



Article

## Digital Transformation in Accounting Information Systems and Its Impact on The Property of Faithful Representation Using Some Statistical Methods

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Digital transformation has become a necessity for all economic units to survive in a competitive environment. The accounting function is considered one of the important functions that have been affected by the application of digital transformation by replacing traditional manual accounting operations and relying on advanced accounting information systems and modern technology to improve the performance of accounting work and provide high-quality information. Therefore, the research aimed to study the digital transformation of accounting information systems and its impact on the property of Faithful representation of accounting information, which was represented by three dimensions (completeness, neutrality, free from errors). The results showed the existence of an impact of the digital transformation of accounting information systems on the property of completeness of accounting information, as well as the existence of an impact of the digital transformation of accounting information systems on the property of neutrality of accounting information, in addition to the existence of an impact of the digital transformation of accounting information systems on the property of free from errors of accounting information.

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### 1. Introduction

Today, economic units operate in an environment with great technological development, which imposes on the units a continuous change in the work of the information system, i.e. collecting information, processing it and delivering it to its users. (Đorđević & others, 2018 :24) This technological development has imposed on all professions and fields to adapt to this development. One of the most important of these developments is the digitization of operations, i.e. making a radical change in the way of work, which is known as digital transformation, which can be defined as "the transformation from the traditional paper-based work system to a digital system using databases, which reduces reliance on the human element and thus reduces corruption and increases transparency, i.e. the process of using technology in providing services", (Al-Kafi and Ali, 2023: 48) Digital transformation has become an important and necessary element for all institutions and bodies that seek to develop and improve services and facilitate their access to beneficiaries at the appropriate time and place (Al-Ashoul, 2022: 8)

Digital transformation is no longer an option for economic units, but rather an inevitable necessity, as units will not be able to survive in a competitive environment without digital transformation in their operations and will face the risk of extinction in the market. Economic units that apply digital transformation work to improve efficiency and profitability, especially since most units that applied digital transformation reported a significant increase in their profits, in addition to a large number of units that reported an increase in market share after applying digital transformation in their businesses. (Muhammad and Mubarez, 2023: 1105)

Digital transformation has affected all jobs in various fields, and accounting is one of these fields, as digital transformation in the field of accounting includes reliance on advanced accounting information systems and modern technology to improve the performance of accounting work by replacing traditional manual accounting operations with technological and more automated operations. (Al-Hawari and Marzouq, 2023: 37-38). Which contributes to getting rid of the practice of traditional manual repetitive work and its slow and ineffective repercussions and working to improve the speed of completing tasks accurately and effectively and reducing errors as much as possible. (Qarwash and Al-Sahli, 2024: 26), therefore, thanks to the digital transformation, accounting information has become more reliable and transparent and is provided quickly, as transactions are completed in a short time and without errors, which will ensure the preparation of financial reports quickly and with high performance. (SABUNCU, 2022: 106)

In order for accounting information to be of high quality, it must have several characteristics, one of which is the characteristic of Faithful representation, which is achieved if the accounting information honestly expresses the financial transactions and other events it represents. (Hussein et al., 2024: 392) According to the conceptual framework of accounting, the characteristic of Faithful representation is one of the basic qualitative characteristics of the quality of accounting information. (Fouda, 2023: 25) It is defined as providing a true and accurate picture of the financial and economic situation within the economic unit, i.e. it gives an accurate perception of reality without distortion or misleading. (Ismail et al., 2023: 14) In order for the characteristic of Faithful representation to be achieved, accounting information must have a number of sub-characteristics, namely completeness, neutrality, and free from errors (Mbobu and Ekpo, 2016: 187), as completeness is that the information expresses all the necessary information for users to fully understand the events being expressed. (Samaha et al., 2022: 18) That is, there is no omission in the information because that would make it misleading, unreliable, and undependable (Rizk et al., 2015: 9). Neutrality means that the information is free from bias, whether in selecting or presenting the information (Muhammad et al., 2024: 137). Free from errors means the absence of errors or inaccuracy in describing the phenomenon and the absence of errors in the processes and procedures by which the accounting information was produced. (Ajibade, 2022: 3)

The main objective of this research is to know the impact of digital transformation of accounting information systems on the property of Faithful representation of information through its sub-properties, which are completeness, neutrality and free from errors.

## 2. Materials and Methods

To measure the relationship between digital transformation in accounting information systems and its impact on the property of Faithful representation of accounting information, a survey study was used to examine the opinions of a sample of academics and professionals in the Iraqi environment by preparing a questionnaire according to the five-point (LIKERT) scale and distributing it to the research sample and then analyzing it using statistical measures represented by frequencies that express the number and intensity of answers for each scale, the arithmetic mean to diagnose the sample's answers, the standard deviation to clarify the dispersion of the sample's answers, and the t-test, in addition to the significance level (Sig) to clarify the relationship between the variables.

### 3. Results

The study forms were distributed, revised, arranged, and then distributed to the target sample, which included more than 80 forms, from which 60 valid forms for the study were extracted. After that, the statistical analysis was conducted through the steps shown below:

First: Demographic results:

Demographic information includes studying a set of characteristics and qualities of sample individuals, which include qualitative characteristics, namely educational attainment and years of service. The results were as shown in the tables below:

1) Academic achievement:

Table (1)

Academic achievement	Repetition	% Percentage
Bachelor	37	61.7
Master's degree and equivalent	16	26.7
PhD and equivalent	7	11.6
the total	60	100

It is clear to us from the table above that the number of those who have a bachelor's degree is (37) at a rate of (61.7%) of the sample, and those who have a master's degree or its equivalent were (16) at a rate of (26.7%), and those who have a doctorate degree or its equivalent were (7) at a rate of (11.6%) of the total number of 60.

2) Number of years of service:

Table (2)

Number of years of service	Repetition	% Percentage
5 years and less	9	15
From 6 years to 10 years	22	36.7
From 11 to 15 years	17	28.3
16 years and older	12	20
the total	60	100

From the table above, it is clear that the number of those whose answers were obtained had years of service of 5 years or less was 9, representing 15%. As for those who had years of service of 6 to 10 years, their number was 22, representing 36.7%. As for those who had years of service of 11 to 15 years, their number was 17 answers, representing 28.3%. As for those who had years of service of 16 years or more, their number of answers was 12, representing 20%.

Second: Field results:

Descriptive data are analyzed using descriptive statistics for the purpose of providing summary reports about them. Descriptive measures are divided into two sections: the first section is the measures of central tendency, and the second section is the measures of dispersion.

The first dimension: Digital Transformation in Accounting Information Systems Completeness of Accounting Information

Table (3)

N	Paragraphs		I totally disagree	I disagree	neutral	agree	Totally agree	Arithmetic mean	Standard deviation	(t) test value	sig	Rank
1	The digital transformation of accounting information systems contributes to providing complete information to users by not withholding essential information.	Repetition		2	2	40	16	4.17	.642	50.256	0.000	2
		Percentage %		3.3	3.3	66.7	26.7					
2	The digital transformation of accounting information systems provides honest and non-misleading information to users.	Repetition			16	28	16	4.10	.736	42.071	0.000	4
		Percentage %			26.7	46.7	26.7					
3	The digital transformation of accounting information systems contributes to providing all necessary information and not deleting any part of it inadvertently or deliberately.	Repetition		2	8	30	20	4.13	.769	41.608	0.000	3
		Percentage %		3.3	13.3	50.0	33.3					
4	Digital transformation of accounting information systems helps satisfy users' needs and provides high-quality returns to its users.	Repetition		4	4	28	24	4.20	.840	38.744	0.000	1
		Percentage %		6.7	6.7	46.7	40.0					
5	The digital transformation of accounting	Repetition		4	4	40	12	4.00	.736	42.071	0.000	5

information systems enhances the accuracy of the representation of economic phenomena.	Percentage %			6.7	6.7	66.7	20.0					

The table above shows the frequency of each question of the first dimension, where the highest answers were for the fourth paragraph (The digital transformation of accounting information systems helps satisfy the needs of users and provides high-quality returns to its users), where the average answers were 4.20, which is greater than the hypothetical mean of 3, which indicates that the answers have an impact on this dimension, and the standard deviation was 0.840, which indicates that the level of dispersion of answers to the paragraph is low, and the result of the t-test was 38.744, and the value of the significance level sig was 0.000, which is less than 0.05%. As for the fifth paragraph (The digital transformation of accounting information systems enhances the validity of the representation of phenomena of economic events), the average answers were 4, which is greater than the hypothetical mean of 3, which indicates that the answers have an impact on this dimension, and the standard deviation was 0.736, which indicates that the dispersion of answers is low, while the value of the t-test is 42.071 and the significance level is 0.000 .

The second dimension: Digital transformation of accounting information systems and the neutrality of accounting information.

Table (4)

N	Paragraphs		I totally disagree	I disagree	neutral	agree	Totally agree	Arithmetic mean	Standard deviation	(t) test value	sig	Rank
1	Digital transformation of accounting information systems provides unbiased information that serves all users without affecting their behavior.	Repetition		2	10	34	14	4.00	.736	42.071	0.000	4
		Percentage %		3.3	16.7	56.7	23.3					
2	The digital transformation of accounting information systems contributes to providing honest facts without selecting information for the benefit of a specific group or decision.	Repetition		4	6	36	14	4.10	.781	39.665	0.000	1
		Percentage %		6.7	10.0	60.0	23.3					

3	The digital transformation of accounting information systems increases the reliability of information that can be relied upon in decision-making.	Repetition		6	2	34	18	4.07	.861	36.588	0.000	2
		Percentage %		10.0	3.3	56.7	30.0					
4	Digital transformation enhances accounting information systems on the objectivity of information for economic events.	Repetition		6	4	36	14	3.97	.843	36.446	0.000	5
		Percentage %		10.0	6.7	60.0	23.3					
5	The digital transformation of accounting information systems contributes to presenting information in a more transparent and reliable manner and increases users' confidence.	Repetition		2	2	44	12	4.03	.802	38.963	0.000	3
		Percentage %		3.3	3.3	73.3	20.0					

The table above shows the frequency of each question of the second dimension, where the highest answers were for the second paragraph (The digital transformation of accounting information systems contributes to providing honest facts without selecting information for the benefit of a specific category or decision), where the average answers were 4.10, which is greater than the hypothetical mean of 3, which indicates that the answers have an impact on this dimension, and the standard deviation was 0.781, which indicates that the level of dispersion of answers to the paragraph is low, and the result of the t-test was 39.665, and the value of the significance level sig was equal to 0.000, which is less than 0.05%.

As for the fourth paragraph (the digital transformation of accounting information systems enhances the objectivity of information for economic events), the average response rate was 3.97, which is greater than the hypothetical mean of 3, which indicates that the responses have an impact on this dimension, and the standard deviation was 0.843, which indicates that the dispersion of the responses is small. The value of the t-test is 36.446, and the significance level is 0.000.

From the special rates for each paragraph, which is greater than the hypothetical mean 3, and thus indicates that all paragraphs related to the questions related to the first dimension are all influential in the questionnaire, and we accept the first hypothesis,

which states that there is an impact of the digital transformation of accounting information systems and the neutrality characteristic of accounting information.

The third dimension : Digital transformation of accounting information systems and the error-free nature of accounting information .

Table (5)

N	Paragraphs		I totally disagree	I disagree	neutral	agree	Totally agree	Arithmetic mean	Standard deviation	(t) test value	sig	Rank
1	The digital transformation of accounting information systems provides information free from manipulation and intentional and unintentional errors.	Repetition	2	10	8	26	14	3.67	1.115	25.475	0.000	5
		Percentage %	3.3	16.7	13.3	43.3	23.3					
2	The digital transformation of accounting information systems contributes to providing information based on sound and real inputs.	Repetition		6	2	44	8	3.90	.752	40.151	0.000	4
		Percentage %		10.0	3.3	73.3	13.3					
3	The digital transformation of accounting information systems enhances the honest expression of information in financial reports.	Repetition	2	4		42	12	3.97	.882	34.823	0.000	2
		Percentage %	3.3	6.7		70.0	20.0					
4	Digital transformation helps accounting information systems prepare and display information with minimal errors.	Repetition	4	4	4	34	14	3.83	1.076	27.591	0.000	3
		Percentage %	6.7	6.7	6.7	56.7	23.3					

5	The digital transformation of accounting information systems contributes to describing economic events exactly as they are, without bias or manipulation.	Repetition		4	4	32	20					
		Percentage %		6.7	6.7	53.3	33.3	4.13	.812	39.413	0.000	1

The table above shows the frequency of each question of the third dimension, where the highest answers were for the fifth paragraph (the digital transformation of accounting information systems contributes to describing economic events as they are, without bias or manipulation), where the average answers were 4.13, which is greater than the hypothetical mean of 3, which indicates that the answers have an impact on this dimension, and the standard deviation was 0.812, which indicates that the level of dispersion of answers to the paragraph is low, and the result of the t-test was 39.413, and the value of the significance level sig equals 0.000, which is less than 0.05%.

As for the first paragraph (the digital transformation of accounting information systems leads to the provision of information free from manipulations and intentional and unintentional errors), the average response rate was 3.67, which is greater than the hypothetical mean of 3, which indicates that the responses have an impact on this dimension, and the standard deviation was 1.115, which indicates that the dispersion of the responses is large. The value of the t-test is 25.475, and the significance level is 0.000.

From the special rates for each paragraph, which is greater than the hypothetical mean 3, and thus indicates that all paragraphs related to the questions related to the first dimension are all influential in the questionnaire, and we accept the first hypothesis, which states that there is an effect of the digital transformation of accounting information systems and the error-free property of accounting information.

#### 4. Discussion

The findings of this study reveal that digital transformation in accounting information systems has a significant impact on the property of **Faithful Representation**, which includes three main dimensions: **completeness**, **neutrality**, and **freedom from errors**.

For the dimension of **completeness**, digital transformation enhances the ability to provide comprehensive and accurate information, ensuring that no essential information is omitted or concealed. This aligns with previous findings suggesting that digitalization improves the transparency and accuracy of financial reporting (Qarwash & Al-Sahli, 2024).

In terms of **neutrality**, the results indicate that digital transformation facilitates the presentation of unbiased and fair information for all users without influencing their behavior. It ensures that facts are presented without selective disclosure that benefits specific groups, thus enhancing objectivity and reliability in decision-making (Muhammad et al., 2024). These findings are consistent with prior research emphasizing the role of digitalization in improving honesty and transparency in financial reporting (Al-Hawari & Marzouq, 2023).

Furthermore, for the dimension of **freedom from errors**, digital transformation has proven effective in minimizing manipulations and both intentional and unintentional errors in financial reporting. By leveraging valid inputs and accurate automation processes, digital transformation strengthens the integrity of accounting information and reduces the risk of human error. This supports previous studies suggesting that digitalization enhances the accuracy and reliability of financial statements by minimizing manual errors (Sabuncu, 2022).

Overall, this study confirms that digital transformation in accounting information systems not only improves operational efficiency but also strengthens the quality of **Faithful Representation** in financial reporting. These findings have practical implications for accounting practitioners to continuously adopt digital technologies in accounting information systems to ensure transparency, accuracy, and reliability of information delivered to stakeholders.

## 5. Conclusion

The results of the first dimension showed that there is an impact of the digital transformation of accounting information systems on the completeness property of accounting information. Therefore, the digital transformation of accounting information systems will contribute to providing complete information to users that is honest and not misleading and that honestly expresses the representation of economic events phenomena, as well as providing all necessary information and not deleting any part of it inadvertently or intentionally, which will contribute to satisfying the needs of users and give a high-quality return.

The results of the second dimension showed the existence of an impact of the digital transformation of accounting information systems on the neutrality of accounting information. Therefore, the digital transformation of accounting information systems will contribute to providing unbiased information that serves all users without affecting their behavior and presenting honest facts without selecting information for the benefit of a specific group or decision, in addition to increasing the reliability and objectivity of information that can be relied upon in making decisions, and thus increasing the confidence of users.

As for the third dimension, the results showed that there is an impact of the digital transformation of accounting information systems on the error-free property of accounting information. Therefore, the digital transformation of accounting information systems will contribute to providing information free from manipulations and intentional and unintentional errors, and providing information that is based on sound and real inputs, and honestly expressing information in financial reports and describing economic events as they are, without bias or manipulation.

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