

# The Impact of using Modern Technologies on Quality Audit of Small Enterprises Financial Statements

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## Abstract

The study investigated the impact of using modern technologies on audit quality of financial statements in small enterprises. The study aimed to identify modern technologies (artificial intelligence technologies, robots) used in achieving the quality audit of financial statements. The study problem was represented in that the use of modern technologies such as artificial intelligence and robots which are used in all walks of life recently intervened auditing process. The study significance lies in the importance of investigating and identifying modern technologies (artificial intelligence technologies, robots) used in achieving audit quality of financial statements. The study adopted the Statistical Package for Social Science (SPSS) to test the hypotheses: There is a statistically significant relationship between using electronic auditing (artificial intelligence, robots) and quality audit of financial statements. Using electronic auditing contributes to achieving quality audit of financial statements. The study concluded that there is a statistically significant relationship between using electronic auditing (artificial intelligence technologies, robots) and quality audit of financial statements. Using electronic auditing contributes to achieving quality audit of financial statements.

**Keywords:** Modern technology, financial statements.

## 1. Introduction

Ali Shanan (2023) pointed out that information technology, digital transformation and digital data is a toolkit that indispensable for small enterprises. In order to adapt to changes small enterprises and large companies resorted to implement the digital transformation toolkit in governance process and financial reporting as that helps them grow, continue in competition, support transparency requirements, verify adjustments validation, provide technological means of disclosing administrative policies, adopt new methods and reduce earnings management. Activating the digital transformation technology leads to achieve the basic characteristics of accounting information and to overcome challenges.

### Study problem

Modern technologies such as artificial intelligence and robots are used in all walks of life. Recently, modern technologies can be used in auditing therefore, many accounting firms

changed to using these technologies instead of the old manual auditing. The problem of this research is represented in an attempt to identify the role of this digital transformation on the quality of audit and the achievement of competitive advantage in small enterprises.

### Study hypotheses

The study tests the following hypotheses:

1. There is a statistically significant relationship between using the digital audit (artificial intelligence technologies, robots) and the quality audit of financial statements.
2. There is a statistically significant relationship between using the electronic audit and achieving the quality audit of financial statements.
3. There is a statistically significant relationship between the quality audit of financial statements and the achievement of competitive advantage.

### Study objectives

The study aims to achieve the following: To identify the modern technologies (artificial intelligence technologies, robots) that are used to achieve the quality audit of financial statements, to clarify the role of electronic audit on achieving the quality audit of financial statements and to find out the relationship between the quality of financial statements and the achievement of competitive advantage.

### Study significance

The research significance is represented in the significance of investigating and identifying the modern technologies (artificial intelligence technologies, robots) that are used to achieve the quality of audit of financial statements, identifying the role of electronic audit on achieving the quality of audit of financial statements and identifying the relationship between the quality of financial statements and the achievement of competitive advantage.

## 2. Literature review

### 2.1 Previous studies

Wahba (2023) study aims to identify the impact of using digital transformation toolkit in governance process and financial reporting and to identify the impact on the quality of sustainable development. The study concluded several findings: There is a positive impact of using the digital transformation toolkit on the quality of financial reporting as a result of using the modern digital transformation toolkit in issuing them. Also, there is a positive impact on the sustainable development process as a result of the quality of digital governance process.

Al-Shareeda & Al-Samarrai (2021) research aimed to define the role of artificial intelligence technologies using digital audit in achieving the quality of audit and in supporting the audit strategy used by audit firms operating in Bahrain Kingdom through testing some hypotheses that investigated the role of artificial intelligence technologies on achieving the quality of audit from one hand and on supporting the achievement of audit strategy in those firms from the other hand.

The research explained the significance of using digital audit in achieving the quality of audit process and in supporting the audit strategy in audit firms operating in Bahrain Kingdom. The research concluded that using artificial intelligence technologies contributes to achieving the quality of audit process and to supporting the application of audit strategy in Bahrain Kingdom. The researchers, based on the findings presented the following recommendations: Attention should be given to artificial intelligence technologies in using digital audit and to their role on achieving the quality of audit and on supporting the audit strategy in audit firms operating in Bahrain Kingdom.

Hammad (2020) study aimed to identify the role of digital transformation on the development of employees' performance. In order to achieve the study objective, a questionnaire was designed and distributed to the study sample consisted of (318) individuals working in the company investigated. The Statistical Package for Social Science (SPSS) was used in analyzing the study data. The most important findings: There is a statistically significant relationship between digital transformation and the development of employees' performance. There is insufficiency in terms of digital transformation dimensions including strategic planning for digital transformation, leaders preparation in the field of digital transformation, institutional structure of digital transformation and recruiting skills and competencies for the digital transformation process. In accordance with the field study performed by the researcher in the company investigated, a framework of recommendations was proposed as a work program to be implemented within certain steps.

Al-Khasawna (2013) study aimed to investigate the role of digital audit on achieving competitive advantages in audit firms in the Hashemite Kingdom of Jordan, through testing some hypotheses that investigated the role of digital audit on achieving the dimensions of competitive advantage in audit firms. The study clarified the obstacles that hinder the benefit from using electronic audit in achieving competitive advantages in audit firms in the Hashemite Kingdom of Jordan. The study concluded the following: Using digital audit contributes to achieving competitive advantages through reducing cost and providing quality, flexibility and market share. There are obstacles that hinder using electronic audit such as the expensiveness of audit software programs and their inappropriateness to business organizations and auditors' need for qualification and training.

## 2.2 Theoretical framework

### 2.2.1 Governance of digital transformation and audit

The Kingdom's Vision (2030) highlighted the governance of digital transformation as one of the digital strategies. Governance of digital transformation means to establish organizational relations between the system of business and the technological systems and to determine how these systems help employees using technology in performing their work within a flexible framework and well defined limits. The governance of digital transformation contributes to measuring to what extent systems and decisions are provided and implemented, quality and excellence of performance are achieved, appropriate and effective methods are used in achieving the organization's plans and objectives. It is also known as a system that works on governing relations between the basic parties.

Wahba (2023) stated that the digital governance aims to governing and organizing the institution's works related to digital transformation and this contributes to achieving an optimal benefit from the available resources and avoiding replication and optimal using of common platforms.

Digital transformation positively affects the process of governance and audit within institutions depending on the modern digital transformation toolkit such as computers and the Internet. Using modern accounting information systems affects the use of quality technology in audit performance.

Al-Shareida & Al-Samarrai (2021) indicated the effect of industrial revolution and governance of digital transformation on the audit. They stated that there are equipment of data collection such as sensors and built-in computers and program units that collect data on all over the company and external parties related such as suppliers and customers through a network that submits data at a time close to the actual time. Audit will depend on data analysis technology in building audit models that control product and identify errors resulting from machines and equipment and save costs and facilitate decision process. So cold "Audit exception" will be used in order to draw attention towards the major problems in automated auditing process.

In the near future, audit will depend on a visual digital global representation that reflects all processes coherently helping to analyze not only financial but also non-financial aspects. The expected approach of auditing process will restore its balance and enable it to protect self. this approach will be applicable on many types of external, internal and specialized audit. Fourth Industrial Revolution Technologies will submit information automatically to the degree that reporting, exchanging and auditing them will be performed without any manual intervention. Auditing without manual intervention indicates that this auditing types steps do not provide any value added and it is just unnecessary friction that should be removed of the auditing system.

#### 2.2.2 Operational definitions:

Artificial intelligence is a modern computer science that searches for advanced methods to design intelligent systems that give the same characteristics known to people and which are similar, if only to a limited extent, to human intelligence.

Digital auditing is the use of automated auditing programs to examine, verify, and report the auditing process.

Audit quality is the ability to achieve the maximum possible benefit from the audit process through a set of policies and procedures practiced by the auditor during his work and in accordance with auditing standards.

An audit strategy is a plan developed by an auditor with the aim of performing an audit process within a specific period. The auditor distributes the work among the auditors according to the nature of the audit work through an executive program that reflects the objectives of the plan as practical procedures that can be tracked and supervised.

Using electronics, information technology and digital industries were the greatest achievements of the Industrial Revolution. Computers and robots had the upper hand in leading this industrial

revolution, which was known as the Digital Revolution. The term Fourth Industrial Revolution is considered comprehensive, and is used to describe a set of ongoing technological developments that provide the basis for the digitization of business environment, by designing procedures and setting standards to overcome problems associated with audit processes.

The quality of audit performance depends on two basic conditions: (Abu Hein, 2005: 46); it detects errors and gaps in the client's accounting system. This means that the more fraud and material misrepresentations are revealed, the greater quality of audit and vice versa by taking into consideration the following:

- Concluding the final opinion of the audit process.
- The auditor gives attention to completing the audit process at the highest possible quality so that he can give the highest possible confidence to his report.
- The company under audit needs to give confidence to its financial statements, so it needs the audit process to be conducted at the highest possible quality.
- Professional organizations believe that the quality of audit performance ensures that the audit profession fulfills its responsibilities towards all beneficiaries.

Global Journal of Economics and Business (2020), 8(1), 15-31.

Because of the severe competition among auditing firms, all auditors and clients opinion is directed towards the audit quality as the advantage according to which an auditor distinguished from other competitors (profession practitioners).

Based on what is stated above, it is clear that in order for quality to be achieved in the audit process, the work must be performed at a high level, efficiently and effectively, in accordance with professional standards of auditing and ethical requirements, which achieves for the benefiting parties the objectives expected from implementing the audit mission, and the possible disadvantages in case there is a lack of quality. Al-Khasawneh (2013), The role of electronic auditing in achieving audit quality, (p. 15) believes that the use of electronic auditing contributes to achieving the dimensions of auditing quality. Using electronic auditing achieves a cost advantage by reducing the cost of auditing service and increases the profitability of auditing firms through using auditing software programs in auditing financial statements, and therefore, performs auditing service quickly more than a service for more than a company. It also reduces the time necessary for planning and therefore it can be used to plan and identify the tests size via the expert systems and artificial intelligence. In order to achieve this, the auditor should be of a high level of scientific and practical qualification in the field of using electronic auditing programs and software in planning for auditing tasks and using standard devices and competencies that contribute to achieving objectives. The 1009 International Statement indicated that using information systems technologies improves the efficiency and effectiveness of electronic auditing procedures and achieves quality. Using electronic auditing in performing financial processes contributes to completing the auditing tasks efficiently and effectively. Using auditing software programs in performing service tasks contributes to save time exerted effort. In order to achieve this advantage, the employees should be of a high level of scientific and practical qualification on electronic technologies and their use in electronic auditing. In order to

achieve quality auditing, the auditing tasks should be accomplished objectively. Using electronic auditing technologies by qualified auditors achieves the objectivity in the auditing process and in the evaluation of financial statements and proving evidences. Electronic technologies help in achieving independency and neutrality in auditing financial statements and detecting errors and material misrepresentations in financial statements. Ammar Al-Samarrai & Nadia Al-Shareida (2020), The role of artificial intelligence and robots on achieving quality audit.

### 2.2.3 Electronic auditing and market share:

Using electronic auditing in submitting financial statements contributes to providing the financial statements quickly and accurately, especially in an environment where business organizations compete using information technology. Using information technology contributes to encouraging business organizations to link with audit firms to perform auditing tasks.

Electronic auditing and excellence: Information technology in the current era is considered a competitive advantage for business organizations as business organizations attempt to benefit from them in providing their services and products and thus be distinguished with their production. Auditing firms are such organizations that can benefit from electronic auditing technologies in achieving quality in providing services and communication between the organization being audited and the auditing firm.

Electronic auditing and creativity: Creativity in using electronic auditing makes the auditor design programs necessary for the auditing or develop the systems available to be appropriate to the existing accounting systems. Creativity also found in using and developing artificial intelligence programs and expert system programs.

## 3. Study methodology

### 3.1 Study method and tools

The analytical and descriptive approach was used to measure the impact of using modern technologies on quality audit of small enterprises financial statements. A questionnaire was designed as study tool and distributed to a random sample from the small enterprises employees in the city of Khamis Mushait. The validity and reliability of the tool was confirmed using the Cronbach Scale. The Statistical Package of Social Science (SPSS) was adopted using the regression analysis to identify the relationship between the study variables (modern technologies, quality audit of financial statements).

### 3.2 Study population

The population of the study consisted of the small enterprises operating in the city of Khamis Mushait including commercial, service and industrial enterprises.

### 3.3 Study sample

The study sample was randomly selected of (40) employees who work in the small enterprises in the city of Khamis Mushait. A questionnaire was distributed to the study sample individuals and then their answers were collected.

### 3.4 Study tools

Primary studies: They include a field study and a questionnaire.

Secondary studies: They include previous studies, books, periodicals, blogs, the Internet.

### 3.5 Study limits

Spatial limits: Khamis Mushait city.

Time limits: 2024.

## 4. Study results

### 4.1 Statistical tools used in the analysis

Table (1): Five-point Likert scale

Classification	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Degree	5	4	3	2	1

Source: prepared by the researcher based on the study field data using SPSS-2023

The table (1) according to the Five-point Likert scale above shows that

the hypothesized mean is  $\frac{1+2+3+4+5}{5} = 3$ .

### 4.2 Descriptive analysis of the questionnaire statements

Hypothesis one: There is a statistically significant relationship between using (artificial intelligence technologies, robots) and quality auditing of financial statements.

Table (2): frequency and percentage distribution of the respondents' answers for the hypothesis statements

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
Artificial intelligence technologies and robots achieve audit quality.	12 30%	23 57.5%	2 5%	3 7.5%		3.07
Artificial intelligence technologies and robots allow exception to draw attention towards major problems in automated auditing process.	18 45%	12 30%	0 12.5%	0 12.5%		3.43
Information uses artificial intelligence technologies and robots in planning fields.	14 35%	20 62.5%	1 2.5%			3.80
Information adopts artificial intelligence technologies and robots in documenting.	0 12.5%	23 82.5%	1 2.5%	1 2.5%		3.29
Artificial intelligence technologies and robots contribute to the development of employees' performance.	16 40%	23 57.5%		1 2.5%		3.99
Artificial intelligence technologies and robots adopt quality financial statements.	22 55%	13 32.5%	0 12.5%			3.32
Total	36.25%	53.75%	5.83%	4.17%		4.03

Source: prepared by the researcher based on the study field data using SPSS-2023

The table (2) above shows the relationship between using the modern technologies and the quality auditing of financial statements as follow:

(36.75%) of the study sample respondents strongly agree, (53.75%) agree while (05.83%) neutral and (04.17%) disagree with the questionnaire statements; therefore, most of the study sample respondents agree with the questionnaire statements. Also, the mean for all statements was (4.03) which is greater than the hypothesized mean (3); this confirms that the study sample responses agree with the statements.

Hypothesis two: There is a statistically significant relationship between using electronic auditing and achieving quality auditing of financial statements.

Table (3): frequency and percentage distribution of the respondents' answers for the hypothesis statements

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
There is a network that provides data at a time very close to the actual time.	1 20%	10 37.5%	10 25%	3 7.5%		3.07
The network depends on the equipment of data collection such as sensors and built-in computers.	6 15%	19 47.5%	5 12.5%	0 12.5%		3.43
The network collect information automatically and provide information automatically to that degree that error reporting is performed without any manual intervention.	11 27.5%	14 35%	7 17.5%			3.80
Audit in building auditing models, will depend on the data analysis technology that control product and identify errors resulting from machinery and equipment.	20 50%	5 12.5%	6 15%	1 2.5%		3.29
The network saves costs and facilitates decision making process.	30 75%	3 7.5%	4 10%	1 2.5%		3.99
The network contributes to audit exception to draw attention towards major problems in the automated auditing process.	27 67.5%	12 30%	1 2.5%			3.32
In the future, audit will depend on a visual global digital representation that coherently reflects processes of financial and non-financial aspects.	24 60%	14 35%	2 5%			
Total	45%	29%	12.5%	13.21%		4.19

Source: prepared by the researcher based on the study field data using SPSS-2023

The table (3) above shows the relationship between using the electronic auditing and achieving the quality auditing of financial statements as follow:

(45%) of the study sample respondents strongly agree, (29%) agree while (12.5%) neutral and (13.21%) disagree with the questionnaire statements; therefore, most of the study sample respondents agree with the questionnaire statements. Also, the mean for all statements was (4.19) which is greater than the hypothesized mean (3); this confirms that the study sample responses agree with the statements.



#### 4.3 Verification of the study hypotheses

Table (4): Hypothesis one: There is a statistically significant relationship between using (artificial intelligence technologies, robots) and the quality audit of financial statements.

	Coefficients of Regression	(t) Test	P.Value	Interpretation
B <sub>0</sub>	1.441	8.112	.000	Significance
B <sub>1</sub> Using modern technologies	.012	.449	.654	Insignificance
(R) Coefficient of correlation	0.772			
(R <sup>2</sup> ) Coefficient of determination	.596			
(f) Test	162.734	0.000 model is significant		

Source: prepared by the researcher based on the study field data using SPSS-2023

Table (4) above shows the following:

1. The estimation results showed that there is a direct correlation between the modern technologies as an independent variable and the quality audit of financial statements as a dependent variable; the value of simple coefficient of correlation was (0.722).
2. The value of the coefficient of determination was (0.596); this value indicates that the modern technologies contribute by 59.6% to the quality audit of financial statements as a dependent variable.
3. The mean of the quality audit of financial statement was 1.441 when there are no modern technologies.
4. The quality audit of financial statements increases by 0.012 when the modern technologies increase in one unit.

Accordingly, the study concluded that the hypothesis is achieved; this means that the modern technologies affect the quality audit of financial statements.

Table (5): Hypothesis two: There is a statistically significant relationship between using electronic auditing and achieving the quality audit of financial statements.

	Coefficients of Regression	(t) Test	P.Value	Interpretation
B <sub>0</sub>	1.247	8.254	.000	Significance
B <sub>1</sub> Electronic auditing	.342	9.563	.000	Significance
(R) Coefficient of correlation	.845			
(R <sup>2</sup> ) Coefficient of determination	.714			
(f) Test	183.370	0.000 model is significant		

Source: prepared by the researcher based on the study field data using SPSS-2023

Table (5) above shows the following:

1. The estimation results showed that there is a direct correlation between the electronic auditing as an independent variable and the process engineering as a mediator variable and the institutional performance as a dependent variable; the value of the simple coefficient of correlation was (0.845).
2. The value of the coefficient of determination was (0.714); this value indicates that the electronic auditing contribute by 71.4% to the institutional performance as a dependent variable.
3. The mean of the institutional performance was 1.274 when there are no electronic auditing.

4. The institutional performance increases by 3.42 when the electronic auditing increases by one unit.

Accordingly, the study concluded that the hypothesis is achieved; this means that the electronic auditing achieves the quality audit of financial statements.

## **5. Findings:**

The study came up with following:

1. There is a statistically significant relationship between using the electronic auditing and achieving the quality audit of financial statements.
2. The electronic auditing achieves the quality audit of financial statements.

## **6. Recommendations:**

Based on the findings, the study recommends the following:

1. In the future, audit should depend on a visual global digital representation that coherently reflects the processes of financial and non-financial aspects.
2. Information should be collected automatically and reporting information should be performed without any manual intervention.

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