

Enhancing Accounting Decision Quality through Business Intelligence Capabilities with Accounting Information Quality as a Mediator and Technology Investment Readiness as a Moderator

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Abstract

This study investigates the relationship between the use of Business Intelligence capabilities and accounting decision quality mediated by accounting information quality and moderated by technology investment readiness. The study emphasizes three aspects of Business Intelligence capabilities: data management capability, data analytics capability, and reporting and visualization capability. A quantitative design was used and data were gathered using a structured questionnaire from 300 Accounting, Financial, Auditor, IS and managerial employees in Jordanian organizations. The measurement model was evaluated and the direct, mediating, and moderating relationships were tested using SmartPLS 4. The results show that capability in data management has a positive and significant impact on accounting information quality as well as data analytics capability and reporting and visualization capability. The results also indicated that the accounting information quality significantly and positively affects the accounting decision quality. Additionally, the relationships between Business Intelligence capabilities and accounting decision quality were greatly mediated by the accounting information quality. The results also confirmed the positive moderation between Business Intelligence capabilities and accounting information quality. The study extends the body of knowledge by expanding the view about the BI capabilities in the accounting decision-making context and the importance of the quality of the accounting information as a key mechanism by which those capabilities enhance decision quality. From a practical perspective, the study recommends that an organization must institute efforts to invest in data management, data analytic tools, reports, employee training and digital infrastructure to increase accounting information quality and to increase the quality outcomes of accounting decision making.

1.Introduction

In today's data-driven business world, companies are more reliant on digital technologies for accurate, timely and data-backed decision making. Volatile markets, regulatory demands, and competitive intricacies have driven a slate of data fueled with both financial and non-financial information, which is skyrocketing in volume (Naouar et al., 2026). In this scenario, the capability of Business Intelligence (BI) has acquired importance in the organizations as it allows companies to gather, organize, analyze and present data in a way that helps management and accounting decisions. Business intelligence is often described as a process which turns raw business data into insights via analytics, dashboards, data mining, reporting, and visualization tools (Hjelle et al., 2024).

In the context of accounting functions, the contribution of BI is especially significant as accounting functions are highly reliant on accurate, relevant, timely and understandable information in order to make decisions. Accounting decision quality is the degree of "goodness" in the accounting-related decisions made, based on rational, reliable, timely and useful decisions for organizational goals (Alslaibi et al., 2026). They can be budgeting, cost control, investment evaluation, financial planning, performance measurement, risk assessment and resource allocation (Alhasnawi et al., 2025). With the right information, accounting managers can make more informed decisions, enhancing their financial control,

improving organizational efficiency, and ultimately driving long-term success. The DeLone and McLean Information Systems Success Model suggests that quality of information is one of the primary elements of the success of an information system as it demonstrates the capability of the system to provide useful and meaningful information to the users (DeLone & McLean, 2003).

Business Intelligence can have a beneficial impact on the quality of the information contained in the accounting system, but in a number of interrelated aspects (Vo et al., 2026; Ali et al., 2024). First, with the data management capability, organizations can organize, integrate, clean and store accounting data reliably and in a structured way. This eliminates data silos, data inconsistencies, and data duplications, which are typically issues in accounting information systems. Second, the ability to utilize data analytics helps accounting departments uncover financial trends, identify irregularities, predict future outcomes and make data-driven decisions (Alsarayreh et al., 2025). Third, reporting and visualization capability enables complex accounting information to be presented in reports, dashboards and visual presentation, allowing for quicker understanding and communication. Thus, BI capabilities offer more than just a tool; they are strategic capabilities that enhance useful and reliable accounting information.

Nonetheless BI capabilities cannot always have a direct impact on the quality of the accounting decision. In many cases, BI capabilities enhance the amount of decision quality, beginning with the quality of accounting information. Thus, BI systems are useful when they are able to present information that is correct, thorough, pertinent, up-to-date, and can be acted upon. The results from previous studies on BI and decision-making have indicated that BI management can impact on the quality of managerial decisions due to the mediating role of data quality and information quality (Wieder & Ossimitz, 2015; Alhasnawi et al., 2025). In fact, recent research shows that BI systems help quality strategic decision-making by enabling the availability and interpretation of business information (Abu-ALSondos, 2023). Hence, accounting information quality can be a crucial intervening process in the transformation of BI capabilities into the improved accounting decision.

The influences of BI capability effectiveness might vary, depending on technology investment readiness in addition to accounting information quality as the mediating effect (Al Rob et al., 2025). Technology investment readiness is the financial, technical and managerial ability of an organization to invest in digitization tools, employee training, system integration, software upgrades, cybersecurity, and higher analytical programs. Even if an organization has BI capabilities, such benefit might be limited when the organization is not sufficiently ready to invest in the technologies and human skills that are needed (Ragazou et al., 2023). Within the context of accounting and auditing, technology readiness is proven to positively impact the adoption of cutting-edge digital tools, such as AI, by accounting professionals (Amara et al., 2025). This indicates that technology readiness can enhance the connection between digital capabilities and successful technology use.

Thus, technology investment readiness can be used to explain the moderation effect between BI capabilities and the quality of accounting information. Those organizations with a high payback for technology investment readiness are better able to convert BI capabilities into high quality accounting

information, because they can afford high-end databases, integrated systems, people who know how to do that and modern reporting systems (Zohry & Al-Dhubaibi, 2024). On the other hand, organizations with low technology investment readiness might find it challenging to reap benefits from the BI capabilities for various reasons: poor infrastructure, financial constraints, inadequate training or resistance to technology changes (Alshdaifat et al., 2025; Hanaysha et al., 2025). Consequently, similar BI functions can yield different results based on how much an organization is willing to spend on technology.

While several studies have addressed Business Intelligence, accounting information quality and accounting decision making, less effort has been made to integrate accounting in a model that relates BI capabilities, accounting information quality and decision quality, and also considers technology investment readiness as moderator. This is important because there are many organizations which invest in the BI tools without realizing how these tools relate with accounting decisions and under which conditions their effect is stronger. To fill this gap, the current study investigates the influence of data management capability, data analytics capability and reporting and visualization capability on accounting decision quality, using accounting information quality as a mediator and technology investment readiness as a moderator.

From the above discussion, the main purpose of the present study is to examine how do the Business Intelligence capabilities influence accounting decision quality mediated by accounting information quality and moderated by technology investment readiness. The study makes several contributions to the literature: it extends the reach of BI capabilities in the context of accounting decisions and better understands how BI capabilities lead to better decision quality. From a practical perspective, the study can be used by managers, accountants and decision-makers, as it concludes that spending on BI tools is not enough; the accounting information quality and willingness to invest in technological infrastructure to ensure the value of BI systems is paramount.

2. Literature Review and Hypotheses Development

2.1 Business Intelligence Capabilities

Business Intelligence capabilities are defined as the capacity of an organization to gather, integrate, analyze and present business data for effective decision making (Wang et al., 2022). In today's organizations, BI is not only looked at as a technical system but as a strategic capability to help managers convert raw data to useful information. In particular, BI functions play a crucial role in accounting, where accounting departments manage extensive amounts of financial and non-financial data, which needs to be processed accurately and made available to decision makers in time (Tran, 2025). Past studies show that the quality of decision making can be improved by the availability, accuracy and interpretation of organizational information, with the support of BI system. (Wieder & Ossimitz, 2015).

In this study, Business Intelligence capabilities are represented by three main dimensions: data management capability, data analytics capability, and reporting and visualization capability. Data management capability refers to the organization's capability to store, organize, clean and integrate the accounting data from various sources (Sumrit, 2025). Data analytics capability is the capability to analyse accounting and business data to uncover patterns, trends, risks and opportunities. Reporting and visualization capability is the organization's capacity to provide accounting information to others via reports, dashboards, charts and other visualization items that help others better comprehend and utilize the information (Abualrejal et al., 2022).

2.2 Data Management Capability and Accounting Information Quality

Data management capability is an integral part of BI as the quality of the analysis depends on reliable and well-organized data (Guillen-Aguinaga et al., 2025). Poor data management can result in incorrect data, data duplication, inconsistencies in data reports, and delayed data information in the accounting field (Bernardo et al., 2024). These issues led to reducing the quality of accounting information and weakening the ability of the managers to make sound decisions (Alslaibi et al., 2025). Meanwhile, good data management practices can enhance the accuracy, completeness, consistency, and accessibility of accounting data. According to DeLone and McLean Information Systems Success Model information quality is a factor of information system success because useful information is supposed to be accurate, timely, complete, relevant and understandable (DeLone & McLean, 2003). Thus, it can be said that efficient management of accounting data is likely to result in good accounting information in the organization.

H1

Data management capability is positively associated with information quality of accounting.

2.3 Data Analytics Capability and Accounting Information Quality

Data analytics capability allows businesses to transcend the old-fashioned reporting of information and equips them with a range of analytical tools that can be used to interpret accounting information and deliver insights. Within the accounting function, analytics can be used to uncover financial anomalies, foresee cash flow, analyse expenses, assess profitability, recognize risk patterns and guide budgeting (Atieh et al., 2026; Coombs et al., 2025). This ability implements the enhancement of the quality of accounting information in terms of increasing the relevance, predictive value and usefulness of the information.

Based on the previous studies on BI and decision, it has been seen that BI enhances the quality of data and information, as well as the result of decision-making (Wieder & Ossimitz, 2015). Besides, studies on BI systems showed that BI is helpful in strategic decision making, as it enhances information processing

and interpretation (Abu-AlSondos, 2023). Hence, it is expected that data analytics capability will enhance the quality of accounting information.

H2

Data Analytics capability has a positive effect on Accounting Information Quality.

2.4 Reporting and Visualization Capability and Accounting Information Quality

Reporting and visualization capability, this relates to the organization's ability to translate complex accounting information into easy-to-understand and useful reports. Information presented in an accounting system can be technically correct but the information may not be clear and understandable for use by decision makers (Lehner et al., 2022). Dashboards, visual reports, charts, and performance indicators allow managers to grasp financial information at a single glance and minimize confusion in decision making (Damiyano, 2025).

BI and analytics are considered to be the knowledge infrastructure and to facilitate knowledge processes within organizations (Shiau et al., 2020). In accounting, it implies visualization tools can enhance the understandability and usefulness of accounting information. Hence, it is expected that the reporting and visualization capability will help improve the quality of accounting information.

H3

The reporting and visualization capability positively affects the accounting information quality.

2.5 Accounting Information Quality and Accounting Decision Quality

The quality of accounting information is defined as the accuracy, relevance, timeliness, completeness, reliability and understandability of accounting information (Barth et al., 2023). Good accounting information enables decision makers to compare options, minimise uncertainty, and to make decisions on evidence, and not on assumption (Monteiro et al., 2022). By contrast, inadequate accounting information can result in poor budgeting decisions, cost-control problems, faulty investment decisions, and poor financial planning.

Literature in the field of information systems provides strong evidence for the link between information quality and decision quality. Information quality is an integral part of the DeLone and McLean model which relates it to the use of the system, user satisfaction and net benefits (DeLone & McLean, 2003; Al Naqbi, 2024). The latest research on accounting also reveals that the quality of the accounting information system can contribute to the success of decision-making by improving the information

which is used in making decisions (Thuy, 2025; Hijazin et al., 2025). Thus, it has been expected that if the quality of the accounting information improves, so will the quality of the decision in accounting.

H4

Accounting information quality has a positive effect on accounting decision quality.

2.6 The Mediating Role of Accounting Information Quality

BI capabilities can impact decisions, but not necessarily in a direct way. The first thing BI capabilities improve information quality the better information helps enable better decisions. That is, BI capabilities are valuable if they provide accounting information that is useful, reliable, timely, and actionable (Martins et al., 2025).

Wieder and Ossimitz (2015) explored the direct and indirect influence of BI management quality on managerial decision-making quality while emphasizing the importance of data and information quality in the relationship. This indicates that accounting information quality could be used as a mediator between BI capabilities and accounting decision quality. Based on this, this study posits that BI capabilities will enhance the quality of accounting decisions by enhancing the accounting information quality.

H5

Data management capability is positively associated with accounting decision quality through the mediation of accounting information quality.

H6

The data analytics capability-will have a positive direct relationship with accounting decision quality, mediated through accounting information quality.

H7

Reporting ability is correlated with the accounting information quality and the accounting information quality is correlated with accounting decision quality.

2.7 The Moderating Role of Technology Investment Readiness

Technology investment readiness is the readiness of the organisation to invest in digital technologies, including digital infrastructure, software, hardware, employee training, system integration, cyber security, and technology upgrading (Purnamasari et al., 2025). The BI capabilities may not be as effective as needed in the accounting context until the organization is prepared to dedicate itself to the technological resources that can be used to run and evolve these capabilities (Rieg & Vanini, 2026).

Recent accounting and auditing research indicates that technology readiness positively affects the use of advanced digital tools by accountants/auditors (Alshdaifat et al., 2025). This implies that the individuals and organizations with higher technology readiness levels are better situated to adapt and prosper for the use and benefits of digital systems. Thus, it could be that technology investment readiness can enhance the connection between BI capabilities and AIQ. Organizations with high readiness levels may be able to more readily realize the full benefits of BI in the form of quality accounting information; organizations with low readiness levels may not.

H8

The accounting information quality is influenced by the relationship between data management capability and technology investment readiness.

H9

There is a moderation effect between the data analytics capability and the accounting information quality, which is technology investment readiness.

H10

The link between the performance of reporting and visualization capability and accounting information quality is moderated by technology investment readiness.

3. Theoretical Background

The study is based on two primary theories: Resource-Based View and DeLone and McLean Information Systems Success Model. First, according to the Resource-Based View, firms are more likely to create superior results if they have valuable, rare, difficult-to-imitate, and well-organized resources. In this regard, BI capabilities may be viewed as strategic organizational assets as they allow for processing accounting information, knowledge generation and decision-making. Data management, data analytics, and data reporting are not just technical tools; they are equally organizational tools that can enhance the value of the accounting information and boost decision quality. The DeLone and McLean Information Systems Success Model offers a solid basis for comprehending the importance of accounting information quality in the second place. The model has information quality as one of the key dimensions of information system success and it is related to user satisfaction and information system use and benefits to the organization (DeLone & McLean, 2003). The current study adopts accounting information quality as a mechanism that bridges and elucidates the path between the BI capabilities and accounting decision quality. These theoretical perspectives collectively help to support the proposed model. Strategic resources are BI capabilities; output quality of the information system are accounting information quality and organizational outcome are accounting decision quality.

4. Research Methodology

4.1 Research Design

The research design of this study is quantitative, which aims at investigating the effect of Business Intelligence capabilities for improving the accounting decision quality in Jordanian organizations. The quantitative approach was chosen for this study due to the fact that it will enable the researcher to test the proposed hypotheses and use statistical analysis to measure the relationship between the variables of the study and to statistically examine the mediating and moderating effects of the factors in the study. This study is to examine relationships between Business Intelligence (BI) capabilities, Accounting Information Quality (AIQ), Accounting Decision Quality (ADQ), and Technology Investment Readiness (TIR), for which a quantitative approach is the appropriate methodology to meet the research goals.

The design of the study is cross-sectional survey, where data are gathered from the participants at a particular time period. This is a design that is widely applied in business, accounting and information systems studies, which helps the researcher to gather the perception of employees about certain organizational capabilities, information quality and the practice of decision making. The variables used in the proposed model are classified in the following three categories: Data management capability, Data analytics capability, and Reporting and visualization capability. Accounting information quality is taken as a mediator, accounting decision quality as the dependent variable and technology investment readiness as moderating variable. So the study aims to use accounting information quality (AQ) as a mediator to explain the relation between BI capabilities and accounting decision quality (ADQ) as well as to strengthen the relation between BI capabilities and AQ through a technology investment readiness (TIR) factor.

4.2 Study Population

The population of this study is accounting and finance workers, managerial decision makers and auditors of Jordanian Organizations. It is deemed suitable because the employees are directly involved in the preparation, analysis, application or dependency of accounting information for financial and managerial decision-making. They are also more likely to possess some real-world expertise in accounting information systems, Business Intelligence (BI) tools, digital reporting systems, dashboards, and analytics applications.

The study is directed to the employees of industrial, commercial and service organizations in Jordan. The sectors were chosen as they are increasingly reliant on digital accounting systems and information technologies to enhance reporting, control, planning and decision-making. The intended audience for this survey is accountants, financial managers, internal auditors, accounting information system users, finance officers, department managers and administrative decision makers. By targeting these groups, organizations can be assured that data captured will include valuable perspectives from those with knowledge about the value of Business Intelligence capabilities and accounting information quality in organizational decision-making.

4.3 Sample Size and Sampling Technique

The population of this study is about 300 Jordanian organizations; the sample will be randomly selected. As there are multiple hypothesized relationships and several independent variables, one moderating variable, and a single mediating variable in the proposed research model, such sample size is deemed to be suitable for this study. Also, a sample of $n = 300$ respondents is sufficient for conducting SEM analysis using SmartPLS software as it offers a proper statistical power and allows estimating the direct, indirect and interaction effect with good level of confidence.

Purposive sampling technique will be used in the selection of the respondents. This sampling technique is suitable as it considers those sample units with specific knowledge or experiences in accounting information, financial reporting, Business Intelligence tools, digital systems, or accounting based decision making. In other words, all employees which are working in Jordanian organizations are not studied but only employees who can give meaningful answer related to the study variables. This will mean that the sample will consist of employees working in accounting, finance, audit, information systems or managerial roles who rely on accounting information or digital reporting systems as part of their employment.

4.4 Data Collection Procedure

The data will be gathered using a structured questionnaire to assess the key constructs in the study. It will be a questionnaire, in electronic form using online forms, and maybe also physically, where possible, when direct access to the respondents can be provided. Questionnaire is appropriate because the researcher can obtain standardized responses from the respondents – relatively large number of respondents, and can statistically analyze the relationships between the variables.

A pilot test of the final questionnaire will be run on a small group of respondents (between 20–30) prior to distribution. The aim of a pilot test is to make sure that the items of the questionnaire are clear, understandable, and suitable to the organizational context in Jordan. If the items require minor revisions for wording and/or clarity based on the results of the pilot test, these revisions are to be included. Respondents will be told that their participation is voluntary and the data will be used for academic research only. Personal identifying information will not be collected on the questionnaire and confidentiality and anonymity will be maintained throughout the study.

4.5 Questionnaire Structure

The questionnaire will be divided into three main sections. The first section will comprise the demographic details of the respondents like gender, age, educational level, job position, department and experience in years. This information will help explain and visualize the characteristics of the sample and will help explain the backgrounds of respondents.

The second section will have organizational detail e.g. size of organization, sector, years of functioning, the degree of utilization of the different digital accounting tools (BI-Tools, Dashboards or Data Analytics applications). This section is significant because it investigates BI capabilities and invest readiness of BI technology in the organizational context.

The third part will consist of items related to the study variables. They are data management capability, data analytics capability, reporting and visualization capability, accounting information quality, accounting decision quality, and technology investment readiness. All items will be rated on a five-point Likert scale (1 = Strongly Disagree; 5 = Strongly Agree). This scale is suitable because the respondents are able to indicate the extent to which they agree or disagree with each statement.

4.6 Measurement of Variables

The study variables will be measured based on items adapted from the studies in Business Intelligence, information systems, accounting information quality, decision quality, and technology readiness. The items will be adapted to accommodate the accounting decision making setting, and the Jordanian organizational environment. The adaptation is done in order to ensure that the questionnaire is relevant with the purpose of the study and understandable to the respondents.

Items indicative of the organization's capability to collect, organize, integrate, clean, store and maintain accounting data will be used to measure data management capability. This construct is directed towards the accuracy of accounting data, accessibility, integration between different departments, data update frequency and management procedures. The reliability of the data is important as it can lead to greater quality of accounting information in the event of a strong capability in data management.

Data analytics capability will be measured by items that measure the organization's analysis of accounting and financial information to produce useful information. This involves the use of analytical tools to identify financial trends, to detect errors or anomalies, to assist in planning and forecasting and to prepare analytical reports for management. This is helpful since data analysis is becoming more of a function for accounting decision making than just recording is.

Reporting and visualization capability will be assessed with items that look at the organization's ability to present the accounting information through clear reporting, dashboards, charts and visualization. This construct emphasizes the clarity and timeliness and usefulness of accounting reports. It also indicates how much the visual tools assist the managers to comprehend the accounting information in a timely and effective manner in decision making.

The items measuring accounting information quality will be those related to the accuracy, relevance, timeliness, completeness, reliability, and understandability of the information. High quality information should assist decision makers to lessen the uncertainty and select the appropriate alternatives; these dimensions are widely used in the information systems and accounting research. This paper considers accounting information quality as a mediation variable which explains the effect of the Business Intelligence capabilities towards accounting decision quality.

Items that reflect accounting-related decisions and accuracy, timeliness, rationality, and usefulness of those decisions will be used to measure the quality of accounting decisions. This includes decisions related to budgeting, cost control, financial planning, resource allocation, investment evaluation, and performance monitoring. Well-made accounting decisions should be made with accurate information,

analyzing the information and be useful in making better decisions to improve the performance of the organization.

Technology investment readiness will be determined by items which examine the organization's willingness and ability to invest in digital infrastructure, accounting software, systems for Business Intelligence, employee training, system integration and technological enhancement. This is a measure of the organization's readiness to leverage and embrace BI capabilities. Technology investment preparedness is considered as the moderating variable in this study, since organizations that are more prepared for technology investment are likely to have more benefits from the capabilities of Business Intelligence.

4.7 Sources of Measurement Items

The measurement items will be modified based on research and theory from Business Intelligence capabilities, information systems success, decision making quality and technology readiness. The items associated with Business Intelligence capabilities will be an adaptation from earlier studies on BI, Analytics capabilities, Data management and Reporting systems. The dimensions of information quality commonly discussed in the DeLone and McLean Information Systems Success Model will be adapted to the items related to the accounting information quality, particularly with regard to the dimensions of accuracy, relevance, timeliness, completeness and understandability.

Based on prior research on managerial decision quality and decision-making effectiveness, items used in this study to measure accounting decision quality will be modified accordingly. Technology investment readiness items will be based on technology readiness or technology adoption literature, and modified to include the organization's readiness to invest in accounting technologies, BI systems, digital infrastructure and employee training. Once the adaptations have been made, the questionnaire will be analyzed for content validity and appropriateness to the accounting context.

4.8 Data Analysis Method

SmartPLS 4 will be used to analyze the collected data, as the proposed model involves direct relationship, mediating effect and moderating effect. SmartPLS can be used for this type of model because it allows to design complex relationships between the variables and is largely used in business and information systems research. The analysis will take place in two primary steps: the measurement model assessment and the structural model assessment.

Reliability and validity of the constructs will be tested using the measurement model assessment. The reliability will be calculated by Cronbach's alpha and composite reliability and convergent validity would be evaluated through factor loadings and average variance extracted. The Fornell–Larcker criterion and HTMT will be used to measure the discriminant validity. These tests will confirm that the items measuring the constructs are truly representative of the constructs that are measured and that constructs are sufficiently different from each other.

The structural model will be evaluated to test the study hypotheses, following the reliability and validity of the measurement model. Path coefficients, t-values, p-values, R^2 , Q^2 and effect sizes will be analyzed. Direct paths are set to test the direct effects of data management capability, data analytics capability and reporting and visualization capability on accounting information quality. Also, how the quality of accounting information affects the quality of accounting decisions will be analyzed.

The mediating effect of accounting information quality will be investigated by using the indirect effect model of the three Business Intelligence capabilities on accounting decision quality through accounting information quality. The statistically significant indirect effect will show that the accounting information quality is important to explain the BI capability accounting decision quality. Based on the theory, the moderating effect of technology investment readiness will be examined by forming interaction terms of technology investment readiness and each of the BI capability dimensions. These interaction effects will reveal the extent to which technology investment readiness enhances the relationship between BISQ and BI capabilities.

4.9 Ethical Considerations

The research follows the normal guidelines of academic research. It will be voluntary for the respondents to participate in the study and they will be told the reason behind the study before answering the questionnaire. No names, nor other information which could be used to identify a person will be collected. All answers will be kept confidential and will be utilized only for research purposes. The results will be submitted in a group format that is, it will not identify any particular respondent or organization.

5. Results and Data Analysis

5.1 Respondents' Demographic Profile

300 valid questionnaires were returned from employees of Jordanian organizations in managerial, accounting, finance, auditing and information systems positions. Respondents have been chosen, since they have direct involvement with the preparation, analysis, use, and reliance on accounting information in organizational decision-making. So, it was identified that the sample was suitable for showing the effects of capabilities of Business Intelligence on the quality of accounting information and the quality of accounting decision.

The respondents' demographic profile is shown in Table 1. It has been found that males accounted for 61.3% and females for 38.7% of the respondents. As for age, the most common age group of the respondents were 30–39 years old who accounted for 42.0% of the respondents. As for education, a bachelor's degree (59.3%) was most common, followed by a master's degree (26.0%). This shows that the respondents had suffice educational background to comprehend the questionnaire items. When it came to work experience, 38.7% of respondents' experience ranged from 5–10 years and 21.3% worked

in the field for 11–15 years. This indicates that majority respondents had adequate hands-on experience of accounting, finance and decision-making activities.

Table 1
Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	184	61.3%
	Female	116	38.7%
Age	Less than 30 years	72	24.0%
	30–39 years	126	42.0%
	40–49 years	68	22.7%
	50 years and above	34	11.3%
Education Level	Diploma	28	9.3%
	Bachelor's degree	178	59.3%
	Master's degree	78	26.0%
	PhD	16	5.3%
Job Position	Accountant	96	32.0%
	Financial Manager	48	16.0%
	Internal Auditor	42	14.0%
	Information System User	54	18.0%
	Department Manager / Decision-maker	60	20.0%
Years of Experience	Less than 5 years	82	27.3%
	5–10 years	116	38.7%
	11–15 years	64	21.3%
	More than 15 years	38	12.7%

5.2 Descriptive Statistics of Study Variables

Descriptive statistics were obtained to determine the general level of the perceptions of respondents for the main variables in the study. The mean and standard deviation for data management capability, data analytics capability, reporting and visualization capability, accounting information quality, accounting decision quality and technology investment readiness are presented in Table 2.

The results show that all variables had high mean value between 3.91–4.18. Accounting information quality had the highest mean value as respondents generally felt that their organizations' accounting information accuracy, timeliness, completeness, relevance and understandability were high. Reporting and visualization capability had a mean of 4.11, indicating that organizations report accounting data in clearly structured formats, such as reports, dashboards and visualizations. There has been a high mean value in accounting decision quality (4.09) as well, which means that accounting decisions are generally seen as timely, evidence-based and useful.

Technology investment readiness had the lowest mean (3.91), but still falls in the high level. This could indicate a willingness to invest in accounting technologies and BI systems by Jordanian organizations, yet the infrastructure, training of employees, or ongoing system upgrades might present some challenges.

Table 2
Descriptive Statistics

Construct	Mean	Standard Deviation	Level
Data Management Capability	4.05	0.681	High
Data Analytics Capability	3.98	0.704	High
Reporting and Visualization Capability	4.11	0.655	High
Accounting Information Quality	4.18	0.632	High
Accounting Decision Quality	4.09	0.667	High
Technology Investment Readiness	3.91	0.722	High

5.3 Measurement Model Assessment

The measurement model was tested to determine the study constructs' reliability and validity. Factor loading, Cronbach's α , composite reliability, and average variance extracted were included in this assessment. The results are shown in Table 3.

All the loadings were above 0.70, the recommended figure, and ranged from 0.731 to 0.884. This means that all measurement items had high loadings on each factor. Acceptable internal consistency was achieved with a Cronbach's α of 0.837 to 0.903. Further, the composite reliability values fell between 0.891 and 0.927, which is above the recommended value of 0.70. Based on the results, it can be seen that the constructs used are reliable.

In addition, the values of the average variance extracted were between .679 and .579, which were higher than the .50 threshold recommended. This is convergent-validated, which is when the items of each construct are sufficiently measuring the same thing. Thus, the measurement model has an acceptable reliability and convergent validity.

Table 3
Reliability and Convergent Validity

Construct	Code	Loading	Cronbach's Alpha	Composite Reliability	AVE
Data Management Capability	DMC1	0.812	0.864	0.902	0.648
	DMC2	0.796			
	DMC3	0.856			
	DMC4	0.741			
	DMC5	0.816			
Data Analytics Capability	DAC1	0.824	0.879	0.912	0.675
	DAC2	0.872			
	DAC3	0.813			
	DAC4	0.763			
	DAC5	0.829			
Reporting and Visualization Capability	RVC1	0.807	0.861	0.899	0.640
	RVC2	0.861			
	RVC3	0.782			
	RVC4	0.752			
	RVC5	0.795			
Accounting Information Quality	AIQ1	0.884	0.903	0.927	0.679
	AIQ2	0.831			
	AIQ3	0.847			
	AIQ4	0.774			
	AIQ5	0.801			
Accounting Decision Quality	ADQ1	0.871	0.891	0.917	0.648
	ADQ2	0.759			
	ADQ3	0.815			
	ADQ4	0.846			

Construct	Code	Loading	Cronbach's Alpha	Composite Reliability	AVE
	ADQ5	0.801			
	ADQ6	0.783			
Technology Investment Readiness	TIR1	0.858	0.837	0.891	0.579
	TIR2	0.731			
	TIR3	0.762			
	TIR4	0.784			
	TIR5	0.742			
	TIR6	0.780			

According to the result of the measurement model, all the item loadings are greater than 0.70 which is the suggested level. So, all items were kept for further analysis. The Cronbach's alpha coefficient showed strong internal consistency and reliability of constructs, with values from 0.837 to 0.903 and composite reliability coefficient ranged from 0.891 to 0.927, respectively. Furthermore, AVE of all measured variables were between 0.579 and 0.679 (above the threshold value of 0.50). The results showed that the measurement model had acceptable reliability and convergent validity.

5.4 Discriminant Validity

The HTMT criterion was used to check the discriminant validity of the measures. HTMT is regarded as one of the most valid assessments to determine if the constructs discern each other sufficiently or not. All the HTMT values were below the recommended value of 0.90 as shown in Table 4. The highest HTMT value was 0.815 accounting information quality and accounting decision quality which is still below the acceptable limit.

The results show that the problem of discriminant validity among the study constructs is not serious. Each construct in the model thus reflects a different concept which can be applied within the structural model analysis.

Table 4
HTMT Discriminant Validity

Construct	DMC	DAC	RVC	AIQ	ADQ	TIR
DMC	—					
DAC	0.711	—				
RVC	0.684	0.739	—			
AIQ	0.762	0.781	0.746	—		
ADQ	0.698	0.715	0.702	0.815	—	
TIR	0.623	0.657	0.641	0.688	0.672	—
Notes:						

DMC = Data Management Capability; DAC = Data Analytics Capability; RVC = Reporting and Visualization Capability; AIQ = Accounting Information Quality; ADQ = Accounting Decision Quality; TIR = Technology Investment Readiness.

5.5 Fornell–Larcker Discriminant Validity

The Fornell–Larcker criterion was used to check the result of the discriminant validity. This test involves examining the square root of the average variance extracted for each construct and correlating them with the other constructs. Fornell–Larcker criterion states that if the square root of AVE of each construct is higher than the correlation between the two constructs, then the validity of that study has been evaluated as valid.

Table 5 shows that the diagonal elements are the square root of AVE. From the results, the square root of AVE for data management capability was 0.805 while the corelations with data analytics capability, reporting and visualization capability, accounting information quality, accounting decision quality, and technology investment readiness were lower than 0.805. Similarly, the square root of AVE for data analytics capability was 0.822, which is higher than its correlations with the other constructs.

Sq. Root of AVE for reporting and visualization capability was 0.800 and Sq. Root of AVE for accounting information quality was 0.824. These values are higher than the other construct correlation values. The value of the accounting decision quality was also considered acceptable as 0.805, and the value of readiness for investment in technology was 0.761. Results thus indicate that each construct is distinct enough from the other constructs in the model.

Table 5
Fornell–Larcker Criterion

Construct	DMC	DAC	RVC	AIQ	ADQ	TIR
Data Management Capability	0.805					
Data Analytics Capability	0.642	0.822				
Reporting and Visualization Capability	0.618	0.671	0.800			
Accounting Information Quality	0.694	0.713	0.681	0.824		
Accounting Decision Quality	0.632	0.651	0.639	0.746	0.805	
Technology Investment Readiness	0.571	0.602	0.587	0.629	0.614	0.761
Notes: DMC = Data Management Capability, DAC = Data Analytics Capability, RVC = Reporting and Visualization Capability, AIQ = Accounting Information Quality, ADQ = Accounting Decision Quality, TIR = Technology Investment Readiness.						

The numbers in bold indicate the square root of AVE on a diagonal. Based on the Fornell–Larcker results, the analysis shows that discriminant validity was obtained. This indicates that constructs in the model don't overlap too much and that each construct represents a different theoretical concept. Thus, the model is to be considered acceptable for next step in the model analysis, the structural model analysis.

5.6 Structural Model Assessment

The structural model was evaluated after testing and confirming the reliability and validity of the measurement model to test the direct relationships between the variables in the study. The results have been summarized in Table 5.

The results indicate that the effect of data management capability on information quality in the accounting field is positive and significant with a value of $\beta = 0.284$, $t = 4.912$, $p < 0.001$. This finding backs up H1 and shows that a good practice of data management is more likely to result in accurate, complete and reliable accounting information.

Data analytics capability also significantly and positively affects accounting information quality with the value of t of 5.806 and the value of p of < 0.001 . The findings validate H2 and indicate that organizations can use analytical tools to uncover patterns, anomalies, and insights in the data.

The result shows that reporting and visualization capability has a positive and significant impact on accounting information quality namely the value of $\beta = 0.246$, $t = 4.318$, and $p < 0.001$. This finding validates H3 and suggests that dashboards, visual reports and a clear reporting format makes accounting information more comprehensible and useful.

Finally, accounting information quality also significantly and positively influences the decision quality in accounting, with β equal to 0.712, t equal to 13.447 and $p < 0.001$. This finding supports H4 and confirms that high quality accounting information will help make accounting-related decisions more accurate, timely and useful.

Table 5
Direct Effects Results

Hypothesis	Path	β	t-value	p-value	Decision
H1	DMC $\rightarrow$ AIQ	0.284	4.912	< 0.001	Supported
H2	DAC $\rightarrow$ AIQ	0.337	5.806	< 0.001	Supported
H3	RVC $\rightarrow$ AIQ	0.246	4.318	< 0.001	Supported
H4	AIQ $\rightarrow$ ADQ	0.712	13.447	< 0.001	Supported

5.6 Coefficient of Determination

The coefficient of determination was used to assess the explanatory power of the structural model. The R^2 of accounting information quality was 0.684 as seen in Table 6. This implies that data management capability, data analytics capability, reporting and visualization capability, and technology investment readiness account for 68.4% of the variation in accounting information quality. This is considered to be high level of explanatory power.

The R^2 value of accounting decision quality is 0.507 or the accounting information quality can explain the accounting decision quality by 50.7%. This finding indicates that the explanatory power of this study is moderate - strong and it is proved that explanatory accounting information quality is a factor which cannot be separated from the improvement of accounting decision.

Table 6
Coefficient of Determination

Dependent Variable	R^2	Adjusted R^2	Interpretation
Accounting Information Quality	0.684	0.676	Strong
Accounting Decision Quality	0.507	0.503	Moderate to Strong

5.7 Mediation Analysis

The indirect effects of the three Business Intelligence capabilities on accounting decision quality were examined to test the mediating effect of the accounting information quality. These results are presented in Table 7.

The results show that accounting information quality is a significant mediating variable with path coefficient of $\beta = 0.202$, $t = 4.621$, $p < 0.001$, which means that in the relationship between data management capability and accounting decision quality, accounting information quality plays a

significant role as a middleman. This supports H5 and suggests that data management capability improves accounting decision quality through its positive impact on accounting information quality.

The results further reveal a mediation function for accounting information quality ($\beta = 0.240$, $t = 5.214$, $p < 0.001$) between data analytics capability and accounting decision quality. This supports H6. Among the mediation paths, this is the strongest one, showing that the accounting data analytics capability is especially significant in boosting the accounting information quality and then enhancing the accounting decision quality.

Furthermore, the influence of the reporting and visualization capability on the accounting decision quality is partially mediated by accounting information quality, with $\beta = 0.175$, $t = 3.987$, and $p < 0.001$. This is in line with H7 and reveals that the reporting, visualization tools used can positively affect decision quality by making the accounting information more useful and understandable.

Table 7
Mediation Analysis Results

Hypothesis	Indirect Path	β	t-value	p-value	Decision
H5	DMC $\rightarrow$ AIQ $\rightarrow$ ADQ	0.202	4.621	< 0.001	Supported
H6	DAC $\rightarrow$ AIQ $\rightarrow$ ADQ	0.240	5.214	< 0.001	Supported
H7	RVC $\rightarrow$ AIQ $\rightarrow$ ADQ	0.175	3.987	< 0.001	Supported

The mediation results show that Business Intelligence capabilities can affect the quality of accounting decision both directly by using technological capabilities, but most importantly, by improving the quality of accounting information. This provides a reassurance that information quality in accounting is a key mediation mechanism that converts BI capabilities into improved accounting decisions.

5.8 Moderation Analysis

Moderating effects of technology investment readiness were explored by looking at the interaction effects between technology investment readiness and each dimension of Business Intelligence capabilities. These results are shown in Table 8.

The relationship of Data Management Capability with the Technology Investment Readiness was positive and significant, with the values of $\beta = 0.118$, $t = 2.431$ and $p = 0.015$. This supports H8 and suggests the positive effect of data management capability on accounting information quality is magnified as organizations' preparedness to invest in technology increases.

The interaction between data analytics capability and technology investment readiness was also positive and significant with $\beta = 0.146$, $t = 2.876$ and $p = 0.004$. This helps to validate H9 and indicates that organizations with higher levels of technology investment readiness are better able to realize benefits from data analytics capability. This could be because of the fact that these companies can invest in analytical tools, employee training, system integration, and high-level BI applications.

Also, reporting and visualization capability and technology investment readiness had a significant interaction with $\beta = 0.109$, $t = 2.198$, and $p = 0.028$. This confirms H10 and suggests that the more ready an organization is for technology investment, the better the relationship will be between reporting and visualization capability and the quality of accounting information.

Table 8
Moderation Analysis Results

Hypothesis	Interaction Path	β	t-value	p-value	Decision
H8	DMC $\times$ TIR $\rightarrow$ AIQ	0.118	2.431	0.015	Supported
H9	DAC $\times$ TIR $\rightarrow$ AIQ	0.146	2.876	0.004	Supported
H10	RVC $\times$ TIR $\rightarrow$ AIQ	0.109	2.198	0.028	Supported

From the moderation results, it can be seen that Technology Investment Readiness (TIR) has a significant effect in enhancing Business Intelligence effectiveness. Organizations that are more ready to invest in technology are more likely to have high-quality accounting information from their BI capabilities. However, when organizations lack investment readiness for technology, they may not be able to reap the full advantages of BI because of lack of infrastructure, training, or regular technology assistance.

5.9 Predictive Relevance and Effect Size

To further evaluate the quality of the structural model, the predictive relevance and effect size were considered. The Q² values of accounting information quality and accounting decision quality were positive, suggesting a good predictive relevance of the model. This means that the model is capable of predicting the dependent variables.

Values of f^2 were used for the evaluation of effect size. Findings indicated that out of these capabilities, the data analytics capability the greatest impact on the quality of accounting information, followed by the data management capability and the reporting capability and visualization capability. The information quality of accounting had positive and significant impact on accounting decision quality, supporting the major role of information quality in the model.

Table 9
Predictive Relevance and Effect Size

Path / Dependent Variable	f ² / Q ² Value	Interpretation
DMC → AIQ	0.096	Small to Moderate Effect
DAC → AIQ	0.137	Moderate Effect
RVC → AIQ	0.081	Small to Moderate Effect
AIQ → ADQ	0.514	Large Effect
Q ² for AIQ	0.421	Predictive Relevance
Q ² for ADQ	0.318	Predictive Relevance

5.10 Summary of Hypotheses Testing

The result of hypotheses testing is summarized in Table 10. The results indicate that all the proposed hypotheses were accepted. The results show that these three dimensions of Business Intelligence capabilities positively affect accounting information quality. The results also show that there is a positive relationship between accounting information quality and accounting decision quality. Further, the findings confirm the relevant mediating and moderating effects of accounting information quality and technology investment readiness.

Table 10
Summary of Hypotheses Testing

Hypothesis	Statement	Decision
H1	Data management capability positively affects accounting information quality.	Supported
H2	Data analytics capability positively affects accounting information quality.	Supported
H3	Reporting and visualization capability positively affects accounting information quality.	Supported
H4	Accounting information quality positively affects accounting decision quality.	Supported
H5	Accounting information quality mediates the relationship between data management capability and accounting decision quality.	Supported
H6	Accounting information quality mediates the relationship between data analytics capability and accounting decision quality.	Supported
H7	Accounting information quality mediates the relationship between reporting and visualization capability and accounting decision quality.	Supported
H8	Technology investment readiness moderates the relationship between data management capability and accounting information quality.	Supported
H9	Technology investment readiness moderates the relationship between data analytics capability and accounting information quality.	Supported
H10	Technology investment readiness moderates the relationship between reporting and visualization capability and accounting information quality.	Supported

6. Discussion

Main goal of this study was to investigate the effect of Business Intelligence capabilities on the accounting decision quality by using accounting information quality as a mediator and technology investment readiness as a moderator. The results support the suggested research model because all the direct hypotheses, mediating hypotheses, and moderating hypotheses were confirmed. Overall, the results confirm that the Business Intelligence capabilities are important in the enhancement of the quality of accounting information, which in turn, improves the quality of accounting decisions in Jordanian companies (Wieder & Ossimitz, 2015; Abu-ALSondos, 2023; Wang et al., 2022; Tran Thanh Thuy, 2025).

Data Management Capability was found to have a statistically significant, positive impact on accounting information quality. This finding means that the ability of organizations to organize, integrate, update, clean, and maintain accounting information will determine their ability to produce accurate, complete, and reliable accounting information. This is logical since the quality of accounting information is subject

to the quality of the data used. The data that can be gleaned from accounting data will be less useful for decision-making purposes if the accounting information is scattered, outdated, duplicated, and not well organized. Thus, good data management is the basis for generating quality accounting information. In the organization context in Jordan, this finding indicates that companies need to pay more attention to data governance, database integration, data accuracy, and frequent updating of their accounting systems (Bernardo et al., 2024; Guillen-Aguinaga et al., 2025; Zohry & Al-Dhubaibi, 2024).

The results also showed that data analytics capability has a positive and significant impact on data accounting information quality. Data analytics capability had the greatest impact on accounting information quality of the three Business Intelligence capabilities. This discovery underscores the need to shift from the grounds of conventional accounting reporting to more sophisticated analytical practices. Data are more useful when organizations can analyze them, and find trends, anomalies, predict financial outcomes, and assist with planning and control. The high impact of data analytics capability indicates that data analytics capability supports the accounting data from being a mere record to become an insight. Especially in today's accounting landscape, timely, evidence-based information is crucial for decision makers to react to financial risks, cost pressures and market uncertainty (Hjelle et al., 2024; Damiyano, 2025; Rieg & Vanini, 2026; Sumrit, 2025).

The reporting and visualization ability was also observed to significantly and positively influence accounting information quality. This finding indicates that presentation of accounting information is significant. Even in the event that information is accurate and properly analyzed, the information might not benefit decisionmakers if it is presented in a complex, unclear and/or delayed format. Well-designed accounting reports, dashboards, visual reports and charts can make accounting information understandable, accessible and useful. Thus, reporting and visualization capability improves accounting information quality by providing information that is easier to understand and convey. This finding highlights the importance of not just accuracy and completeness, but also clarity and usability of accounting information (Hjelle et al., 2024; Martins et al., 2025; DeLone & McLean, 2003).

Moreover, the study revealed that there exists a significant positive relationship between the accounting information quality and accounting decision quality. This was one of the strongest relationships in the model and therefore its results support the conclusion that high-quality accounting information is a great enabler of high-quality accounting decisions. Information that is accurate, timely, relevant, complete, reliable, and understandable enables better assessment of alternatives, decreases uncertainty, and enables making better, rational decisions. This determination helps corroborate that the quality of accounting decision making is not simply a function of the experience or judgment of the manager, but also a function of the quality of information that is available to him. From a practical standpoint, those organizations that are looking to improve upon their budgeting, cost control, investing, resource allocation, and financial planning should prioritize the quality of accounting information (DeLone & McLean, 2003; Monteiro et al., 2022; Zohry & Al-Dhubaibi, 2024; Tran Thanh Thuy, 2025).

The mediation results showed that accounting information quality significantly mediates the relationships between Business Intelligence capabilities and accounting decision quality. Such a conclusion is vital because it sets the ground for the value added by BI capabilities to accounting decision-making. The findings indicate that the ability to use BI does not necessarily result in improved accounting decision-making unless first improving the quality of the accounting information. That is, they are enabling features that improve accounting information's accuracy, relevance, timeliness, completeness, and understandability, then helps to make better accounting decisions. Thus, accounting information quality can be considered as a main stream of influence between BI capabilities and decision outcome (Wieder & Ossimitz, 2015; Abu-AlSondos, 2023; Martins et al., 2025; Tran Thanh Thuy, 2023).

More specifically, the indirect effect of data analytics capability on accounting decision quality via accounting information quality was found to be the highest of all the mediation paths. This shows that the role of analytics ability is especially significant in enhancing accounting decision quality. Those organizations that are good at using analytics, are more able to produce quality accounting information that will then guide better decisions. This discovery indicates that enterprises should not view analytics as an edge technical function for the option but more as a strategic accounting function that plays a direct role in the quality of decisions.

Moderation outcomes also indicated that there was a relationship between investment readiness in technology and the relationship between Business Intelligence capabilities and accounting information quality. This results in positive influences of data management capability, data analytics capability, and reporting and visualization capability being more significant at the high level of readiness to invest in technology. This discovery is particularly relevant as that does not necessarily imply BI capabilities alone are enough. Additionally, organizations must possess sufficient financial resources, digital infrastructure, employee training, system integration, software upgrading and top management support to maximize the benefits of BI systems (Purnamasari et al., 2025; Atieh et al., 2026; Rieg & Vanini, 2026; Al Rob et al., 2025).

The data analytics capability and accounting information quality relationship exhibited the strongest moderation effect. It implies that the ability to analyze data is enhanced when an organization is willing to invest in the latest tools, trained staff, and technology. If companies do not invest in their readiness to use technology, they might not use analytics tools effectively or fully, or they may lack tools to produce accounting information that is useful. Thus, the more investment ready an organization is, the more likely it is to produce quality accounting outputs from analysis capabilities.

This set of findings comprised shows that Business Intelligence capabilities, accounting information quality and tech investment readiness go hand in hand. Technical and analytical capabilities are provided by BI capabilities; the immediate output of BI capabilities is accounting information quality; and the ultimate organizational output is accounting decision quality. Investing in technology readiness

enhances this process by providing them with the resources and assistance they need to use BI capabilities.

Theoretically, the findings confirm the Resource-Based View in that BI capabilities can be viewed as resources in themselves for the organizations and can be used to improve the outcomes of their decision-making process. Data management, data analytics, and reporting capabilities are important as they can help organizations to generate better accounting information and make better decisions. The results also validate the rationale of information systems success view that sees information quality as an important determining factor of success. The mechanism by which the BI capabilities were transformed to better accounting decision quality in this study was the quality of the accounting information.

Practically, the findings suggest a number of implications for managers, accountants, and decision-makers. Firstly, they should invest in enhancing data management as reliable accounting decisions start from good data management. Secondly, create Data Analytics skills by implementing data analytics tools and educating accounting staff on how to understand financial and non-financial data. Thirdly, there is a need to develop reporting and visualization systems in order to make information in accounting reports more understandable, timely and clear. Finally, managers need to understand that it is not sufficient that they invest in BI Systems that they should also make sure that the systems provide high-quality accounting information. Finally, organizations need to also strengthen their technology investments capacity by providing adequate resources for technological infrastructure, employee training, software development, system integration and continuous technological upgrading (Bernardo et al., 2024; Martins et al., 2025; Guillen-Aguinaga et al., 2025; Rieg & Vanini, 2026).

The results indicate that organizations are becoming more aware of the importance of digital transformation in accounting and decision-making in the Jordanian context. But the comparatively low level of the mean score for technology investment readiness suggests that some enterprises may be experiencing difficulties either with financial investment or with infrastructure readiness, training or managerial support. Accordingly, Jordanian organizations must adopt and emphasize on the importance of technological readiness to maximize the benefits of BI capabilities (Ali et al., 2024; Atieh et al., 2026; Purnamasari et al., 2025; Rieg & Vanini, 2026).

7. Conclusion

This study explored how the use of Business Intelligence capabilities affected decision quality in accounting using accounting information quality as a mediation variable and technology investment readiness as a moderation variable. Three dimensions of Business Intelligence capabilities data management capability, data analytics capability and reporting and visualization capability were the focus of the study. The results obtained from a sample of employees in accounting, finance, auditing, information system and managerial jobs in organizational units in Jordan showed strong support for the suggested research model.

The findings indicated that the three Business Intelligence capabilities had positive and significant impact on the accounting information quality. Data analytics capability was the most significant followed by data management capability and reporting and visualization capability. This means that managing accounting data, analyzing financial information through analytical tools and providing information through clear reports and dashboards can all help to improve the quality of accounting information in an organization.

The results also indicated that there is a strong positive relationship between the accounting information quality and accounting decision quality. This implies that, accurate, timely, relevant, complete, reliable and understandable accounting information is important to enhance the quality of accounting-related decisions. The mediation results showed that accounting information quality mediates the relationships between Business Intelligence capabilities and accounting decision quality. Thus, BI capabilities will affect accounting decisions by improving the quality of accounting information decision makers provide and use.

Further, the findings in the moderation results indicated that technology investment readiness enhances the Business Intelligence capabilities and accounting information quality relationship. Without such digital investment in infrastructure, software, training, system integration and technological upgrade, organizations are less inclined to be able to transform BI functionality into quality accounting information.

As a whole, the study finds that the Business Intelligence capabilities, accounting information quality and technology investment readiness are important factors that are needed in order to enhance accounting decision quality. The organizations which are aiming the success of the accounting decision making process should adopt BI system in addition to this, they should make sure that this system generate high quality accounting information and there should be technological investment readiness.

8. Recommendations

Several recommendations can be proposed on the basis of findings of this study. Clear guidelines for accounting data management, such as data collection, validation and cleaning, storage and integration, and updating. This will minimize errors, inconsistencies and duplication in accounting information. Data analytics tools are also a worthwhile investment and should be taught to accounting employees. Accountants can no longer just render financial statements; they must be capable of interpreting accounting data and giving inputs that will aid in the managerial decisions. Such a transformation can lead to a more strategic position for the accounting department. Moreover, organizations should make use of modern reporting and visualization tools, like dashboards and interactive reports. These tools can aid managers in better comprehending financial information and quick, correct decision-making. Furthermore, there is a need for better support from senior officials for investment in technology. This includes allocating budgets for BI systems, accounting software, system upgrades, employee training, and digital infrastructure. However, if the organizations are not prepared for investment, it may not fully

utilize the features of BI. Lastly, organizations ought to consistently investigate the quality of the information provided by the accounting technique. This assessment should be on the accuracy, timely delivery, relevance, completeness, reliability and understandability. By constantly checking and monitoring the quality of accounting information, companies can enhance their decision-making process and minimize the financial risks associated with it.

9. Limitations of the Study

There are some limitations to this study. The first reason is that the study employed cross sectional research design and hence, the data were gathered at one point in time. Thus, the results do not fully account for improving Business Intelligence capabilities over time, accounting information quality or decision quality. Second, it was a study conducted by the use of questionnaire with respondents' perception. There are many instances of this method being employed in business and information systems research, but self-reports could be influenced by personal judgment or response bias. Third, the research was limited to Jordanian organizations. Thus, the results may not be fully applicable to other countries organizations with different economic, technological or institutional contexts. Fourth, the study conducted an examination of Business Intelligence capabilities in three aspects: Data management capability, Data analytics capability, and Reporting and visualization capability. Additional BI dimensions including system integration capability, predictive analytics capability, and artificial intelligence capability and data governance capability were not considered. Fifth, accounting information quality was explored as the mediating variable and technology investment readiness was explored as the moderating variable. The relationship between BI capabilities and accounting decision quality can also be mediated or moderated by other factors (e.g., organizational culture, digital skills, top management support, system quality, user satisfaction and environmental uncertainty).

10. Future Research Directions

The research can be extended in a number of ways in the future. Future research can be conducted using a longitudinal design to explore how over time Business Intelligence capabilities and the quality of accounting information changes, and how they affect the quality of accounting information decisions in the long run. Second, the same model could be used in future studies in other countries, or other national contexts could be compared. This would assist in deciding if the results apply to Jordan or can be transfer to the regional and international contexts. Thirdly, future research can be conducted to study the model in particular sectors for example banking area, manufacturing area, healthcare, education or logistic. Focusing on sector specific studies might help in providing a more detailed insight as the manner of usage of the accounting information and BI systems may vary from sector to sector. Fourth, other BI dimensions can be added in future studies, such as artificial intelligence capability, predictive analytics capability, data governance capability, system integration capability or cloud-based accounting capability. The inclusion of these variables could help to better understand digital accounting transformation. Fifth, future studies could focus on other mediating factors, including user satisfaction, effectiveness of the accounting system, organizational learning or digital accounting competence.

Likewise, future research can investigate other moderating factors including environmental uncertainty, digital skills, firm size, organizational culture, and top management support. Lastly, future research might be a mixture of quantitative and qualitative approaches. Interviews with accountants and financial managers as well as IT managers might give a better explanation of how BI capabilities are used in organizations to enhance accounting information quality and decision-making.

Declarations

Author Contributions Statement

K.A. conceived the study, developed the research framework, and supervised the overall research process. H.A. contributed to the research design, methodology development, and data analysis. T.A.A. participated in questionnaire development, data collection, and literature review. A.A.A. contributed to data interpretation, validation of the findings, and manuscript revision. A.B.A.Q. assisted with statistical analysis, interpretation of the results, and critical revision of the manuscript. A.F.H. drafted the manuscript, interpreted the findings, coordinated communication among the authors, and managed the manuscript submission process. All authors reviewed, revised, and approved the final version of the manuscript.

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Data availability:

Data supporting this study are available from the corresponding author upon reasonable request

Ethics approval:

This study was approved by the Institutional Review Board of the Center for Research at Middle East University, Jordan, in accordance with the University's ethical guidelines and regulations for research involving human participants and the ethical principles of the Declaration of Helsinki. The protocol number for this approval is not applicable.

Consent to participate:

Written informed consent to participate in this study was obtained from all participants prior to data collection. Participants were informed about the purpose of the study, the confidentiality of responses, the voluntary nature of participation, and their right to withdraw at any stage without penalty.

Consent for publication:

All participants gave their consent to the publication of the study's results

Competing interests:

The authors declare no competing interests.

Originality:

This manuscript is our original work and has not been published previously, nor is it under consideration for publication elsewhere in whole or in part.

Accordance statement:

This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki (2013 revision), and ethical approval was granted by the Center for Research of Middle East University University.

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Figures

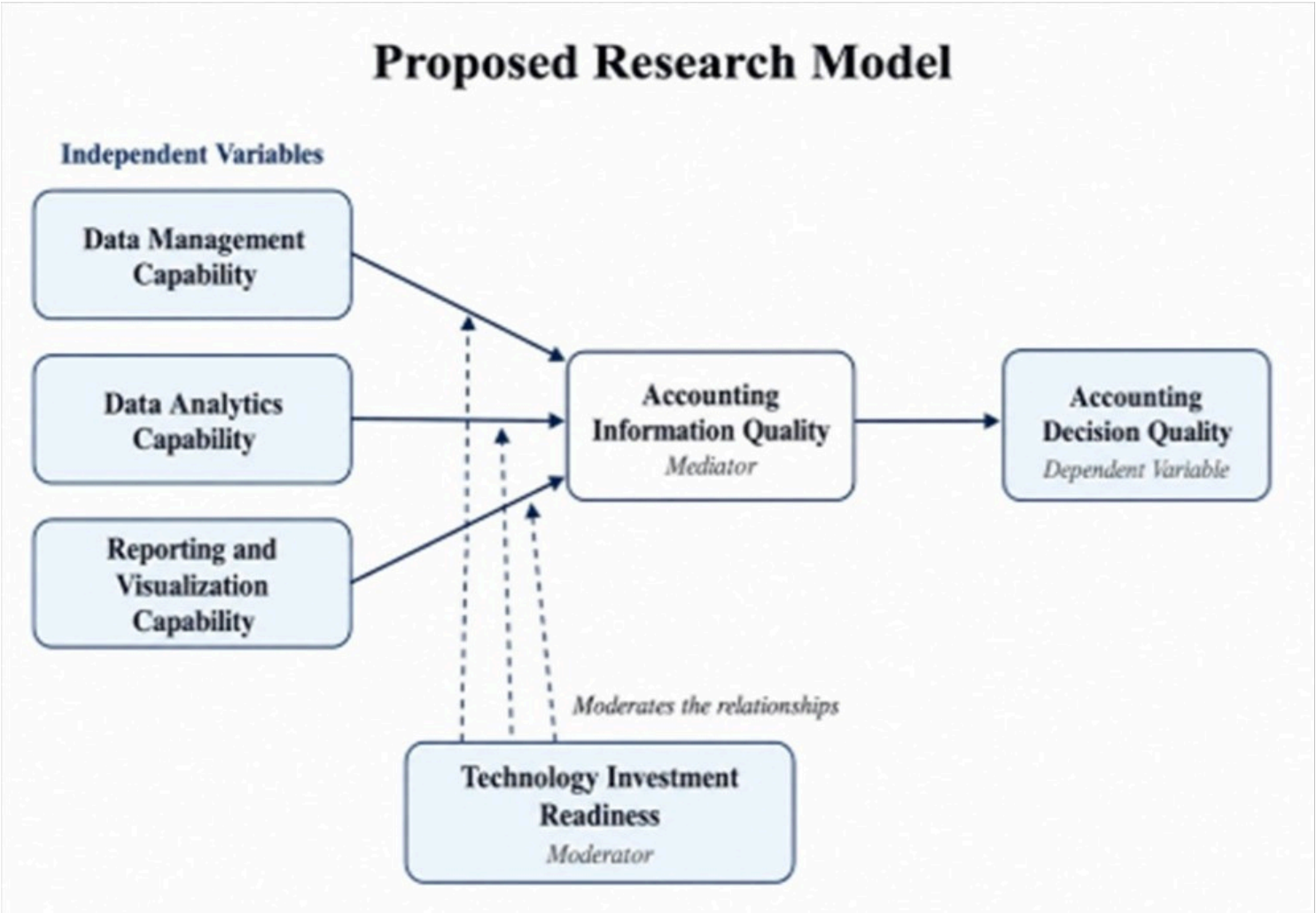


Figure 1

Unnumbered image in the Theoretical Background Section