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TRACKING EFFECT ELECTRONIC DATA OPERATING SYSTEMS IN AUDITING TECHNOLOGY AND THE QUALITY OF THE EXTERNAL AUDITOR'S PERFORMANCE

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Abstract:

The complexity of electronic data operation systems in light of the progress of information technology in the business environment is the cause of the development of the auditing profession and has significantly affected the use of auditing technology to enhance the quality of external auditor performance. The research aims to analyze the impact of the complexity of electronic data operation systems on the quality of external auditor performance and understand how the complexity of systems affects the auditor's ability to conduct an effective and comprehensive audit. The deductive approach was adopted in the theoretical aspect, and in the practical aspect, the questionnaire was analyzed and distributed to the research sample using SPSS statistical programs to show the correlation and influence between the research variables. The research results indicate that the use of audit technology according to the environment of the complexity of electronic operating systems leads to raising the efficiency of the external auditor. The most important recommendations were the need to adopt the use of audit tools based on information technology in analyzing big data, to improve the ability of auditors to detect violations and analyze data more accurately.

Keywords: Information Systems, Audit Technology, Quality Of External Auditor's Performance

THE INTRODUCTION:

Electronic data operating systems resulting from the use of information technology are among the variables that have occurred in the development of the science and profession of auditing as a result of the reality of the business environment at the present time. Therefore, the auditor must deal scientifically with the complexity of electronic operating systems and big data in order to complete the audit process scientifically and express the appropriate opinion on the financial statements through the use of audit technology that keeps pace with this development and develops the auditor's efficiency in using it. The research problem is to show the extent to which the complexity of electronic operating systems affects the quality of the auditor's work. The research aims to analyze the impact of the complexity of electronic data operating systems on the quality of the external auditor's performance and understand how the complexity of the systems affects the auditor's ability to conduct an effective and comprehensive audit. The importance of the research is highlighted in providing a deeper understanding of the challenges of modern auditing, which helps the research clarify the challenges facing auditors in light of the complexity of electronic data operating systems, which contributes to the development of effective solutions. The research community includes certified public accountants and auditors in Iraq and a sample of auditing companies and offices, monitoring and auditing accounts. The research relied on the deductive approach in the theoretical aspect and on the inductive approach in the practical aspect.

The first axis: research methodology

Firstly.Research problem

The external auditor faces practical challenges related to the complexity of electronic operating systems and how to use appropriate auditing technology in light of the limited level of practical academic qualifications available to auditors. These challenges require a high ability to analyze data and verify its validity and accuracy. Despite the availability of advanced auditing technology, there is an urgent need to answer the following question:

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1.The extent to which the complexity of electronic operating systems affects the quality of the external auditor's work?

Secondly.Research Objectives

The research aims to:

1. Analyzing the impact of the complexity of electronic data operating systems on the quality of the external auditor's performanceandUnderstand how systems complexity affects the auditor's ability to conduct an effective and comprehensive audit.
2. Evaluation of the tools and techniques used in audit technology, andStudy the efficiency of modern tools and techniques in dealing with the complexity of systems and ensuring the accuracy and reliability of audit operations.

Third.HypotheticalatSearch

The research is based on the following hypotheses:

1. There is a statistically significant relationship betweenTqqDElectronic data operating systems, Auditing technology and the quality of auditor performance
2. There is a statistically significant effect between the complexity of electronic data operating systems and auditing technologyThe quality of the auditor's performance

Fourth.The importance of research

The importance of this research lies in several points:

1. Providing a deeper understanding of the challenges of modern auditingThanThe research helps clarify the challenges that auditors face in light of the complexity of electronic data operating systems, which contributes to the development of effective solutions.
2. Enhancing the quality and reliability of external audits by providing recommendations based on careful analysis. Research can contribute to improving the quality of audits and ensuring their accuracy.
3. Supporting innovation in the field of auditing technology: The research contributes to directing innovation efforts towards developing advanced auditing tools and techniques capable of dealing with the increasing complexities in electronic operating systems.
4. Improving the efficiency of economic units. Improving the quality of audit can enhance the efficiency of economic units and the reliability of their data, which reflects positively on the overall performance of economic units.

Fifth. Research methodology

The research relied on the theoretical side on the deductive approach and on the practical side on the inductive approach.

Sixth. Data collection methods

Sources of the theoretical aspect include:

1.Academic books: Presents basic theories and concepts in the field.
2.Scientific articles: It contains recent research and developments in the field.
3.Academic journals: Reliable sources containing peer-reviewed articles.
4.Theses and dissertations: Providing in-depth and documented studies.
5.Scientific conferences: Provides the latest research and discussions in the field.
6.Government reports and organizations: Provides updated data and statistics.
7.Electronic references: Such as academic databases (JSTOR, PubMed, Google Scholar).

As for the practical aspect, the research used a set of statistical methods using the statistical programSPSS v 26 and AMOS v 26, which can help in reaching research goals. The data was collected by distributing (125) questionnaires to the research sample.

Seventh. Research population and sample

The research population is certified public accountants and auditors in Iraq and a sample of companies and auditing offices that monitor and audit accounts, and the time limits for the research are the year 2024.

Axisthe second: The theoretical aspect

In the current digital era, electronic data operating systems have become an integral part of the operations of economic unitsperhapsYesWorld level.andThe complexity and diversity of these systems pose significant challenges to external auditors seeking to ensure the quality and reliability of audits.soAuditing is one of the essential tools that ensure the validity and integrity of financial and administrative data, and it increasingly relies on technology to analyze and evaluate data. As electronic operating systems become more complex, this task becomes more challenging, requiring the use of advanced audit techniques and powerful analytical tools.

Firstly.History and development of electronic data operating systems

1. First beginnings:

Electronic data operating systems began to emerge with the invention of computers in the mid-twentieth century. The first operating systems were intended for major devices(Mainframes) that filled entire rooms and were mainly

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used for...Economic units. One of the first of these systems was the operating systemBatch Processing Systems which allowed multiple programs to run simultaneously sequentially (Silberschatz, Galvin, & Gagne, 2018).

2. The sixties and seventies:

Operating systems began to improve with the advent of...IBM System/360, which was a general operating system that could run different programs on multiple machines. New operating systems also appeared in this period such as Unix, which was developed at Bell Labs and became one of the most important operating systems thanks to its adaptable design and high flexibility (Silberschatz, Galvin, & Gagne, 2018; Tanenbaum & Bos, 2014).

3. The eighties and nineties:

Operating systems have undergone a major transformation with the advent of personal computers(PCs). In 1981, IBM launched the DOS operating system, which was simple but powerful, on personal computers. After that, Microsoft began to develop operating systems, launching Windows in the mid-1980s, which turned into one of the most widely used operating systems around the world in the 1990s (Tanenbaum & Bos, 2014; Torvalds & Diamond, 2001).

4. For the new millennium and beyond:

Operating systems have evolved to become more interactive and user-friendly. Advanced versions of Windows, Apple's macOS, and the rise of Linux as an open source operating system have contributed to a variety of options for users and developers **(**Silberschatz, Galvin, & Gagne, 2018; Tanenbaum & Bos, 2014**).**

5. Modern era:

In the last decade, operating systems have evolved dramatically to accommodate cloud computing technology, artificial intelligence, and the Internet of Things(IoT). Operating systems have become more integrated with smart devices, which has helped in the development of mobile operating systems such as Android and iOS, which have dominated the smartphone market (Silberschatz, Galvin, & Gagne, 2018; Tanenbaum & Bos, 2014).

SECONDLY. TQQDELECTRONIC DATA OPERATING SYSTEMS AND ITS CAUSES

thatElectronic data operating systemsMore complicatedOver time due to rapid technological developments and increasing requirements for performance and flexibility. Here are some of the main reasons why these systems are so complex:

1. Rapid technological development

With advances in processor, memory, and storage device technology, operating systems need to support advanced hardware that requires complex operations. For example, the evolution of multi-core processors requires operating systems to manage threads (Threads) and multitasking more complexly to make the most of available resources. (Silberschatz, Galvin, & Gagne, 2018).

2. Diversity of devices and users

Modern operating systems need to support a wide range of different devices, from smartphones to giant servers. This diversity forces operating systems to adapt to different needs of users, such as supporting different types of file systems, peripheral devices, and programming interfaces, which increases the complexity of programming and maintenance (Tanenbaum & Bos, 2014).

3. Safety and protection requirements

Operating systems have become more complex due to the increase in cyber attacks and security threats. They need to implement complex mechanisms to ensure protection from viruses, malware, and illegal intrusion. They must manage access to resources and verify the identity of users accurately (Tanenbaum & Bos, 2014).

4. Distributed and cloud computing

The complexity of electronic operating systems has increased as a result of the development in the use of cloud computing and applications that need to manage resources across multiple servers and different environments. This requires precise synchronization between processes operating in diverse environments, as well as effective management of network connectivity and cloud infrastructure (Silberschatz, Galvin, & Gagne, 2018).

5. Performance and efficiency requirements:

Operating systems need to provide high performance and resource efficiency to ensure applications run quickly and responsively. This requires continuous improvements in memory management, process scheduling, and input-output coordination, which adds further complexity to the design and implementation of operating systems (Silberschatz, Galvin, & Gagne, 2018).

Third. TechnologicalAAuditing and its development

Auditing technology has witnessed remarkable developmentOver the past yearsThis contributed to significantly improving the accuracy and efficiency of auditing operations. This development was the result of technological innovations that provided advanced tools and programs that help auditors carry out their tasks more efficiently.

Initially, audits relied heavily on manual examination of documents and financial records. With the advent of computers in the 1970s and 1980s, modules beganEconomic FYUse programs such asExcel for analyzing financial data, which has increased efficiency and accuracy in audits (McKee, 2010).With the development of information

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technology, major auditing firms have begun to develop customized software e.gACL and IDEA that enable auditors to analyze large sets of financial data quickly and efficiently, making it easier to detect potential manipulations and errors (Coderre, 2009).Then an appearanceThe Internet and cloud computing, auditing companies have embracedCurriculumElectronic auditing, which relies on electronic platforms to collect and analyze financial data remotely, which has contributed to reducing cost and time (Byrnes, 2015). Big data-based auditing.and Auditors can now use artificial intelligence and machine learning to analyze large amounts of data quickly and accurately, enhancing the ability to detect unusual patterns and identify risks more effectively (Alles, 2015).In financial statements and reports, the use of computers has led to an impact on all types provided by the accounting system, as well as on the methods of presenting them.(Khachev, 2022) and Auditing technology is expected to continue to evolve with the advancement of artificial intelligence, blockchain, and predictive analytics. These technologies will enhance auditors' ability to provide a more comprehensive and accurate audit while reducing time and cost (Rozario & Vasarhelyi, 2018).

Fourth.Challenges and responsibilities of external auditing in light of the complexity of electronic operating systems

In light of the rapid technological development and complexity of electronic operating systems, the external auditor faces a set of increasing challenges and responsibilities.soInternational auditing standards focus (ISAs help ensure the quality and efficiency of audits in these complex environments. Below are the most prominent challenges and responsibilities that external auditors must take into consideration:

1. Technological complexity:

With the complexity of electronic operating systems, auditors face difficulty in understanding how these systems work and their impact on the financial statements. The auditor is required to have a deep understanding of the technology used in the accounting system of the economic unit, such as database management systems, cloud computing technologies, etc. and adherence to the International Auditing Standard (ISA 315), which stipulates that auditors evaluate and understand the information technology environment to identify potential risks (IFAC, 2018). This complexity can lead to difficulty in assessing the effectiveness of internal controls specified in internal control, which may negatively affect the quality of the audit process. According to some studies, the lack of scientific and technological knowledge of auditors can significantly affect the quality of the audit, increasing the likelihood of errors or failure to detect material misstatements (Brazel, T. & Agoglia, C., 2007).

2. Cyber risk assessment:

The increasing reliance on technology increases the exposure of economic units to cyber risks. The external auditor must be able to assess the ability of the economic unit to protect its data from cyber threats and determine the impact of these risks on the financial statements. This requires performing advanced control tests and analyzing the potential impact of these risks on the financial statements in accordance with International Standard on Auditing No. 330 (ISA 330) (AICPA, 2017). thatCybersecurity is a critical element of an audit.soHe shouldTo the external auditorBeing able to evaluate the effectiveness of controls related to cybersecurity, the auditor's failure to recognize these risks can lead to reduced audit quality and increased financial risk to the organization (Bierstaker, J., Janvrin, D., & Lowe, D., 2014).

3. Ensuring data integrity:

Under electronic operating systems, huge amounts of data are stored and processed electronically. The auditor's responsibility includes ensuring the integrity and accuracy of the financial data generated from these systems. This requires careful examination of internal IT controls and verification of unauthorized modifications or tampering of data.(ISA 540) (IFAC, 2018).

andrequiresalsoAdvanced analysis tools and more time to analyze financial data and draw accurate conclusions.and thatLack of proficiency in using these tools can lead to a decline in the quality of the auditor’s performance and his ability to detect errors or manipulations (Alles, M., 2015).

4. Dealing with computerized auditing tools:

The use of computerized auditing tools such asIDEA and ACL are essential in analyzing the large and complex data generated by electronic operating systems. It is the auditor's responsibility to learn and use these tools effectively to ensure an accurate and effective audit. According to ISA 330, auditors are required to use appropriate tools and techniques to process electronic information (ISA 330) (Curtis & Payne, 2008).

5. Compliance with international standards:

International standards on auditing impose clear responsibilities on the external auditor in dealing with the advanced electronic environment. Auditors must adhere to standards such as:ISA 315, ISA 330, and ISA 540 to ensure correct risk assessment and implementation of appropriate audit procedures appropriate to the complexity of electronic operating systems. It becomes difficult for auditors to ensure that the economic unit complies with international and local accounting standards and practices. This requires auditors to be aware of ongoing technological and legislative

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developments to ensure that audits are consistent with best practices, which directly impacts the quality of performance (Curtis, MB, & Payne, EA, 2008).

Sixth. studyconditionpractical

1. Case Study: CollapseEnron and the role of complex operating systems

In the company collapse scandalEnron In the early 2000s, its complex financial operating systems played a crucial role in misleading external auditors. Enron used complex financial structures and opaque accounting tools implemented by complex electronic operating systems. This complicated audits and presented significant challenges for external auditors, resulting in the failure of audit firm Arthur Andersen to detect financial fraud and irregularities in a timely manner. This case has contributed significantly to highlighting the importance of auditors' understanding of complex operating systems and their impact on audit quality (Benston & Hartgraves, 2002; Swartz & Watkins, 2003).

2. Case study:Lehman Brothers and the collapse of the financial system

It was a collapseLehman Brothers in 2008 as a direct result of using the unitEconomic systemMcomplex electronic operations to manage its financial operations, including the use of complex derivative financial instruments. Auditing firms failed to adequately understand and analyze these systems, which resulted in the significant financial risks the company was facing not being detected. In this case, the complexity of the electronic operating systems was one of the main factors contributing to the failure to detect potential financial risks, which led to a deterioration in the quality of the external audit (Valukas, 2010).

3. Case study: Using big data in auditingKPMG

The audit company didKPMG adopts advanced big data analysis tools in auditing operations. However, I faced lonelinessEconomic challengeTLarge in the beginning due to the complexity of the electronic operating systems for the data that it deals with. Auditors had to learn to use new tools and understand how to accurately analyze massive amounts of data. Despite these challenges, I managedKPMG was able to significantly improve audit quality after overcoming these challenges by training auditors and improving the tools used (Brown-Liburd, Issa, & Lombardi, 2015).

4. Case study: The complexity of operating systems in banks and their impact on auditing

In the case of a bankWells Fargo, the complexity of its electronic operating systems made it difficult to detect illegal account opening practices in which the company engaged. These practices were closely linked to the complexity of the operational system that allowed bank employees to open new accounts without customers' knowledge. The complexity of the system and the difficulty of understanding it by auditors led to a delay in revealing these practices, which affected the quality of external audit performance and increased the bank's operational risks (O'Toole, 2017).

The third axis: the practical aspect

This topic will discuss the results of the analysis of the questionnaire distributed to the specific research sample according to the research methodology to find outThe impact of the complexity of electronic data operating systems on audit technology and the quality of auditor performanceExternally, the results were as follows:

Firstly.Characteristics of the sample members

Table No. (1) Results of the statistical description of the characteristics of the research sample, such as gender, age, educational qualification, years of service in the job, and specialization. Frequencies and percentages were used to analyze this data

Table No. (1) Statistical description of the characteristics of the research sample

Percentage %	repetition	Categories	Characteristics
36	45	Males	Gender
64	80	Females	
100	125	the total	
72.8	91	22 – 30	the age
24.8	31	30 – 40	
2.4	3	40 – 50	

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100	125	the total	
87.2	109	Bachelor's	Certificate
7.2	9	Master's	
5.6	7	Ph.D	
100	125	the total	
64	80	Less than 5	Years of service
15.2	19	5 – 10	
17.6	22	10 – 15	
3.2	4	15 - or more	
100	125	the total	

Source: Table prepared by the researcher based on the outputs of the program (SPSS-v26).

It is clear fromTable No. (1) the following:

1- Gender: The ratio of females to males reached (64%), which is higher than the percentage of males (36%) in the research sample.

2-Age: The age group is between (22-less30 years old) constitute the highest percentage (72.8%) of the sample, followed by the group between (30-less(from 40 years) (24.8%).

3- Academic qualification: Bachelor's degree holders have the highest representation in the sample (87.2%), followed by diploma degree holders (7.2%). 4-Years of service: It is clear that individuals with less than 5 years of experience constitute the highest percentage in the sample (64%).

andThrough the previous presentation, it is clear how consistent the study sample is with each other and the sample's compatibility with the study, which enhances the credibility of the results reached.

Secondly.Measuring Instrument Test:

The questionnaire is the primary research tool as it was used for the purpose of collecting data related to the researchpresent,It requires conducting some tests on it to ensure the validity and accuracy of the data obtained.

Third.Stability of the research measurement tool:

Reliability expresses the extent to which a measure is free from biasAnd mistakes,This ensures consistency and stability of the measure across time periodsdifferent,The measurement tool is tested by using the Cronbach's alpha test, which has an acceptable value of 0.60 and above. The following table shows the results of the Cronbach's alpha test:

Table (2) Cronbach's alpha test for the variables and dimensions of the study

Cronbach's alpha value	The name of the variable or dimension	T
0.856	The complexity of electronic data operating systems	1
0.824	Auditing technology and the quality of auditor performance	2
0.963	The scale as a whole	3

Source: Prepared by the researcher

It is noted from the table (2) Above, the study's measurement tool is characterized by consistency and stability, as all Cronbach's alpha values are more than 0.60, and therefore the results obtained by the sample studied can be relied upon.

Fourth.Statistical description

The tables below show the statistical description of the study variables and questionnaire itemsas follows:

Table (3) Statistical description of the variable complexity of electronic data operating systems

Order of importance	Answer level	Relative importance	Coefficient of variation	Standard deviation	Arithmetic mean	Coding	T
3	high	0.812	0.242	0.984	4.06	The complexity of electronic data operating systems necessitates the use of more sophisticated audit technology to implement audit procedures to ensure quality performance	1
2	high	0.816	0.245	0.998	4.08	Complex electronic operating systems pose new challenges that require innovative audit solutions, while maintaining independenceAuditor	2
6	high	0.796	0.250	0.994	3.98	Electronic operating systems for complex data are still a challenge in achieving quality performanceAuditor.	3
5	high	0.798	0.243	0.969	3.99	Complex electronic operating systems require administrators to invest more time in the auditing process to ensure accuracy and quality.	4
4	high	0.806	0.176	0.708	4.03	The use of advanced technology in	5

						auditing contributes to improving the quality of performanceAuditor.	
1	high	0.818	0.181	0.739	4.09	The incompatibility of electronic data operating systems with available auditing technology leads to a decline in the quality of professional performanceFor the auditor	6
10	high	0.78	0.250	0.975	3.9	The use of advanced auditing technology can reduce human errors in auditing complex electronic data.	7
9	high	0.786	0.252	0.989	3.93	thatAuditorsThose who use advanced auditing techniques are able to deal with complex electronic operating systems efficiently.	8
7	high	0.796	0.249	0.992	3.98	Advanced audit technology contributes significantly to improving the efficiency and effectiveness of audit operations in complex electronic operating systems environments.	9
8	high	0.788	0.224	0.884	3.94	Auditors need continuous training to update their technology skillsCheckQ To keep upSystems complexityOperating Email	10
	High	0.7996	0.231	0.9232	3.998	The axis as a whole	

Source: Prepared by the researcher

It is noted from the table (3) The variable complexity of electronic data operating systems had a mean with a standard deviation of (3.998), a standard deviation of (0.9232), a coefficient of variation of (0.231), and a high response level.As for the paragraphs of the axis, the sixth paragraph, which states (that incompatibility of electronic data operating systems with available auditing technology leads to a decline in the quality of the auditor's professional performance) came in first place. The arithmetic mean was(4.09), with a standard deviation of (0.739), a coefficient of variation of (0.18), and a high response level. As for the seventh paragraph, which states (that the use of advanced auditing technology can reduce human errors in auditing complex electronic data), it ranked last. The arithmetic mean reached (3.9), with a standard deviation of (0.975), and a coefficient of variation of (0.25), and the level of an answer. high. It is clear from the above presentation that there is some agreement among the sample members regarding the first axis as a whole and its paragraphs. This axis is about the complexity of electronic data operating systems And the extent of the auditor's ability to deal with these systems.

Table (4) Statistical description of the audit technology variable and the quality of auditor performance

Order of importance	Answer level	Relative importance	Coefficient of variation	Standard deviation	Arithmetic mean	Coding	T
3	high	0.794	0.250	0.994	3.97	The complexity of electronic operating systems requires advanced auditing techniques to ensure quality performance, consistent with international auditing standards.	1
1	high	0.798	0.253	1.008	3.99	The complexity of electronic data operating systems negatively affects the quality of auditor performance.	2
6	high	0.778	0.258	1.004	3.89	Advanced auditing technology helps mitigate the negative impact of the complexity of electronic data	3

						operating systems on performance quality.	
5	high	0.78	0.251	0.979	3.9	The integration of advanced electronic operating systems with audit technology positively affects the quality of the audit process.	4
4	high	0.788	0.182	0.718	3.94	The challenges posed by complex electronic operating systems can be overcome using innovative auditing techniques	5
2	high	0.798	0.188	0.749	3.99	Complex electronic operating systems require constant updates to audit technology to maintain quality performance.	6
10	high	0.762	0.259	0.985	3.81	Improving auditing technology in the planning stage leads to more effective and accurate planning when dealing with existing electronic operating systems.	7
9	high	0.768	0.260	0.999	3.84	The auditor's technological capabilities greatly affect the interpretation of data generated by the usual electronic operating systems.	8
7	high	0.778	0.258	1.002	3.89	Advanced audit technology enables auditors to identify potential risks in complex electronic operating systems more effectively.	9
8	high	0.77	0.232	0.894	3.85	Auditing technology helps provide auditors with accurate and transparent reports when dealing with complex electronic operating systems	10
	High	0.239	0.239	0.9332	3.907	For the axis as a whole	

Source: Prepared by the researcher

It is noted from the table (4) The variable audit technology and the quality of auditor performance was its arithmetic mean with a standard deviation of(3.907) with a standard deviation of 0.9332) and a coefficient of variation of (0.239) with a high response level.

As for the paragraphs of the axis, the second paragraph came, which states: "Advanced auditing technology enables streamers to identify potential risks in complex electronic operating systems more effectively." In first place, the arithmetic mean was(3.99), with a standard deviation of (1.008), a coefficient of variation of (0.253), and a high response level. As for the seventh paragraph, which states (improving auditing technology in the planning stage leads to more effective and accurate planning when dealing with complex electronic operating systems), it ranked last, as the arithmetic mean reached (3.81), with a standard deviation of (0.985), and a coefficient of variation of (0.259).) and with a high response level.It is clear from the previous presentation that there is agreement among the sample members regarding the second axis as a whole and its paragraphs. This axis is about the auditor's technology and the auditor's commitment to performing his work with quality.

FIFTH: HYPOTHESIS TESTING

This research is based on a set of hypotheses, namely hypotheses of correlation relationships and hypotheses of influence between the study variables, the complexity of electronic data operating systems, audit technology, and the quality of auditor performance, as follows:

1- Testing the first hypothesis: There is a statistically significant correlation between the complexity of electronic data operating systems, audit technology, and the quality of auditor performance:

The table below shows the results of correlations between variables between the complexity of electronic data operating systems, audit technology, and the quality of auditor performance.

table (5) Correlation relationships between the variable complexity of electronic data operating systems, audit technology and the quality of auditor performance

Source

Variable		Auditing technology and the quality of auditor performance
The complexity of electronic data operating systems	Pearson Correlation	0.747
	Sig. (2-tailed)	0.000
	N	125

program(SPSS-v26)

Notes from the table(5) There is a correlation between the complexity of electronic data operating systems, audit technology and the quality of auditor performance. The correlation coefficient value reached (0.747) at the confidence level of (0.01), and thus the first hypothesis is met. This correlation is positive (direct) between the complexity of electronic data operating systems, audit technology, and the quality of auditor performance, which indicates that the complexity of electronic operating systems has a role in achieving quality in auditor performance. The correlation between the two variables can be illustrated through the figure below:

Figure (1) Correlation between variables

Source: Prepared by the researcher

2- Testing the second hypothesis: There is a statistically significant effect between the complexity of electronic data operating systems, audit technology, and the quality of auditor performance.

Table No. (6) shows the results of the direct effect model for the complexity of electronic data operating systems variable, the audit technology variable, and the quality of auditor performance:

Table (6) The direct effect between the complexity of electronic data operating systems, audit technology and the quality of auditor performance.

Path			Estimate	S.E	CR	P-value
Auditing technology and the quality of auditor performance	<---	The complexity of electronic data operating systems	0.425	0.06	7.0883	0.000

Source: programAMOS V 26

We notice from Table (6) that there is an effect of the complexity of electronic operating systems on audit technology and the quality of auditor performance. As for testing the second hypothesis, we notice from Table (6) that there is an effect of the complexity of electronic operating systems on audit technology and the quality of auditor performance, as the value of the regression coefficient reached (0.425). With a critical ratio of (7.0883)It is a moral value depending on the value(P-value)Which amounted to (0.000), which is less than the level of significance (5%), and thus the second hypothesis is fulfilled, that is, the complexity of electronic operating systems contributes

significantly to improving auditing technology and the quality of the auditor's performance. The impact relationship can be highlighted through the figure below:

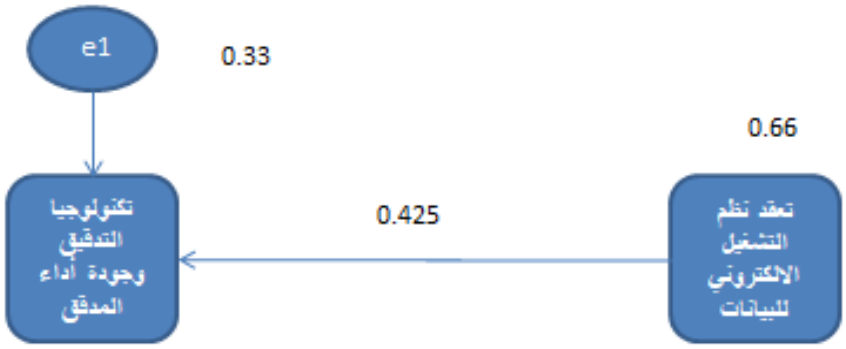

Figure (2) Impact relationship between variables

FOURTH AXIS: CONCLUSIONS AND RECOMMENDATIONS

First, the conclusions

1.The complexity of electronic operating systems makes it difficult to detect errors and manipulations in the financial statements, which affects the accuracy and credibility of the audit results.

2.Keeping up with advanced technology requires the auditor to have a deep understanding of complex operating systems, which in itself is a challenge facing the auditor, which may negatively affect the quality of audit performance.

3.The complexity of electronic operating systems increases the likelihood of exposure to hacking and cyber threats, making it more difficult for auditors to assess data security and accuracy.

4.Adopting advanced audit technology enables auditors to identify potential risks in complex electronic operating systems more effectively.

5. Commitment to applying relevant international auditing standards on the use of electronic systems limits the auditor's liability for failure to exercise the necessary professional care.

Second: Recommendations

1. The need to oblige auditors to apply local and international auditing standards to enhance their skills in dealing with complex electronic systems, which helps them in carrying out accurate and effective auditing operations.

2.The need to develop and use technology-based auditing tools to improve auditors' ability to detect violations and analyze data more accurately.

3.The need to put in place strong cybersecurity technologies to protect financial data during the audit process by relying on an expert, to ensure the integrity of data and reduce the risk of breaches in order to increase the effectiveness of the audit.

4.The need to improve the effectiveness of internal control in order to create integration between the various systems within economic units, which makes it easier for auditors to track and analyze financial operations in a comprehensive and effective manner.

5. Developing auditors' skills in dealing with complex electronic systems during auditing according to specialized training programs enhances the quality of the audit and contributes to discovering violations more effectively.

THE REVIEWER

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