Contemporary Readings in Law and Social Justice
ISSN: 1948-9137, e-ISSN: 2162-2752
Vol 16 (1), 2024
pp. 1148 - 1164

The Quality of Accounting Information in the Context of Big Data and the Position of International Standards (IFRS) on Big Data

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Abstract - The world today is witnessing tremendous and rapid developments in various business sectors. This rapid development has led to a digital revolution that has affected numerous fields of business. Digital transformation is an investment in thought and a change in behavior that brings about a radical transformation in the way work is conducted. It provides significant potential for building effective and competitive societies by fundamentally transforming the services provided to various beneficiary parties, whether consumers or employees, and by improving their productivity and experiences. Digital transformation also helps institutions improve their industrial paths and utilize their resources more efficiently and optimally.

Keywords – various, Conducted, Potential, utilize

Received:20 March 2024 **Revised:** 17 May 2024 **Accepted:** 22 June 2024

Introduction –

The world today is witnessing tremendous and rapid developments in various business sectors. This rapid development has led to a digital revolution that has affected numerous fields of business. Digital transformation is an investment in thought and a change in behavior that brings about a radical transformation in the way work is conducted. It provides significant potential for building effective and competitive societies by fundamentally transforming the services provided to various beneficiary parties, whether consumers or employees, and by improving their productivity and experiences. Digital transformation also helps institutions improve their industrial paths and utilize their resources more efficiently and optimally.

The history of digital transformation began with the emergence of computers, which changed handwritten notes into computerized information that can be processed, analyzed, and shared. With the development and emergence of networks and the Internet, these capabilities have evolved; they are no longer limited to converting handwritten notes into computerized information. Instead, they have become advanced capabilities, and data sets have grown very large. Big data requires robust digital data management and analysis processes, supported by data centers and data warehouses. Digital transformation represents an organization's use of digital technology across all areas of business and changes the way the organization delivers value to its customers by making cultural and operational

transformations that meet the changing and evolving requirements of customers. This relies on innovative digital technologies.

Big Data is considered one of the tools of digital transformation. It refers to a set of data that is large in size, generated at an unstable speed, and increases significantly over time. It is difficult to handle using traditional data processing and storage devices because the data source continuously produces a vast amount of information. For example, the New York Stock Exchange produces one terabyte of data per day.

Problem Statement

As a result of rapid and increasing technological developments, and the rising information challenge coupled with the factors of time, cost, and effort needed to process and manage data effectively, traditional methods of data processing have become inadequate. They fail to realize the benefits necessary to keep pace with the digital revolution. This necessitates the use of digital transformation tools and the shift from a traditional economy to a digital economy. Accounting, as a social science, is influenced by and influences its surrounding environment. As a profession, accounting must respond and adapt to these transformations and developments brought about by digital transformation tools. Based on the above, the research problem is encapsulated in the following questions:

1. Does big data have an impact on the quality of accounting information?
2. Has IFRS addressed big data in accounting?

Research Objective

In light of the research problem, the study's objectives can be determined as follows:

1. Understand the concept of big data.
2. Demonstrate the effects of big data on the quality of accounting information.
3. Examine the IFRS position on big data and its accounting treatment.

Research Importance

The importance of studying "the quality of accounting information under big data and the position of IFRS on big data" lies in several key areas:

- **Improving Decision-Making**: The quality of accounting information plays a crucial role in financial and management decision-making. Big data provides large amounts of information that, when used correctly, can enhance the accuracy and timeliness of these decisions.
- **Increasing Transparency and Credibility**: Big data improves the transparency and credibility of accounting information by offering accurate and comprehensive data, thereby boosting investor and stakeholder confidence in financial reporting.
- **Global Compliance**: International Financial Reporting Standards (IFRS) serve as a global reference for accounting practices. Understanding how these standards handle big data can help organizations achieve compliance and enhance their financial reporting.
- **Enhancing Accounting Systems**: Studying the impact of big data can contribute to developing more efficient and effective accounting systems for data processing, helping companies improve internal processes and reduce costs.
- **Identifying Opportunities**: Big data can uncover new patterns and opportunities to improve companies' financial and operational performance, enhancing their competitiveness and fostering innovation

Research Hypothesis

- **H0.1**: There is no statistically significant relationship between big data and the quality of accounting information according to IFRS.

- **H0.2**: There is no statistically significant effect of big data on the quality of accounting information according to IFRS.

Research Methodology

The methodology consists of two aspects:

1. **Theoretical Aspect**: An inductive and critical analytical approach was utilized by collecting information from main sources such as internet sources, scientific research sites, official documents, theses, periodicals, research, and books related to the subject.

2. **Field Aspect**: A questionnaire design was adopted for the fieldwork.

Research Plan

The research is outlined in the following sections:

- **Previous Studies**
- **The Scientific Rooting of Big Data**
- **Quality of Accounting Information**
- **The Practical Side**

Previous Studies

Numerous researchers have explored the subject of big data. A study conducted in 2018 focused on the impact of big data on financial reports, aiming to demonstrate how big data supports companies' competitive advantages and the quality of financial reports. It also examined the role of innovative business intelligence technologies and blockchain databases in enhancing accounting and financial report quality in a big data environment, highlighting the importance of integrating business intelligence tools with blockchain databases and big data.

Shehata, in 2018, proposed a model for using big data analytics to enhance the quality of financial reports and strategic performance evaluation. This study highlighted the advantages, challenges, risks, dimensions, and models of big data analytics and found that they help reduce subjective assumptions in asset estimation and effectively monitor changes.

Bassiouni's 2020 study explored the impact of big data disclosure on the quality of accounting information and the financial performance of companies listed on the Egyptian Stock Exchange. It investigated how factors such as company size, financial leverage, ownership structure, and sector type influence the quality of accounting information and concluded a significant impact of virtual currency and blockchain on financial reports.

Youssef, in 2019, analyzed the effect of big data analysis on improving the quality of accounting information, which in turn enhances financial report quality. The study underscored that big data analysis contributes to a comprehensive understanding of economic units and strategic development.

Biao Liu's 2016 study focused on accounting management in the era of big data, emphasizing the importance of strengthening accounting knowledge and management information systems. This focus aims to improve data security, total quality management, and, ultimately, the quality of accounting information.

Finally, Janvrin & Watson in 2017 investigated big data as a development in accounting. They emphasized the need for accountants skilled in big data and advocated for changes in accounting curricula to adapt to a big data environment.

These studies collectively emphasize the transformative impact of big data on accounting practices, decision-making, and strategic management, underlining the need for integration and adaptation in the accounting field.

Second: The Scientific Rooting of Big Data

Big data is currently one of the most discussed topics in the field of business. It is among the most frequently used terms in the market; however, there is no consensus on a single definition. This lack of agreement arises from the overlap of various disciplines in covering and processing big data. The term "big data" is relative for institutions; some may consider the data they handle as big data, while others may not.

Big data is defined as large and complex data sets that cannot be processed efficiently using traditional technologies. To leverage this data effectively, modern methods must be employed. Big data possesses unique characteristics such as volume, velocity, variety, and validity (Al-Tayeb and Al-Rubai, 2018). Specifically, big data encompasses a vast array of interconnected and intricate information, including text messages, tweets, videos, shared statuses, product likes, weather indicators, and news. It also incorporates data from smartphones, geolocation services, traffic data, and more—making it challenging to process using conventional methods or standard database management tools. Furthermore, big data is growing at an incredibly rapid pace, and its evolution shows no signs of slowing down (Youssef, 2018).

Table (1) The Stages of the Emergence of Data Volume and Its Increase Leading to Big Data

Seq.	Stage	History	What distinguishes the phase	Data size	Information Creation	Data analysis
Phase I	***Book - keeping Procedure***	***Babylonians and Chaldeans***	***Writing on clay tablets and papyrus***	***Small/ Transaction***	***Manual***	***Unlimited time***
Phase 2	***Accounting***	***1494AD***	***Using the theory of double entry, debtor and creditor***	***Small/ Transaction***	***Manual***	***Little time with manual reports***
Phase 3	***Calculators***	***1642AD***	***Invention of the Pascal Computer and Pocket Calculator***	***Average Transaction***	***Manual with small automation***	***Little time with manual reports***
Phase 4	***Computers***	***1911AD***	***IBM emergence and modem software***	***High/ Transaction***	***Manual with high automation***	***Automated structured data analysis***
The Fifth stage	***Internet***	***1985***	***World Wide Web***	***High/ Transaction***	***Manual with high automation***	***Automated structured data analysis and search process to find corroborating and competitive data.***
The Sixth	***cloud computing***	***1997***	***Relying on the cloud to access data as well as***	***High/ Transaction***	***Manual with high***	***Structured automated analysis of***

Stage			***relying on high storage capabilities.***		***automation***	***unstructured data and data research to find competitive data and search for predictive tools for data analysis.***
The Seventh Stage	***Internet of Things (IoT)***	***2013***	***There are many technologies in the last stage, such as wireless communications and GPS***	***Unspecified and unstructured***	***Automatically generated sensors***	***Structured automated analysis of data and unstructured data in addition to searching data to find supporting or competitive data, finding predictive tools and providing automated applications to collect, archive, evaluate and predict data patterns, trends and strategic actions.***

Source: Prepared by the researcher based on

Abdulrahman Zuhair Abdul Qader, Employing Big Data in the Development of Accounting Practices and its Implications for the Financial and Operational Performance of Business Organizations, PhD Dissertation, Faculty of Management and Economics , University of Mosul , 2022, 29-30

Lindell, Jim, 2017, Analytics and big data for accountants, Association of International Certified Professional Accountant, AICPA.

Characteristics of Big Data

Big data possesses a set of characteristics:

First: Volume: When the volume of data exceeds the carrying capacity of data stores (such as relational databases) and the technical capabilities to process it, then this data is considered huge. This volume represents the primary feature for categorizing data as large (Khine & Shun, 2017, 43).

Second: Velocity: In addition to its large size, big data is characterized by its very high speed. The data generation rate is rapid, requiring swift analysis to meet demand and timely delivery. The speed of big data is a distinctive characteristic that makes it a crucial element in the decision-making process (Amirham, 2020, 159).

Third: Diversity (Variety): Diversity reflects the breadth of the data created in non-traditional environments. This diversity arises from the complexity of the data generated by the various information systems within an entity on one hand, and the multitude of data sources on the other (Ghosh, 2016, 219). In a big data environment, data can be structured, unstructured, or semi-structured.

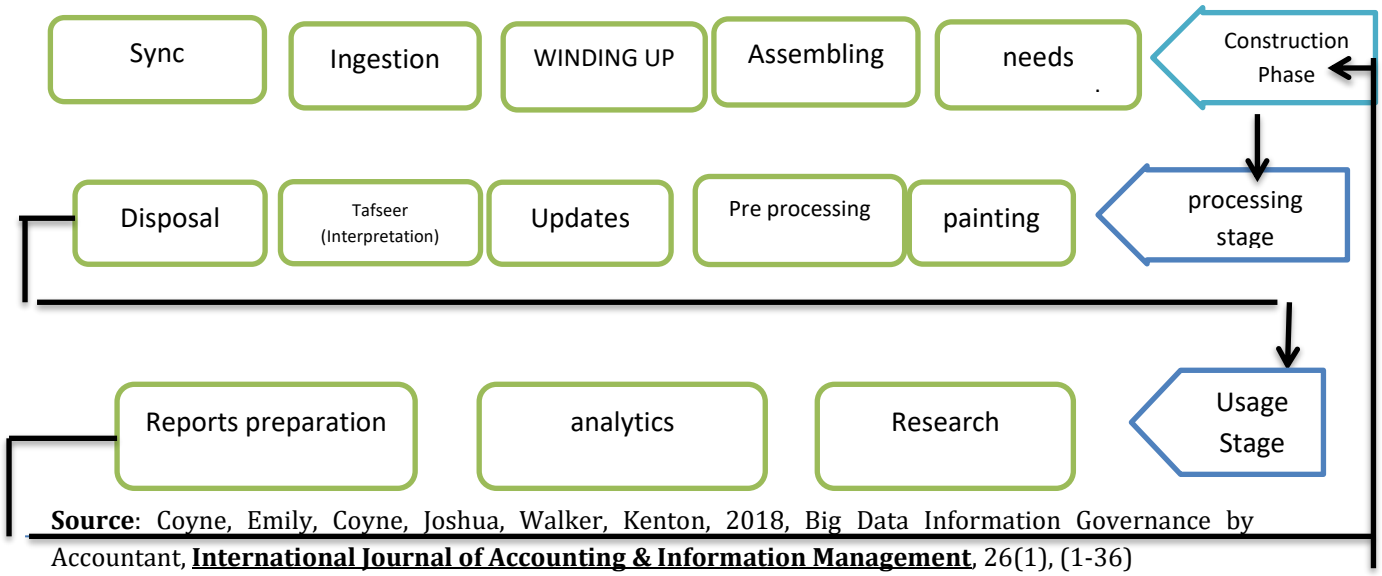
Fourth: Credibility (Veracity): The credibility characteristic of big data addresses the accuracy of big data analytics by relying on the reliability of the data source, as there can be unreliable data and a lack of certainty regarding their origins (Abdelmaksoud, 2020, 26). Therefore, big data and its analytics must handle inconsistencies, anomalies, and biases in data. This is achieved through statistical tools and analytics that address both organized and unstructured inconsistencies and delays in processing, as well as uncertainty from the data source (Lee, 2017, 296; Al-Maghazi, 2018, 19).

Fifth: Value: Value represents the return gained from investing in big data and the useful information it provides for decision-making. Data and its analysis have no value unless they result in impactful information for decision-making (Radi, 2021, 29).

BIG DATA

The life cycle of big data differs from that of traditional data. While both life cycles consist of three stages, the first stage involves creation, the second stage pertains to processing, and the last stage focuses on usage. The life cycle of both traditional data and big data can be illustrated in the following form:

Figure (1): Big Data Lifecycle



Source: Coyne, Emily, Coyne, Joshua, Walker, Kenton, 2018, Big Data Information Governance by Accountant, **International Journal of Accounting & Information Management**, 26(1), (1-36)

Big Data Sources: The views of researchers differ in categorizing the sources of big data (BD). Some categorize them based on the quality of the data into structured, unstructured, and semi-structured data sources. Others classify them according to the nature of the source itself into internal sources, sensors, business transactions, social media, and GPS. Some researchers believe that dividing them into internal sources and external sources is the most acceptable approach, consisting of Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), Business Intelligence (BI), and the Internet of

Things (IoT) (Kuurila, 2016, 13). IoT is one of the most important sources of big data, as well as radio frequency identification (RFID) (Vasarhely et al., 2015, 383). The widespread use of image capture and video recording devices has made visual data more prevalent than ever. External data sources include websites, social media, GPS, government data, credit card data, and financial market data.

Quality of Accounting Information: Useful accounting information is crucial for making rational decisions. Accounting information is characterized by its quality, which includes useful traits that help officials when setting accounting standards and when preparing financial statements. This allows for the evaluation of the information resulting from applying different accounting methods, as mentioned in Statement No. 02 by the Financial Accounting Standards Board (FASB). The study conducted by the FASB in 1980, entitled "Qualitative Characteristics of Accounting Information," is the most comprehensive and important examination of the subject. It distinguishes between the most useful and the least useful information for decision-making purposes (Bin Yahya, 2013, 46).

The quality of accounting information embodies the characteristics necessary for evaluating it effectively. The fundamental rules for assessing the quality of accounting information are crucial because their main purpose is to provide a basis for evaluating the extent to which accounting information achieves its objectives (Ghazal & Al-Abadi, 2012, 166). The term "information quality" refers to the ability of data to meet customer needs promptly, thus emphasizing the importance of high-quality information for business activities (Wongsim & Gao, 2011).

The characteristics of quality accounting information are vital in multiple areas: they help assess the usefulness and quality of the information contained in financial statements and reports, determine the necessary information and its provision frequency, and identify the required accuracy in that information. They also help gauge the extent to which diverse users trust the information included in financial statements and reports. Furthermore, they assist in formulating a conceptual framework for financial accounting and in identifying key elements that financial statements should contain, along with aiding in the development of accounting standards for evaluating satisfaction with existing standards, the need for amendments, or proposals for new standards (Desouky, https://alwatannews.net/Business/article/856889).

Accounting information has several qualitative shortcomings as follows:

First: Relevance: Relevance signifies information that provides at least three dimensions. The first is the impact on objectives, referred to as relevance to objectives. The second dimension concerns influencing understanding, known as semantic relevance. The third dimension, related to influencing decision-making, is called relevance to decisions (Ismail & Noam, 2012, 291). Relevance is also defined as the appropriateness of accounting information as an output of the accounting information system for specific decisions. In other words, accounting information is relevant if it is useful and provides benefits to decision-makers. If the accounting information is inappropriate for decision-makers, it will not be useful, regardless of its other characteristics. The determination of relevance generally depends on the decision-maker's perspective. If the decision-maker is not influenced by the information, it becomes inappropriate and, therefore, not useful (Muhammad, 2021, 110). The property of suitability has secondary characteristics, including predictive value, which means information has predictive value if it can serve as input for mechanisms that allow users of accounting information to forecast future results. This property assists users in predicting expected outcomes of various events or confirming their expectations whenever accurate (IASB, 2018, 12). Accounting information is characterized by its ability to provide economic decision-makers with the tools they need to achieve their predictions, thus reducing the risks involved in decision-making. The greater its usefulness and the more users need it, the more valuable it becomes.

As for confirmatory value, if accounting information provides feedback, it possesses confirmatory value. This means it gives confirmations or observations regarding previous evaluations, helping decision-makers verify or adjust their past or future evaluations (Abdul Halim & Muhammad, 2020, 480). Furthermore, IASB (2018, 13) indicates that both predictive and confirmatory values of accounting

information are interconnected; information that has predictive value often also holds confirmatory value. The relevance of information is also affected by its relative importance; in some cases, the nature of the information is sufficient to determine its relevance, while in other instances, the nature and financial value of the information are crucial. Information can be deemed of relative importance if an event, misrepresentation, or distortion affects the decisions made (Ramli, 2011, 41). The concept of relative importance varies based on the economic item to which the information pertains in the context of financial statements. Therefore, relative importance cannot be evaluated uniformly, as it varies from one item to another; what is significant for one economic entity may be less so for another.

Second Basic Characteristic: Honest Expression: This characteristic was initially classified as a secondary or reinforcing characteristic in earlier frameworks until 2010 when the IASB and FASB decided to elevate it to a basic characteristic in their joint framework. They replaced the characteristic of reliability with honest expression due to the lack of a clear definition for "reliability" and the absence of consensus on its meaning. The term "honest expression" is deemed clearer. The IASB defines it as "the extent to which financial reports accurately represent phenomena in numbers and words, and this information must be useful and honestly express the essence of the economic events it aims to convey, and should not just be an appropriate expression" (IASB, 2018, 13). Al-Maadidi and Jameel define honest expression as "the second basic property of accounting information that makes it useful for the decision-making process. Honest expression reflects the extent to which the figures reported in the financial statements correspond to actual events" (Jameel & Al-Maadidi, 2022, 1370).

The property of honest expression includes a set of secondary characteristics as follows:

- **Completeness**: Completeness means that financial statements must include all necessary information for users to understand the described phenomenon, as well as any necessary clarifications. This ensures that the information accurately reflects economic events and conditions.

- **Neutrality**: Information neutrality means that the information is free from bias in both selection and presentation. Neutrality indicates that information is impartial and not influenced in any way. However, neutrality does not imply that information lacks purpose or influence; rather, it must be neutral while still being capable of affecting users' decisions. The property of neutrality is further reinforced by exercising caution when dealing with events surrounded by uncertainty.

- **Absence of Errors**: This means that there are no mistakes or inaccuracies in describing economic events, and that the method used to generate the information in financial reports has been chosen and applied without errors. The "error-free" property refers to accuracy that is as close to ideal as possible, rather than complete accuracy in all aspects (IASB, 2018, 13).

Secondary Characteristics of Accounting Information: The Financial Accounting Standards Board (FASB) has identified the following secondary characteristics that must be present in accounting information, along with additional qualities directly related to it:

- **Comparability**: Defined by the FASB as the quality of information that enables users to perceive the similarities and differences in the financial reporting of two entities, which significantly affects the quality of financial reporting (Shuraki et al., 2020). The comparison process requires consistency in the application of accounting policies over time, meaning that the application of these policies should be stable. Additionally, the presentation of financial statements must remain consistent from one period to another in terms of classification. Entities are not permitted to change accounting policies except under specific circumstances that achieve suitability and reliability, or in compliance with local regulations or international standards, as stated in International Accounting Standard No. (8) (Hamidat & Khaddash, 2018).

- **Stability and Consistency**: The property of stability and consistency is crucial for achieving comparability. Organizations must apply the same accounting policies in their transactions and activities throughout successive accounting cycles. International accounting standards require organizations to

disclose any changes in accounting policies, along with the reasons for these changes and their implications.

Some also emphasize the property of appropriate timing: This characteristic ensures that accounting information is available to decision-makers at the time they need it, before it loses its capacity to influence decisions. In other words, older information may be less useful.

Understandability is another important property, ensuring clarity and reducing complexity in financial reports. This property emphasizes the need to classify, distinguish, and present information clearly and accurately, making it comprehensible to users who possess a reasonable understanding of commercial and economic activities and who carefully read and analyze information (IASB, 2018, 16).

Fourth: Practical Aspect: Presentation and Analysis of Data

First: Descriptive Analysis of the Questionnaire Axes

Duplicates, percentages, and relative importance indices will be extracted, along with arithmetic means, standard deviations, coefficients of variation, and the direction of the research sample for all paragraphs of the questionnaire axes.

1. **Descriptive Analysis of the Dimensions and Paragraphs of Big Data:** Duplicates and ratios were calculated, in addition to the arithmetic mean, standard deviation, coefficient of variation, and response ratio for each paragraph related to the variable (big data), as follows:

Table (2): Description and Diagnosis of Big Data Paragraphs

Paragraphs	Response Scale 5										Average	Standard deviation	Coefficient of variation	Response Percent
	Strongly Agree		Agree		Neutral (3)		Disagree (2)		I don't strongly agree.					
	C	%	C	%	C	%	C	%	C	%				
X 1	22	10.6	124	59.6	46	22.1	11	5.3	5	2.4	.707	0.82	22.1	74.1
X 2	54	26	124	59.6	19	9.1	6	2.9	5	2.4	038	0.827	20.5	80.8
X 3	48	23.1	132	63.5	23	11.1	3	1.4	2	1	0-062	0.696	17.1	81.3
X(4)	39	18.8	126	60.6	37	17.8	4	1.9	2	1	942	0.727	18.4	78.8
x 5	45	21.6	118	56.7	41	19.7	2	1	2	1	971	0.735	18.5	79.4
X(6)	43	20.7	124	59.6	31	14.9	8	3.8	2	1	3.952	0.772	19.5	79
X(7)	42	20.2	122	58.7	32	15.4	10	4.8	2	1	407	0.795	20.3	78.5
X(8)	45	21.6	95	45.7	46	22.1	19	9.1	3	1.4	769	0.94	24.9	75.4
X-9	37	17.8	125	60.1	37	17.8	6	2.9	3	1.4	.899	0.77	19.8	78

DIMENSION	20.0%	58.2%	16.7%	+3.7%	1.4%	.918	0.787	20.1%	78.4%
	78.3%			5.1%					

It is noted from Table (2) that big data is represented by paragraphs (X4_1 to X4_9), with **78.3%** of the respondents expressing agreement (strongly agree or agree) on the overall dimension, while the percentage of disagreement (disagree or strongly disagree) was **5.1%**, and **16.7%** remained neutral. This is supported by an arithmetic mean of **3.918**, a standard deviation of **0.787**, a coefficient of variation of **20.1%**, and a response intensity of **78.4%**.

Paragraph (X4_3), which states that "Big Data can be one of the factors that contribute to improving the quality of accounting information in the Iraqi environment," achieved the highest agreement rate of **86.6%**, with an arithmetic mean of **4.062**, a standard deviation of **0.696**, a coefficient of variation of **17.1%**, and a response intensity of **81.3%**. Conversely, the lowest agreement was found in paragraph (X4_8), which states that "Big data will lead to the completion of accounting reports and the presentation of information in them; thus, it will reduce asymmetry in information and improve credibility in accounting reports," with an equal percentage of **67.3%**. This paragraph had an arithmetic mean of **3.769**, a standard deviation of **0.94**, a coefficient of variation of **24.9%**, and a response intensity of **75.4%**.

The researchers believe that big data enhances the property of relevance by improving the evaluative ability of financial reports and helping institutions identify weaknesses in their sectors. Regarding the property of honest expression, big data improves the credibility of accounting reports and enhances the ability to predict institutional risks, achieving compatibility with beneficiaries and users. It also improves the neutrality and verification of information when it is used to analyze internal data that cannot be captured through traditional methods, such as phone calls, discussions, and meetings.

Additionally, big data affects the understandability feature by clarifying unclear information in financial reports, leading to a better understanding of the content presented in accounting reports, along with supporting information found in videos and discussions within annual reports. Big data promotes growth and rationalizes decision-making by being viewed as the future aspect of information. It enhances the overall understanding of institutional performance by providing insights into all activities and operations, as well as facilitating the assessment of strategic performance.

Furthermore, it simplifies the process of making comparisons between economic institutions for the current period or for previous periods. Like any digital transformation technology, big data allows for comparisons within an institution's different sectors as well as external comparisons with other institutions. With big data, financial data can be provided in a timely manner, moving away from traditional quarterly or annual reports, thus supporting data reporting effectively. Consequently, big data improves timeliness and positively impacts it. It also has a positive effect on the stability of information due to its operation in a fast-paced technical environment characterized by standardized measurement methods, which helps users obtain information quickly while ensuring that the data remains unmodified.

1. **Descriptive Analysis of the Paragraphs of the Accounting Information Quality Variable According to IFRS Standards:**

Duplicates and ratios were calculated, in addition to the arithmetic mean, standard deviation, coefficient of variation, and response ratio for the paragraphs related to the variable (quality of accounting information according to IFRS standards), as shown in the following table:

Table (3): Description and Diagnosis of Accounting Information Quality Paragraphs According to IFRS Standards

Paragraphs	Response Scale 5					Average	Standard deviation	Coefficient of variation	Response Percent
	Strongly Agree	Agree	Neutral (3)	Disagree (2)	I don't strongl				

									y agree.					
	C	%	C	%	C	%	C	%	C	%				
Y1	40	19.2	139	66.8	25	12	0	0	4	1.9	4.014	0.698	17.4	80.3
Y2	32	15.4	139	66.8	27	13	10	4.8	0	0	3.928	0.688	17.5	78.6
Y3	16	7.7	114	54.8	72	34.6	4	1.9	2	1	3 663	0.69	18.8	73.3 %
Y4	17	8.2	105	50.5	68	32.7	16	7.7	2	1	572	0.789	22.1	71.4
Y5	10	4.8	104	50	70	33.7	18	8.7	6	2.9	452.	0.833	24.1	69
DIMENSION	11.1		57.8%		25.2%		4.6%		1.4%		726	740	20.0 %	74-89-5
	68.8%						6.0%							

Source: Prepared by the researcher based on SPSS

It is noted from Table (3) that the digital transformation variable is represented by paragraphs (Y1 to Y5), with **68.8%** of the respondents expressing agreement (strongly agree or agree) regarding this variable. The percentage of disagreement (disagree or strongly disagree) was **6.0%**, while **25.2%** remained neutral. This finding is supported by an arithmetic mean of **3.726**, a standard deviation of **0.740**, a coefficient of variation of **20.0%**, and a response intensity of **74.5%**.

Paragraph (Y1), which states that "International Accounting Standards (IFRS), in their current state, are suitable for the use of big data in accounting work," achieved the highest agreement rate of **86%**, with an arithmetic mean of **4.014**, a standard deviation of **0.698**, a coefficient of variation of **17.4%**, and a response intensity of **80.3%**. In contrast, the lowest agreement came from paragraph (Y5), stating that "the regulatory authorities in Iraq provide adequate support and guidance for accounting work in adopting digital transformation in accordance with IFRS," which received an agreement rate of approximately **54.8%**. This paragraph had an arithmetic mean of **3.452**, a standard deviation of **0.833**, a coefficient of variation of **24.1%**, and a response intensity of **69.0%**.

Testing Correlation and Impact Hypotheses

First: Testing the First Main Hypothesis

H0.1: There is no statistically significant relationship between big data and the quality of accounting information according to IFRS.

To ascertain and verify the first main hypothesis, structural equation modeling (SEM) was employed to prove or disprove this hypothesis. Figure (1) illustrates this case. Table (4) presents the correlation values of the model, indicating the rejection of the first main hypothesis.

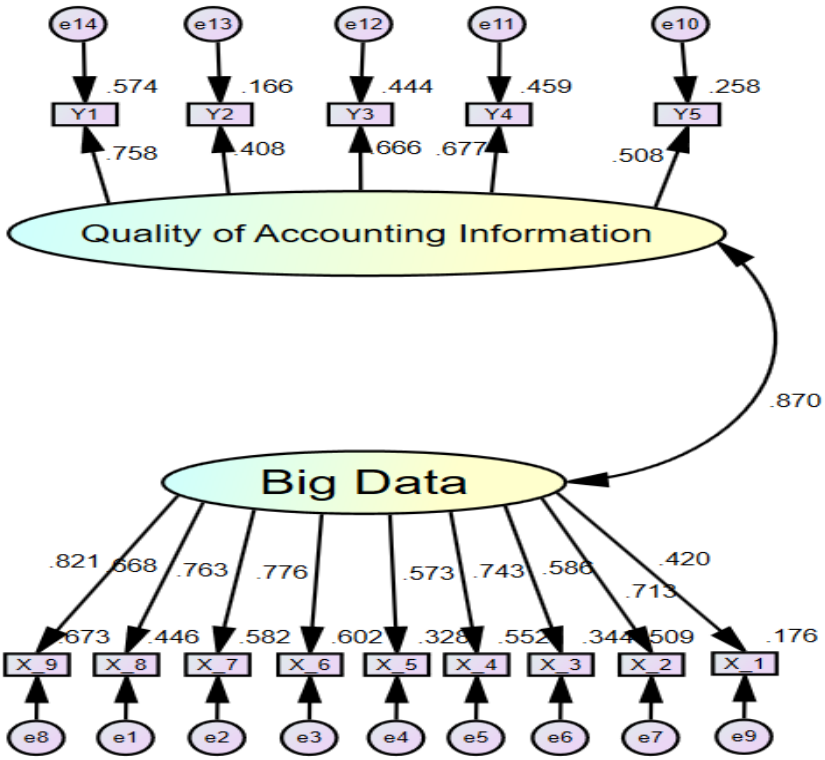


Figure (1): The Correlation Between Big Data and the Quality of Accounting Information According to IFRS

Source: Prepared by the researcher based on Amos V23.

Table (4): Analysis of the Correlation Between Big Data and the Quality of Accounting Information According to IFR

Variables	**Quality of accounting information according to IFRS**		
BIG DATA	Correlation coefficient	Probability Value	Sig
	0.870	0.000	Statistically significant

Source: Prepared by the researcher based on the outputs of Amos V23.

From Table (4), we note that there is a direct relationship between both big data and the quality of accounting information according to IFRS. The associated p-value corresponding to the correlation coefficient is less than the significance level of 0.05; therefore, we reject the null hypothesis and accept the alternative hypothesis. This indicates that:

"There is a statistically significant relationship between big data and the quality of accounting information according to IFRS."

Fourth: Testing the Second Main Hypothesis

H0.2: There is no statistically significant effect of big data on the quality of accounting information according to IFRS.

To verify and validate the second main hypothesis, we developed a structural equation model to either prove or disprove this hypothesis. Figure (2) illustrates this case. Table (5) presents the results of the regression analysis of the model, indicating the rejection of the second main hypothesis.

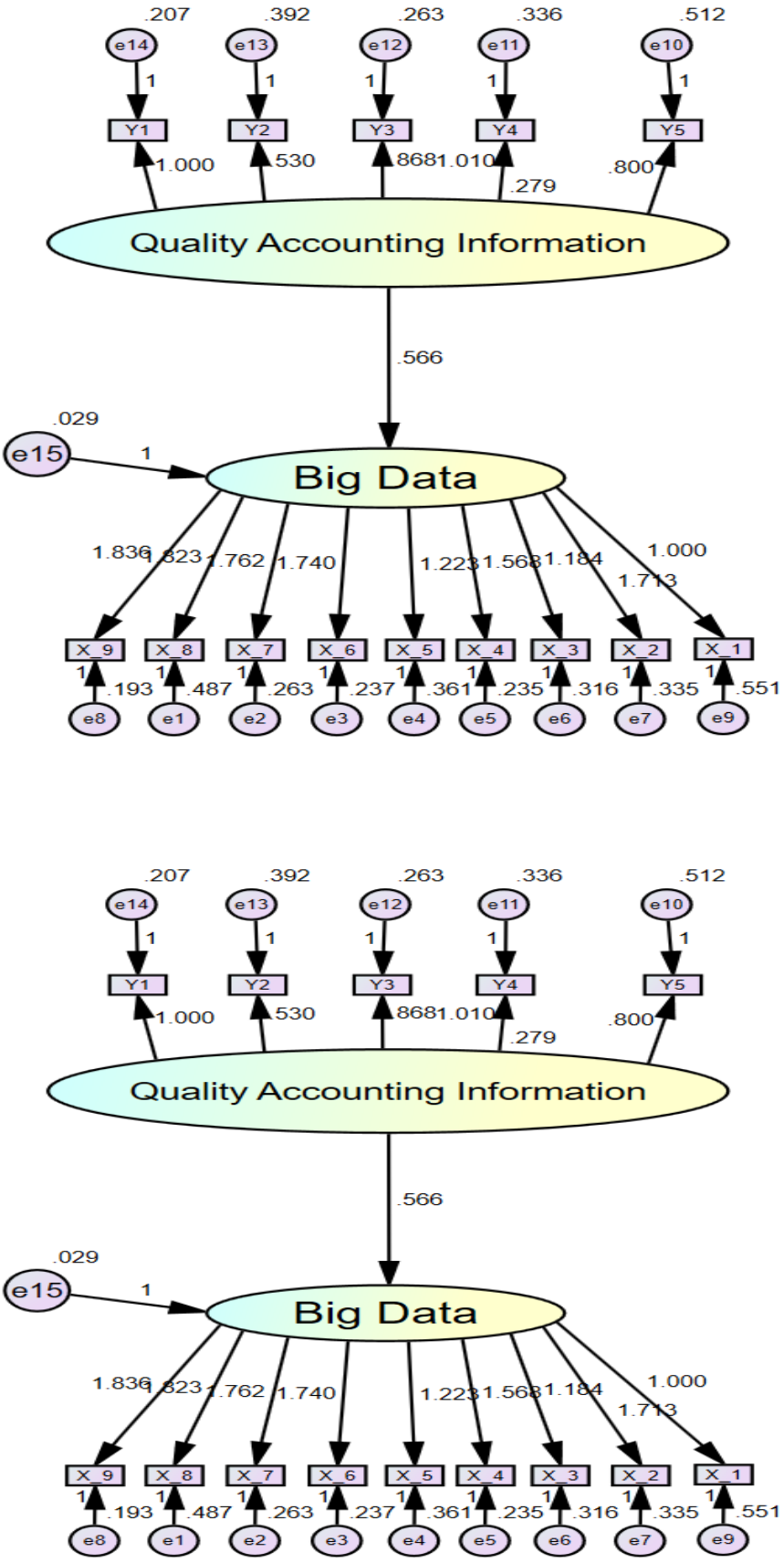


Figure (2): The Impact of Big Data on the Quality of Accounting Information According to IFRS
Source: Prepared by the researcher based on Amos V23.

Table (5): The Impact of Big Data on the Quality of Accounting Information According to IFRS

The independent variable	Approved Variable	Coefficient of regression	Probability Value	Sig
BIG DATA	**Quality of accounting information according to IFRS**	0.566	0.000	Statistically significant

Source: Prepared by the researcher based on Amos V23.

From Table (5), we note that there is a significant impact of big data on the quality of accounting information according to IFRS. The probabilistic value associated with the regression coefficient is less than the significance level of 0.05. Therefore, we reject the null hypothesis and accept the alternative hypothesis, which means:

"There is a statistically significant effect of big data on the quality of accounting information according to IFRS."

Results:

1. The concept of big data is relative and varies between institutions. Judging data as "big" is determined by its characteristics and the ability of relevant information systems to process and manage it.

2. Based on the results of the statistical analysis, the researchers conclude that there is a strong relationship of influence between the study variables (big data, quality of accounting information, IFRS).

3. The results of the field study showed a positive impact of big data on each of the qualitative characteristics of accounting information as follows:

a. Big data enhances convenience and identifies weaknesses in an organization's sectors.

b. Regarding the property of honest expression, big data improves the credibility of accounting reports, enhances the prediction of institutional risks, and helps achieve compatibility among beneficiaries and users.

c. It enhances the information's neutrality and verifiability by analyzing internal information that cannot be captured by traditional methods such as phone calls, discussions, and meetings.

d. Big data helps clarify unclear information in financial reports, leading to a better understanding of the content of accounting reports and additional information presented in videos and discussions found in annual reports, thus improving the property of understandability.

e. Big data facilitates comparisons between economic institutions for the current period or previous periods, as well as comparisons across different sectors and institutions.

f. Big data enhances timeliness by providing financial data promptly, rather than relying solely on traditional quarterly or annual reports. It also positively impacts information stability due to operating in a technical environment characterized by speed and standardized measurement methods, disallowing any modification of data and information.

4. **Improving Data Accuracy**: The study demonstrated that the use of big data can increase the accuracy of accounting information by providing more detailed and varied data, which facilitates advanced analysis.

5. **Increasing Transparency**: Big data has been shown to enhance the transparency of financial information, thereby boosting the confidence of investors and other stakeholders.

6. **Data Integration**: The study indicated that integrating big data with traditional accounting systems improves the quality of financial reporting and contributes to enhanced financial decision-making.

7. **Technological Challenges**: The study revealed several technical challenges associated with processing and analyzing big data, such as the need for strong technical infrastructure and specialized human competencies in data analysis.

8. **International Standards Position (IFRS)**: The study found that International Financial Reporting Standards (IFRS) have begun to consider the impact of big data on accounting, focusing on improving transparency and disclosure while providing guidance on handling multi-source data.

Recommendations:

1. There is a need to conduct workshops and training courses for institutional leaders and stakeholders to promote the culture of big data and its analysis across all areas of life, especially in the workplace.

2. Given the similarities between the characteristics of intangible assets and big data, big data can be recognized as an intangible asset in accounting, as it meets the recognition criteria established in International Accounting Standard (IAS 38).

3. **Boosting Technology Infrastructure**: Companies should invest in developing robust technology infrastructure capable of efficiently processing and analyzing big data, including the use of cloud computing and big data analytics technologies.

4. **Human Resources Training**: Organizations should offer advanced training programs in big data analysis and the use of sophisticated analytical tools to enhance employee capabilities in extracting maximum benefits from data.

5. **Improving the Integration Between Accounting Systems and Big Data**: Develop integrated accounting systems that facilitate seamless interaction between traditional data and big data to enhance the accuracy and efficiency of financial reporting.

6. **Promoting Compliance with IFRS Standards**: Organizations should stay updated on IFRS standards to ensure compliance and achieve the required transparency in financial reporting, while leveraging available guidance on handling big data.

7. **Develop Data Management Strategies**: Companies should formulate effective data management strategies that encompass collecting, organizing, and analyzing data in ways that ensure quality and reliability.

8. **Increase Investment in Research and Development**: Encourage ongoing research in big data and accounting to identify best practices and innovations that can further enhance the quality of accounting information.

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