels between E-Commerce and the risks of audit process in Palestine.
5. There is a significant statistical difference at 0.05 levels among respondents in regard the impact of E-Commerce on the external auditor work due to personal information's and Data's in Palestine.

1.5 The Importance of the Research:

The importance of the study arises from the use of E-Commerce in the audit process. To prevent huge information about E-Commerce that companies dealing with it with an attempt to deepen the knowledge in this field, as well as to measure the use of this method by the external auditors in Palestine. And as well as identify the main difficulties and risks that prevent E-Commerce, and obtaining evidence of high quality, as the results will give indications on the impact of E-Commerce on the external auditor work in Palestine.

1.6 The Objectives of the Research:

1. Identify the requirements and characteristics of E-Commerce.
2. Know the obstacles that stand in the face of E-Commerce in the Palestine.
3. Determine the expected impact of E-Commerce on auditing and accounting standards and the relationships between it.
4. Describe the approaches of E-Auditing that dealing with information systems.
5. The ability of external auditor in Palestine to gather information contained in electronic sites of companies dealing with E-Commerce.

1.7 Research Methodology:

The data analyzed through using the descriptive analytical approach by collecting data from:

1. **Primary Data:** By distributing a questionnaire and analysis of results, with responsible people.
2. **Secondary Data:** using books, magazines, researches, articles, and previous studies, websites, etc.

1.8 Research Population and Sample:

Research population represents of all operated international accounting firms which is 12 located in Palestinian Authority areas. And the sample involves 40 employees including Accountants, Assistant Auditors, Senior Auditors and Auditors Mangers in Deliotte and Touché Firm, Ernst and Young Firm, Price Water House Coopers Firm and Talal Abu-Ghazaleh Group Firm.

Table (1): A list of International Accounting Firms in Palestinian Authority areas:-

#	Firms Name	Firms Type	Work Place	Number of Branches	Number of Respondents (Accountants, Assistant Auditors, Senior Auditors & Auditors Mangers)
1.	Deliotte and Touché	International	Palestinian Authority areas	3	12
2.	Ernst and Young	International	Palestinian Authority areas	3	11
3.	Price Water House Coopers	International	Palestinian Authority areas	3	4
4.	Talal Abu-Ghazaleh	National (Regional)	Palestinian Authority areas	3	13
TOTAL				12	40

1.9 Previous Studies:

A: English Studies:-

1) **(Moorthy and Other, 2011): "The Impact of Information Technology on Internal Auditing"**

This paper evaluates the role of information technology and how it affects internal audit process in the organization. The study also stresses on the global trend of adopting IT system in producing a more controlled environment in delivering the auditing process. It also constitutes on how IT affects internal control and provides guidelines and best practices in evaluating techniques available to effectively perform auditing tasks internally. It also addresses how technology, Information system (IS) and electronic data processing (EDP) have changed the way organizations conduct its business, promoting operational efficiency and aid decision-making. It also spotlights many aspects of IT risks and controls and highlights whether the right people are overseeing IT risks to the degree they should. It demonstrates the impact of technology convergence on the internal control mechanism of an enterprise. It emphasizes that the auditor also has a responsibility to assure that the governance level of management understand risks accepted by management and the liabilities potentially transferred to board members.

The objectives of the research are:

To identify reasons for lack of guidelines available to best practices.

To address and suggest accounting standards to educate and help relevant auditors in performing audit task and mitigate organizational risk.

Another important role for auditors, and the auditing profession, is to encourage and support the efforts of providers of systems and new technologies to enhance the built-in monitoring and assurance features of systems without considering them as processing overhead or as elements that contribute to decreased performance. An important role for auditors is to not only understand and change with the technologies, but to also explain the effects of such changes to others.

2) (Al-Jabali and Nazmy, 2011): "The Impact of E-Commerce on the Audit Profession in Jordan"

This study aims to identify the extent of the impact of E-Commerce on audit profession in Jordan. For purpose of this study, researcher selected a random sample consist of (80) auditors licensed practicing auditing in Jordan.

The study found the need to define the auditors of E-Commerce and its institutions and its requirements so that auditors deal with this type of activity efficiently and effectively, and the need for increased training of scientific, practical and technological auditors will positively reflect on the process of checking E-Business processes, and the need of specialized courses in the audits E-Commerce by the Jordanian Society of Chartered Accountants, as well as the importance of educating auditors by E-Commerce dangers and how to deal with during the audit process.

At the end of this study, the research resulted in the following:-

There is an impact of E-Commerce on the planning audit process, according to researcher view that this result is logical, based on the activities of new pattern electronic, and this requires non-traditional plan as well as the complexity of the processes and this requires the use of a greater number of auditor in addition to the rehabilitation more of auditors.

There is an impact of E-Commerce on the implementation audit process, which these operations are not unusual, there is a wide need of efforts in audit process and to obtain as much evidence as possible to confirm these operations.

There is no impact of E-Commerce on the auditor's report where the criteria for the preparation of the report govern the auditor's report and any modification in the standards would entail an amendment in the auditor's report.

At the end of this study, the research recommendations are the following:-

The necessity to teach auditors E-Commerce and its principles and its requirements, so that auditors can deal with this type of activities efficiently and effectively.

Increasing the scientific and practical training and technological rehabilitation to auditors, that will positively reflect on the process of auditing e-commerce processes.

Holding specialized courses in audits of E-Commerce by the legal Jordanians Association Accountants.

3) **(Genete and Tugui, 2008): "Particularities in Audit Planning in E-Commerce"**

The purpose of this study is to catch some of the audit particularities in the E-Commerce environment. The technological and economic development of the latest centuries resulted in the significant development of the E-Commerce, and the changes made in the manner of executing transactions had important repercussions on the manner of executing the audit. In this context, auditors must adapt their activity to the general evolution tendency, must be able to understand and evaluate not only the financial information, but also the processing techniques used by the information system of the audited companies. Changes in the manner of executing the audit determined by the use of E-Commerce are noticeable early on the mission planning stage.

At the end of this study, the research resulted in the following:-

The expansion of E-Commerce use has a strong impact on the audit mission early on the work planning stage.

The main principles of an audit mission for companies using E-Commerce are identical with the ones of companies that perform only classic transactions, but there are significant changes at the level of the methods used to accomplish the mission.

E-Commerce transactions substantially increase the volume of work in the audit planning stage and they bring numerous particularities that have to be analyzed and understood by the auditor.

4) **(Shaikh, 2005): "E-Commerce Impact: Emerging Technology – Electronic Auditing"**

The purpose of this study is to expect an explosive application of these technologies to take place when they become mature and may further assist auditors in improving the quality of their work. How to use some of the computer-assisted auditing techniques (CAATs) more effectively with the emerging information technologies.

Constructed an infrastructure with the support of emerging technologies. Electronic auditing (EA) framework– prepared and used with information technology, these examples are object-oriented distributed middleware's, internet security technologies, and intelligent agents.

The study found a CPA may conveniently audit the loan account of a bank with EA framework. Demonstration/Application.

Auditors will have to design one specialized audit software for each auditee's electronic data processing (EDP) system if the EDP system uses proprietary file formats or different operating systems. The EA has some limitations. This approach depends on distributed middleware's standards, i.e. CORBA, DCOM, or Java RMI, to enable the interconnections of the auditor's GAAS, auditee's EDP systems. Furthermore, this article proposes a new auditing approach that we call EA.

5) (Nikoloyuk and Others, 2005): "E-Commerce Impact on Canadian Public Sector Audit Practice"

The purpose of this study is reports on the research conducted into the adaptations Canadian public sector auditors have made to the emergence of E-Commerce and E-Business in the delivery of public services.

The study found a distinct disconnect between what is reported in the literature and what has actually happened in practice. Practicing auditors do have a significant interest in the impact of E-Business on the audit profession specifically and on their client organizations generally.

But there is significant disagreement about whether E-Business constitutes just another set of technologically mediated changes, not much different from the many others of the past 30 years, or whether E-Business is truly disruptive in nature.

The paper identifies key differences between what is said in the literature and what is done on the ground. It identifies key lessons from audit experience related to evolving E-Government, including the management of new risks.

6) (Gorwani, 2005): "E-Commerce - Implications For Auditor"

E-Commerce systems have become essential to run the transactions, handle business contacts and manage information necessary to initiate and sustain the business activities. In many enterprises, they have become an integral part of the business and are fundamental to their growth, prosperity and, above all, survival. The widespread use and continuing development of E-Commerce systems has enabled the organizations to improve the efficiency of their operations tremendously.

The purpose of this study is to introduced enormous amount of risk that needs to be addressed by the management and assessed by the auditor while planning and conducting their audit.

The study found E-Commerce does not give rise to new audit objectives nor does it change the same. However, it essentially forces the auditors to review their audit processes and procedures in the light of changes brought by E-Commerce in the ways of doing business and resultant risks. It requires auditors to upgrade their professional skills with the adequate knowledge of E-Commerce systems to apprehend their impact on client's business and audit process in its right spirit.

The shift to the seamlessly connected organizations has already placed greater value on the auditors who are skilled at identifying and handling complex technological issues and adapting with the ever-changing business environment.

7) (Hicks, 2004): "E-Commerce and Its Impact on the Accounting Profession - A Literature Review"

Issues concerning E-Commerce are increasing as more companies are developing a web presence and conducting business on the Internet. Convenience and money are prompting consumers to shop online. The accounting profession is affected in many dimensions by E-Commerce. Management accountants must be aware of the company's strategy and how the Internet fits into the company's business. They must also be able to integrate accounting software that can track sales orders and customer data. Internal auditors must understand the laws relating to sales and ensure the company website is secure and trustworthy. Web assurance services are available that assure customers about the security and features of a website. These services create new opportunities for CPAs and licensed accounting firms. Tax issues are also emerging that governments and tax professionals must resolve.

Accountants must be informed about various E-Commerce strategies in order to advise management on the best and most profitable way to enter into the world of E-commerce. The Internet and E-Commerce will only continue to grow as security is enhanced and consumers become more trusting of its services and benefits.

These issues are some of the problems facing companies who provide services that span beyond an operating cycle or fiscal year. The increase of Internet service companies and other technology companies will bring the uncertainties of revenue and

expense recognition to light and regulatory bodies must be prepared to address these issues. As technology expands, new opportunities arise for companies that can increase productivity and sales. With these opportunities, reservations also arise about how to operate in this new high-tech environment and how to make this technology work for a specific company and its customers.

8) (Santos and Others, 2004): " The Impact of E-Commerce on The Internal Control and on Auditing Practices"

The trend that one has verified in E-Commerce, assuming the internet as a privileged way for the implementation of inter-organizational communication channels, and also the major development verified in the intra-organizational technological infrastructures (intranets and extranets), have given else to complex commercial partnerships. This complexity has had an enormous impact on what regards internal control systems and auditing practices.

An internal control system is composed by a set of control mechanisms thought of according to the risk management connected to business' processes. These mechanisms play an important role in assuring that electronic commercial transactions are trustful and, so, enabling their increase.

The growing importance of E-Commerce and the need to assure the necessary trust in electronic commercial transactions, has led the authors to study and propose, using organizational engineering, an internal control system, from an holistic perspective, thus enabling the implementation of real time auditing practices, of the electronic commercial transactions, using the digital agents' technology.

In the present study, an organization should decide to implement any E-Commerce model that will implement its information and communication channel trough the internet; it should extend its intra-organizational internal control system to its inter-organizational control.

9) (Wagner, 2001): "Information System Auditing and E-Commerce"

Information Technology has become a vital resource to almost every person in the world, whether they know is or not. With approximately 500 million people connected to the Internet, along with the growth of technology, E-Commerce is being considered by entities of all types, be it an individual or an organization. E-Commerce involves

using Information Technology to transmit data, which is often sensitive, over the Internet. The use of the Internet to transmit sensitive data makes the data increasingly vulnerable and subject to undesirable consequences resulting from deficient control. Reducing this potential is the challenge of Information System Auditing. This study reached to the following results:

The study found most significant risks in E-Commerce tend to be simple in concepts. Establishing an effective security function, securing passwords, dealing with customers, keeping information confidential, encryption, developing, secure systems, and using the best technology may seem simple in concept, but are surprisingly complex to implement. An auditor should understand an E-Commerce function both increase risks and decreases control, and should be involved in every aspect of an E-Commerce presence to ensure reasonable assurance.

B: Arabic Studies:-

1) (قيراط, 2008): "The Impact of E-Commerce on the Audit Practices: A Practical Study on Syrian Auditors"

The aim of this study was to identify the degree of the impact of E-Commerce practices of the auditing process, and what is required of the auditor to enable him to perform a sound auditing process in relation to E-Commerce operations.

The study concluded that there is a need to train Syrian auditors on the required skills to successfully perform auditing E-Commerce operations. In addition to the most important security procedures to close the security gaps that could be broken into by experts. The research recommended that the authority is responsible for the auditing profession in Syria should provide its members with the most recent periodicals related to E-Commerce.

At the end of this study, the research resulted in the following:-
The Syrians auditors agreed to a greatly that there is a need for training and skills development in the current references of auditor to be able to review the financial statements for E-Commerce transactions. The security of electronic information enhances the confidence of the auditor with audit evidence resulting from auditing E-Commerce processes.

The design of E-Commerce system must save the documents related to E-Commerce processes until the auditor does for approval within a specified period, and since it can be retrieved when needed.

At the end of this study, the research recommendations are the following:-

To take care of the organisers of the profession in Syria that provides modern versions of E-Commerce for members of the profession.

To take care of the official authorities and the organization of the profession in Syria to develop training programs for the auditors review the Syrians about E-Commerce.

2) (العميري والمعتاز, 2007): "The Effect of E-Commerce on the Audit Planning: An Empirical Study on the External Auditors in Saudi Arabia"

The purpose of this field is to identify the impact on the planning review process transformation facilities from traditional to E-Commerce system, and the significance of this impact; and to what extent were the significant differences between the views by the personal characteristics of the sample of auditors involved in this study.

Note that this study was conducted in Saudi Arabia and the total sample size consists of main audit eight offices.

The study revealed that E-Commerce is a contemporary phenomenon Tran's part of business performance from traditional methods to technical methods and this has created a kind of new procedures that need a lot of researches to take root, become familiar, and dealt with in ways that make them more accessible and more legitimate.

3) (العمودي, 2006): "The Impact of E-Commerce on the Auditing: A Field Study in Yemen"

The study aimed to identify the impact of E-Commerce on the audit result for the growth of E-Commerce operations, by identifying the characteristics of this type of activity, and to clarify the challenges and opportunities imposed by the audit profession, and the necessity knowledge of the references adequate techniques of E-Commerce, and the latest procedures and methods used in the field Review of E-Commerce, and the development of these procedures under review reflects the requirements of E-Commerce operations.

At the end of this study, the research resulted in the following:-

To audit the E-Commerce processes require taking into account the range of risks associated with the systems of internal control and the nature of E-Commerce processes, as well as the need for a number of scientific skills and professionalism that must be met by the External Auditor, which requires the importance of instructions by either Accountants legal Association in Yemen, or by the Central Agency for Accounting and control and the relevant ministries. The design of E-Commerce system should make it possible to save documents relating to E-Commerce to be the auditor for approval within a specified period, and then it can be reviewed when needed.

Should be allowed the external auditors access to the database at any time, and not to hide any data about him, and should be available detailed data for the process to the appropriate intervals.

At the end of this study, the research recommendations are the following:-
The necessary concerns the profession organizers in Yemen and the audit firms to develop training programs to perform the auditing functions in the E-Commerce environment.
The necessary concerns the universities and those professions supervising, and audit firms, to provide modern versions in the audit, issued by international organizations in the profession of accounting and auditing.

1.10 Comments on Previous Studies:

The researcher find that previous studies did not focus directly on the E-Commerce process, where the researchers gave their attention to another type of information and have written extensively in it but there is no researcher collect this information for E-Commerce as the researcher did and writing them fully.

Also found that most of the previous studies are complementary to previous ones of E-Commerce characteristics and its impact on every factor of the audit process factors, but what distinguishes this study is to demonstrate all the characteristics of E-Commerce and E-Auditing and type of electronic information systems provided to help the external auditor in his work related to the audit profession in Palestine.

The researcher add-values to his study from others researchers efforts in the same field of search, where E-Commerce is one of the new sciences in Palestine, as well as the techniques and systems used by the international accounting firms that follow these field in Palestine.

Chapter Two:

"General Concepts of E-Commerce"

2.1 Introduction:

Electronic commerce (E-Commerce) "is sharing business information, maintaining business relationships, and conducting business transactions by means of telecommunications networks". Traditional E-commerce, conducted with the use of information technologies centering on electronic data interchange (EDI) over proprietary value-added networks, is rapidly moving to the Internet. The Internet's World Wide Web (WWW) has become the prime driver of contemporary E-commerce (Zwass, 1996).

For E-Business enterprises in the age of the Internet, electronic commerce is more than just buying and selling products online. Instead, it encompasses the entire online process of developing, marketing, selling, delivering, servicing, and paying for products and services transacted on internetworked, global marketplaces of customers, with the support of a worldwide network of business partners (O' Brien, 2002, P.162).

E-Commerce refers to the use of the Internet and the Web transacts business. More formally, e-commerce is about digitally enabled commercial transactions between and among organizations and individuals. For the most part, this means transactions that occur over the Internet and the Web (Laudon's, 2010, P.403).

Although most commercial transactions still take place through traditional retail channels, rising numbers of consumers and businesses are using the Internet for electronic commerce. Today, E-Commerce revenue represents about 5 percent of all retail sales in United States, and there is tremendous upside potential for growth (Laudon's, 2010, P.416).

Electronic Commerce: is commerce, but it accelerated and enhanced by IT, in particular the Internet. E-Commerce enables customers, consumers, and companies to form powerful new relationships that would not be possible without the enabling technologies. In a few short hours, you can set up shop on the Internet and be instantly accessible to millions of consumers worldwide (Haag & Cummings, 2010, P.128).

2.2 Definition of E-Commerce:

There are several points of view to define E-Commerce:

1. E-Commerce as a concept: "the implementation and management of commercial activities relating to goods and services by converting the data over the Internet or similar technical systems" (أبا زيد, 2005).

2. E-Commerce (EC): "Is an emerging concept that describes the process of buying, selling or exchanging products, services, and information via computer networks, including Internet" (Turban & Others, 2002, P.4).

3. E-Commerce: "The ability to buy anything from anywhere at any time, which means the use of E-Commerce methods and techniques in the conduct of business transactions" (حلس وجربوع, 2001).

4. E-Commerce: "It is the process of exchange something of value such as products, services, or information through electronic means, mostly the Internet". Or: "Its Sharing business information, maintaining business relationships, and conducting business transactions by means of telecommunication networks" (Gupta, 2000, P.217).

Finally, from the above definitions we can deduce the online world defines E-Commerce:

Modern and progressing technological systems that create an open door for the sale and purchase of products and services and information through the Internet.

2.3 A Brief History of E-Commerce:

EC applications were first developed in the early 1970s with innovations such as electronic fund transfer (EFT). However, the extent of the applications was limited to large corporations financial institutions, and a few daring small businesses. Then came electronic data interchange, known as EDI, which expanded from financial transactions to other types of transactions processing, thus enlarging the pool of participating companies from financial institutions to manufacturers, retailers, services, and many other types of businesses. More new EC applications followed, ranging from stock trading to travel reservation systems. As the Internet became more commercialized and users flocked to participate in the World Wide Web (WWW) in the early 1990s, the term electronic commerce was coined and EC applications rapidly expanded. One reason for the rapid expansions of e-commerce was the development of new networks,

protocols, software, and specifications. The other reason was the increase in competition and other business pressures (Turban & Others, 2002, P.14).

2.4 Global E-Commerce:

Electronic commerce is revolutionizing business in developed and developing countries. In fact, EC may change the economic status of some nations as they become active in electronic commerce. However, countries and individuals face severe obstacles as they struggle against high technology costs, poverty, lack of education, primitive infrastructure, and restrictive government regulations. Despite these challenges, there will be more "Global" in the World Wide Web by 2002, according to U.S.-based consultancy Gartner Group. EC site developers also face the challenge of customizing a site so that it can meet the local needs, preferences, and value systems of many different cultures. Why customize? Even though anyone anywhere in the world can access an EC site, once a visitor is on the site it becomes a window into the company's offerings and products. The company must communicate with the local customer in a meaningful way. This means that a site based in Canada that wants to target Argentineans must do so in a culturally sensitive manner by changing the language, offering products that its target audience prefers, and giving users viewing options that suit their technological sophistication. EC developers, then, must analyze the similarities and differences among culture and adapt the site accordingly. Andersen Consulting, for instance, researched the best way to offer travel services via electronic commerce. It discovered that African and German travelers respond to promises of adventure and danger, whereas U.S. travelers were motivated by an emphasis on nature and family. In response, Andersen changed its site to reflect local preferences and tastes (Gupta, 2000, P.230).

2.5 Business Models of E-Commerce:

On of the major characteristics of EC is that it enables the creation of new business models. A **business model** is a method of doing business by which a company can generate revenues to sustain itself. The model spells out how the company is positioned in the value chain. Some models are very simple. For example, Nokia sells cellular phones and generates profits. On the other hand, a TV station provides free

broadcasting. Internet portals, such as Yahoo, also use a complex business model (Turban & Others, 2002, P.6).

2.6 Types of E-Commerce Models:

There are nine major e-commerce models. While we focus the majority on Business to Business (B2B) e-commerce and Business to Consumer (B2C) e-commerce (both in the e-commerce private sector), let's start by exploring each e-commerce models: (Haag & Cummings, 2010, P.129-148)

2.6.1 Business to Business (B2B): occurs when a business sells products and services to customers who are primarily other businesses. So, for example, when Gates Rubber Company sells belts, hoses, and other rubber and synthetic products to General Motors or any other manufacturer that needs those parts, this is B2B e-commerce. B2B e-commerce is where all the money is right now in the e-commerce world (Haag & Cummings, 2010).

2.6.2 Business to Consumer (B2C): occurs when a business sells products and services to customers who are primarily individuals. You are no doubt familiar with this model of e-commerce. If you've ever ordered a book on Amazon (www.amazon.com), purchased a CD from Circuit City online (www.ciruitcity.com), or ordered a movie from Netflix (www.netflix.com), you've participated in B2C e-commerce. B2C e-commerce garners most of the attention these days in the popular media. B2C e-commerce is the model that fuelled the early growth of e-commerce in the 1990s. B2C e-commerce is very much a cut-throat environment, no matter what the product and service (Haag & Cummings, 2010).

2.6.3 Consumer to Business (C2B): occurs when an individual sells products and services to a business. The C2B e-commerce model is a true inversion of the B2C e-commerce business model. In the B2C e-commerce business model, demand is driven by the consumer and supply is driven by the business. In C2B it is inverted; the consumer drives supply and the business drives demand. Many people have mistakenly lumps such sites as Piceline.com (www.piceline.com) into the C2B category. At

Pinceline.com you, as a consumer, can set your price for items such as airlines tickets and hotel rooms, but you (as a consumer) still provide the demand and the airlines or hotel still provides the supply (Haag & Cummings, 2010).

2.6.4 Consumer to Consumer (C2C): occurs when an individual sells products and services to another individual. C2C e-commerce usually takes place through an intermediary organization, such as eBay. eBay is a hybrid of both a B2C e-commerce site and a C2C e-commerce site. It is a B2C e-commerce site because it sells a service to you, that of giving you the ability to interact in the auctioning of items. (You pay eBay only if you're the seller, not the buyer). And it is really an intermediary supporting your engagement in a C2C e-commerce business model. That is, you use eBay to sell products and services to other consumers, and you use eBay to buy products and services from other consumers (Haag & Cummings, 2010).

2.6.5 Business to Government (B2G): occurs when a business sells products and services to a government entity. Lockheed Martin, for example, generates almost 80 percent of its revenue by providing products and services to the U.S. Department of Defense (DOD). Lockheed Martin sells tactical aircraft, aeronautical research equipment, commercial satellites, government satellites, strategic missiles, naval systems, and IT equipment and services to the U.S. federal government.
Electronic Government: Is the use of digital technologies to transform government operations in order to improve efficiency, effectiveness, and service delivery (Haag & Cummings, 2010).

2.6.6 Consumer to Government (C2G): occurs when an individual sells products and services to a government entity. This is very similar to the C2B e-commerce business model, except that the buying partner is a government entity, not a business. The C2G market is quite small, and, to say the least, unremarkable. While you could receive royalties from a government entity for the photos and videos you post on Fotolia, most government entities do not engage in buying products and services from individuals. For example, to sell products and services to the U.S. federal government, you must register yourself as a formal business within the Central Contractor Registration (CCR) system at www.ccr.gov (Haag & Cummings, 2010).

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2.6.7 Government to Business (G2B): occurs when a government entity sells products and services to businesses. There are several good examples within this e-commerce business model. The first is the Small Business Administration (SBA, at www.sba.gov). In addition to providing small business loans (which do have an interest accruing), the SBA offers services in many areas such as surety guarantees, disaster assistance, ombudsman, and so on. Most of these services are free, to be sure, but some that involve financial baking and guarantees carry with them various fees and commissions (Haag & Cummings, 2010).

2.6.8 Government to Consumer (G2C): refers to the electronic commerce activities performed between a government and its citizens or customers including paying taxes, registering vehicles, providing information and services, and so in. This particular model of e-commerce does not often fit well within the supply-and-demand notion. Again, supply is the first partner and demand is the second partner. In the B2C model for example, Amazon has the supply of books, movies, and other products, and you-as a consumer-provide the demand. In the G2C model, a government often provides citizens with the ability to interact with it electronically to achieve efficiencies. Paying your taxes is an example. You can file your taxes electronically and receive your refund (or pay additional taxes) electronically. The notion of supply and demand isn't particularly applicable in this site case (Haag & Cummings, 2010).

2.6.9 Government to Government (G2G): refers to the electronic commerce activities performed within a nation's government. (It might also refer to the electronic commerce activities performed between two or more nation's governments including providing foreign aid) (Haag & Cummings, 2010).

2.6.10 M-Commerce: Mobile computing is a broad general term describing your ability to use technology to wirelessly connect to and use centrally located information and/or application software. Mobile computing is all about wireless connectivity. For example, **m-commerce (wireless e-commerce)** describe electronic commerce conducted over a wireless device such as a cell phone, or notebook giving person the ability to purchase and download music, buy and sell stocks, check weather forecasts, read your e-mail, and a host of other functions (Haag & Cummings, 2010).

Figure No. 1
"Nine Major E-Commerce Business Model"

	BUSINESS	CONSUMER	GOVERNMENT
BUSINESS	**B2B**	**C2B**	**G2B**
CONSUMER	**B2C**	**C2C**	**G2C**
GOVERNMENT	**B2G**	**C2G**	**G2G**

Source: (Haag &, Cummings, 2010, P.128)

2.7 The Characteristics of E-Commerce:

Identify six main characteristics as follows: (Al-Mutalqha, 2008)

2.7.1 The Disappearance Paper Documents in Commercial Transactions: Electronic transactions characterized that there are no paper documents reciprocal in transactions, since all of the correspondence between the parties to transactions conducted electronically without the use of any papers, which is consistent with the purpose of e-commerce is the creation of community transactions paperless, which raises the issue of electronic evidence and its impact as an obstacle for the growth of e-commerce (Al-Mutalqha, 2008).

2.7.2 Inability to Identify Contractors: The Internet provides business sector manage transactions efficiently from anywhere in the world, so that the center of company information can be found in any place without affecting the performance but may for this separation spatial between the parties of electronic transactions did not know all the information core from each other as in traditional commercial transactions, where one of them doesn't know the financial position and whether it has reached the age of maturity or minus eligibility (Al-Mutalqha, 2008).

2.7.3 Products Delivered Electronically: Internet allowed the possibility of delivery of some products electronically, such as computer programs, musical recordings, videos, books, papers and reports online, as well as some services such as

consulting medical or engineering, which creates a challenge for the authorities where there is not yet agreed mechanisms for digital products subject to customs or taxes, as vendors that can be used to escape the payment of customs duties and taxes by not recording these transactions in the books of the official accounting (Al-Mutalqha, 2008).

2.7.4 Absence of Direct Relationship between the Contracting Parties: Spin bargaining and negotiations between contract parties in the contract to agree on details of the contract to be concluded between them, may require the contract one session or several sessions until agreement on the terms and details of the contract, but in the decades of E-Commerce do not have a council held in the traditional sense, the seller may be in place and the buyer had put away the thousands of miles away, has a different time schedule as well as between buyer and seller place. The human factor May miss completely, computers based correspondence between them is what is known as contracting agent E, which prompted some to suggest that E-Commerce have a negative impact on social relations between individuals as a result of the absence of intimate relationships between contractors, where everyone can get the essential needs of food, clothing and other through the Internet and even without leaving home (Al-Mutalqha, 2008).

2.7.5 The Presence of the Electronic Mediator: The electronic mediator between contract parties is a computer and related network of international contacts that you move the expression electronically for each of the contracting parties at the same moment, in spite of separated spatially, usually the E-mail reached at the same moment to the other party, unless there has been a malfunction in the network or the collapse of it may not get the message or reach false or illegible, and may arise in the responsibility of Internet service provider for non-arrival of the message or it arrives late or arrive in time, but there by mistake or misrepresentation (Al-Mutalqha, 2008).

2.7.6 Speed in the Completion of Business Transactions: E-commerce effectively Contribute in the completion of commercial transactions between the parties speedy as business transactions without the need to move the parties and having met in a particular place and in the provision of time and effort and money (Al-Mutalqha, 2008).

2.8 Requirements of E-Commerce:

To become commerce available over the Internet in any society it is necessary to provide a suitable environment, as well as the requirements to achieve them. In this section we will deal briefly with these requirements in accordance with the following divisions: (Turban & Others, 2004)

2.8.1 Electronic infrastructure: including supporting infrastructure of e-commerce and contract business dealings via Internet. Among the most prominent component of this infrastructure information and communication technology (ICT) sector and include the networks of telecommunications and telecommunications equipment, fax, fixed telephone and mobile, as well as computers and software applications and operating and support services, technical, and human capital used in business and e-commerce, as well as to the availability of productive sectors of information technology. These components provide an environment of electronic infrastructure which helps the spread of Internet use and create a suitable environment for Ecommerce. The spread of Internet access a major factor in e-commerce, because it serves as the channel email or market in which such transactions and commerce exchanges. The spread of the Internet depends on the availability of essential elements by the availability of personal computers and mobiles, and access to the Internet through knowing of user's numbers, participants and potential users of the Internet (Turban & Others, 2004).

2.8.2 Legislation and regulations for E-Commerce: include legislation, laws and rules that fit with the nature of commerce via the Internet. These legislations represent legal and regulatory framework that ensures the continuation of E-commerce and protect the rights of the parties collaborating. Also provides the legal framework to

create legal tools suited to the electronic transactions, such as the means of contracting over the Internet or via e-mail, and the conditions required for this, and solve conflict E-Commerce, whether in society or whether they are between parties in different countries, as well as dealing with the proof means of conflicting commerce parties via the Internet (Turban & Others, 2004).

2.8.3 Availability human resources: This is a component of the success of e-commerce in any society; these include human resources professionals in IT and communication networks, the Internet and software applications related to commerce online. On the other hand e-commerce requires the so-called readiness mail (E-Readiness) any ready community desire to use and practice of commerce via the Internet. And the incidence of E-Readiness of a society through the development of the quality of the educational systems and expand opportunities for community members to make use of it to become a society with knowledge of technology culture, as well as to provide opportunities for institutions and educational institutions and schools to use information and communication technology, and adapting curriculum with technical knowledge (Turban & Others, 2004).

2.9 Risks of E-Commerce:

From the risks that may faced e-commerce: (النعيمي, 2003)

1. Unreliability, especially in this type of commerce between unknown parties to each other and that doesn't have sufficient commercial fame.

2. Unsafe from piracy and intrusion in the global networks and what happen to these sites in order to steal information and access to the secret numbers of accounts and credit cards.

3. The presence of international espionage by some governments, large companies, multinational business, trade of some companies and individuals under the pretext of security reasons is to get the secrets of business deals and pass it to competitor's customers.

4. Swindling and fraud process that are practiced under known names and with a view to extortion and obtaining money from the shortest way.

5. Non-exist of binding laws and regulations for all countries in the world, and if found in some countries it is different in its legislation among them, and

so, they are valid only in the country's legislature. Note that this type of commerce beyond the borders and geographical regions. Different regulations and international laws in the acceptance or non-acceptance in transactions conducted in electronic communication networks.

6. Lack of infrastructure needed by communication and information networks in all countries, making it the exclusive and monopoly to some countries in the world without the other.

7. The need to technical staff based on the management as well as the specialist staff in the management, which carries additional burdens.

8. The need to high level of risk, is well known that capital is coward by nature. So up to this date did not account for big significant capital.

2.10 Obstacles of E-Commerce:

There are general obstacles for e-commerce and obstacles stand in the face of Arabic e-commerce and special obstacles stand in the face of e-commerce inside Palestine: (حطاب وبرهان, 2007)

2.10.1 General obstacles for E-Commerce:

Obstacles that limit the spread of e-commerce can be divided into two categories:

2.10.1.1 Technical obstacles, including:

1. Security and protection problems, quality, reliability still need to have globally recognized standards.

2. Speed of communication is still inadequate to the requirements of e-commerce applications.

3. Software development tools of electronic commerce are still at an early stage.

4. The high cost of e-commerce projects that can't be tolerated for small business.

5. Problems related to the process of implementing applications which require high efficiency cannot be done without an automated or computerized stores.

2.10.1.2 Regulatory and environmental obstacles, including:

1. Concern of security, protection and privacy is the most important restrictions that obstacle the use of electronic commerce, where there are many cases in through which fraud and deception.
2. The lack of confidence in electronic commerce process of the fact that the seller and the buyer do not deal with each other directly but through the network.
3. Failure to resolve many issues relating to legal and public policy such as taxes and others.
4. The lack of clear methodologies to evaluate and measure the benefits of electronic commerce.

2.10.2 Obstacles that face E-Commerce in the Arab world:

We can summarize the obstacles sentence in this type of commerce in the Arab world as follows: (النعيمي, 2003)

1. Lack of Arabic sites to the technical characteristics that give sites attractive and make clients provide on their sites.
2. The problem of Arabic language and lack of Arabic programs with powerful search engines are able to reduce this weakness, especially the English language is the language used in the information exchange at the level of global networks.
3. The lack of banking systems in most Arab countries that capable of solving the payments problems via the Internet and credit cards. And in this context, highlights the use of E-Card exchange issue, which is the primary means of buying and selling.
4. The lack of legal legislation to control the e-commerce processes between Arab countries and even on the level of one Arab state.
5. The lack of infrastructure for e-commerce in most Arab countries.
6. The lack of technical infrastructure for e-commerce in most Arab countries, particularly high price of electronic equipment and the high price of communication wages and the difficulty available in some Arab countries.

7. Arab governments in a way dealing with e-commerce in the absence of clear strategies and specific, especially with information technology and the formation of national networks that provide the necessary data base for this type of commerce.

8. Habits and social traditions that consumers believe in is consider obstacle in the maximum benefits of global networks benefits for electronic commerce.

9. The cost of building websites in global networks is still expensive because they rely on professionals in its creation, management and maintenance to ensure its success, which carries this type of commerce additional expenses.

10. The lack of research and development centers to provide consulting and help citizens in their countries to get rid of their electronic illiteracy firstly, and then building the human Information secondly.

2.10.3 Obstacles that stand in the face of E-Commerce in Palestine:

There are obstacles preventing the access of information technology to Palestine, including the following: (حلس وجربوع, 2001)

1. The Delay entry of the visa entry card service to Palestinian Authority areas which resulted in the lack of awareness, maturity and lack of safety standards.

2. Modern Internet services in Palestine, where no more than seven years and non-clearly vision about the future of the Internet where the Palestinian Telecommunications Company provides public Internet services directly which cause detriment with the specializing Palestinian companies in information systems.

3. Few specializing companies in information systems, which doesn't exceed the number of these companies and which work in the Palestinian Authority areas 50 companies.

4. Israeli restrictions that prevent Palestinian companies from the use of satellites directly. And in the current situation as experienced by Gaza Strip from political and economic siege for more than three years (2007 and even 2009). There were not kind of technological

development of what constitutes the most important obstacle in the face of the electronic commerce exchange development.

2.11 E-Commerce Payment Systems:

Several electronic payment systems have been developed to pay for goods electronically on the Internet. EPSs for the Internet include systems for digital credit card payments, digital wallets, accumulated balance digital payment systems, online stored value payments, digital checking, and electronic billing presentment and payment systems (Laudon's, 2010, P.427).

2.11.1 Types of Electronic Payment Systems:

1. Credit Card payment systems: Nearly all online payments in the United States (90 percent) use Credit cards, or rely on credit card system. Business can also contract with services that extend the functionality of existing credit card payment systems.

2. Digital wallets: make paying for purchases over the Web more efficient by eliminating the need for shoppers to enter their address and credit card information repeatedly each time they buy something. The digital wallet security stores credit card and owner identification information and enters the shopper's name, credit card number, and shipping information automatically when invoked to complete a purchase. Google Checkout is an example.

3. Micropayment systems: have been developed for purchases of less than $10, such as downloads of individual articles or music clips, which would be too small for conventional credit card payment.

4. Accumulated balance digital payment systems: enable users to make micropayments and purchases on the Web, accumulating a debit balance that they must pay periodically on their credit card or telephone bills. Examples are Valista's Payments Plus used by AOL, Vodafone, and NTT DoCoMo, and Clickshare, which is widely used by the online newspaper and publishing industry.

5. Online stored value payment systems: enable consumers to make instant online payments to merchants and others individuals based on value stored in an online digital account. Some online stored value payment systems such as Valista are merchant platforms. Others are focused on peer-to-peer payments, such as PayPal.

PayPal is owned by eBay and makes it possible for people to send money to vendors or individuals who are not set up to accept credit card payments.

6. Digital checking systems: such as PayByCheck extend the functionality of existing checking accounts so they can be used for online shopping payments. Digital checks are processed much faster than traditional paper-based checking.

7. Electronic billing presentment and payment systems: are used for paying routine monthly bills. The enable users to view their bills electronically and pay them through electronic fund transfers from bank or credit card accounts. These services notify purchasers about bills that are due, present the bills, and process the payment. Some of these services, such as CheckFree, consolidate subscribers' bills from various sources so that they can all be paid at one time.

Table No. (2): Summarizes the features of some of these e-commerce payment systems as shown:-

<div align="center">

Table No. (2)

"Examples of Electronic Payment Systems for E-Commerce"

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Payment Description	System	Commercial Examples
Credit card payment systems	Protect information transmitted among users, merchant sites, and processing banks.	- Visa - MasterCard - American Express
Digital wallet	Software that stores credit card and other information to facilitate form completion and payment for goods on the Web	Google Checkout
Accumulated balance digital payment systems	Accumulates micropayment purchases as a debit balance that must be paid periodically on credit card or telephone bills	- Valista Payment Plus - Click share
Stored value payment systems	Enable consumers to make instant payment to merchants or individuals based on value stored in a digital signature	- PayPal, Valista

Digital checking	Provides electronic checks with a secure digital signature	- PayByCheck
Electronic billing presentment and payment systems	Support electronic payments for online and physical store purchases of goods or services after the purchase have taken place	- Yahoo! Bill Pay, Check Free

Source: (Laudon's, 2010, P.428)

2.11.2 Security for E-Payment Systems:

When you use a credit card to make a purchase on the Internet, how can you be sure that someone won't intercept the card number as it traverses the network and use it for their purposes? If you contact an EC site with the intention of making a purchase, how can you be sure that it's a legitimate site? If one company sends a bill to another company over the Internet, how can the recipient be sure that the bill hasn't been changed? If a customer sends your company an e-check and later denies that he or she sent it, how can you refute the denial? These questions are illustrative of the issues of trust or "PAIN" that arise with e-payment systems. A well-devised online security system provides the answer to many, but not all, of these and similar questions (Turban & Others, 2002, P.586).

2.11.3 Issues for E-Commerce Systems:

An internal accounting systems to external parties systems, such as customers and suppliers. As a result, a company's risks depend in part on how well its e-commerce partners identify and manage risks in their own IT systems. To manage these interdependency risks, companies must ensure that their business partners manage IT system risks before conducting business with them electronically.

The use of e-commerce systems also exposes sensitive company data, programs, and hardware to potential interception or sabotage by external parties. To limit these exposures, companies use firewalls, encryption techniques, and digital signatures.

A **firewall** protects data, programs, and other IT resources from unauthorized external users accessing the system through networks, such as the Internet. A firewall is a system of hardware and software that monitors and controls the flow of e-commerce

communications by channeling all network connections through controls that verify external users, grant accesses to authorized users, deny access to unauthorized users, and direct authorized users to requested programs or data.

Encryption techniques protect the security of electronic communication when information is transmitted and when it is stored. Computerized encryption changes a standard message or data file into one that is coded (encrypted), requiring the receiver of the electronic message or user of the encrypted data file to use a decryption program to decode the message or data. A public key encryption technique is often used, where one key (the public key) is used for encoding the message and another key (the private key) is used to decode the message. The public key is distributed to all approved users of the e-commerce system. The private key is distributed only to internal users with the authority to decode the message. Auditors should understand the nature of firewall and encryption controls to ensure that they are properly implemented and monitored. An inadequate firewall may increase the likelihood of unauthorized changes to software and data. Thus, the auditor may need to test controls surrounding the use of the firewall to ensure that automated application controls used to support assessed control risk below the maximum have not been changed without the auditor's knowledge (Arens, 2012, P.388).

2.12 E-Commerce Strategies in Small Businesses:

EC strategy can be very simple, or it can cover many topics. A comprehensive EC strategy is also provided in the Real-World Case regarding Skymall, Inc. Details of e-strategy in the private sector are usually considered propriety information and are not disclosed. In contrast, public organizations disclose their EC strategies. Formulating strategies in small businesses is usually much less sophisticated than it is in large corporations. Senior managers tend to know the whole spectrum of the business and possess the knowledge and authority to control the destiny of the new EC venture. A fundamental reason for differences in strategy formulation between large and small companies lies in the relationship between owners and managers. The CEO of a large corporation has to consider and balance the diverse needs of the corporation's many stakeholders. The CEO of a small business, however, is very likely to be the owner (or one of owners) (Turban & Others, 2002, P.680-706).

2.13 The Future of E-Commerce:

EC will continue to expand fairly rapidly. There are a number of reasons for this. To begin wit, its infrastructure is becoming better and less expensive with time. Second, consumers will be more experienced and will try different products and services and tell their friends about them. Security, privacy protection, and trust will be much higher, and more support services will simplify the transaction process. Legal issues will be clarified, and more and more products and services will be online at reduced prices (Turban & Others, 2002).

Chapter Three:

"E-Commerce and E-Auditing"

3.1 General Auditing Concepts (Introduction):

The researcher have introduced the role of auditors in society, and how auditors' responsibilities have increased to include reporting on the effectiveness of internal control over financial reporting for public companies. Now, the researcher examines auditing more specifically using the following definitions:

3.2 Definitions of Auditing:

Auditing is the accumulation and evaluation of evidence about information to determine and report on the degree of correspondence between the information and established criteria, Auditing should be done by competent, independent person (Arens et al, 2012, P.4).

Auditing is a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and establish criteria and communicating the results to interested users (Hall, 2007, P.742).

3.3 Auditing Objectives:

There are three main objectives for auditing process: (جربوع, 2008, P.3)

1. To express an opinion on the financial statement according to Generally Accepted Accounting principles (GAAP), at the end of the period, in all material respects.

2. To provide the management with information about the internal control system. Auditors are required to provide the audit committee or its equivalent about any deficiency in the design of operations that come to their attention during the course of this study.

3. To provide the users of financial statements such as investors, creditors, bankers and government departments, with financial information so as to decide if they can grant facilities to the company under auditor or not according to the information provided by the external independent auditor.

3.3.1 Auditing objective relating to organization structure:

The auditor's objective is to verify that individuals in incompatible areas segregated in accordance with the level of potential risk and in a manner that promotes a working environment. This is an environment in which formal, rather than casual, relationships need to exist between incompatible tasks (جربوع, 2008).

3.3.2 Auditing procedures relating to organization structure:

The following tests of control would enable the auditor to achieve the control objectives: (Hall, 2007, P.730-731)

1. Obtain and review the corporate policy on computer security. Verify that the security policy is communicated to responsible employees and supervisors.

2. Review relevant documentation, including the current organizational chart, mission statement, and job descriptions for key function, to determine if individual or groups are performing incompatible functions.

3. Review systems documentation and maintenance records for a sample of applications. Verify that maintenance programmers assigned to specific projects are not also the original design programmers.

3.4 Types of Audits:

CPA's perform three primary types of audits as: operational audits, compliance audits and audits of financial statements (Arens et al, 2012, P.12-13).

3.4.1 Operational Audit:

Operation audit evaluate the efficiency and effectiveness of any part of an organization's operating procedure and methods. At the completion of an operational audit, management normally expects recommendation for improving operations. In operational auditing, the reviews are not limited to accounting. They can include the evaluation of organizational structure,

computer, operations, production methods, marketing, and any other area in which the auditor is qualified (Arens et al, 2012).

3.4.2 Compliance Audits:

A compliance audit is conducted to determine whether the auditor's is following specific procedure, rules, or regulation set by some higher authority.

Results of compliance audits are typically reported to management, rather than outside users, because management is the primary group concerned with the extent of compliance with prescribed procedures and regulations. Therefore, a significant portion of work of this type is often done by auditors employed by the organizational units. When an organization such as the Internal Revenue Service (IRS) wants to determine whether individuals or organization issuing the requirements, the auditor is employed by the organization issuing the requirement (Arens et al, 2012).

3.4.3 Audits of Financial Statements:

Audits of financial statements examine financial statements to determine if they give a true and fair view or fairly present the financial statements in conformity with specified criteria. The criteria may be (IFRS), (GAAP) as in the USA, national company laws as in Northern Europe, or the tax code in South America. This book primarily discusses audits of financial statements (Hayes et al, 2005, P.15).

3.5 Types of Auditors and Their Duties, Functions, and Relationships:

There are two types of audit functions that exist today. They have very important roles in assuring the validity and integrity of financial accounting and reporting systems. They are the internal and external audit functions.

3.5.1 The Internal Audit Function:

The internal audit function is a control function within a company or organization. The primary purpose of the internal audit function is to assure that management authorized controls are being applied effectively. The internal

audit function, although not mandatory, exists in most private enterprise or corporate entities, and in government (such as federal, state, county, and city governments). The mission, character, and strength of an internal audit function vary widely within the style of top executives and traditions of companies and organizations. IT audits is one of the newer, emerging areas of support for internal audit. The internal audit group, if appropriately staffed with the resources, performs the monitoring and testing of IT activities within the control of the organization. Of particular concern to private corporations is the processing of data and the generation of information of financial relevance or materiality. The IA department reports directly to the president or board of directors. An IA must be independent of the department heads and other executives whose work he reviews. IA, however, can never be independent in the same sense as the independent auditors because they are employees of the company they are examining (Senft & Gallegos, 2009, P.67-68).

IA has two primary effects on a financial statement audit: (Hayes et al, 2005, P.16)
1. Their existence and work may affect the nature, timing, and extent of audit procedures.
2. External auditors may use internal auditors to provide direct assistance in performing the audit. If this is the case the external auditor must assess IA competence (education, experience, professional certification, etc.) and objectivity (organizational status within the company).
3. In developing the evaluation procedures, the auditor should consider such factors as whether the internal auditors: (SAS No. 65, AU Section 322, 1991, P.255)
   • Scope of work is appropriate to meet the objectives.
   • Audit programs are adequate.
   • Working papers adequately document work performed, including evidence of supervision and review.
   • Conclusions are appropriate in the circumstances.
   • Reports are consistent with the results of the work performed.

4. In making the evaluation, the auditor should test some of the internal auditors' work related to the significant financial statement assertions. These tests may be accomplished by either (*a*) examining some of the controls, transactions, or balances that the internal auditors examined or (*b*) examining similar controls, transactions, or balances not actually examined by the internal auditors. In reaching conclusions about the internal auditors' work, the auditor should compare the results of his or her tests with the results of the internal auditors' work. The extent of this testing will depend on the circumstances and should be sufficient to enable the auditor to make an evaluation of the overall quality and effectiveness of the internal audit work being considered by the auditor (SAS No. 65, AU Section 322, 1991, P.255).

3.5.2 The External Auditor:

The external auditor evaluates the reliability and the validity of systems controls in all forms. The principal objective in their evaluation is to minimize the amount of substantial auditing or testing of transactions required to render an opinion on a financial statement. External auditors are provided by public accounting firms and also exist in government as well. For example, the Government Accountability Office (GAO) is considered an external reviewer because they can examine the work of both federal and private organizations where federal funds are provided. The Watchdogs of Congressional Spending provide a service to the taxpayer in reporting directly to Congress on issues of mismanagement and poor controls. Interestingly, in foreign countries, an Office of the Inspector General or Auditor General's Office within that country prepares similar functions. Also, the GAO has been a strong supporter of the International Audit Organization, which provides government audit training and guidance to its international audit members representing governments worldwide. From a public accounting firm standpoint, firms such as Deloitte, Ernst & Young, Price Waterhouse Coopers (formerly Price Waterhouse and Coopers & Lybrand), and KPMG have provided these types of external audit services worldwide. The external auditor is responsible for testing the reliability

of client IT systems and should have a special combination of skills and experience. Such an auditor must be thoroughly familiar with the audit attest function. The attest function encompasses all activities and responsibilities associated with the rending of an audit opinion on the fairness of the financial statements. Besides the accounting and auditing skills involved in performing the attest function, these external auditors also must have substantial IT audit experience. The Sarbanes–Oxley Act of 2003 now governs their role and limits of services that can be offered beyond audit. Through observation, determine that the segregation policy is being followed in practice. Review operation room access logs to determine whether programmers enter facility for reasons other than system failures. Review user right and privileges to verify that programmers have access privileges consistent with their job descriptions (Senft & Gallegos, 2009, P.68).

3.5.3 The relationship between internal and external audit:

On of the areas of co-corporations between internal and external auditors is computer auditing. The objectives of the two auditors are different but they overlap. The external auditor provides an opinion on the statutory accounts. The internal auditor is considered with compliance and efficiency, both financial and operational. The internal auditor does not focus his attention on the year-end results. Both auditors are interested in the internal control of the financial accounting system. Whereas the internal auditor is concerned with the operational efficiency of non-financial operations such as production and computer operations, the external auditor does not share this concern beyond satisfying himself that operations, efficient or otherwise, are properly accounted for. In accounting matters the external auditor is interested in completeness and accuracy of updating, satisfactory maintenance of date and accuracy of processing. The internal auditor is also concerned with efficiency and economy. With respect to assets the external auditor is concerned about existence, ownership, valuation and inclusion in the financial accounts. The internal auditor is concerned about security, appropriateness and utilization as well. The internal auditor can assist the external auditor in computer auditing work by his special knowledge of the concern's computer systems and the people and

politics involved, by his special ability to monitor continuously, and of course by virtue of work he has already done to meet his own objectives, or which he is prepared to do on behalf of the external auditor. The extent to which external auditor will rely on internal audit work is related to the degree of internal audit independence, the extent to which the external auditor is able to supervise the internal auditors, the materiality levels to which internal auditors works-they should not be greater than those of the external auditors if the external auditors is to rely upon the internal auditor's work- the internal auditor's inclination to take on work for the external auditor and the quality of his work. The level of professionalism of the internal auditors-from the external auditor's point of view they should have similar qualifications to himself and external audit staffing and fee constrains (Chambers & Court, 1986, P.16).

3.6 Audit Report:

The audit report is the final step in the entire audit process. The auditor must gather a sufficient and competent evidence to justify his opinion on the financial statements (جربوع, 2009, P.199-206).

3.6.1 Reporting Standards:

The four reporting standards require the auditor to prepare a report on the financial statement taken as a whole, including information disclosures. The reporting standards require:

1. The report shall state whether the financial statements are prepared in accordance with GAAP.
2. The report shall identify those circumstances in which such principles have not been consistently observed in the current period in relation to the preceding period.
3. Informative disclosures in the financial statements are to be regarded as reasonably adequate unless otherwise stated in the report.
4. The report shall show the auditor's opinion on the financial statements, taken as a whole, or an assertion to the effect that the opinion cannot be expressed, and then the reasons must be stated.

In all cases where the auditors name is associated with the financial statements, the report should contain a clear-cut indication of the character of the auditor's work and the degree of responsibility he is being.

3.6.2 Auditor's Standard Report:

The audit report is the auditor's formal means of communicating his findings to interested parties. In issuing an audit report, the auditor must meet the four generally accepted auditing standards of reporting. A standard report is the most common report issued. It contains an Unqualified opinion that states that the financial statements present fairly, in all material respects, the financial position, results of operations, and cash flows of the entity in conformity with generally accepted accounting principles. Because of its importance in a financial statement audit, a basic understanding of the form and content of the standard report is essential. The standard report consists of three paragraphs and prescribed languages. The three paragraphs are referred to as the introductory, scope, and opinion paragraphs, respectively (Kell & Others, 1989, P.42).

3.6.3 Types of Audit Report:

There are four categories of audit reports as follow: (Arens, 2012, P.51-66)

1. **Standard unqualified audit report**: The report a CPA issues when all auditing conditions have been met, no significant misstatements have been discovered and left uncorrected, and it is the auditor's opinion that the financial statements are fairly stated in accordance with GAAP.

2. **Unqualified audit report with explanatory paragraph or modified wording**: meets the criteria of a complete audit with satisfactory results and financial statements that are fairly presented, but the auditor believes it is important or is required to provide additional information. In a qualified, adverse, or disclaimer report, the auditor either has not performed a satisfactory audit, is not satisfied that the financial statements are fairly presented, or is not independent. This type of modified wording report is also called

shared opinion or report. A shared unqualified report is appropriate when it is impractical to review the work of the other auditor or when the portion of the financial statements audited by the other CPA is material in relation to the whole.

3. **Qualified Opinion**: A report issued when the auditor believes that the overall financial statements are fairly stated but that either the scope of the audit was limited or the financial data indicated a failure to follow GAAP.

4. **Adverse or Disclaimer Opinion**:

    A. Adverse Opinion: Is used only when the auditor believes that the overall financial statements are so *materially misstated or misleading* that they do not present fairly the financial position or results of operations and cash flows in conformity with GAAP. The adverse opinion report can arise only when the auditor has knowledge, after an adequate investigation, of the absence of conformity. This is uncommon and thus the adverse opinion is rarely used.

    B. Disclaimer Opinion: Is issued when the auditor has been unable to satisfy himself or herself that the overall financial statements are fairly presented. The necessity for disclaiming an opinion may arise because of a severe limitation on the scope of the audit or a non independent relationship under the Code of Professional Conduct between the auditor and the client. Either of these situations prevents the auditor from expressing an opinion on the financial statements as a whole. The auditor also has the option to issue a disclaimer of opinion for a going concern problem.

Figure No. 2

"Four Categories of Audit Reports"

Standard Unqualified	The five conditions stated on page 48 have been met.
Unqualified with Explanatory Paragraph or Modified Wording	A complete audit took place with satisfactory results and financial statements that are fairly presented but the auditor believes that it is important or is required to provide additional information.
Qualified	The auditor concludes that the overall financial statements are fairly presented, but the scope of the audit has been materially restricted or applicable accounting standards were not followed in preparing the financial statements.
Adverse or Disclaimer	The auditor concludes that the financial statements are not fairly presented (adverse), he or she is unable to form an opinion as to whether the financial statements are fairly presented (disclaimer), or he or she is not independent (Disclaimer).

Source: (Arens, 2012, P.49)

3.6.4 Opinions on the auditor's report:

The conditions of issuing opinions on the auditor's report: (جربوع, 2009, P.201-204)

3.6.4.1 The Unqualified opinion:

1. The financial statements must be prepared in accordance with GAAP.
2. The financial statements shall not contain material errors.
3. The auditor must be sure that all items of income statement and the balance sheet are correct.
4. To obtain sufficient and component evidence to justify his opinion on the financial statements.

3.6.4.2 The Qualified opinion:

1. Report can result from a limitation on the scope of the audit or failure to follow GAAP.
2. The decrease of disclosures in the financial statements.

3.6.4.3 The Adverse opinion:

1. There is a departure from GAAP in preparing the financial statements.
2. There are material errors in the financial statements which make it misleading.

3.6.4.4 The Disclaimer opinion:

1. There is a scope limitations imposed by the management on the auditor's works.
2. The existence of uncertainties and future events may affect the account.
3. External auditor not independent.

3.6.5 Effects on the auditor's report:

When the auditor has obtained sufficient competent matter as required by the third standard of field work, he must express the opinion appropriate to circumstances. However, when the auditor is unable to obtain a reasonable basis for an opinion on a material financial statement assertion, an opinion should be deferred until the necessary evidence is acquired, or a qualified opinion or disclaimer of opinion should be expressed on the financial statements (Kell & Other, 1989, P.119).

3.7 Audit Evidence & Documentation:

3.7.1 Audit Evidence:

Evidence defines as: any information used by the auditor to determine whether the information being audited is stated in accordance with the established criteria. The information varies greatly in the extent to which it includes information that is highly persuasive, such as the auditor's count of marketable securities, and less persuasive information, such as responses to questions of client employees (Arens, 2012, P.174).

3.7.2 Audit Evidence Decisions:

The amount and kinds of evidence that the auditor decides are necessary to provide a reasonable basis for forming an opinion on the financial statements taken as a whole, and the timing of procedures used to obtain the evidence, are matter of professional judgment. The auditor makes decisions only after carefully deliberating on the circumstances of a particular engagement and considering the various risks related to the audit. The goal in every audit should be perform the work in an effective and efficient matter (جربوع, 2008, P.153).

There are four decisions about what evidence to gather and how much of it to accumulate:

1. Which **Audit Procedures** to use.
2. What **Sample Size** to select for a given procedure.
3. Which **Items to select** from the population
4. When to perform the procedures.

An **Audit Procedure** is the detailed instruction that explains the audit evidence to be obtained during the audit. It is common to spell out these procedures in sufficiently specific terms so an auditor may follow these instructions during the audit. The list of audit procedures for an audit area or an entire audit is called an **Audit Program**. The audit program always includes a list of the audit procedures, and it usually includes sample sizes, items to select, and the timing of the tests. Many auditors use electronic audit software packages to generate audit programs. These software programs help the auditor address risks and other audit planning considerations and select appropriate audit procedures (Arens, 2012, P.176).

3.7.3 Types of Audit Evidence:

The auditor can choose from eight broad categories of evidence, which are called *types of evidence*. Every audit procedure obtains one or more of the following types of evidence:

1. **Physical examination:** Is the inspection or count by the auditor of a *tangible asset*. This type of evidence is most often associated with inventory and cash, but it is also applicable to the verification of securities, notes receivable, and tangible fixed assets. There is a distinction in auditing between the physical examination of assets, such as marketable securities and cash, and the examination of documents, such as cancelled checks and sales documents. If the object being examined, such as a sales invoice, has no inherent value, the evidence is called documentation (Arens, 2012, P.179).

2. **Confirmation:** Involves obtaining a representation of a fact or condition from a third party, preferably in writing. Auditors most often associate confirmations with cash (confirmation from a bank) and accounts receivable (confirmation from customers). Confirmations, however, has widespread applicability; depending on the circumstances, virtually any transaction, event, or account balance can be confirmed with a third party (جربوع, 2008, P.146-147).

3. **Documentation:** Is the auditor's inspection of the client's documents and records to substantiate the information that is, or should be, included in the financial statements. The documents examined by the auditor are the records used by the client to provide information for conducting its business in an organized manner, and may be in paper form, electronic form, or other media. Because each transaction in the client's organization is normally supported by at least one document, a large volume of this type of evidence is usually available. Documentation is widely used as evidence in audits because it is usually readily available at a relatively low cost. Sometimes, it is the only reasonable type of evidence available. (Arens, 2012, P.182).

4. **Analytical procedures:** Are reasonable tests of financial information made by studying and comparing relationships among data and trends in the data. Analytical procedures are performed early in the audit in planning other auditing procedures, as substantive test to obtain evidence about specific assertion and accounts, and at the end of the audit as an overall review f the financial statements. (جربوع, 2008, P.148).

5. **Inquiries of the client:** Inquiry is the obtaining of written or oral information from the client in response to questions from the auditor. Although considerable evidence is obtained from the client through inquiry, it usually cannot be regarded as conclusive because it is not from an independent source and may be biased in the client's favor. Therefore, when the auditor obtains evidence through inquiry, it is normally necessary to obtain corroborating evidence through other procedures. (Arens, 2012, P.184).

6. **Recalculation:** consists of checking the mathematical accuracy of documents or records. Recalculation can be performed through the use of information technology, for example, by obtaining an electronic file from the entity and using CAATs to check the accuracy of the summarization of the file (SAS NO. 160, AU Section 326, 2006, P.312).

7. **Reperformance:** Is the auditor's independent execution of procedures or controls that were originally performed as part of the entity's internal control, either manually or through the use of CAATs, for example, reperforming the aging of accounts receivable (SAS NO. 160, AU Section 326, 2006, P.312).

8. **Observation:** Is the use of the senses to assess client activities. Throughout the engagement with a client, auditors have many opportunities to use their senses-sight, hearing, touch, and smell-to evaluate a wide range of items. The auditor may tour the plant to obtain a general impression of the client's facilities, or watch individuals perform accounting tasks to determine whether the person assigned a responsibility is performing it properly.

Observation is rarely sufficient by itself because of the risk of client personnel changing their behavior because of the auditor's presence. They may perform their responsibilities in accordance with company policy but resume normal activities once the auditor is not in sight. Therefore, it is necessary to follow up initial impressions with other kinds of corroborative evidence. Nevertheless, observation is useful in most parts of the audit (Arens, 2012, P.184).

Figure No. 3

"Relationships among Auditing Standards, Types of Evidence, and the Four Audit Evidence Decisions"
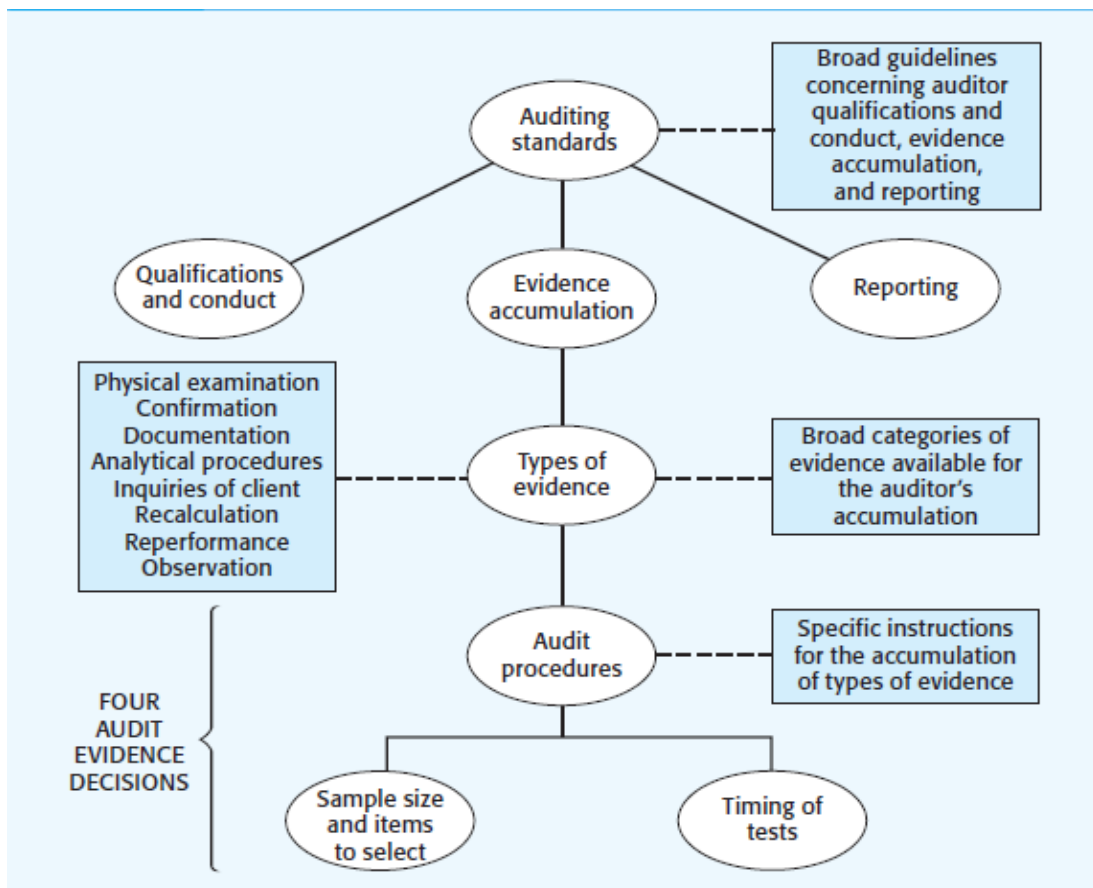
Source: (Arens, 2012, P.180)

3.7.4 Audit Documentation:

Audit documentation is an essential element of audit quality. Although documentation alone does not guarantee audit quality, the process of preparing sufficient and appropriate documentation contributes to the quality of an audit. The auditor must prepare audit documentation in connection with each engagement in sufficient detail to provide a clear understanding of the work performed, including the nature, timing, extent, and results of audit procedures performed. The evidence obtained and its source and the conclusions reached (Bragg & Others, 2010, P.280-281).

3.7.5 Objectives of Audit Documentation:

In Standard No. 3, the following are the objectives of the PCAOB believes should be accomplished by audit documentation: (Latshaw, 2004, P.29)

1. Work papers are the written record of the basis for the auditor's conclusions that provide the support for the auditor's representations, whether those representations are contained in the auditor's report or otherwise.

2. Audit documentation facilitates the planning, performance and supervision of the engagement.

3. Audit documentation is the basis for the review of the quality of the work, because it provides the reviewer with written documentation of the evidence supporting the auditor's significant conclusions.

4. Auditors who are new to an engagement and review the prior year's documentation to understand the work performed as an aid in planning and performing the current engagement.

5. Supervisory personnel who review documentation prepared by assistants on the engagement.

6. Engagement supervisors and engagement quality reviewers who review documentation to understand how the engagement team reached significant conclusions and whether there is adequate evidential support for those conclusions.

7. A successor auditor who reviews a predecessor auditor's audit documentation.

8. Internal and external inspection teams that review documentation to assess audit quality and compliance with auditing and related professional practice standards; applicable laws, rules and regulations; and the auditor's own quality control policies.

9. Others, including advisors engaged by the audit committee or representatives of a party to an acquisition.

3.7.6 Assessing Controls over Documents:

Control points identified during the preparation of the audit data flow diagram, along with information on controls developed in the background segment, should enable the auditor to identify system controls. With a diagram of this type, the auditor can determine whether the following controls are used: (Senft & Gallegos, 2009, P.112-113)

1. Turnaround documents: These documents [manual or automated] should be returned to the originator to make sure that all documents were received and none were added during transmittal.

2. Record counts: They [manual or system generated] should be maintained for all documents to make sure that none are added or lost.

3. Predetermined control totals. For pay roll, predetermined control totals should be developed for important data items, such as hours worked, leave taken, hourly rates, gross pay, and deductions. The purpose is to make sure that records are not altered.

4. Run-to-run totals: These totals should be maintained to assure that no records are added or lost during steps in the computer processing sequence.

3.8 Audit Planning & Assess Audit Risk:

3.8.1 Audit Planning:

A vital phase of every audit engagement is planning. Planning serves much the same purpose in auditing that it does un personal planning for college or a ski trip to Aspen and in business planning for the development of a new product like the personal computer. In each instance, planning results in an orderly arrangement of the parts or steps to achieve the desired objectives.

The first GAAS of field work states: "The work is to be adequately planned, and assistants, If any, are to be properly supervised" (SAS No.108 & No. 114, 2006, P.77).

Audit planning involves the development of an overall strategy or game plan for the expected conduct and scope of the audit. The auditor should plan the audit with an attitude of professional scepticism about such matters as the integrity of management, errors and irregularities, and illegal acts. The amount of planning required in an engagement will vary with the size and the complexity of the client, and the auditor's knowledge and experience with the client. As to be expected, considerably more effort is needed to adequately plan an initial audit than a continuing audit (Kell & Other, 1989, P.68-70).

Figure No.4

"Planning an Audit and Designing an Audit Approach"

1. Accept client and perform Initial audit planning

2. Understand the client business and industry

3. Assess client business risk

4. Assess audit risk

5. Set materiality and asses acceptable audit risk and

6. Understand internal control and asses control risk

7. Gather information to asses fraud risks

8. Develop overall audit plan and audit program
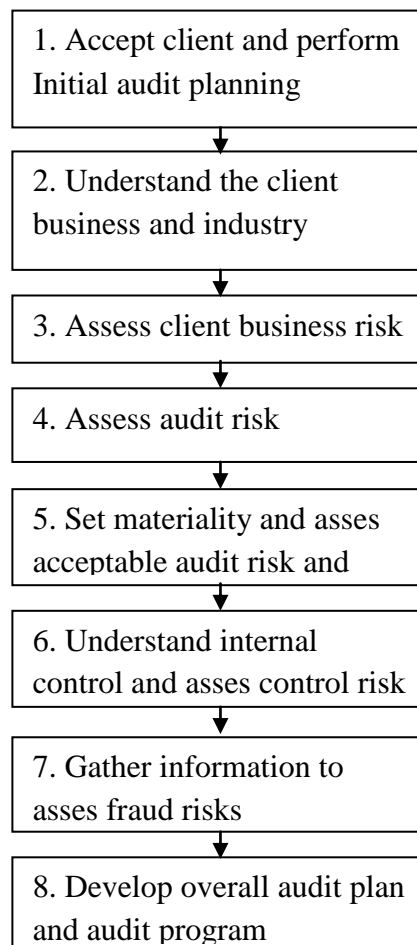
Source: (Arens, 2012, P.210)

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3.8.2 Assess Audit Risk:

In planning the audit, the auditor should also consider audit risk. SAS 47 (AU 312) defines audit risk as "the risk that the auditor may unknowingly fail to appropriately modify his opinion on financial statement that are materially misstated, and therefore, the risk that financial statement will include material misstatement. The more certain the auditor wants to be that he is expressing the correct opinion, the lower will be the audit risk he is willing to accept (SAS 47, 2006, P.91).

The auditor formulates his opinion on the financial statements taken as a whole primarily on the basis of evidence obtained through the verification of the individual account balances. The objective is to restrict audit risk at the individual account balance level so that at the conclusion of the examination, the audit risk in expressing an opinion on the financial statements will be at an appropriately low level (Kell & Others, 1989, P.79).

3.8.3 Audit and Risk:

Continuous changes in technology offer the internal auditing profession both great opportunity and risk. Before attempting to provide assurance on the systems and processes, an IA should understand the changes in business and information systems, the related risks, and the alignment of strategies with the enterprise's design and market requirements. The IA should review management's strategic planning and risk assessment processes and its decisions. It is the responsibility of operational management to identify, assess, and manage risk. It is information system (IS) Audit's responsibility to assist management in this process by facilitating the identification and assessment of risk and by assisting management monitor how well risks are actually being managed by the business. Many organizations do not have the resources available to identify, analyze, and control all business risks from an IS perspective. Implementing a formal risk assessment process assists by providing a consistent method for selecting high-impact risks on which to focus audit resources. During the risk assessment, IS Auditors develop an understanding of the operation's business in order to facilitate the identification and assessment of significant risks to and from the IS. This assessment is then used to allocate

audit resources to areas within the organization that provide executive management and the Audit Committee with the most efficient and effective level of audit coverage. Auditors must always keep in mind that individual managers have differing attitudes toward risk. Some managers or even organizations see the acceptance of risk as fundamental to the making of profits, whereas others are highly risk-averse and consider reducing risk a fundamental component of the business. This is referred to as risk tolerance. Unless the auditor understands this concept, it is likely that management and auditors will talk at cross purposes on risk and that audit recommendations may be deemed impractical or unacceptable. Based upon the individual risk positions adopted, companies will have many different risk mitigation interventions, such as insurance coverage, financial instruments, compliance, and internal audit functions. Management must understand that internal audit does not replace management's responsibility to control its own risk to acceptable levels (Cascarino, 2007, P.37-39).

3.8.4 Audit Risk Components:

The following are the components of risks:

3.8.4.1 Planned detection risk:

Is the risk that audit evidence for a segment will fail to detect misstatements exceeding tolerable misstatement. Planned detection risk is dependent on the other three factors in the model. It will change only if the auditor changes one of the other risk model factors. Planned detection risk determines the amount of substantive evidence that the auditor plan to accumulate, inversely with the size of planned detection risk. If planned risk detection risk is reduced, the auditor needs to accumulate more evidence to achieve reduced planned risk (Bragg and Others, 2010, P.21).

3.8.4.2 Inherent risk:

Inherent risk is the likelihood of a significant loss occurring before taking into account any risk-reducing factors. In evaluating inherent risk, the auditor must consider what are the types of and nature

of risks as well as what factors indicate a risk exists. To achieve this, the auditor must be familiar with the environment in which the entity operates (Cascarino, 2007, P.28).

Inherent risk Associated with the unique characteristic of the business or industry of the client. Firm in declining industries have greater inherent risk than firms in stable or the thriving industries. Auditor cannot reduce the level of inherent risk. Even in a system protected by the excellent controls, financial data and consequently, financial statement can be materially misstated (Hall, 2007, P.745).

3.8.4.3 Control Risk:

Control risk is a function of the effectiveness of the client's internal control structure. Effective internal controls over an account reduce control risk, whereas ineffective internal controls increase control risk. Control risk can never be zero because internal controls cannot provide complete assurance that all material errors will be prevented or detected (Kell & Others, 1989, P.79).

3.8.4.4 Acceptable audit risk:

Is a measure of how willing the auditors is to accept that the financial statement may be materially misstated after the audit is completed and an unqualified opinion has been issued. When auditors decide on a lower acceptable audit risk, they want to be more certain that the financial statements are not material misstated (Arens, 2012, P.262-263).

3.8.5 Assessing Audit risk and designing tests of controls:

Audit risk is the probability that auditor will render an unqualified opinion on the financial statements that are, in fact, materially misstated. Material misstatement may be caused by errors or irregularities or both. Errors are unintentional mistakes. Irregularities are intentional misrepresentations to mislead the users of financial statements. The auditor's objective is to minimize audit risk by performing of controls and substantive tests (Hall, 2007, P.745).

3.8.6 Assess Control Risk:

The auditor obtains an understanding of the design and implementation of internal control to make a preliminary assessment of control risk as part of the auditor's overall assessment of the risk of material misstatements. The auditor uses this preliminary assessment of control risk to plan the audit for each material class of transactions. However, in some instances the auditor may learn that the control deficiencies are significant such that the client's financial statements may not be auditable. So, before making a preliminary assessment of control risk for each material class of transactions, the auditor must first decide whether the entity is auditable. Two primary factors determine audit ability: the integrity of management and the adequacy of accounting records. The importance of management integrity was if management lacks integrity, most auditors will not accept the engagement. The accounting records are an important source of audit evidence for most audit objectives. If the accounting records are deficient, necessary audit evidence may not be available. For example, if the client has not kept duplicate sales invoices and vendors' invoices, it is usually impractical to do an audit. In complex IT environments, much of the transaction information is available only in electronic form without generating a visible audit trail of documents and records. In that case, the company is usually still auditable; however, auditors must assess whether they have the necessary skills to gather evidence that is in electronic form and can assign personnel with adequate IT training and experience. After obtaining an understanding of internal control, the auditor makes a preliminary **assessment of control risk** as part of the auditor's overall assessment of the risk of material misstatement. This assessment is a measure of the auditor's expectation that internal controls will prevent material misstatements from occurring or detect and correct them if they have occurred (Arens, 2012, P.307).

3.9 Using Computer-Assisted Audit Tools in the Audit Process:

When assessing the effectiveness and integrity of the design and operation of controls, it is necessary for the auditor to test and evaluate these controls. The decision to test and evaluate is not related to the size of the firm but the complexity of the IT environment. Therefore, CAATs play a very important role in the performance of audit work. CAATs can be used in a variety of ways to evaluate the integrity of an application, determine compliance with procedures, and continuously monitor processing results. Information systems auditors review application systems to gain an understanding of the controls in place to ensure the accuracy and completeness of the data. When adequate application controls are identified, the auditor performs tests to verify their effectiveness. When controls are not adequate, auditors must perform more extensive testing to verify the integrity of the data. To perform tests of applications and data, the auditor may use CAATs. Many tools and techniques have been developed that offer significantly improved management control and reduced costs if properly applied. Automated techniques have proven to be better than manual techniques when confronted with large volumes of information. The auditor, by using automated techniques, can evaluate greater volumes of data and quickly perform analysis on data to gather a broader view of a process.

There may be situations where the auditor may be required to conduct tests and evaluate IT controls and perform substantive tests to obtain sufficient information and evidence regarding financial statement assertions. Examples of some of these situations can be:

- Applications or systems involving (EDI).
- Electronic payment systems that transmit electronic transactions from one company network to another.
- Decision support systems that involve automatic reasoning or artificial intelligence or heuristic scenarios where they support decision making within the organization processes.
- Applications that use technology such as neural network to assess financial conditions using ratio application in calculation of credit worthiness .
- In systems where enterprise resource architecture is used to integrate the enterprise resource planning systems, blending legacy data with newer support systems.

- In systems that provide electronic services of all types to customers, especially where the IT system initiates bills for services rendered and processes the billing transaction.
- Computer programs that perform complex calculations involving money or resulting in a financial decision, present or future, such as reorder points, commissions, retirement or pension funds, and collection of accounts (Lin & Wang, 2011, P.777).

Also explain Web Trust Principles through internet, thus principals can be summarized as follow: (AICPA/CICA, 2002)

- System security principals.
- Information confidentiality.
- Information privacy of customs.
- Processing integrity principals.
- System availability principals.

3.10 Impact of E-Commerce on Auditing & Accounting:

The accounting and auditing science is a social science primarily and it's a science of language figures, so it is natural that accounting and auditing profession to be impacted by developments the information technology that has become one of the most important elements of accounting systems; in which it is noted that the accounting systems in companies and various firms have come to rely mainly on the use of computers, and these systems get more complex in companies that work in the e-commerce field, and these technological developments have created huge challenges in front of the accounting profession practitioners. And Audit related to the design of accounting systems, and develops internal control systems to ensure the efficiency, and the effectiveness of accounting system operation. No doubt that it has become to the external auditor and internal auditor for both the responsibility of qualifying themselves to deal with these advanced technology systems, which also should be said for accountants in various economic sectors, which should also be included in the curricula of accounting education in universities. It should be noted that American Institute of Certified Public Accountants (AICPA) experience aimed to increase the rehabilitation and development of accountants to deal with systems and internet technologies, particularly with regard to e-commerce where it The Institute aimed at providing a new

service for accountants to provide them with developed programs aimed at enabling them to submit the possibility of reliability and confidence on the accounting information systems that based on advanced information technology, as appeared new services for examination carried out by the legal accountant to determine the efficiency and effectiveness of accounting information systems, and the possibility of Accreditation on reliability. Another challenge facing the audit profession in light of e-commerce is presenting the impact of the financial statements published via internet on accounting and auditing, and the extent of confidence in the financial statements contained in these statements and means to guarantee that confidence. It is clear that financial statements published via the Internet will lead to the effects on the methods of accounting and auditing, and will be the focus of accounting studies during the current decade (العميري والمعتاز, 2007).

3.11 Impact of E-Commerce on auditing standards:

There is no doubt that E-Commerce affects the business environment; and therefore the auditing standards due to the strong link between business processes and accounting, where believed that E-Commerce effects on the accounting standards, and audit lead to change in the used accounting systems which creating a set of related problems to information security and data which requires the necessity of issuing standard complement to the audit standard of computers systems and the internal control standard including the vital role should the auditor play in assessing internal control systems in such companies, in addition to the audit procedures differ from other companies due to the different way in which operation of the system. There are many issues which relate to the nature of accounting and auditing for E-Commerce companies, including: the need to re-examine the characteristics of errors in different types of accounts in E-Commerce companies, and determine the most accounts susceptible to errors in these companies. In addition, the other issue may lead to increase audit businesses under the E-Commerce, where it was common in the past practice the audit that auditors do the implementation of the audit process by following the final audit method, which was usually start their main work after the end of fiscal year companies, but under the conditions of E-Commerce it has become necessary to resort the continuous audit, where the auditor audits the accounting work done first by first on year-round, although this approach has its negative effects on the cost of audit,

but the auditor can be completed by the audit, and write its report in the shortest time possible after the end of the fiscal year, which reducing the period length of audit report delay. The E-Commerce also changes the environment of the company, and many of the other characteristics, which requires looking reply in the analytical procedures indicators review that can rely on at auditing e-commerce companies (العميري والمعتاز, 2007).

3.12 E-Commerce and its relationship with the accounting standards and auditing standards:

In the late of 1997, accountancy and audit competent became aware of which exceeded the importance of e-commerce and expected to generate e-business income exceeds one trillion dollars at the end of 2002 and the accounting profession became one of the professions leading to the development of standards for e-commerce, so as to enable its members to provide confirmation to deal with e-commerce business environment dealing with. The American Institute of Certified Public Accountants (AICPA) was established in cooperation with the Canadian Institute Chartered Accountants (CICA) in which special committee entrusted with the task of studying the market needs for assurance services in e-commerce transactions, in order to enable each of the accounting profession and auditing profession a rapid response to those needs. The Commission was really able to study the market, and concluded that consumers are worried about electronic dealing, and found that the key questions that come to their mind always are:-

1. Is the company that I deal with through the Internet, actually the company concerned or not?
2. Is it in the case I do provide the company with credit card number or my account number, is a secure process?
3. Is my personal information not traded by others in the Internet?
4. Will I receive my order which I ask the same over the internet?
5. Will I meet delivery and in the deadline?
6. Who will ensure getting the value of the goods mentioned in the location of the company?

On the basis of the above questions, that Committee was able to create so-called network reliability and the protection and security procedures by which the conduct of electronic transactions and away from the risks that could impede the implementation of electronic trade exchange (القشي, 2003).

3.13 The Impact of E-Commerce on Audit Reporting:

Most public companies provide access to financial information through their home Web page. Visitors to a company's Web site can view the company's most recent audited financial statements, including the auditor's report. In addition, it is common for the company to include such information as unaudited quarterly financial statements, other selected financial information, and press releases often labeled as "About the Company" or "Investor Relations" on its Web site. Even before the widespread use of the Internet, companies often published documents that contained information in addition to audited financial statements and the independent auditor's report. The most common example was and still is the company's annual report. Under auditing standards, the auditor has no obligation to perform any procedures to corroborate the other information. The auditor is, however, responsible for reading the other information to determine whether it is materially inconsistent with information in the audited financial statements. However, under current auditing standards, auditors are not required to read information contained in electronic sites, such as the company's Web site, that also contain the company's audited financial statements and the auditor's report. Auditing standards note that electronic sites are a means of distributing information and are not considered "documents," as that term is used in auditing standards (Arens, 2006, P.65).

3.14 The Impact of E-Commerce on Audit Evidence & Audit Documentation:

Audit evidence is often available only in electronic form, and auditors must evaluate how this affects their ability to gather sufficient appropriate evidence. In certain instances, electronic evidence may exist only at a point in time. That evidence may not be retrievable later if files are changed and if the client lacks backup files. Therefore, auditors must consider the availability of electronic evidence early in the

audit and plan their evidence gathering accordingly. When evidence can be examined only in machine-readable form, auditors use computers to read and examine evidence. Commercial audit software programs, such as ACL and Interactive Data Extraction and Analysis (IDEA) software, are designed specifically for use by auditors. These programs are typically Windows-based and can easily be operated on the auditor's desktop or notebook computer. The auditor obtains copies of client databases or master files and uses the software to perform a variety of tests of the client's electronic data. These audit software packages are relatively easy to use, even by auditors with little IT training, and can be applied to a wide variety of clients with minimal customization. Auditors may also use spreadsheet software to perform audit tests. Auditors often use engagement management software to organize and analyze audit documentation. Using audit management software, an auditor can prepare a trial balance, lead schedules, supporting audit documentation, and financial statements, as well as perform ratio analysis. The software also facilitates tracking audit progress by indicating the performance and review status of each audit area. Tick marks and other explanations, such as reviewer notes, can be entered directly into computerized files. In addition, data can be imported and exported to other applications, so auditors may download a client's general ledger or export tax information to a commercial tax preparation package. Auditors also use local area networks and groupshare software programs to access audit documentation simultaneously from remote locations (Arens, 2012, P.195-196).

3.15 Electronic Auditing (E-Auditing):

In the beginning, it must be taken into account that the objectives of the regulations, and audit objectives are the same, not affected by the operation of the data, whether manual or automatic. Also, the scope of the audit does not change in the computer information system (ذنيبات, 2006).

E-Auditing means "process of applying any kind of systems using Information Technology to assist the auditor in planning, control and the audit documentation" (غراب وحجازي, 2003).

Therefore the E-auditing corner in addition to the corners of E-auditing. The above-mentioned is the use of IT in the audit process to assist the auditor auditing through the different stages of audit of planning, control and documentation. If the earlier era has been characterized by several revolutions of mankind, beginning with the

Industrial Revolution and then, the knowledge revolution, and through the technology and communications revolutions, which is indisputable that we are living today in a revolution of Information Technology. This revolution, which required from the firm the speed in processing data and the speed of delivered the user to take advantage in decision-making and the rationalization of those decisions (غراب وحجازي, 2003).

Not only that but put this technology security and integrity of these organizations on the line; so it would request that including the status of many of the security measures that accompanied the use of this technology in order to protect their valuable information. The presence of security and precise control over the information resources related to the company must be a priority senior management. Although the control objectives have remained the same in light of the use of information technology, the methods of control and security have changed significantly in light of developments in electronic commerce and information technology (Romney & Steinbart, 2006).

3.16 Approaches of E-Auditing:

There are three different approaches to the use of information technology in the auditing process; simplest is auditing around the computer, and deeper and focused is auditing with the computer. As well as audit through the computer. And can be subjected to the three entrances as follows: (Arens, 2012) & (ذنيبات, 2006)

3.16.1 Auditing around the computer:

The audit around the computer based on the attention and audit the auditor of the inputs and outputs only, without look at what is happening inside the computer from the data operation process, assuming that the control systems on operating is effectively. This is the entrance of the simplest approaches e-auditing, and does not require the high costs, it also does not require high skills and expertise of the computer, but it is not effectiveness in light of the increasing adoption of firms on using computerized systems, and complexity of the operation methods and data processing, and the diversity of fraud ways and the inability of this approach to set or adjust.

3.16.2 Auditing through the computer:

In this approach, Auditors can exercise various tools and techniques (CAATs) based on use of computers. The most important computer assisted audit techniques are: (Jakšić, 2009)

1. **Test Data:** This technique is based on auditors' creation of input data that should be processed by client's application. Test data consist of correct and incorrect data. If incorrect data is entered into the system, auditor expects the input rejection. Results of input procedures are compared with expected behavior of application in order to determine whether input controls are in place.

2. **Integrated Test Facility:** Integrated test facilities are built-in test environments within a system. This approach is used primarily with large-scale, online systems serving multiple locations within the company or organization. Integrated test facility is a variation of test data technique. The main difference is that instead of checking information system while not in use, simulated data are added to client's real data and processed simultaneously.

3. **Parallel Simulation:** In test data and integrated test facility techniques audit tests are based on simulated data, while in parallel simulation technique auditor uses actual data which is processed with clients' and auditor's program. The main advantage in utilization of parallel simulation is a possibility than auditor's program could have additional controls embedded, which enables the valuation of effects of nonexistent control procedures. The main disadvantage lies in significant cost of audit programming if written uniquely for one client. Parallel simulation is the best technique for verification of calculations (depreciation, interest, taxes, payroll etc.).

4. **Online Audit Monitor:** provides continuous audit through integration of audit program code into client's transactional application. Its task is to monitor transactions and makes extractions if certain criteria are met (specific transactions, unusual transactions, high risk transactions etc.).

3.16.3 Auditing with the computer:

In this approach the auditor uses some of the programs assistance, some of which require skill and experience in the computer field. The programs are designed to assist the auditor in his work, divided into: (ذنيبات, 2008, P.318-322)

1. Custom-Designed Program: It serves to do some auditing functions, consistent with the client system, and is prepared with the expert's assistance in this field.

2. Generalized Audit Software: It does not belong to a particular application or a client, but it prepares in general to assist the auditor, and may be used in many applications, and with many clients.

Chapter Four:

"Research Methodology"

4.1 Data Measurement:

In order to be able to select the appropriate method of analysis, the level of measurement must be understood. For each type of measurement, there is/are an appropriate method/s that can be applied and not others. In this research, ordinal scales were used. Ordinal scale is a ranking or a rating data that normally uses integers in ascending or descending order. The numbers assigned to the important (1, 2, 3, 4, 5) do not indicate that the interval between scales are equal, nor do they indicate absolute quantities. They are merely numerical labels. Based on Likert scale we have the following:

Item	*Strongly Agree*	*Agree*	*Moderately Agree*	*Disagree*	*Strongly Disagree*
Scale	5	4	3	2	1

4.2 Test of Normality for each field:

Table (3) shows the results for Kolmogorov-Smirnov test of normality. From Table (3), the p-value for each field is greater than 0.05 level of significance, then the distribution for each field is normally distributed. Consequently, Non-Parametric tests will be used to perform the statistical data analysis.

Table 3: Kolmogorov-Smirnov test

Field	Kolmogorov-Smirnov	
	Statistic	**P-value**
Current skills, knowledge and qualification of Palestinian auditors in E-Commerce	0.983	0.288
The impact of using E-Commerce on the Audit Report	1.316	0.063
The impact of electronic information systems on the quality of audit Evidence & documentation process	0.769	0.594
The risks of audit process related to E-Commerce systems	0.842	0.477
All paragraphs of the questionnaire	0.957	0.319

4.3 Statistical analysis Tools:

The researcher would use data analysis both qualitative and quantitative data analysis methods. The Data analysis will be made utilizing (SPSS 20). The researcher would utilize the following statistical tools:

1) Kolmogorov-Smirnov test of normality.
2) Pearson correlation coefficient for Validity.
3) Cronbach's Alpha for Reliability Statistics.
4) Frequency and Descriptive analysis.
5) Parametric Tests (One-sample T test, Independent Samples T-test, Analysis of Variance).

4.3.1 T-test: is used to determine if the mean of a paragraph is significantly different from a hypothesized value 3 (Middle value of Likert scale). If the P-value (Sig.) is smaller than or equal to the level of significance, $\alpha = 0.05$, then the mean of a paragraph is significantly different from a hypothesized value 3. The sign of the Test value indicates whether the mean is significantly greater or smaller than hypothesized value 3. On the other hand, if the P-value (Sig.) is greater than the level of significance, $\alpha = 0.05$, then the mean a paragraph is insignificantly different from a hypothesized value 3.

4.3.2 The Independent Samples T-test: is used to examine if there is a statistical significant difference between two means among the respondents toward The Impact of E-Commerce on the Auditor Work - Applied Study on the International Accounting Firms Working in Palestine due to (Qualification).

4.3.3 The One- Way Analysis of Variance (ANOVA): is used to examine if there is a statistical significant difference between several means among the respondents toward The Impact of E-Commerce on the Auditor Work - Applied Study on the International Accounting Firms Working in Palestine due to (Age, Job Description, Years Experience in Auditing Field and Numbers of Times You Audited for E-Commerce).

4.4 Validity of Questionnaire:

Validity refers to the degree to which an instrument measures what it is supposed to be measuring. Validity has a number of different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which include internal validity and structure validity.

4.4.1 Internal Validity:

Internal validity of the questionnaire is the first statistical test that used to test the validity of the questionnaire. It's measuring the correlation coefficients between each paragraph in one field and the whole field.

Table (4) clarifies the correlation coefficient for each paragraph of the " current skills, knowledge and qualification of Palestinian auditors in E-Commerce" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at α = 0.05, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table 4: Correlation coefficient of each paragraph of "Current skills, knowledge and qualification of Palestinian auditors in E-Commerce":-

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The auditor has appropriate knowledge about the Internet and IT	.380	0.008*
2.	The auditor has the ability to understand the impact of the firm business in e-commerce on the financial data's	.693	0.000*
3.	The auditor has the ability to understand the impact of technique used for e-commerce on the data	.840	0.000*
4.	The auditor has the ability to understand the firm look for managing of electronic errors	.701	0.000*

5.	The auditor has the ability to evaluate electronic audit manual	.620	0.000*
6.	The auditor has the ability to determine the extent, the nature and timing of audit procedures	.714	0.000*
7.	The auditor has the ability to understand the risks involved in electronic commerce practices	.403	0.005*
8.	There auditor has the ability to determine the extent of the required procedures for auditing in the e-commerce environment	.560	0.000*
9.	There is an urgent need to attend a program, rehabilitation and training on auditing of e-commerce methods	.351	0.013*
10.	the international professional versions of auditing profession are viewed regarding e-commerce	.740	0.000*
11.	Considered the audit of internal control procedures process for e-commerce companies are complex	.464	0.001*

* Correlation is significant at the 0.05 level

Table (5) clarifies the correlation coefficient for each paragraph of the "The impact of using E-Commerce on the Audit Report" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table 5: Correlation coefficient of each paragraph of "The impact of using E-Commerce on the Audit Report":-

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	When preparing the auditor's report, taking into account the nature of e-commerce processess?	.687	0.000*
2.	The electronic information systems is used in the preparation of the annual financial statements at the audit process	.624	0.000*
3.	When preparing the external auditor's report, the information technology is used for firms practicing e-commerce	.642	0.000*
4.	Falls to the external auditor's full responsibility to determine whether the financial data's are agrees with electronic financial data's	.429	0.003*
5.	From the problems facing the auditing profession: difficult to express an opinion about fairness of the financial statements in preparing the independent auditor's report in e-commerce environment	.438	0.002*

* Correlation is significant at the 0.05 level

Table (6) clarifies the correlation coefficient for each paragraph of the "The impact of electronic information systems on the quality of audit evidence and documentation process" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table 6: Correlation coefficient of each paragraph of ″The impact of electronic information systems on the quality of audit Evidence and documentation process":

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Evidences and procedures of audit process is documented when reviewing operations in e-commerce	.680	0.000*
2.	E-commerce systems is used in gathering evidence process	.659	0.000*
3.	When gathering evidence for e-commerce process, deviations are calculated in the cost for the audit process functions	.857	0.000*
4.	Eelectronic programs is used in preparing notes forms and documents	.732	0.000*
5.	E-commerce systems is used in documenting the client's accounting system	.603	0.000*
6.	The use of electronic information systems in the audit process works to improve the auditor ability and rehabilitation on prepare evidence of high quality	.517	0.000*
7.	There is impact for using e-commerce systems on the auditor ability in obtaining on evidence to the appropriate timing of an item being audited	.676	0.000*
8.	The e-sites consider documents can be invoked	.433	0.003*

* Correlation is significant at the 0.05 level

Table (7) clarifies the correlation coefficient for each paragraph of the "The risks of audit process related to E-Commerce systems″ and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at α = 0.05, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table 7: Correlation coefficient of each paragraph of "The risks of audit process related to E-Commerce systems":-

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	E-commerce systems is used in assessing audit risks related to e-commerce processes	.749	0.000*
2.	External auditor is able to audit the financial statements data's for e-commerce processess, and meet its challenges in the light of his current skills	.476	0.001*
3.	The need for high skills and external expertise in order to use the computer in the application is one of the most important risk audit process in e-commerce systems	.292	0.034*
4.	From the risks facing by the external auditor planning and assessment audit work risks for e-commerce process	.259	0.041*
5.	The use of e-commerce systems in the audit process leads to reliance Increasingly on devices and programs abilities, which reduces the innovation and creativity of the external auditor	.374	0.009*

* Correlation is significant at the 0.05 level

4.4.2 Structure Validity of the Questionnaire:-

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one field and all the fields of the questionnaire that have the same level of liker scale.

Table (8) clarifies the correlation coefficient for each field and the whole questionnaire. The p-values (Sig.) are less than 0.05, so the correlation coefficients of all the fields are significant at α = 0.05, so it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the study.

Table 8: Correlation coefficient for each field and the whole of questionnaire:-

No.	Field	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Current skills, knowledge and qualification of Palestinian auditors in E-Commerce	.889	0.000*
2.	The impact of using E-Commerce on the Audit Report	.738	0.000*
3.	The impact of electronic information systems on the quality of audit Evidence & documentation process	.878	0.000*
4.	The risks of audit process related to E-Commerce systems	.512	0.000*

* Correlation is significant at the 0.05 level

4.5 Reliability of the Research:

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring. The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample of people on two occasions and then compares the scores obtained by computing a reliability coefficient.

4.5.1 Cronbach's Coefficient Alpha:

This method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire. The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. The Cronbach's coefficient alpha was calculated for each field of the questionnaire.

Table (9) shows the values of Cronbach's Alpha for each field of the questionnaire and the entire questionnaire. For the fields, values of Cronbach's Alpha were in the range from 0.566 and 0.801. This range is considered high; the result ensures the reliability of each field of the questionnaire. Cronbach's Alpha equals 0.857 for the entire questionnaire which indicates an excellent reliability of the entire questionnaire.

Table 9: Cronbach's Alpha for each field of the questionnaire:-

No.	Field	Cronbach's Alpha
1.	Current skills, knowledge and qualification of Palestinian auditors in E-Commerce	0.801
2.	The impact of using E-Commerce on the Audit Report	0.566
3.	The impact of electronic information systems on the quality of audit Evidence & documentation process	0.788
4.	The risks of audit process related to E-Commerce systems	0.682
All paragraphs of the questionnaire		0.857

Thereby, it can be said that the researcher proved that the questionnaire was valid and reliable.

Chapter Five:

"Data Analysis and Discussion"

5.1 Introduction:

In this chapter describe the results of the study, in order to discuss & analyze data's of E-Commerce of the information collected from the sample through questionnaire, from personal data like: (Age, Qualification, Specialization, Job Description, etc) & test the hypothesis which consist five hypothesis in this research, are being examined on this chapter as follows:-

5.2 Personal Data:

5.2.1 Age:

Table No.(10) shows that 40.0% of the sample are "Less than 30 years" , 32.5% of the sample are of "30 – Less than 40 years", 20.0% of the sample are of "40 – Less than 50 years" and 7.5% of the sample are of "50 years and more".

The researcher aim to the fact that the diversity of life for individuals respondents leads to diversity of perspectives with respect to the subject matter under study, in addition to more respondents are aged less than 40 years old and that they represent the majority.

Table (10): Age:-

Age	Frequency	Percent
Less than 30 years	16	40.0
30 – Less than 40 years	13	32.5
40 – Less than 50 years	8	20.0
50 years and more	3	7.5
Total	**40**	**100.0**

5.2.2 Qualification:

Table No.(11) shows that 80.0% of the sample are "B.Sc" holders and 20.0% of the sample are "M.Sc" holders.

This reflects the nature of the work to international accounting firms that do not require high academic certificates, but only with a bachelor's degree, and allows for the first university degree certificate to apply a practice license under certain conditions.

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Table (11): Qualification:-

Qualification	Frequency	Percent
B.Sc	32	80.0
M.Sc	8	20.0
Total	**40**	**100.0**

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5.2.3 Specialization:

Table No.(12) shows that 97.5% of the sample are "Accounting" and 2.5% of the sample are "Financial and Banking Sciences".

This means that every external auditor is an accountant and not vice versa, and thus an indication of the direction of the respondents' ability to understand and absorb the purposes of the questionnaire. And this profession cannot work out without a specialist in the field of accounting.

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Table (12): Specialization:-

Specialization	Frequency	Percent
Accounting	39	97.5
Financial and Banking Sciences	1	2.5
Total	**40**	**100.0**

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5.2.4 Job Description:

Table No.(13) shows that 5.0% of the sample are "Accountant" , 15.0% of the sample are of "Assistant Auditor", 50.0% of the sample are of "Senior Auditor", 25.0% of the sample are of "Audit Manager" and 5.0% of the sample are Other "Auditing Supervisors".

Thus, the diversity of job titles for individual's respondents leads diversity of perspectives with respect to the subject matter under study, and which works to enrich the subject and an increase in the information accuracy given and available. So, the job description for the person has nothing to do with the E-Commerce process.

Table (13): Job Description:-

Job Description	Frequency	Percent
Accountant	2	5.0
Assistant Auditor	6	15.0
Senior Auditor	20	50.0
Audit Manager	10	25.0
Other (Auditing Supervisors)	2	5.0
Total	**40**	**100.0**

5.2.5 Years of Experience in Auditing Field:

Table No.(14) shows that 35.0% of the sample are "Less than 5 years" , 20.0% of the sample are of "5 – Less than 10 years" and 45.0% of the sample are of "10 years and more".

This indicates that the majority of auditors have sufficient experience to which they are entitled in their work field, in addition to practice through their dealings with the E-Commerce process.

Table (14): Years of Experience in Auditing Field:-

Years of Experience in Auditing Field	Frequency	Percent
Less than 5 years	14	35.0
5 – Less than 10 years	8	20.0
More than 10 years	18	45.0
Total	**40**	**100.0**

5.2.6 Numbers of Times that Audited on E-Commerce Processes:

Table No.(15) shows that 37.5% of the sample are of "Less than 5 times", 25.0% of the sample are "5 – Less than 10 times" and 30.0% of the sample are "More than 10 times".

This reflects the nature of the auditors work in international accounting firms who audited before companies concerned E-Commerce or with electronic information systems, and this indicates that most respondents from auditors have dealt previously

with processes belong to E-Commerce or electronic information systems from experience in this field. This gives the accuracy in answering this questionnaire.

Table (15): Numbers of Times that Audited on E-Commerce Processes:-

Numbers of Times that Audited on E-Commerce Processes	Frequency	Percent
Less than 5 times	15	37.5
5 – Less than 10 times	10	25.0
More than 10 times	12	30.0
Total	**37**	**92.5**

5.3 Research Hypotheses:

5.3.1 Hypothesis No.1: "There is significant statistical at 0.05 levels between E-Commerce and current skills, knowledge and qualification of Palestinian auditors"

Table (16) shows the following results:-

● The mean of paragraph #1 "The auditor has appropriate knowledge about the Internet and IT" equals 4.33 (86.50%), Test-value = 15.94, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

● The mean of paragraph #11 "Considered the audit of internal control procedures process for E-Commerce companies are complex" equals 3.28 (65.50%), Test-value = 2.22, and P-value = 0.016 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

● The mean of the field "Current skills, knowledge and qualification of Palestinian auditors in E-Commerce" equals 3.94 (78.73%), Test-value = 16.31, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value. We conclude that the respondents agreed to field of "Current skills, knowledge and qualification of Palestinian auditors in E-Commerce ".

This means that there is a high approval by the sample respondents on the paragraphs of this field. And this has been confirmed by the study of (قيراط, 2008).

Table (16): Means and Test values for "Current skills, knowledge and qualification of Palestinian auditors in E-Commerce"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The auditor has appropriate knowledge about the Internet and IT	4.33	86.50	15.94	0.000*	1
2.	The auditor has the ability to understand the impact of the firm business in e-commerce on the financial data's	4.23	84.50	13.43	0.000*	2
3.	The auditor has the ability to understand the impact of technique used for e-commerce on the data	4.08	81.50	14.33	0.000*	4
4.	The auditor has the ability to understand the firm look for managing of electronic errors	4.00	80.00	9.87	0.000*	5
5.	The auditor has the ability to evaluate electronic audit manual	3.78	75.50	7.43	0.000*	9
6.	The auditor has the ability to determine the extent, the nature and timing of audit procedures	4.13	82.50	11.72	0.000*	3
7.	The auditor has the ability to understand the risks involved in electronic commerce practices	3.98	79.50	11.62	0.000*	6
8.	There auditor has the ability to determine the extent of the required procedures for auditing in the e-commerce environment	3.98	79.50	11.62	0.000*	6
9.	There is an urgent need to attend a program,	3.88	77.50	8.06	0.000*	8

	rehabilitation and training on auditing of e-commerce methods				
10.	the international professional versions of auditing profession are viewed regarding e-commerce	3.68	73.50	5.36	0.000*	10
11.	Considered the audit of internal control procedures process for e-commerce companies are complex	3.28	65.50	2.22	0.016*	11
All paragraphs of the field		3.94	78.73	16.31	0.000*	

* The mean is significantly different from 3

5.3.2 Hypotheses No.2: "There is significant statistical at 0.05 levels between E-Commerce and the audit report"

Table (17) shows the following results:-

● The mean of paragraph #1 "When preparing the auditor's report, taking into account the nature of E-Commerce processess?" equals 4.20 (84.00%), Test-value = 12.49 and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

● The mean of paragraph #5 "From the problems facing the auditing profession: difficult to express an opinion about fairness of the financial statements in preparing the independent auditor's report in E-Commerce environment" equals 3.00 (60.00%), Test-value = -0.00, and P-value = 0.500 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this paragraph is insignificantly different from the hypothesized value 3. We conclude that the respondents (Moderately agree, neutral) to this paragraph.

● The mean of the field "The impact of using E-Commerce on the audit report" equals 3.86 (77.20%), Test-value = 13.58, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3.

We conclude that the respondents agreed to field of "The impact of using E-Commerce on the audit report ".

This means that there is a high approval by the sample respondents on the paragraphs of this field. And this has been confirmed by the study of (Al-Jabali and Nazmy, 2011).

Table (17): Means and Test values for "The impact of using E-Commerce on the Audit Report":-

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	When preparing the auditor's report, taking into account the nature of e-commerce processess?	4.20	84.00	12.49	0.000*	1
2.	The electronic information systems is used in the preparation of the annual financial statements at the audit process	4.20	84.00	12.49	0.000*	1
3.	When preparing the external auditor's report, the information technology is used for firms practicing e-commerce	4.18	83.50	11.68	0.000*	3
4.	Falls to the external auditor's full responsibility to determine whether the financial data's are agrees with electronic financial data's	3.73	74.50	4.91	0.000*	4
5.	From the problems facing the auditing profession: difficult to express an opinion about fairness of the financial statements in preparing the independent auditor's report in e-commerce environment	3.00	60.00	0.00	0.500	5
All paragraphs of the field		3.86	77.20	13.58	0.000*	

* The mean is significantly different from 3

5.3.3 Hypotheses No.3: "There is significant statistical at 0.05 levels between E-information systems and the quality of audit evidences and documentation process"

Table (18) shows the following results:

● The mean of paragraph #1 "Evidences and procedures of audit process is documented when reviewing operations in E-Commerce" equals 4.30 (86.00%), Test-value = 14.58, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

● The mean of paragraph #8 "The e-sites consider documents can be invoked" equals 3.70 (74.00%), Test-value = 5.84, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

● The mean of the field "The impact of electronic information systems on the quality of audit evidence and documentation process" equals 4.00 (80.06%), Test-value = 16.97, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to field of "The impact of electronic information systems on the quality of audit evidence and documentation process ".

This means that there is a very high approval by the sample respondents on the paragraphs of this field. And this has been confirmed by the study of (قيراط, 2008), the study of (العميري والمعتاز, 2007) and the study of (Al-Jabali and Nazmy, 2011).

Table (18): Means and Test values for "The impact of electronic information systems on the quality of audit evidence and documentation process":-

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Evidences and procedures of audit process is documented when reviewing operations in e-commerce	4.30	86.00	14.58	0.000*	1
2.	E-commerce systems is used in gathering evidence process	4.25	85.00	14.56	0.000*	2
3.	When gathering evidence for e-commerce process, deviations are calculated in the cost for the audit process functions	4.03	80.50	9.83	0.000*	3
4.	Eelectronic programs is used in preparing notes forms and documents	3.88	77.50	9.82	0.000*	7
5.	E-commerce systems is used in documenting the client's accounting system	4.00	80.00	11.40	0.000*	4
6.	The use of electronic information systems in the audit process works to improve the auditor ability and rehabilitation on prepare evidence of high quality	3.98	79.50	11.62	0.000*	5
7.	There is impact for using e-commerce systems on the auditor ability in obtaining on evidence to the appropriate timing of an item being audited	3.90	78.00	11.47	0.000*	6
8.	The e-sites consider documents can be invoked	3.70	74.00	5.84	0.000*	8
	All paragraphs of the field	4.00	80.06	16.97	0.000*	

* The mean is significantly different from 3

5.3.4 Hypotheses No.4: "There is significant statistical at 0.05 levels between E-Commerce and the risks of audit process"

Table (19) shows the following results:

● The mean of paragraph #1 "E-Commerce systems is used in assessing audit risks related to E-Commerce processes" equals 4.15 (83.08%), Test-value = 10.75, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to this paragraph.

● The mean of paragraph #5 "The use of E-Commerce systems in the audit process leads to reliance Increasingly on devices and programs abilities, which reduces the innovation and creativity of the external auditor" equals 2.78 (55.50%), Test-value = -1.46, and P-value = 0.076 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this paragraph is insignificantly different from the hypothesized value 3. We conclude that the respondents (Moderately agree, neutral) to this paragraph.

● The mean of the field "The risks of audit process related to E-Commerce systems" equals 3.66 (73.20%), Test-value = 11.98, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. We conclude that the respondents agreed to field of "The risks of audit process related to E-Commerce systems ".

This means that there is a high approval by the sample respondents on the paragraphs of this field. And this has been confirmed by the study of (العمودي, 2006): "The Impact of E-Commerce on the Auditing: A Field Study in Yemen".

Table (19): Means and Test values for "The risks of audit process related to E-Commerce systems":-

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	E-commerce systems is used in assessing audit risks related to e-commerce processes	4.15	83.08	10.75	0.000*	1
2.	External auditor is able to audit the financial statements data's for e-commerce processess, and meet its challenges in the light of his current skills	4.08	81.50	11.05	0.000*	2
3.	The need for high skills and external expertise in order to use the computer in the application is one of the most important risk audit process in e-commerce systems	3.65	73.00	6.21	0.000*	4
4.	From the risks facing by the external auditor planning and assessment audit work risks for e-commerce process	3.68	73.50	5.15	0.000*	3
5.	The use of e-commerce systems in the audit process leads to reliance Increasingly on devices and programs abilities, which reduces the innovation and creativity of the external auditor	2.78	55.50	-1.46	0.076	5
	All paragraphs of the field	3.66	73.20	11.98	0.000*	

* The mean is significantly different from 3

5.3.5 Hypotheses No.5: "There is significant statistical differences at 0.05 levels among respondents in regard the impact of E-Commerce on the external auditor work due to personal information's and data's"

Table (20) shows the following results:

The p-value (Sig.) is greater than the level of significance $\alpha = 0.05$ for each personal data, then there is insignificant difference in respondents' answers in regard The Impact of E-Commerce on the External Auditor Work - Applied Study on the International Accounting Firms Working in Palestine due to each personal information's and data's. We conclude that the personal information's and data's have no effect on The Impact of E-Commerce on the External Auditor Work - Applied Study on the International Accounting Firms Working in Palestine.

And here researcher aimed to that there is no statistically significant differences between age, qualification, job description, the number of years of experience in the field of audit and the number of times in which audited on E-Commerce processes. This means that there is no effect of personal data's on the answers results of the questionnaire.

Table (20): Independent Samples T-test and ANOVA Test for Personal Data's:-

No	Personal Data's	Test Name	Test Value	P-value (Sig.)
1.	Age	ANOVA	0.680	0.513
2.	Qualification	Independent Samples T-test	0.236	0.815
3.	Job Description	ANOVA	0.910	0.469
4.	Years' Experience in Auditing Field	ANOVA	2.520	0.094
5.	Numbers of Times that Audited on E-Commerce Processes	ANOVA	1.409	0.256

Chapter Six:

"Conclusion's and Recommendations"

Introduction:

After analyzing the data and testing hypotheses using the required statistical analysis, in this chapter the researcher will show the main results that achieved through statistical analysis, and also show the main required recommendations according to the results that achieved.

6.1 Conclusions:

From analyzing the data collected and tested hypothesis using different statistical analysis, The researcher had concluded that the E-Commerce processes, encompasses the policies, tasks, behaviors and other aspects of all international accounting firms that taken together:-

1. The study sample recognized that the majority of study hold a bachelor's degree (80.0%) and major specialization in accounting (97.50%), which confirms the sample being a subject to the purposes of achieving of this study.

2. The study sample enjoyed a moderately experience in auditing field about more than ten years (45.0%), but not enjoyed enough a numbers of times audited on E-Commerce processes about less than five times (37.50%), which confirms the sample being moderately a subject to the purposes of achieving this study.

3. The E-Commerce has an impact on current skills, knowledge and qualification of the Palestinian auditors, and this result is logical based on the external auditors has an appropriate knowledge about the Internet and IT with study sample recognized of (86.50%).

4. The E-Commerce has an impact on the external auditor's report depend on the nature of E-Commerce processes where the criteria for the preparation of the report are governed the auditor's report, and this result is logical with study sample recognized of (84.0%).

5. The evidences and procedures of audit process is documenting through reviewing operations in E-Commerce resulting from electronic information systems due to the quality of audit evidences and documentation, and this result is logical with study sample recognized of (86.00%).

6. The E-Commerce has an impact on the implementation risks of audit process, which these operations are not usual, therefore the need of wide effort in assessing audit risks related to E-Commerce processes and to obtain as much as

possible to confirm these operations, and this result is logical with study sample recognized of (83.08%).

7. The study sample recognized that the personal information's and data's have no effect on The Impact of E-Commerce on the External Auditor Work - Applied Study on the International Accounting Firms Working in Palestine. So, the researcher aimed to that there is no statistically significant differences to personal data's.

6.2 Recommendations:

At the end of this study, the researcher recommends the following:-

1. The necessity for the external auditors to updates their professional information about newer E-Commerce in the modern technology and its requirements, so that external auditors can deal with this type of activities efficiently and effectively.

2. Increasing the scientific and professional experiences and technological capacity building to external auditors, that will positively reflect on auditing the fields of E-Commerce processes.

3. More sophisticated current skills, knowledge and newer technology must be added to the qualification of Palestinian auditors to create a various experts staff professionally in the field of E-Commerce.

4. Advising the external auditors to take into consideration the importance of financial documents on electronic sites related to companies, banks or NGO's dealing with E-Commerce.

5. The electronic information systems in the international accounting firms in Palestine should be updated and developed, using a clear strategy allow firms to be fully documented, including reviewing operations, evidences and procedures of audit and should be completely tested prior to implementation.

6. Advising the external auditors about outweighed the risks of E-Commerce process and how to deal with during audit process.

7. Work on awareness the international accounting firms in Palestine with the importance of E-Commerce process that companies dealing with on the general level.

6.3 Future Researches:

In light of its previous recommendations, the researcher suggests doing the following studies: -

1. The Impacts of E-Commerce on Developing Accounting Information Systems (AIS) - Case Study in Gaza Strip.

2. The Impact of Electronic Information Systems on the Quality of Professional Performance of External Auditor's Work – Applied Study on Banks Working in Gaza Strip.

3. The Effect of E-Auditing on the Audit Quality: Evidence from Palestine.

References

References:-

A: English References:

1- Arens, Alvin A., Elder, Randal J. and Beasley, Mark S., **"Auditing and Assurance Services – An Integrated Approach"**, 14th Edition, Prentice Hall, 2012.

2- Arens, Alvin A., Elder, Randal J. and Beasley, Mark S., **"Auditing and Assurance Services: An Integrated Approach"**, Prentice Hall, USA, 2006.

3- Bragg, Steve M., Wiley Practitioner's Guide to GAAS 2010: Including all SASs, SSAEs, SSARSs & Interpretations, John Wiley and Sons, Inc.

4- Cascarino, **Auditor's Guide to Information Systems Auditing**, John Wiley and Sons, Inc., 2007.

5- Chambers, Andrew D. and Court, John M., **Computer Auditing**, 2nd Edition, 1986.

6- Exposure Draft by AICPA/CICA, Trust Services Principles and Criteria, Incorporating Sys. Trust and Web Trust, Trust Services, AICPA, New York, NY 10036-8775, July 1, 2002.

7- Genete, Laura-Diana, and Tugui, Alexandru, Particularities in Audit Planning in E-Commerce, Faculty of Economics and Business Administration, Iasi, Romania, 2008.

8- Gorwani, Kavita, E-Commerce - Implications for Auditor, The Chartered Accountant, December 2005.

9- Gupta, Uma, **Information systems – Success in the 21st century**, Prentice Hall, 2000.

10- Hall, **Accounting information systems**, 5th Edition, Thomson South Western, 2007.

11- Hayes et al, **Principles of Auditing - An Introduction to International Standards on Auditing**, 2nd Edition, Pearson Education Limited, 2005.

12- Haag, Stephen and Cummings, Maeve, **Management information systems for the information age**, 8th Edition, McGraw-Hill, 2010.

13- Hicks, Julie, E-Commerce and Its Impact on the Accounting Profession - A Literature Review, **UNC Greensboro Journal of Student Research in Accounting**, Issue 1 (1-16), 2004.

14- Jarbou, Yousef Mahmoud, **"Auditing between theory and application",** **Practical Framework**, 1ˢᵗ Edition, 2009.

15- Jarbou, Yousef Mahmoud, **"Auditing between theory and application",** **Theoretical Framework**, 1ˢᵗ Edition, 2008.

16- Jakšić, Dejan, **"Implementation of Computer Assisted Audit Techniques in** **Application Controls Testing",** 2009.

17- Kell, Walter C., Boynton, William C. and Ziegler, Richard E., **Modern** **Auditing**, 4ᵗʰ Edition, John Wiley and Sons, Inc., 1989.

18- Laudon, Kenneth and Laudon, Jane, **Management Information System -** **Managing the Digital Firm**, 11ᵗʰ Edition, Prentice Hall, 2010.

19- Latshaw, 2004." SEC Approves Auditing Standard No. 3, "Audit Documentation", Bank Accounting and Finance, Vol. 17 Issues 6, 2004.

20- Moorthy, M. Krishna, Seetharaman, A., Zulkifflee, Mohamed, Gopalan, Meyyappan and Har San, Lee, The Impact of Information Technology on Internal Auditing, **Academic African Journal of Business Management,** Vol. 5(9), pp. 3523-3539, 2011.

21- Nikoloyuk, Gerald M., Marche, Sunny, and McNiven, James, E-Commerce Impact on Canadian Public Sector Audit Practice, **International Journal of** **Public Sector Management**, Vol. 18 Issue: 1, pp.83 – 95, 2005.

22- O'Brien, James A., **Management information systems - Managing** **information technology in the E-Business enterprise**, 5ᵗʰ Edition, McGraw-Hill, 2002.

23- Romney and Steinbart, **Accounting Information Systems**, Prentice Hall, 2006.

24- SAS No.47, Audit risk and Materiality in Conducting an Audit" AU Section 312, P.91, December 15, 2006.

25- SAS No.65, " The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statements", AU Section 322, P.255, December, 1991.

26- SAS No.106, "Audit Evidence", AU Section 326, December, 2006.

27- SAS No.108 & No. 114, " Planning and Supervision" AU Section 311, P.77, December 15, 2006.

28- Santos, Carlos, and Tribolet, Jose, The Impact of E-Commerce on The Internal Control and on Auditing Practices, IADIS International Conference E-Commerce, Portugal, 2004.

29- Shaikh, Junaid M. E-Commerce Impact: Emerging Technology – Electronic Auditing, **Managerial Auditing Journal**, Vol. 20 Issue: 4, pp.408–421, 2005.

30- Senft and Gallegos, 2009, **Information Technology Control and Audit**, 3rd Edition, Taylor & Francis Group, LLC**.**

31- Turban, E., King, D., Lee, J. and Viehland, D., **"E-Commerce a managerial perspective"**, New Jersey: Pearson Education, Inc., Upper Saddle River, 2004

32- Turban, E., King, D., Lee, J., Wakentin, M. and Chung, M., **"E-Commerce - A Managerial Perspective"**, Pearson Education, Inc., 2002.

33- Wagner, Harold J., "Information System Auditing and E-Commerce", College of Business & management, University of Illinois, Springfield, Illinois, USA, Fall 2001.

34- Wang and Lin, **A selection model for auditing software, Industrial Management & Data Systems**, Vol. 111 No. 5, pp. 776- 790, Emerald Group Publishing Limited, 2011.

35- Zwass, V., Electronic Commerce: Structures and Issues., **International Journal of Electronic Commerce**, Volume 1, Number 1, Fall pp. 3 - 23, 1996.

B: Arabic References:

1. أبا زيد، ثناء، "واقع التجارة الالكترونية والتحديات التي تواجهها عربياً ومحلياً، **مجلة جامعة تشرين للدراسات و البحوث العلمية ـ سلسلة العلوم الاقتصادية والقانونية**، المجلد 27، العدد 4، جامعة تشرين، اللاذقية، سوريا، 2005.

2. العمودي، أحمد عبدالله عمر، " أثر التجارة الإلكترونية على المراجعة ـ دراسة ميدانية في اليمن"، جامعة دمشق، دمشق، سوريا، 2006.

3. القشي، ظاهر، مدى فاعلية نظم المعلومات المحاسبية في تحقيق الأمان والتوكيدية والموثوقية في ظل التجارة الإلكترونية، جامعة دمشق، دمشق، سوريا، 2003.

4. النعيمي، قاسم، التجارة الإلكترونية بين الواقع والحقيقة، جامعة دمشق، دمشق، سوريا، 2002.

5. العميري، محمد فواز، والمعتاز، إحسان صالح، "أثر التجارة الإلكترونية على تخطيط أعمال المراجعة: دراسة ميدانية على مكاتب المراجعة في المملكة العربية السعودية، **مجلة جامعة الملك عبد العزيز: الاقتصاد والإدارة**، جامعة أم القرى، مكة المكرمة، المملكة العربية السعودية، المجلد 21، العدد 2، ص151-182، 2007.

6. المتلقى، محمد فواز، **الوجيز في عقد التجارة الإلكترونية**، الإصدار الأول والثاني للنشر، دار الثقافة للنشر، عمان، الأردن، 2008.

7. الجبالي، محمود علي، ونظمي، إيهاب، "أثر التجارة الإلكترونية على مهنة المراجعة في الأردن"، **المجلة الأوروبية للعلوم الاقتصادية والمالية والإدارية**، إصدار رقم 30، جامعة العلوم المالية والمصرفية وجامعة الزرقاء، الأردن، 2011.

8. حلس، سالم وجربوع، يوسف، **المحاسبة الدولية**، الجامعة الإسلامية، الطبعة الأولى، 2001.

9. حطاب، عزالدين، وبرهان، محمد نور، التجارة الإلكترونية، الشركة العربية المتحدة للتسويق، القاهرة، مصر، 2009.

10. ذنيبات علي، "مدى وفاعلية استخدام تكنولوجيا المعلومات في عملية التدقيق في الأردن"، **مجلة دراسات العلوم الإدارية**، المجلد 30 ، العدد2 ، ص 253-268، 2006.

11. ذنيبات علي، "**تدقيق الحسابات في ضوء معايير التدقيق الدولية والأنظمة والقوانين المحلية :نظرية وتطبيق"**، مطبعة الجامعة الأردنية، عمان، الأردن، ص 318-322، 2008.

12. شكر، طلال حمدون، وعلام، محمد حمدان، "مدى استخدام تكنولوجيا المعلومات في عملية التدقيق (التدقيق الالكتروني) في فلسطين، وأثر ذلك على الحصول على أدلة ذات جودة عالية تدعم الرأي الفني المحايد للمدقق حول مدى عدالة القوائم المالية"، الأكاديمية العربية للعلوم المالية والمصرفية، **المجلة الأردنية للعلوم التطبيقية: سلسلة العلوم الإنسانية** 10 (2): 179-191، عمان، الأردن، 2007.

13. غراب، كامل، وحجازي، فادي، **"نظم المعلومات الإدارية :مدخل متكامل"**، مكتبة الإشعاع، القاهرة، مصر، 2003.

14. قيرط، عصام، "أثر التجارة الإلكترونية على المراجعة: دراسة تطبيقية على المراجعين السوريين"، **مجلة جامعة تشرين للدراسات و البحوث العلمية ـ سلسلة العلوم الاقتصادية والقانونية**، المجلد 30، العدد 1، جامعة تشرين، اللاذقية، سوريا، 2008.

C: Websites:

1. Iraq National Library Activities Website:-
   http://www.iraqnla-iq.com

2. Electronic Library Website:-
   http://papers.ssrn.com/sol3/AbstractNotFound.cfm?error=restricted

3. Electronic Commerce Website:-
   http://www.knowledgestorm.com

4. King Abdul-Aziz University Website:-
   http://www.kau.edu.sa/Show_Res.aspx?Site_ID=320&LNG=AR&RN=51597

5. All Business Website:-
   http://www.allbusiness.com/trends-events/audits/13444610-
   1.html#ixzz1nZbZPTfN

Appendices

Appendix No. (1)

Names of the Referees:-

No.	Name	Workplace
1	Prof. Dr. Ali Shaheen	Islamic University of Gaza
2	Prof. Dr. Samir Safi	Islamic University of Gaza
3	Dr. Issam Al-Buhaisi	Islamic University of Gaza
4	Dr. Sabri Mushtaha	Islamic University of Gaza
5	Mr. Adnan Awad	Saba & Co. – Gaza Branch

Appendix No. (2)

"Questionnaire in English"

The Name of Allah, the Beneficent, the Merciful

The Islamic University of Gaza
High Studies Deanery
Faculty of Commerce
Master of Accounting & Finance

Peace be upon you and Allah mercy and blessings,,,
Good Greetings,,,

The researcher **Mohammad Osama Shaat** conducted a study entitled "**The Impact of E-Commerce on the Auditor Work - Applied Study on the International Accounting Firms Working in Palestine**"

We hope that you will be a good help for this study, and through answering questions from the questionnaire attached. I would like to assure you that the information or the data that will provide will be used only for the purposes of scientific research.

Note: E-Commerce means in this questionnaire: the application of any type of Electronic information systems to assist the auditor in preparing the report, statement quality of audit evidence and documentation, planning the audit works and the risks facing the audit profession.

Thank you for your corporation with us

The Researcher/
Mohammed O. Shaat

"General Information"

Section 1: Personal Information:-

Note: Please answer the questionnaire by put a mark (✓) based on your personal information:

1- Age:

Less than 30 years ☐   30 – Less than 40 years ☐

40 – Less than 50 years ☐   More than 50 years ☐

2- Qualification:

Diploma ☐   B.Sc ☐   M.Sc ☐

3- Specialization:

Accounting ☐   Financial and Banking Sciences ☐

Economic ☐   Other, Identify …………………

4- Job Description:

Accountant ☐   Assistant Auditor ☐   Senior Auditor ☐

Audit Manager ☐   Other, Identify …………………

5- Years Experience in Auditing Field :

Less than 5 years ☐   5 – Less than 10 years ☐   More than 10 years ☐

6- Numbers of Times that Audited on E-Commerce Processes:

Not there ☐   Less than 5 times ☐

5 – Less than 10 times ☐   More than 10 times ☐

Section 2: The extent of use E-Commerce in the Audit Process:-

Note: Please answer the questionnaire by put a mark (✓) based on your personal opinion:

First: Current skills, knowledge and qualification of Palestinian auditors in E-Commerce:-

No.	Statement	Strongly Agree	Agree	Moderately Agree	Disagree	Strongly Disagree
1	The auditor has an appropriate knowledge about the Internet and IT					
2	The auditor has the ability to understand the impact of the firm business in e-commerce on the financial data's					
3	The auditor has the ability to understand the impact of the technique used for e-commerce on the data					
4	The auditor has the ability to understand the firm which looks for managing of electronic errors					
5	The auditor has the ability to evaluate electronic audit manual					
6	The auditor has the ability to determine the extent, the nature and timing of audit procedures					
7	The auditor has the ability to understand the risks involved in electronic commerce practices					
8	The auditor has the ability to determine the extent of the required procedures for auditing in the e-commerce environment					
9	There is an urgent need to attend a program, rehabilitation and training on auditing of e-commerce methods					

No.	Statement	Strongly Agree	Agree	Moderately Agree	Disagree	Strongly Disagree
10	the international professional versions of auditing profession are viewed regarding e-commerce		F			
11	Considered the audit of internal control procedures process for e-commerce companies are complex					

Second: The impact of using E-Commerce on the Audit Report:-

No.	Statement	Strongly Agree	Agree	Moderately Agree	Disagree	Strongly Disagree
1	When preparing the auditor's report, taking into account the nature of e-commerce processess?					
2	The electronic information systems is used in the preparation of the annual financial statements at the audit process					
3	When preparing the external auditor's report, the information technology is used for firms practicing e-commerce					
4	Falls to the external auditor's full responsibility to determine whether the financial data agreed with electronic financial data's					
5	From the problems facing the auditing profession: difficult to express an opinion about fairness of the financial statements in preparing the independent auditor's report in e-commerce environment					

Third: The impact of electronic information systems on the quality of audit Evidence and documentation process:-

No.	Statement	Strongly Agree	Agree	Moderately Agree	Disagree	Strongly Disagree
1	Evidences and procedures of audit process are documented when auditing operations in e-commerce					
2	E-commerce systems is used in gathering evidence process					
3	When gathering evidence for e-commerce process, deviations are calculated in the cost for the audit process functions					
4	Eelectronic programs are used in preparing notes forms and documents					
5	E-commerce systems are used in documenting the client's accounting system					
6	The use of electronic information systems in the audit process works to improve the auditor ability and rehabilitation on preparing evidence of high quality					
7	There is an impact for using e-commerce systems on the auditor ability in obtaining an evidence in the appropriate time of an auditing item.					
8	The e-sites consider the documents which can be invoked					

Forth: The risks of audit process related to E-Commerce systems:-

No.	Statement	Strongly Agree	Agree	Moderately Agree	Disagree	Strongly Disagree
1	E-commerce systems are used in assessing audit risks related to e-commerce processes					
2	External auditor is able to audit the financial statements data's for e-commerce processess, and meet its challenges in the light of his current skills					
3	The need for high skills and external expertise in order to use the computer in the application as one of the most important risk audit process in e-commerce systems					
4	Analyze the risks facing the external auditor planning and assessment audit work risks for e-commerce process					
5	The use of e-commerce systems in the audit process leads to reliance Increasingly on devices and programs abilities, which reduces the innovation and creativity of the external auditor					

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Appendix No. (2)

"Questionnaire in Arabic"

بسم الله الرحمن الرحيم

الجامعة الإسلامية – غزة

برنامج الدراسات العليا

كلية التجارة

ماجستير المحاسبة والتمويل

السلام عليكم ورحمة الله وبركاته ،،،،،،،،،،

تحية طيبة وبعد ،،،،،،،،،،

يقوم الباحث **محمد أسامة شعت** بعمل دراسة بعنوان "**أثر التجارة الإلكترونية على عمل مراجع الحسابات، دراسة تطبيقية على شركات المراجعة الدولية العاملة في فلسطين**"

كلنا أمل أن تكونوا خير معين لهذه الدراسة، وذلك من خلال الإجابة على أسئلة الاستبانة المرفقة. وأود أن أؤكد لكم أن المعلومات أو البيانات التي ستزودننا بها سوف تستخدم فقط لأغراض البحث العلمي.

ملاحظة: يقصد **بالتجارة الإلكترونية** في هذا الاستبيان: تطبيق أي نوع من أنظمة المعلومات الإلكترونية لمساعدة مراجعة الحسابات في إعداد التقرير، بيان وجودة أدلة المراجعة والتوثيق، تخطيط أعمال المراجعة، والمخاطر التي تواجه مهنة المراجعة.

شاكرين لكم حسن تعاونكم معنا لما فيه من رقي لمجتمعنا ،،،،،

الباحث/ محمد أسامة شعت

<p align="center">"معلومات عامة"</p>

القسم الأول: معلومات شخصية:-

1- العمر:

أقل من 30 سنة ☐   30 – أقل من 40 سنة ☐   40 – أقل من 50 سنة ☐   50 سنة فأكثر ☐

2- المؤهل العلمي:

دبلوم ☐   بكالوريوس ☐   دراسات عليا ☐

3- التخصص:

محاسبة ☐   علوم مالية ومصرفية ☐   اقتصاد ☐   أخرى، حدد ....

4- المسمى الوظيفي:

محاسب ☐   مساعد مدقق ☐   مدقق رئيسي ☐   مدير تدقيق ☐   أخرى، حدد ....

5- سنوات الخبرة في مجال المراجعة:

أقل من 5 سنوات ☐   5- أقل من 10 سنوات ☐   10 سنوات فأكثر ☐

6- عدد المرات التي راجعت فيها على عمليات للتجارة الإلكترونية:

لا يوجد ☐   أقل من 5 مرات ☐   5 – أقل من 10 مرات ☐   10 مرات فأكثر ☐

القسم الثاني: مدى استخدام التجارة الالكترونية على مهنة المراجعة:-

أولاً : المهارات الحالية، المعرفة، ومؤهلات المراجع الفلسطيني في التجارة الإلكترونية:-

#	البيان	موافق بشدة	موافق	موافق بدرجة متوسطة	غير موافق	غير موافق بشدة
1	يوجد لدى المراجع معرفة ملائمة عن الانترنت وتكنولوجيا المعلومات					
2	يوجد لدى المراجع القدرة على فهم أثر نشاط المنشأة في التجارة الالكترونية على البيانات المالية					
3	يوجد لدى المراجع القدرة على فهم أثر التقنية المستخدمة للتجارة الالكترونية على البيانات					
4	يوجد لدى المراجع القدرة على فهم نظرة المنشأة لإدارة الأخطاء الإلكترونية					
5	يوجد لدى المراجع القدرة على تقييم دليل المراجعة الالكتروني					
6	يوجد لدى المراجع القدرة على تحديد مدى وطبيعة وتوقيت إجراءات المراجعة					
7	يوجد لدى المراجع القدرة على فهم الأخطار المتضمنة في ممارسات التجارة الالكترونية					
8	يوجد لدى المراجع القدرة على تحديد مدى الإجراءات المطلوبة للمراجعة في بيئة التجارة الالكترونية					
9	يوجد حاجة ملحة لحضور برنامج وتأهيل وتدريب على أساليب مراجعة عمليات التجارة الالكترونية					
10	تم الإطلاع على الاصدارات المهنية الدولية لمهنة المراجعة بخصوص التجارة الالكترونية					
11	تعتبر عملية مراجعة إجراءات الرقابة الداخلية لشركات التجارة الالكترونية معقدة					

ثانياً : أثر استخدام التجارة الالكترونية على تقرير المراجعة:-

غير موافق بشدة	غير موافق	موافق بدرجة متوسطة	موافق	موافق بشدة	البيان	#
					عند إعداد تقرير المراجع، تؤخذ في الاعتبار طبيعة عمليات التجارة الإلكترونية؟	1
					يتم استخدام أنظمة المعلومات الإلكترونية في إعداد القوائم المالية السنوية عند عملية المراجعة	2
					عند إعداد تقرير المراجع الخارجي، يتم استخدام تكنولوجيا المعلومات للمنشآت التي تمارس التجارة الالكترونية	3
					تقع على المراجع الخارجي كامل المسؤولية لتحديد ما إذا كانت البيانات المالية الورقية تتفق مع البيانات المالية الالكترونية	4
					من المشاكل التي تواجه مهنة المراجعة: صعوبة إبداء الرأي عن عدالة القوائم المالية عند إعداد تقرير المراجع الخارجي المستقل في ظل بيئة التجارة الالكترونية	5

ثالثاً: أثر أنظمة التجارة الإلكترونية على عملية التوثيق وجودة أدلة المراجعة:-

غير موافق بشدة	غير موافق	موافق بدرجة متوسطة	موافق	موافق بشدة	البيان	#
					يتم توثيق أدلة وإجراءات عملية المراجعة عند مراجعة العمليات في التجارة الالكترونية	1
					يتم استخدام أنظمة التجارة الإلكترونية في عملية جمع الأدلة	2
					عند جمع الأدلة لعمليات التجارة الالكترونية، يتم احتساب الانحرافات في التكاليف لمهام عملية المراجعة	3
					يتم استخدام البرامج الالكترونية في إعداد نماذج المذكرات والوثائق.	4

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					البيان	#
					يتم استخدام أنظمة التجارة الإلكترونية في توثيق نظام المحاسبة لدى العميل	5
					استخدام أنظمة المعلومات الإلكترونية في عملية المراجعة يعمل على تحسين قدرة وتأهيل المراجع على إعداد أدلة ذات جودة عالية	6
					هناك أثر لاستخدام أنظمة التجارة الإلكترونية على قدرة المراجع في الحصول على الأدلة بالتوقيت الملائم للبند محل المراجعة	7
					تعتبر المواقع الالكترونية وثائق يمكن الاستناد إليها	8

رابعاً: مخاطر عملية المراجعة المتعلقة بأنظمة التجارة الالكترونية:-

غير موافق بشدة	غير موافق	موافق بدرجة متوسطة	موافق	موافق بشدة	البيان	#
					يتم استخدام أنظمة التجارة الإلكترونية في تقدير مخاطر المراجعة المتعلقة بعمليات بالتجارة الالكترونية	1
					المراجع الخارجي قادر على مراجعة بيانات القوائم المالية لعمليات التجارة الالكترونية، ومواجهة تحدياتها في ظل مهاراته الحالية	2
					إن الحاجة إلى مهارات عالية وخبرات خارجية من أجل استخدام الحاسوب في التطبيق يعد واحداً من أهم مخاطر عملية المراجعة في أنظمة التجارة الإلكترونية	3
					من المخاطر التي يواجهها المراجع الخارجي مخاطر تخطيط وتقييم أعمال المراجعة لعمليات التجارة الالكترونية	4
					ان استخدام أنظمة التجارة الإلكترونية في عملية المراجعة يؤدي إلى الاعتماد بشكل متزايد على قدرات الأجهزة والبرامج، مما يقلل من الابتكار والإبداع لدى المراجع الخارجي	5

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