

Impact of Business Intelligence Capabilities on the Competitive Performance of Islamic Banks in Jordan

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Abstract: This study aimed to measure the impact of business intelligence capabilities on the competitive performance of Islamic banks in Jordan. The study population involved 240 senior- and middle-level managers of Islamic Banks in Jordan. The 202 managers responded to the distributed questionnaire from which 202 questionnaires were received, among which 14 were unsuitable for statistical analysis. Structural equation modeling (SEM) was used to test the hypothesized relationships. The importance of this study comes from the structure of the study variables that this study deals with the business intelligence variable as one of the renewable and evolving variables, as it allows organizations in general, and banks in particular, to manage a large amount of data, and turn it into the information of interest to the organization by following up on technological development. The study found a statistically significant effect of business intelligence capabilities represented by capabilities of business intelligence, structure, and culture of business intelligence on competitive performance. Based on the study results, the researchers recommend that managers and decision-makers more clearly interpret top management decisions to ensure the progress of the business.

Keywords: business intelligence, competitive performance, Islamic banks.

商業智能能力對約旦伊斯蘭銀行競爭績效的影響

摘要：本研究旨在衡量商業智能能力對約旦伊斯蘭銀行競爭績效的影響。研究人群涉及約旦伊斯蘭銀行的 240 名高級和中級管理人員。202 名管理人員對發放的問卷進行了回答，共收到 202 份問卷，其中 14 份不適合統計分析。結構方程模型用於檢驗假設的關係。這項研究的重要性來自研究變量的結構，該研究將商業智能變量作為可更新和不斷發展的變量之一進行處理，因為它允許一般組織，特別是銀行，管理大量數據，並通過跟進技術發展，將其轉化為組織感興趣的信息。該研究發現，以商業智能能力、結構和商業智能文化為代表的商業智能能力對競爭績效具有統計上的顯著影響。根據研究結果，研究人員建議管理者和決策者更清楚地解讀最高管理層的決策，以確保業務的進展。

关键词：商業智能、競爭績效、伊斯蘭銀行。

1. Introduction

The competitive advantage is an appropriate measure of competitive performance, as they are as they are used interchangeably [1, 2]. The importance of the competitive advantage gives organizations an advantage over competitors and enables them organizations to provide added value to customers, obtain customer loyalty and enhance the organization's

reputation, in addition to allowing the organization to find added value to help achieve additional profits and protect market share [3–5]. Competitive performance can be achieved through the organization's efficiency in using its resources in an optimal way [6–9], increasing customer satisfaction by focusing on the quality of products, and quickly responding to customers' needs, so that the organization is a market leader in terms of providing the lowest costs and the

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best quality [10–17]. This performance leads to achieving the organizational strategic goals and distinguishing it from competitors. The competitive advantage provides preference and adds value to the organization over other competitors. [18] showed that competitive performance is the essence and content of a competitive advantage, as it adds to the organization the ability to develop services. Competitive performance gives the organization a competitive position in the sector [19].

Human resources and individual competencies are human and intellectual capital and strategic stock that includes capabilities and skills that must be managed according to a strategic perspective [20–25], through modern administrative systems and approaches such as competency management, knowledge management, and total quality management, so that the organization can achieve optimal usage of resources, and the best for those resources and competencies, to ensure that they can build and maintain a competitive advantage, especially considering the rapid changes and developments in the business environment. Organizations in their various fields have been interested in finding solutions and tools capable of influencing competitive performance to maintain a competitive advantage through the optimal use of resources [26]. Service sector organizations must adopt business intelligence as the basis for which Provides organizations with quick managerial solutions, to help decision-makers in organizations to derive the necessary information and knowledge.

The globalization, which was the result of the rapid and widespread development of technology, decreased the ability of organizations to compete on the one hand, and increased competitiveness in the provision and delivery of services worldwide on the other hand; it also reduced the chances of reaching the required level of competitive performance. In order for service organizations and banks to be able to take advantage of the available opportunities and access them before competitors, they must adopt the best technological and electronic resources to reach the required competitive performance level. Given the current growth trends, resorting to the use of technology provides more efficient and effective ways to retrieve and disseminate information within organizations. Many advanced and dynamic solutions exist provided by the technological revolution, and among those solutions are called business intelligence, which can be a method or tools that can be used to develop competitive performance. The importance of this study comes from the structure of the study variables that this study deals with the business intelligence variable as one of the renewable and evolving variables, as it allows organizations in general, and banks in particular, to manage a large amount of data, and turn it into information of interest to the organization by following up on technological development, so that organizations and banks can reach

the largest number of customers and achieve high market share ratio. Based on the foregoing, and given the importance of employing business intelligence, this study came to examine the impact of business intelligence capabilities on competitive performance.

2. Literature Review and Theoretical Framework

2.1. Business Intelligence Capabilities

Banks currently must manage their files, data and customer data faster and better, and to maintain the accuracy of their performance [27]. This requires the adoption of technology applications in general, and business intelligence applications in particular, to benefit from their capabilities and balance between efficiency, effectiveness, and speed of decision-making, and improve competitive performance [28]. A business intelligence system is a set of technological tools that collect unstructured data for processing, including merging, analysis, and storage, to obtain useful information that helps understand the external and internal environment and enhance the decision-making process [29]. To store these big data, the organization should provide an infrastructure capable of performing data processing operations efficiently and effectively. Business intelligence systems are defined as the ability of systems to increase the effectiveness and efficiency of administrative work, especially concerning making appropriate decisions through the integration of the work of technological tools to collect and analyze data to create new knowledge that helps in decision-making [30]. Business intelligence provides a clear concept that includes information operations management, and knowledge to improve the quality of the decision-making process [31].

2.2. Concept of Business Intelligence Capabilities

The concept of organizational capacity denotes the methods, tools, requirements and means to help the organization achieve its strategic goals [32]. It is an information technology tool [33]. It is the set of skills that organizations employ to manage their resources efficiently and effectively to improve and enhance their market position and achieve competitive advantage [17]. The organization's ability to set flexible goals and to change them in line with the external environment variables measure business intelligence capabilities are measured by [34]. Business intelligence capabilities were described by [35] as the ability for organizational learning and the capabilities of the organization's human resources from experiences and knowledge [36], in addition to strategic planning capabilities [37]. When intelligence is related to capabilities, it refers to the methods used by an organization to obtain useful information to help the organization predict the

behavior of the external environment, such as customers, suppliers, and competitors. Business intelligence enables organizations to process and organize big data in terms of its collection and analysis [31]. According to the general concept of the business intelligence system, it is a system based on collecting big data from various sources, which analyzes it using modern analytical tools and stores it for proper use at the right time. An aspect of business intelligence capabilities is the technical capabilities, which process data to obtain information that helps make strategic decisions in the organization [38]. Thus, technical capabilities are a capability of business intelligence.

The authors of [39] indicate that there are other capabilities of the business intelligence system. To ensure that technical capabilities are applied correctly, some capabilities must be available, represented in the structure of business intelligence, and the culture of business intelligence [40, 41]. The culture of business intelligence is defined as it is the organization's values and beliefs, how to distribute power and its authorities, and the control and guidance systems. The organization's values and beliefs reflect the extent of commitment and acceptance of senior management and employees to modern technology and its trends, as well as the organization's ability to learn from competitors. As for the structure of business intelligence, reflects the degree of organizational performance, which allows the use of the outputs of the business intelligence system in the decision-making process in the organization. The distribution of power and authority at the different managerial levels indicates that the concerned party accepts the application of the business intelligence systems [42].

Business intelligence capabilities, according to researchers, are a set of methods, tools, trends and values that the organization must enable it to predict the behavior of the external environment, such as competitors, stakeholders and customers. These capabilities are represented in the technical capabilities that in turn work to collect, analyze and process data, to create new knowledge that is stored for the time of need. Organizational capabilities are represented in the structure of the business intelligence system and the culture of business intelligence in the organization, the distribution of powers and authority to access information, and guidance and control systems. The definition of business intelligence capabilities, based on the above, is that they are the assets of the organization (human and technological), while organizational capabilities include (the organizational structure and values of the organization, the extent to which it can learn from its competitors, and the sharing of business intelligence system information for use in the decision-making process). These decisions are to predict changes in the external environment and the behavior of stakeholders, such as customers, and to face rapid changes in line with strategic goals.

The researchers measured the impact of business intelligence capabilities on other variables with many measures related to business intelligence. The study [43] adopted two main capabilities of business intelligence: data integrity, and the ability to analyze data. [38] indicated that the project of applying business intelligence systems requires some infrastructure to implement the system, and these infrastructure requirements are related to technical capabilities, accepting the idea of sharing information and knowledge among all parties, the commitment and adoption of the system by top management, and the presence of organizational culture. Some studies added that some capabilities that distinguish business intelligence systems from the rest of traditional information systems, which are the capabilities related to the Performance Indicators Capabilities, which are the capabilities of analysis and forecast [44, 45].

The basic business intelligence capabilities are centered on three capabilities: technical capabilities, business performance capabilities, and analytical capabilities [46]. Business performance capabilities include the organization's knowledge of its needs and operations, whereas technical capabilities are based on knowledge of technical tools and modern data management applications, and analytical capabilities refer to the organization's knowledge of statistical and data analytics processes. Thus, they are business intelligence capabilities. These capabilities can be described and combined into a single capacity (technical capabilities). Organization's knowledge of its needs, operations, and data management through appropriate analytical tools, branches under the concept of technical capabilities [38, 44, 47], operational capabilities, and strategic capabilities [48]. [49] used two dimensions to measure business intelligence: the ability to discover opportunities, and the ability to exploit them, from which the discovery of opportunities can be divided into two types: the discovery of internal opportunities, which are related to improving the efficiency and effectiveness of internal processes, while the discovery of external opportunities is related to the external environment, its control and market conditions. After reviewing previous studies, researchers relied on three dimensions to measure business intelligence capabilities: technical capabilities, business intelligence structure, and business intelligence culture. As the functions of this system are not complete without the availability of technical capabilities, the structural dimension was chosen to clarify the way the different managerial levels work together through business intelligence systems and demonstrate ways to share information among employees. The focus of some previous studies was on the technical capabilities of business intelligence and their impact on other technologies; the current study sought to use various capabilities of business intelligence to contribute by first filling part of this

research gap and then making recommendations considering its findings.

2.3. Competitive Performance

To achieve competitive performance, the organization must achieve a competitive advantage in its field of work, and its target market [50]. The terms *competitive advantage* and *performance* are related to the extent of overlap, from the side of the concept and method of measurement. The focus of the researchers was more on the study of the competitive advantage compared to competitive performance. Some researchers linked the competitive advantage with the ability to achieve outstanding competitive performance for an organization [51]. The competitive advantage refers to the organization's ability to make optimal use of available opportunities in the market, and to be away from risks and threats [52], as a competitive advantage is linked to competitive performance [53], that competitive performance is the extent to which the organization achieves its objectives within its competitive position.

The competitive advantage has been defined as the organization's ability to outperform its competitors through highly competitive performance by relying on providing products at lower cost or higher quality [54–56]. [7] stated that the definition of a competitive advantage is the ability of the organization to exploit its resources in a way that outweighs its competitors. The choice of a competitive strategy is to enable the organization to compete and maximize profitability. [57] sees competitive performance as obtaining a market share and the ability to increase profits. When defining the competitive advantage, some studies have indicated many competitive advantages that an organization possesses; this means that the competitive advantage is the organization's ability to reduce the costs of its products, or to provide high-quality products according to the needs of the target market. Based on the foregoing, the definition of competitive performance is what the organization gains from the advantages that distinguish it from its competitors by providing services and products of high quality, lower cost, increased profitability, and maintaining position and market share. [18] used five dimensions to measure competitive performance: cost, quality, flexibility, delivery, and on-time delivery. [45] specified a set of dimensions, which are cost, quality, flexibility, creativity, continuity, and differentiation. The authors of [6] mention two types of strategies, namely, cost leadership and differentiation.

2.4. Business Intelligence Capabilities and Competitive Performance

Some bases can be reached through explaining the relationship between business intelligence capabilities and competitive performance, considering the theoretical literature and previous studies. The main

objective of business intelligence systems is to deliver information in an effective manner that enables the organization to achieve its strategic objectives depending on the decision-making process, which enhances the competitive advantage [46]. This indicates that the origin of business intelligence systems is to improve the competitive performance of an organization, thus enabling it to enhance its competitive position. Business intelligence capabilities illustrate the ability of organizations to exploit the resources available through organizational processes to achieve competitive advantage, which is expressed in the optimal use of technical and human resources, to obtain valuable information.

The application of business intelligence systems as a set of capabilities that the organization possesses as untechnical assets, is an important step in studying the relationship between business intelligence and the organizational performance [49]. The technical capabilities possessed by business intelligence systems help discover the information and knowledge contained in big data, and this increases the organization's ability to review its strategies and adjust goals based on the changes that occur in the competitive environment, and the results of analysis of big data help the organization make its decisions and achieve strategic goals [4]. Some studies indicated that the impact of business intelligence systems on the performance of an organization does not directly affect, but rather by providing the organization with models for its managerial processes, thus enabling it to improve these processes [58]. [49] showed the positive impact of business intelligence capabilities on the performance of organizations, which is not complete unless they possess other capabilities that enable them to analyze constantly changing data, especially for the competitive performance of those organizations. Other studies also confirmed that the organizational performance is greatly affected by the styles and forms of organizational culture prevailing in them concerning the application of business intelligence, in addition to the experiences of employees in the organization [58]. This indicates that the business intelligence capabilities have a clear positive impact on improving the competitive performance of organizations. Based on the above literature, the study hypothesis may be described as the following:

H1: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of business intelligence abilities on the competitive performance of Islamic banks in Jordan.

Fig. 1 represents the proposed model for the study, as it shows the hypothetical relationship between the study variables represented by the independent variable (business intelligence capabilities), and the dependent variable (competitive performance).

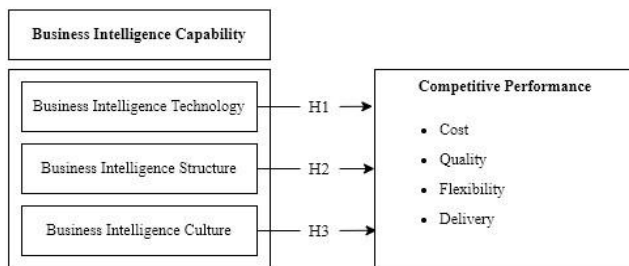


Fig. 1 Study model

3. Research Methodology

3.1. Population and Sample

The banking sector plays a vital role in the Jordanian economy through its contribution to enhancing the competitive environment based on the secured climate and government monitoring. Therefore, 351 managers who work in the Islamic Banks in Jordan represent the research population. A self-administered questionnaire was distributed to a non-probability sample of 240 managers in the top and middle managerial levels via e-mail. The retrieved questionnaires were 202, which were found that they contained 14 ones not appropriate for statistical analysis. Hence, the number of statistically analyzed questionnaires was 188. Those questionnaires constituted a response rate of 78.33% from the distributed questionnaires.

Frequencies and percentages used for determining the research sample characteristics showed that males constituted 69.7% ($n = 131$) of the research sample, while the sample contained 30.3% ($n = 57$) of females. The results also indicated that 47.3% ($n = 89$) of respondents hold a bachelor's degree comparative with 52.7% ($n = 99$) of them who hold postgraduates' degrees. Moreover, it was found that most of the research sample was aged 40–50 years 44.7% ($n = 84$) n and 30–40 years 29.3% ($n = 55$). As for the managerial level, the results confirmed that 67.6% ($n = 127$) of managers were at the middle level, while 32.4% ($n = 61$) of them were at the top level.

3.2. Research Instrument

A survey was used to collect main data about the research variables. This survey was designed as a self-administered electronic questionnaire by Google Forms. It included three major parts: a part for control variables, followed by a part for the independent variable, and a part for the dependent variable. The five-point Likert scale was applied in the second and third parts of the survey, where its lower value of 1 indicated "strongly disagree" while its upper value of 5 indicated "strongly agree."

Business intelligence capability (BIC): it was the independent variable in this research that was a second-order construct measured by 17 items developed through [46]. This second-order construct was divided into three first-order constructs: business intelligence

technology, business intelligence structure, and business intelligence culture. The 6 items measured business intelligence technology (BIT) (e.g., the bank has modern techniques to obtain data from several sources). The 5 items measured business intelligence structure (BIS) (e.g., information is spread at all administrative levels of the bank easily and quickly.). The 6 items measured business intelligence culture (BIC) (e.g., the bank seeks to increase its employees' awareness of the applying advanced systems importance in achieving customer satisfaction).

Competitive performance (CP) was the dependent variable, which was also a second-order construct measured by 15 items based on [6]. This second-order construct was divided into four first-order constructs: cost, quality, flexibility, and delivery. The cost was measured using 4 items (e.g., the bank uses innovative business methods to reduce waste of resources and lower service costs). The 6 items measured quality (e.g., the bank adopts a comprehensive monitoring procedure to verify the quality of operations and services provided to its customer). The 6 items measured flexibility (e.g., the bank constantly monitors the change in the desires and needs of its customers). The 4 items measured delivery (e.g., the bank obligates to provide the service to its customers on time).

Control variables: they included four categorical variables, which used in the analysis of the sample characteristics. Gender contained males and females. The educational level had two categories: bachelor and postgraduation. The age group included four groups that were less than 30 years, from 30 to less than 40 years, from 40 to less than 50 years, and 50 years and older. Two categories measured the managerial level of the top management and middle management.

4. Results

4.1. Validity and Reliability

The study was used confirmed measures of business intelligence capability and competitive performance that developed through the published literature. Nevertheless, confirmatory factor analysis (CFA) was performed to test the reliability and validity of these measurements by covariance matrix and maximum likelihood estimation, as well as to provide the necessary inferences to ensure the approximate fit that helps improve the measurement of the constructs used [22, 59–61]. The results of CFA are listed in Table 1.

Table 1 Assessment of reliability, convergent and discriminant validity

	L.R	AVE	I.C	C.R	1	2	3	4	5	6	7
BIT	.80–.87	.70	.93	.93	.83						
BIS	.84–.85	.72	.92	.93	.40	.85					
BIC	.78–.84	.65	.92	.92	.62	.34	.81				
COS	.70–.78	.55	.83	.83	.52	.62	.70	.74			
QUA	.72–.81	.57	.88	.89	.61	.56	.63	.68	.75		
FLE	.69–.77	.55	.88	.88	.54	.65	.60	.53	.70	.74	
DEL	.69–.82	.60	.85	.85	.71	.68	.54	.72	.73	.69	.77

Notes: L.R: loading range, BIT: business intelligence technology, BIS: business intelligence structure, BIC: business intelligence culture, COS: cost, QUA: quality, FLE: flexibility, DEL: delivery, I.C: internal consistency, C.R: composite reliability; rightmost values indicate to square root of average variance extracted.

Initially, all items that had a loading value less than 0.50 were omitted [62–64]. After that, the convergent and discriminatory validity was determined, where the results in Table 1 showed that the values of the average variance extracted (AVE) were greater than 0.50, which is an indication that the scale is characterized by convergent validity [65]. The values of the square root of the average variance extracted were higher than the correlation between the rests of the constructs, as this is considered a condition for discriminatory validity [66]. Consequently, the measurement used for business intelligence capability and competitive performance demonstrates high levels of convergent and discriminatory validity. An internal consistency indicator tested reliability using Cronbach's alpha coefficient (I.C) and the composite reliability indicator by MacDonald's omega coefficient (C.R). The results in Table 1 demonstrated that Cronbach's alpha coefficients ranged within the domain (0.833–0.933) were higher than the minimum threshold of 0.70 for the internal consistency indicator [67]. Moreover, MacDonald's omega coefficients for each construct were greater than the minimum accepted value of 0.70 for composite reliability [68]. Therefore, constructs of business intelligence and competitive performance that are used in this research have appropriate reliability.

The researchers used an exceedingly admitted set of indicators to evaluate the structural validity of the measurement model used to test the impact of business intelligence capabilities on competitive performance. Fig. 1 demonstrates the results obtained for these indicators.

The results indicated in Fig. 1 listed that the value of the chi-square ratio (CMIN/DF) was 1.195, which is less than the maximum permissible value of 3. The value of the comparative fit index (CFI) was 0.974 and the Tucker-Lewis index (TLI) was 0.971, which were higher than the minimum value of 0.90. Further, the value of the root mean square error of approximation (RMSEA) was 0.032, which is less than the upper threshold of 0.08. Subsequently, an appropriate structural validity characterized the model used in this research [69, 70].

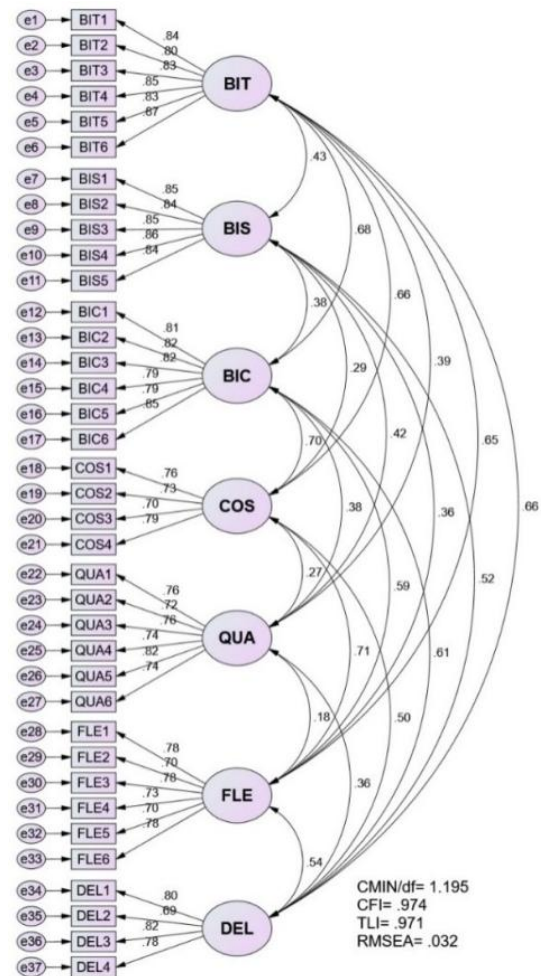


Fig. 2 Standardized coefficients for confirmatory factor analysis

4.2. Descriptive Statistics

For descriptive statistics, the authors extracted the mean and standard deviation for each first-order construct to evaluate the levels of the research variables in its population. Moreover, variance inflation factor (VIF) and tolerance (Tol.) were used to verify that the research data is not suffering from multicollinearity problems. Table 2 shows the results of those statistics.

Table 2 Results of descriptive analysis and multicollinearity

Constructs	Mean	SD	VIF	Tol.
BIT	3.51	.843	1.757	.569
BIS	3.50	.912	1.214	.823
BIC	3.61	.767	1.680	.595
COS	3.74	.659	---	---
QUA	3.73	.633	---	---
FLE	3.76	.604	---	---
DEL	3.64	.706	---	---

Notes: BIT: business intelligence technology, BIS: business intelligence structure, BIC: business intelligence culture, COS: cost, QUA: quality, FLE: flexibility, DEL: delivery

The results in Table 2 indicated that the dimensions of business intelligence capability had a moderate level, where business intelligence culture ranked first ($M = 3.61$, $SD = 0.767$), then business intelligence technology ($M = 3.51$, $SD = 0.843$), and finally business intelligence structure ($M = 3.50$, $SD = 0.912$).

While it was found that the dimensions of competitive performance had a high level except for delivery, which had a moderate level ($M = 3.64$, $SD = 0.706$). Besides, Table 2 reports that the values of the variance inflation factor (VIF) were less than 3. Likewise, the values of the tolerance indicator (Tol.) exceeded the lowest admitted value of 0.2. These values indicate that the dimensions of business intelligence capability had independently and the research data were free of multicollinearity [71, 72].

4.3. Hypotheses Testing

Structural equation modeling (SEM) was used to test the hypothesized relationships. This approach uses a multi-construct technique to explain the relationship of the cause between the research variables [73]. Accordingly, the relationship between business intelligence capability dimensions and competitive performance was evaluated through this method. Fig. 2 illustrates the structural model used to test the impact of business intelligence capability dimensions on competitive performance.

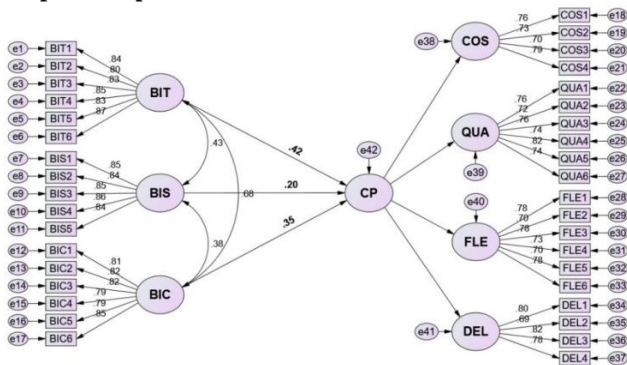


Fig. 3 SEM for testing the impact of business intelligence capability dimensions on competitive performance

Furthermore, Table 3 presents the impact coefficients extracted using SEM to test the impact of the business intelligence capability dimensions on competitive performance. This table indicates that the research hypotheses were supported, and all business intelligence capability dimensions impacted competitive performance, as the probability values (p -value) for each dimension were less than 0.05.

Table 3 Summary of hypotheses testing

Path	Unstandardized Coefficient		Standardized Coefficient	t-value	p-value
	B	SE	β		
BIT $\rightarrow$ CP	.230	.032	.418	7.183	.000
BIS $\rightarrow$ CP	.103	.025	.202	4.175	.000
BIC $\rightarrow$ CP	.214	.034	.355	6.231	.000

Notes: BIT: business intelligence technology, BIS: business intelligence structure, BIC: business intelligence culture, CP: competitive performance

The results in Table 3 demonstrated that business intelligence technology ($\beta = 0.418$, $t = 7.183$, $p = 0.000$) had the greatest impact on competitive performance, followed by business intelligence culture ($\beta = 0.355$, $t = 6.231$, $p = 0.000$), which ranked second,

then business intelligence structure ($\beta = 0.202$, $t = 4.175$, $p = 0.000$) that had the least impact on competitive performance.

5. Discussion

This study came to examine the impact of business intelligence capabilities on competitive performance. The importance of this study comes from the structure of the study variables that this study deals with the business intelligence variable as one of the renewable and evolving variables, as it allows organizations in general, and banks in particular, to manage a huge amount of data, and turn it into information of interest to the organization by following up on technological development. The study found a statistically significant impact of business intelligence capabilities represented by (business intelligence capabilities, business intelligence structure, and business intelligence culture) on competitive performance, and business intelligence capabilities were tested as an independent variable because of their importance in improving the managerial processes of the organization and raising the work efficiency. The study population consisted of managers at the top and middle management levels in Islamic banks in Jordan.

It was found that there is an effect of business intelligence techniques on the competitive performance of Islamic banks in Jordan. This result is consistent with [44], which showed that business intelligence has a high ability to predict internal and external environment variables. This improves the quality of managerial work, flexibility in decision-making and improves quality. Technical capabilities include organizational memory, integration of information and knowledge, creation of perceptions, and presentation and dissemination of information. Organizational memory stores information in special repositories with a quick method to retrieve it when needed. The integration of information and knowledge is the ability to combine and analyze random data from different sources to help decision-making. The ability to transform big data into information and knowledge is the core of the technical ability of business intelligence systems, so investing in software technology is a strategic priority. However, Islamic banks in Jordan have a business intelligence system for the decision-making purposes and provide services to customers. This justifies the use of business intelligence techniques as a capability of business intelligence systems because it suits the business environment that is characterized by continuous change and renewal and enables organizations to collect data about the external environment, such as customers, markets, business performance processes and analyze them, take advantage of opportunities in the market, and achieve a competitive advantage.

An impact of the business intelligence structure on the competitive performance of Islamic banks in Jordan

exists that is consistent with [30, 39], which indicated that the work of the business intelligence system combines the different managerial levels to work together in a partnership to make the appropriate decision. This improves performance and the quality of managerial work and reduces the time to retrieve information and the consequent costs. The ability of an organization to perform business intelligence activities and work is originally an internal ability, and this is also for organizational capacity as supports the organizational structure of business intelligence system tasks, and the spread of business intelligence culture such as relying on big data analysis by business intelligence techniques and sharing system results among employees in the organization. An impact of business intelligence culture on the competitive performance of Islamic banks in Jordan exists. This result is consistent with [11], which showed that encouraging the top management to apply business intelligence systems helps disseminate information faster and improves the quality of performance. Business intelligence culture is embodied in the organization's reliance on business intelligence systems to improve the decision-making process, and in the culture of disseminating useful information between the organization's departments, as well as the organization's relationship with competitors.

Organizational culture is a basis for building organizational behavior, as the organization gives values and practices to the work environment, and determines what is or is not allowed, and it plays a major role in consolidating the use of technology among employees to achieve the desired goals [21]. The organization's motivation of employees to share information and knowledge contributes to spreading trust among employees, and this is what so-called competitive intelligence [28]. Knowledge sharing among employees is achieved by having business intelligence systems that help in rapid and accurate dissemination among employees. Studies have shown that the importance of work culture helps in enhancing competitive intelligence and applying business intelligence systems [49]. We can say that the ability to collect data from the organization's internal and external environments for processing to obtain useful information adds to the organization competitive advantage, giving it high flexibility to deal with changing work environments and enabling it to follow up on competitors, discovering their weaknesses. Business intelligence systems also affect customer satisfaction, not only by analyzing the customers purchasing behavior but also by knowing their current needs and forecasting future needs to provide them before competitors, and this enhances the competitive position of the organization [18].

6. Conclusion

The results showed a weakness in the arrival of

managerial decisions to employees, and therefore, it is recommended that the managerial decisions of top management should be interpreted more clearly to ensure the progress of the business performance process. Weakness was also observed among workers in the concept of sharing information of interest among workers at all managerial hierarchies. It is recommended to train workers and prepare them to share knowledge among themselves and according to the powers granted to them to enhance the competitive performance process. We urged the senior management to participate in making work decisions and taking their opinions to activate the organizational structure from the bottom up. Also, workers must be trained and developed to use business intelligence systems to speed up the performance of all administrative processes to improve competitive performance and reduce the time and costs incurred by banks when they do not keep pace with modern applications for their application and exploited.

7. Limitations and Further Research

This study was applied to Islamic banks in Jordan, and a similar study could be conducted in commercial banks, or a comparative study could be conducted between commercial and Islamic banks in this context. The study sample consisted of 240 managers from middle and upper management in Islamic banks in Jordan. It is also possible to conduct a similar study on another sample of employees who are not managers in Islamic banks and target another sample. The capabilities of business intelligence were studied: business intelligence techniques, business intelligence structure, business intelligence culture and their impact on competitive performance, as this variable was explained by an amount of 64.5%, which reinforces the idea that other variables affect competitive performance. It is also possible to conduct other studies targeting factors that can improve the competitive performance of Islamic banks. An application of business intelligence can also be addressed as an independent variable and its impact on performance.

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