

## The Impact of Business Intelligence Systems on Crisis Management at King Abdulaziz University

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### Abstract

The study aims to explore the impact of Business Intelligence Systems on crisis management at King Abdulaziz University. To achieve this, the study adopted a descriptive survey methodology suitable for the study's objectives, utilizing a case study approach. The study population consisted of academic and administrative leaders at King Abdulaziz University, with a sample size of 53 individuals. Data were collected through a questionnaire using a five-point Likert scale and analyzed using the SPSS software package for the social sciences. The study's key findings include: King Abdulaziz University implements the concepts of Business Intelligence Systems and crisis management effectively. The data revealed a statistically significant impact of Business Intelligence Systems on crisis management at the significance level of  $(0.05 \geq \alpha)$ . The study was based on the primary hypothesis that there is no statistically significant impact of Business Intelligence Systems on crisis management. However, the results refute this hypothesis and confirm the validity of the alternative hypothesis, suggesting a significant impact of Business Intelligence Systems dimensions (data collection and analysis, storage, real-time processing, business performance management, competitive intelligence, and decision support) on crisis management at King Abdulaziz University. In light of these findings, the study recommends enhancing the use of BIS in King Abdulaziz University and other universities to improve their crisis management capabilities.

**Keywords:** Business Intelligence Systems; Business Performance Management; Data Collection; Analysis and Storage; Competitive Intelligence; Decision Support; Real-Time Data Processing.

## Introduction

Since the last decade of the previous century, life in all its aspects has witnessed profound transformations at the global level, and these transformations have clearly affected administrative methods and organizational relations, especially with the rapid progress in technology, and the emergence of a role and problems that exceed the borders of the countries to which the various organizations belong in their activities and types. Due to the increasing effects of globalization and its aspects. Hence the necessity emerged to predict what the future holds for organizations as they are part of a local system within a broader global system that affects their plans, strategies and activities. To overcome the uncertainty that accompanies the future, its basic characteristics must be revealed and appropriate scientific methods must be sought that enable the future to be explored and prepared to confront this. The wave of changes and developments.

In light of the challenges and changes facing the world today, crises have become a recurring and complex phenomenon that requires effective and coordinated interventions by different organizations. Among these organizations, universities stand out as scientific, educational and social institutions that play an important role in confronting crises and disasters and reducing their negative effects. In order to do this, universities need to use tools and technologies that enable them to collect, analyze and present the information necessary to make appropriate decisions in emergency situations. Among these tools and techniques are business intelligence systems, which are considered advanced solutions in the field of information technology to improve organizational performance.

From this standpoint, this study came with the purpose of investigating the impact of business intelligence systems on crisis management at King Abdulaziz University, through a field study on administrative and academic leaders at the university.

### Study Problem

Business intelligence systems are considered modern and advanced tools that help organizations transform raw data into valuable information and useful knowledge to support strategic, tactical and practical decision-making. Many studies and practical experiences have shown the benefits and advantages of business intelligence systems in improving organizational performance and achieving competitive advantage in

various fields and sectors. Among these sectors is the higher education sector, which faces major challenges and changes in light of globalization, technology and competition. Universities are considered among the main institutions in this sector, as they carry out scientific, educational and social tasks that require effective and innovative management of resources, processes and outputs.

Universities suffer from many crises that face their progress. Al-Rabiah (2010) states that universities in the Kingdom of Saudi Arabia faced (34) crises during (1410-1430 AH), and that (67%) of them had previously occurred, and Tayfour (2018) adds that universities are exposed to... This leads to major challenges in crisis management, especially if it is exposed to emergency or circumstantial crises, and the weak spread of the culture of crisis management, in addition to the colleges' lack of a team specialized in managing various crises, limits the effective role of administrative leaders in managing these crises (Al-Jumaah, 2021).

Many studies, such as Al-Khowaiter's study (2019), Rakha's study (2019), and Al-Jumaah study (2021), indicated that the reality of crisis management in a number of Saudi universities was at an average level. The Rakha study (2019) recommended the necessity of creating a crisis management unit in the university's colleges, and the Al-Jumaah study (2021) recommended the necessity of establishing an operations room equipped with the latest technologies in the university, in which all departments participate to help the university manage the crisis and contain the damage.

From this standpoint, the current study coincided with the interest of government agencies in the Kingdom of Saudi Arabia in developing the information infrastructure and enhancing the capabilities of universities to confront crises efficiently and effectively, in order to achieve the goals of the Kingdom's Vision 2030, which aims to develop human resources, raise the educational and research level, and enhance innovation and creativity in the academic and administrative sectors. And improving the quality of life of Saudi society.

Based on the effective role of crisis management based on scientific foundations, the importance of studying the impact of business intelligence systems on crisis management in universities is highlighted, which may contribute to enhancing the ability to adapt, innovate and excel, and support decision-making mechanisms and effective crisis management.

Accordingly, the problem of the study can be formulated in the following main question: What is the impact of business intelligence systems on crisis management at King Abdulaziz University: from the point of view of academic and administrative leaders?

### **Objectives of the study:**

The main objective of this study is to identify the impact of business intelligence systems on crisis management at King Abdulaziz University: from the perspective of academic and administrative leaders. The following sub-objectives fall under this main goal:

- 1) Identifying the philosophical and intellectual foundations of the study topics: business intelligence systems and their dimensions, crisis management and its stages.
- 2) Identify the level of application of the concept of business intelligence systems in its dimensions (collection, analysis and storage of data, real-time data processing, business performance management, competitive intelligence and decision-making support) at King Abdulaziz University.
- 3) Identify the level of application of the concept of crisis management and its components at King Abdulaziz University.
- 4) Determine the impact of business intelligence systems in its various dimensions (data collection, analysis and storage, real-time data processing, business performance management, competitive intelligence and decision-making support) on crisis management at King Abdulaziz University.
- 5) Providing recommendations to develop business intelligence systems and enhance their role in crisis management at King Abdulaziz University.

### **Study questions:**

Through this study, the researchers seeks to reach answers to the main research question: What is the impact of business intelligence systems on crisis management at King Abdulaziz University: from the point of view of academic and administrative leaders? In addition to answering the following specific sub-questions:

1. What are the philosophical and intellectual foundations of the study topics: business intelligence systems and their dimensions, crisis management and their stages?

2. What is the level of application of the concept of business intelligence systems in all its dimensions (data collection, analysis and storage, real-time data processing, business performance management, competitive intelligence and decision support) at King Abdulaziz University?
3. What is the level of implementation of crisis management at King Abdulaziz University?
4. What is the impact of business intelligence systems in all their dimensions (data collection, analysis and storage, real-time data processing, business performance management, competitive intelligence and decision support) on crisis management at King Abdulaziz University?

### **Importance of studying**

This study has scientific and practical importance, as it contributes to enriching theoretical and applied knowledge in the field of business intelligence systems and crisis management in universities and provides valuable insights and recommendations to practitioners and those interested in this field. The importance of the study is evident as follows:

- **Theoretical importance:** The study analyzes and evaluates the impact of the quality of business intelligence on crisis management at King Abdulaziz University, which is a topic that has not been adequately studied in Saudi universities (to the researcher's knowledge), and thus fills a gap in scientific research in this field and provides a reference for other researchers who wish to continue researching this topic.
- **Practical importance:** The study measures the level of application of business intelligence and crisis management systems at King Abdulaziz University, analyzes the relationship between them, explains the factors affecting them, identifies the strengths and weaknesses, identifies the gaps that can be identified and ways to address them, and provides appropriate recommendations to those in charge of managing the university under study. In developing business intelligence systems and making optimal use of them in the university's crisis management process.

### **Study hypotheses:**

This study is based on the following main hypothesis:

H01-There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of business intelligence systems in its dimensions (data collection,

analysis and storage, real-time data processing, business performance management, competitive intelligence and decision support) on crisis management at King Abdulaziz University.

The following sub-hypotheses branch out from them:

H01.1-There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of collecting, analyzing, and storing data as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

H01.2-There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of real-time data processing as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

H01.3-There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of business performance management as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

H01.4 - There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of competitive intelligence and decision-making support as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

### Study model.

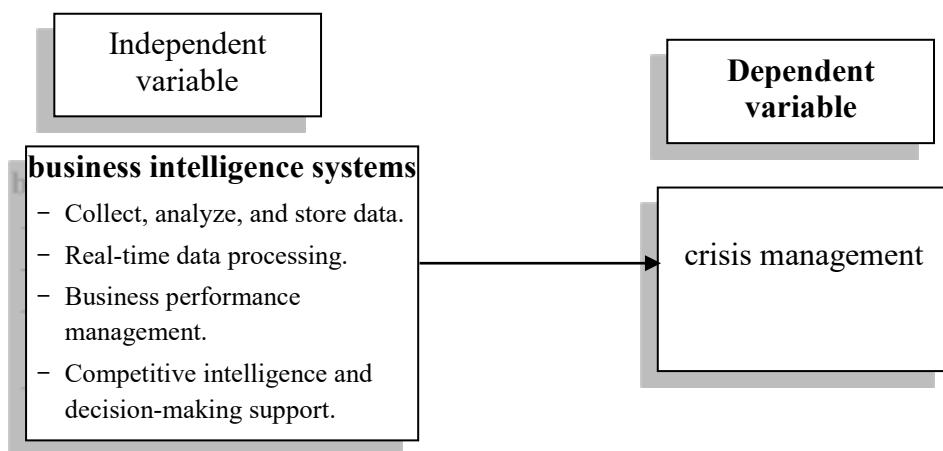


Figure (1): Study model

To achieve the purpose of the study and reach its specific objectives, the researchers designed the theoretical model of the study as shown in Figure No. (1).

### Study methodology:

Based on the type of study, its objectives and questions, this study relied on the descriptive survey approach due to its compatibility with the nature of the study, to answer the study's questions and achieve its objectives, and its procedures were implemented through the following approaches and methods:

- **Quantitative method:** to collect information from the research sample, analyze the numerical data obtained from the sample's answers, and interpret it using numerical and statistical methods.
- **Case study method:** to study the impact of business intelligence systems on crisis management at King Abdulaziz University from the point of view of academic and administrative leaders.
- **Documentary method:** This is done by reviewing intellectual production to view studies and documents related to the subject of the study.

### Study population and sample:

The total population of the current study consisted of academic and administrative leaders at King Abdulaziz University at the university level, and their number reached (53) individuals who were selected using a simple random sampling method.

### The limits of the study:

The limitations of the study are as follows:

- Objective limitations: The objective limitations of this study are limited to addressing the impact of business intelligence systems on crisis management at King Abdulaziz University.
- Spatial limits: The application of the current study is limited to King Abdulaziz University - Jeddah - Kingdom of Saudi Arabia.
- Human limitations: The study is limited to academic and administrative leaders at King Abdulaziz University.
- Time limits: The study was prepared and applied during the year 1445 AH / 2024 AD.

### Study Terminology:

In this study, the researchers used several scientific terms, as follows:

- **Business intelligence systems:** (Gauzelin & Bentz, 2017) define it as Business Intelligence systems are a set of computer programs that are

used to collect, analyze, store and structure data related to the operational activities carried out by the organization so that it is clear for use by stakeholders.

The researcher defined it procedurally: as a set of techniques, tools and methodologies that enable King Abdulaziz University to collect, analyze and display data related to its work and activities, with the aim of enhancing its ability to manage crises.

- **Crisis management:** (Al-Shobaki et al., 2017) defines it as “an administrative process that includes a set of exceptional emergency activities and procedures that differ from the main tasks carried out by the organization and are primarily activated during the occurrence of disasters and risks.” Jaafar (2017) also defines it as “the ability to develop programs and plans to confront unexpected negative events to reduce the damage and negative repercussions as a result of this event.”

The researcher defines it procedurally: as the organized processes and procedures followed by King Abdulaziz University to deal with emergency and sudden events that threaten its stability or reputation or hinder its ability to perform its function and achieve its goals, with the aim of mitigating the damage and restoring the normal situation as quickly as possible.

- **Collecting, analyzing and storing data,** which (Sousa & Oz, 2015) defines as “the process of researching, investigating, and collecting data and then transforming and modeling this data to discover useful patterns and links, which allows us to analyze the data and answer questions with evidence, and formulate these interpretations in a clear model with evidence, The main goal of creating these systems is to collect, analyze and store data, and this data is usually related to customers, suppliers and partners.”

The researcher defines it procedurally as: a set of methods and methods used by King Abdulaziz University to collect data related to its academic and administrative activities, analyze it to extract insights and valuable information, and store it in a secure and organized manner to facilitate access and use when needed.

- **Real-time data processing:** (Stair & Reynolds, 2018) define it as “transforming collected and classified data into information by



evaluating and scrutinizing the relationships between them, which leads to the production of valuable information and knowledge characterized by clarity and accuracy.”

The researcher defines it procedurally: It is the technical ability of King Abdulaziz University to process and analyze data immediately and continuously, which allows quick decisions to be made and to respond to changes occurring in the university environment efficiently.

- **Business performance management:** Armstrong (2018) defines it as “a process that includes controlling the business and activities of the organization and improving them through developing the performance of individuals and work teams, which must be consistent with the organization’s strategic goals.”

The researcher defines it procedurally as: a set of methods and tools used by King Abdulaziz University to monitor, evaluate, and improve the performance of university work, to ensure the achievement of strategic and operational objectives.

- **Competitive intelligence and decision-making support:** (Hammadi et al., 2019) defines it as: “A systematic process consisting of several activities and includes identifying the organization’s needs for intelligence and then carrying out the process of collecting the required data from the external environment, analyzing it, then classifying it, then disseminating it in the external environment and delivering it to Decision makers to help the organization develop implementable strategic visions that enable it to achieve sustainability and progress.”

The researcher defines it procedurally: as the systems and tools used by King Abdulaziz University to collect and analyze information about the competitive environment, and to provide the necessary support to academic and administrative leaders at the university to make informed and effective decisions.

## **The second axis of the study: The theoretical framework and previous studies**

### **First: The theoretical framework:**

The theoretical framework of the current research proceeds as follows:

## ❖ Business intelligence systems

### introduction:

In an era of rapid technological development, business intelligence systems have emerged as a vital tool for enabling organizations to understand their operational and competitive environment more deeply. These systems are the backbone of informed decision-making, as they provide accurate analyses and strategic insights that help improve performance and enhance efficiency.

### The concept of business intelligence systems:

Business intelligence means analyzing the data collected, in order to help decision-making units obtain better knowledge and data covering the organization's operations, and thus better business decisions can be made (Al-Jumaili and Al-Jubouri, 2019).

Rosa et al., (2017) indicated that business intelligence refers to the tools that an organization uses in order to gain a better understanding of operations, markets, and also competitors.

Gauzelin & Bentz, (2017) noted that business intelligence systems are a set of computer programs that are used to collect, analyze, store, and structure data related to the operational activities carried out by the organization so that it is clear for use by stakeholders.

Through the previous definitions, the concept of business intelligence systems can be defined as a set of technologies, tools and methodologies that enable organizations to collect, analyze and display data related to their business and activities, with the aim of improving decision-making and increasing performance and competition.

### Dimensions of Business Intelligence Systems:

1. **Data Collection, Analysis, and Storage:** This foundational process in business intelligence systems involves gathering the necessary data for the organization's operations using suitable scientific statistical techniques and methods. The data is then stored in databases for future utilization (Suwais and Abdeen, 2018). It encompasses research, investigation, data collection, transformation, and modeling to uncover useful patterns and connections. This enables data analysis, evidence-based questioning, and the formulation of clear, evidence-backed interpretations. The primary objective of these systems is the

collection, analysis, and storage of data, typically concerning customers, suppliers, and partners (Sousa & Oz, 2015). Data collection for processing and storage relies on two principal sources: internal sources derived from employee expertise and organizational operations, and external sources obtained from the external environment (Olayan, 2010).

2. **Real-Time Data Processing:** This aspect of business intelligence systems pertains to converting gathered and categorized data into information by assessing and scrutinizing their interrelationships, resulting in the generation of valuable, clear, and precise information and knowledge (Stair & Reynolds, 2018). The data processing sequence includes validating the collected data, classifying it based on specific attributes, and organizing it according to its intended use (Al-Shahrabali and Abu Raqiqa, 2013).
3. **Business performance management:** This process involves controlling the business and activities of the organization and improving them by developing the performance of individuals and work teams, which must be consistent with the organization's strategic goals (Armstrong, 2018). Business performance management is related to the organization's ability to implement a set of activities and processes with high efficiency to achieve high value from products by investing the resources it possesses (Daniels & Bailey, 2014).
4. **Competitive intelligence and decision making:** This dimension relates to how data, information, and insights are used to understand, analyze, and compare the current and future situation of the organization, its competitors, customers, partners, suppliers, and other relevant organizations. Competitive intelligence is defined as a systematic process that consists of several activities and includes identifying the organization's needs for intelligence and then carrying out the process of collecting the required data from the external environment, analyzing it, then classifying it, then disseminating it in the external environment and communicating it to decision makers to help the organization develop executable strategic visions that enable it to achieve Sustainability and advancement (Hammadi et al., 2019). Competitive intelligence is a tool used by organizations to uncover the competitive environment and identify risks, opportunities, and threats

within it. Competitive intelligence depends on collecting data about competitors, customers, new strategies, products, and risks, and analyzing it to benefit from it in developing competitive strategies (Samira and Khulaifi, 2017).

### **The Importance of Business Intelligence Systems:**

Business intelligence systems are crucial due to the complexities organizations encounter in managing various activities and processes. The necessity for data management systems to handle vast quantities of data and information has become essential for organizations (Ben Tayeb, 2016). The significance of business intelligence systems has been underscored in recent years by factors such as the growing complexity in organizational and business activities, stemming from changes and challenges in the external environment, and the swift advancement of modern technological tools and methods (O'Brien & Marakas, 2011).

Business intelligence systems constitute a fundamental and vital component of many organizations' IT portfolios. Their mission is to provide business information and reporting systems by integrating data from diverse sources, both internal and external. Moreover, these systems offer data visualization tools that enhance decision-making efficiency within the organizational environment (Safwan, 2016).

In crisis management, business intelligence systems are pivotal. They enable organizations to analyze extensive, intricate data and derive valuable insights, facilitating informed strategic decisions during crises. Business intelligence systems can aid in forecasting potential crises through trend and pattern analysis, allowing organizations to proactively plan and prepare. They assist in assessing the impact of crises, determining recovery steps, and bolstering the organization's capacity to handle future crises with greater effectiveness and efficiency.

#### **❖ Crisis management**

##### **introduction:**

The ability to deal with crises is considered one of the essential elements of flexibility and success in institutions, and its importance is evident in its ability to transform challenges into opportunities for development and growth, through thoughtful strategies that ensure a rapid and effective response. This process requires a deep understanding of risks and challenges, in addition to developing integrated strategies that enable institutions to predict potential crises and deal with them with high efficiency.

### **Crisis management concept:**

The concept of crisis refers to the occurrence of a major disruption in the natural order of life, which requires the ability to deal with this disruption. This situation poses urgent threats that make it a priority based on the changes and risks it creates in the social system, institutions, governments, political, economic and social system (Boin et.al, 2017). Crisis management is the management that deals with planning and dealing with exceptional emergency circumstances and disasters that may occur suddenly and that hinder normal work (Al-Haila and Abu Ajwa, 2017). Recently, interest in crises and their management has increased further due to the influence of countries and societies on each other due to the conditions imposed by globalization and its strategies (O'Brien & Marakas, 2011).

Crisis management is an administrative process that includes a set of exceptional, emergency activities and procedures that differ from the main tasks carried out by the organization and are mainly activated during the occurrence of disasters and risks (Al-Shoubaki, Abu Amounh, and Al-Badah, 2018). Crisis management is the ability to develop programs and plans to confront unexpected negative events to limit the damage and negative repercussions as a result of this event (Jaafar, 2017). Crisis management also means a set of administrative procedures and activities that organizations plan in the event of an unusual event or disaster that may cause major damage, as these procedures work to avoid the greatest possible amount of losses and ensure the continuity of the organization's work (Al-Amoush, 2021).

From here, it can be said that crisis management means a set of processes, skills, and resources that enable the organization to deal with emergency and critical situations that threaten its stability, function, and purpose, by following organized and systematic steps that include analysis, planning, implementation, evaluation, and learning, with the aim of preserving the safety, security, reputation, and interests of the organization and those concerned with it.

### **Crisis management objectives**

Crisis management includes a set of goals that the organization seeks to achieve in the face of the crisis, including:

- Immediate and rapid response to events resulting from crises and taking preventive measures in advance if a crisis is predicted.
- Preserving the organization's main assets, supporting working individuals and protecting them from losing their jobs.
- Maintaining the organization's programs and operational processes, preventing losses within its business, and continuing to gain the confidence of investors and stakeholders in it.
- Protecting the organization from risks resulting from the occurrence of a specific crisis and preparing and planning to deal with crises in all their forms.
- Providing the organization with the ability to predict and extrapolate the sources of danger and threat that occur during crises, determine the roles and responsibilities of the competent authorities, and provide the necessary resources and capabilities to confront the circumstances affecting the organization.
- Increase oversight of activities within the organization's internal and external environment and advance planning to deal with exceptional circumstances and crises (Al-Amoush, 2021).

### **Stages of crisis management:**

Crises pass through four stages:

#### **1) Pre-crisis stage:**

It is the stage that precedes the occurrence of a crisis, and is characterized by the presence of signs and indicators that indicate the imminent occurrence of a crisis, but they are often unclear, neglected, or wrong. At this stage, the organization must be in a state of preparedness and prevention, analyze potential risks and threats, and develop plans, policies and procedures to deal with the crisis if it occurs. Usually, before a crisis occurs, a crisis sends a number of signals that serve as an early warning indicating the possibility of its occurrence. A crisis, and not paying attention or paying attention to these signals often leads to the occurrence of a potential crisis (Abbas and Al-Najjar, 2020).

#### **2) The beginning stage of the crisis:**

It is the stage in which the crisis begins to emerge and escalate, and is characterized by the presence of a sudden or unexpected event or incidents that lead to a radical change in the previous situation, and create

a state of confusion, anxiety, and pressure on the organization and those concerned with it. At this stage, the organization must be in a state of response and intervention, activate its plans, policies and procedures to deal with the crisis, form a crisis team and define its responsibilities and powers, collect and analyze information and data related to the crisis, and communicate with the concerned parties internally and externally. . And taking all means and methods that would work to contain the crisis, reduce its resulting effects, and prevent it from spreading to other parts of the organization that have not yet been affected by the crisis (Al-Atoum, 2020).

### **3) The stage of the crisis:**

It is the stage in which the crisis reaches its peak and maximum intensity, and is characterized by the presence of negative and dangerous impacts and effects on the organization, its resources, activities and interests, and creates a state of chaos, collapse and deterioration in the situation. At this stage, the organization must be in a state of confrontation and solution, and apply the necessary strategies and measures to reduce losses and damage resulting from the crisis, and provide support and assistance to those affected by the crisis, and cooperate and coordinate with support and assistance agencies, and make great efforts from Management to avoid damage, limit incidents, and attempt to take preventive and remedial measures (Mohammed, 2011).

### **4) Post-crisis stage:**

It is the stage in which the crisis begins to recede and disappear, and is characterized by a gradual improvement in the situation, a mitigation of the negative effects and effects of the crisis, and things return to normal or close to it. At this stage, the organization must be in a state of recovery and restoration, restore the normal and functional status of the organization and its resources and activities, evaluate, analyze and manage the crisis, learn lessons and experiences from the crisis, and develop and update its plans, policies and procedures to deal with future crises. (Al-Atoum, 2020).

### **❖ The role of business intelligence systems in crisis management in universities:**

Business intelligence systems play a pivotal role in enhancing universities' capabilities to manage crises efficiently. These systems go beyond simply being tools for collecting and analyzing data, to become an

integral part of the university's strategic infrastructure, allowing for improving decisions, enhancing response to unexpected events, and dealing with various crises efficiently and effectively. Business intelligence systems contribute to enhancing the ability of universities to manage crises through a number of things, most notably:

Improving decision-making: Business intelligence systems enable university leaders to make decisions based on accurate and deeply analyzed data, which contributes to developing proactive plans for crisis management and reducing potential negative effects.

- **Enhancing crisis response:** These systems provide real-time information that helps universities respond quickly and effectively when crises occur, reducing the time needed to recover and maintaining continuity of academic and administrative operations.
- **Enhancing communication and cooperation:** Business intelligence systems contribute to improving communication channels between different departments within the university, which enhances cooperation and ensures the flow of information necessary for effective crisis management.
- **Developing strategic plans:** These systems help universities analyze data and evaluate different scenarios, enabling them to develop flexible strategic plans capable of adapting to different crises.
- **Evaluating performance after the crisis:** After the end of the crisis, business intelligence systems are used to evaluate the university's performance during the crisis and recall events and study them in-depth to determine the strengths and weaknesses, extract lessons and lessons learned from them, and then circulate those lessons to all parties related to the university, which contributes to Improving preparedness for future crises, and raising the university's efficiency in facing any crises that obstruct the conduct of the educational process in the future (Al-Jumaa, 2021).

## **Second: Previous studies:**

**Al-Ghatam (2023). The Impact of Using Business Intelligence on Crisis Management: A Field Study at the National Center for Disaster and Crisis Management in the Kingdom of Bahrain.**

The study aimed to identify the reality of the use of business intelligence and its impact on the stages of crisis management at the



National Center for Disaster and Crisis Management in the Kingdom of Bahrain. The study relied on the descriptive and analytical approach, and the use of the questionnaire as a tool for the study. The study population consisted of managers in senior, middle, and supervisory management affiliated with the National Center. Disaster and crisis management in the Kingdom of Bahrain in various ministries in the Kingdom of Bahrain, numbering (860) employees. The study sample was selected in a relative stratified manner from managers who have direct contact with the Crisis Management Center in various ministries in the Kingdom of Bahrain, numbering (266) employees. The results of the study showed that the level of availability of business intelligence and the stages of crisis management in the National Center for Disaster and Crisis Management in the Kingdom of Bahrain reached the average level on the five-point Likert scale. The study also found a statistically significant effect of competitive intelligence on the stages of crisis management. The study recommended the need for the National Center for Disaster and Crisis Management in the Kingdom of Bahrain to improve and increase attention to the level of adoption of crisis management in its various stages, with increased attention to studying and analyzing historical trends and data related to the occurrence of crises in order to confront crises and disasters in the Kingdom of Bahrain.

### **Al Olimat, & Alkshal (2023) The Impact of Strategic Intelligence on Crisis Management Styles at Al al-Bayt University.**

The study aimed to assess the impact of strategic intelligence on crisis management styles at Al al-Bayt University in Jordan. The study delved into strategic intelligence dimensions—foresight, future vision, systemic thinking, partnership, and motivation—and their effect on crisis management styles such as changing path, containment, fragmentation, and reserve mobilization. A quantitative approach was used, with a questionnaire gathering 82 responses from university management and department heads. The analysis, conducted using SPSS software, indicated a moderate level of strategic intelligence and crisis management style implementation. The study concludes that strategic intelligence significantly influences crisis management and recommends enhancing its practice within the university to improve crisis response capabilities.

**Obeidat (2022) The impact of business intelligence in crisis management: the strategic vigilance as an intermediary variable in Jordanian insurance companies.**

This study aimed to identify the role of strategic vigilance as an intermediary variable in the impact of business intelligence in crisis management in Jordanian insurance companies. This study used the design of quantitative research, where 275 questionnaires were collected from the observers working in Jordanian insurance companies to obtain the necessary data to test the hypotheses of the study. Path analysis was used to test the hypotheses of the study. The findings of the present study revealed that there is a significant impact of business intelligence on crisis management, as well as the impact of business intelligence on strategic vigilance, the presence of strategic vigilance in crisis management, and the impact of business intelligence on strategic vigilance with strategic vigilance as an intermediary variable.

**Al-Jumaa (2021): The reality of crisis management at Shaqra University in Kingdom of Saudi Arabia from the deans' point of view: The Corona pandemic crisis as a model**

The study aimed at recognize the reality of crisis management at Shaqra University in Kingdom of Saudi Arabia from the deans' point of view. In the current study the Corona pandemic crisis have been used as a model. According to crisis management stages (discovering the early warning of crisis, preparing and preventing, contain the harm, restraining of activity and learning). The descriptive method has been used. A questioner has been used as a study tool, and it have been applied to 18 colleges deans and others 7 supportive deans at Shaqra University. The study concluded to several results: First, deans responded neutral to the statement of the availability of crisis management stages at Shaqra university. While the score average of the study reached to 3.25, it revealed that the crisis management stages was available in neutral way. Finally, the study acquires many advantages from the experience of Shaqra university in dealing with such crisis.

**Al-Amoush (2021): The impact of business intelligence systems on crises management: field study in greater Amman municipality**

The study aims at identifying the impact of business intelligence systems on crises management in greater Amman municipality. The study

used quantitative approach through statistical and descriptive analysis, which were appropriate for the purpose of study. The target population consisted of staff with leading positions in greater Amman municipality a total of (189). A purposive sample method was applied for data collection using a five Likert scale questionnaire. A number of (189) online questionnaires were distributed, (168) questionnaires were returned, statistical package for the social sciences software (SPSS) was used to analyze the data and achieve study objectives. The results indicated that Greater Amman Municipality applies both the concept of business intelligence systems and crisis management to a relatively high degree and that business intelligence systems with all its components have a statistically significant effect on crisis management.

The reality of crisis management strategies in Iraqi universities: an analytical study of the opinions of a sample of the teaching staff at Tikrit university.

**Al-Atoum (2020): The Impact of Business Intelligence on Crisis Management in Jordanian Commercial Banks in the City of Amman.**

The study aimed to demonstrate the impact of business intelligence on crisis management in Jordanian commercial banks in the city of Amman. The researcher used the quantitative approach (descriptive and analytical) through several statistical methods, most notably multiple regression analysis. The findings revealed a significant impact of business intelligence, particularly in its dimensions of competitive intelligence, data collection and analysis, strategic technique adequacy, and business performance management, on the banks' ability to manage crises. This encompassed aspects such as detecting early warning signs, preparing for potential crises, managing damage control, resuming normal operations, and learning from past crises. Consequently, the study recommended that banks should refine their customer services to maximize the advantages of business intelligence, thereby improving their crisis management capabilities.

**Ibrahim (2020): The reality of crisis management strategies in Iraqi universities: an analytical study of the opinions of a sample of the teaching staff at Tikrit university**

The research aimed to reveal the reality of crisis management strategies and the importance of their availability in Tikrit University

through a research community that represents the university teaching card based on the analytical approach, A non-random (intentional) sample of 63 individuals was chosen, Research hypotheses were tested using the statistical program (SPSS Ver. 23) and the AMOS Ver. 20 program, and the research reached a set of results, the most important of which was the availability of crisis management strategies at a university Tikrit was reflected through the answers of the research sample, and accordingly the research recommended increasing interest in these strategies by university administration to gain access to or occupy advanced positions among Iraqi universities.

**Yassin (2020) The role of strategic intelligence management in enhancing the effectiveness of crisis management: Analytical study of the views of a sample of employees of Al-Hamdania University**

The aim of this study is to identify the role of strategic intelligence management in enhancing the effectiveness of crisis management. The philosophy of its problem centered around a key question: Does strategic intelligence management play a role in enhancing the effectiveness of crisis management? The study was based on several hypotheses that assume that there are relationships and influence between strategic intelligence management and enhancing the effectiveness of crisis management. Al-Hamdania University in Nineveh governorate was chosen as a society for the application of the study and its staff. Of the study was composed of (56) respondents. The descriptive and analytical approach was used to complete the requirements. The questionnaire was used as a main tool in the collection of data and was analyzed by the Spss Ver-15 program. The study reached a number of conclusions, DONC strategic effectively and efficiently in enhancing the effectiveness of crisis management in organizations.

**Al-Khowaiter (2019): Developing the Role of Academic Leaders at Prince Sattam Bin Abdulaziz University in Crisis Management**

This study aims to identify the reality of the role of the academic leasers at Prince Sattam bin Abdulaziz University in crisis management, and also to identify the needs and obstacles that face the role of the academic leasers at Prince Sattam bin Abdulaziz University in crisis management. It is also to determine the proposed role of the academic leasers at Prince Sattam bin Abdulaziz University in crisis management,

and ways of developing the role of the academic leaders at Prince Sattam bin Abdulaziz University in crisis management from their point of view. It used a descriptive analytical approach. The sample was (174) academic leaders. The tools used were interview (12 statements) and questionnaire (87 statements). The findings of the study are: 1. the degree of the reality of the role of the academic leaders at Prince Sattam bin Abdulaziz University in crisis management is (intermediate). 2. The degree agreement of the needs of the role of the academic leaders at Prince Sattam bin Abdulaziz University in crisis management and The proposed role of the academic leaders at Prince Sattam bin Abdulaziz University in crisis management is (high) 3. The degree agreement of the obstacles that face the role of the academic leaders at Prince Sattam bin Abdulaziz University in crisis management and the ways of developing the role of the academic leaders at Prince Sattam bin Abdulaziz University in crisis management is (intermediate). The study has many recommendations.

#### **Rakha (2019): The Reality of Crisis Management in the Academic Departments of the University of Tabuk, Saudi Arabia.**

This research aims to reveal the reality of crisis management at the University of Tabuk, Saudi Arabia, from the faculty members' viewpoint, particularly in the stages of discovering early warning signs, readiness and prevention, control of damages, activity recovery, and learning. The study also examines the differences in crisis management perceptions based on gender, specialization, and departmental programs. Employing a descriptive survey approach and a questionnaire for 238 faculty members, the findings indicate a moderate level of crisis management effectiveness. Notably, the recovery stage showed differences based on gender and program type, while department specialization significantly influenced crisis management outcomes, especially favoring practical specialties. The research underscores the importance of establishing crisis management units in each college at the University of Tabuk.

#### **Filipović (2018) Impact of crisis situations on development of business continuity management in Croatia**

The study aimed to measure the impact resulting from the occurrence of crises on part of business management and development in companies operating in Croatia, and the descriptive analytical stratified study was adopted, as the study was applied to (250) companies in Croatia, and a

questionnaire was designed to compete with the study partners, who numbered (106). Of the managers and people who work in business management in these companies. He was able to directly find cases in managing and developing her business.

### **Lott (2012): Crisis Management Plans in Higher Education: Commonalities, Attributes, and Perceived Effectiveness**

This study aims to evaluate the crisis management plans of five universities within the Washington, D.C. Consortium. It assesses the institutions' preparedness and response capabilities, utilizing a 'Four-Level Emergency Response Schema Model' adapted from previous studies. The study involved a quantitative survey and follow-up interviews, revealing that while Crisis Management Teams felt ready to handle crises, other university members lacked familiarity with the plans. The findings suggest a need for improved communication strategies by university administrators to ensure all campus members are well-informed and prepared for potential crises.

#### **Comment on previous studies:**

Through the researcher's review of previous studies, he found interest in the diversity of research trends of previous studies about business intelligence systems and crisis management, while it became clear to the researchers, during their research into previous studies in the period between 2012 - 2023, that there is no study similar to the topic of the current and related study. By examining the impact of business intelligence systems on crisis management at King Abdulaziz University - to the best of the researcher's knowledge - the researchers based the preparation and implementation of the current study on a review of previous studies, to benefit from them in several aspects, the most important of which are:

- Enriching the theoretical framework of the current study and supporting it with the results of previous studies and research.
- Identifying previously researched aspects related to the subject of the study and aspects that have not been studied before, so that the researcher can begin where others left off.
- Help in defining and constructing the study problem.

- Explaining the importance of the study and the justifications for conducting it.
- Benefiting from determining the study methodology to be followed.
- Directing the researchers when designing the study tool to benefit from previous studies in building the study tool.
- Directing the researchers towards many sources of useful information related to the problem of the study.
- Identify the type of statistical treatments appropriate for the study.
- Benefiting from the results and recommendations of previous studies in presenting recommendations and proposals.
- Finding guidance to some references, sources, and research that researchers have not been able to know and access before.
- Previous studies helped the researchers study the method of concluding the results of the study, through what was obtained from the results of the field study and monitoring the extent of agreement or difference between the results of the current study and previous studies.

### **What distinguishes the current study from previous studies:**

The current study is distinguished from previous studies in several aspects, the most important of which is that the current study focuses on King Abdulaziz University in the Kingdom of Saudi Arabia in terms of the study location and its spatial boundaries, while previous studies dealt with different countries and regions such as Jordan, Iraq, Bahrain, and the United States. Second, the current study's sample consists of administrative and academic leaders at the university, which is a specific and important category for understanding the role of business intelligence systems in crisis management, while previous studies included a diverse group of individuals related to the banking, insurance, and public administration sectors. Third, the current study focuses on specific dimensions of business intelligence systems, such as data collection, analysis, and storage, real-time data processing, business performance management, competitive intelligence, and decision-making support. These dimensions reflect the main aspects of business intelligence

systems, while previous studies addressed different or more general dimensions. Fourth, the current study relies on the descriptive survey approach as a research methodology, which is a common approach in this type of studies. The current study uses the electronic questionnaire as a tool for collecting data, and the Statistical Package for the Social Sciences (SPSS) program as a tool for analyzing data. The current studies are consistent with previous studies in this regard. aspect, and based on these aspects, it can be said that the current study provides a new and in-depth look at the impact of business intelligence systems on crisis management in the academic sector, specifically at King Abdulaziz University in the Kingdom of Saudi Arabia.

### **The third axis: curriculum and study procedures**

#### **introduction**

This axis shows the methodology of the study and the procedures that were followed in conducting the study. It also shows the different contexts of the steps that the researchers took to achieve the objectives of the study and answer its questions. In addition to clarifying the type, nature and strategy of the study that was used, describing the study population, and determining the sampling method. Methods and methods for collecting study data, the stages of developing the study tool, demonstrating the validity and reliability of the study tool, and determining the statistical methods used in the study to analyze the data to reach the results.

#### **Study methodology:**

Based on the nature of the study and the objectives it seeks to achieve, the study used the descriptive survey approach, which relies on studying the phenomenon as it exists in reality and is concerned with describing it accurately and expressing it qualitatively and quantitatively, in order to investigate its various aspects and relationships, and to reach conclusions on which the proposed perception is built so that It increases the stock of knowledge about the subject (Qasim, 2011).

The current study follows the case study method, which is one of the methods of the descriptive method, which is the method that aims to collect scientific data related to any unit, whether it is an individual, an institution, or a social system, with the aim of arriving at instructions related to the unit studied and other similar units.



### **Study population and sample:**

The study population consists of administrative and academic leaders at King Abdulaziz University, in the Jeddah region, Saudi Arabia. A random sample representing this community was drawn, amounting to (53) individuals, and the questionnaire was distributed electronically to the members of the study sample.

### **Study tool:**

The questionnaire was used as a tool for collecting data. The phrases of the study tool were formulated in its initial form, and its fields were defined and its phrases were formulated by reviewing the theoretical framework, like the tools used in previous studies similar to the current study. The phrases for each field were formulated according to the procedural definitions and by making use of some of the phrases contained in the tools used. In those previous relevant studies, such as the study of (Al-Amoush, 2021), (Al-Atoum, 2020), and (Al-Samie and Omar, 2022).

The study tool uses a five-point Likert scale as follows: (strongly agree - agree - neutral - disagree - strongly disagree).

### **Questionnaire sections:**

- The first section: demographic data for the sample (gender, age, educational qualification, type of job).
- The second section: contains 30 statements representing the dimensions and themes of the study, as follows:
  - The independent variable: Quality of business intelligence: It contains 20 statements distributed over the following four axes:
    - The first axis: collecting, analyzing and storing data, and it includes 5 phrases.
    - The second axis: real-time data processing, which includes 5 statements.
    - The third axis: Business performance management, which includes 5 phrases.
    - Fourth axis: Competitive intelligence, which includes 5 phrases.
  - Dependent variable: Crisis management: It contains 10 statements.

### **Data collection methods**

Two types of information sources were relied upon:

A- **Secondary data:** These are the data obtained from library sources and from the literary review of previous studies in order to establish the scientific foundations and theoretical framework for this study, such as:

- (1) Management books and scientific materials that examine modern management methods, systems and strategies, crisis management, and analysis of their impact.
- (2) Master's theses and doctoral dissertations that investigate the subject of the study.
- (3) Specialized periodicals and pamphlets written on the subject of the study.

B- **Primary data:** These are the data that were obtained through preparing a special questionnaire for the subject of this study, which covered all the aspects addressed in the theoretical framework, questions and hypotheses on which the study was based. The questionnaire was distributed to the study sample of administrative and academic leaders at King Abdulaziz University.

### **Statistical processing:**

After the researchers completed the process of collecting the necessary data about the variables of this study, it was coded and entered into the computer to extract the statistical results. Statistical methods were used within the Statistical Program for Social Sciences (SPSS Statistical Package for Social Sciences), and then the data obtained from During the field study of the sample investigated, as follows:

#### **1) Descriptive statistics tests and their uses:**

- **Frequencies and percentages:** They were used to measure the relative frequency distributions of the characteristics of the sample members and their answers to the questionnaire statements.
- **Arithmetic Mean:** It was used as the most prominent measure of central tendency to measure the average responses of sample members to questionnaire questions.
- **Standard deviation:** It was used as one of the measures of dispersion to measure the deviation of the sample members' answers from their arithmetic mean.

#### **2) Inferential statistics tests and their uses:**

- Cronbach Alpha test: to test the stability of the study tool.

- Pearson Correlation test: To test the correlation coefficients of independent variables and test construct validity to show the extent to which the score of each item is related to the total score of its axis, and to determine the ability of each item of the scale to excel.
- Multiple Linear Regression test: to test the effect of the independent variables on the dependent variable for testing the main hypothesis.
- Simple Linear Regression test: to test the effect of one independent variable on the dependent variable for testing sub-hypotheses.

Regarding the limits on which this study relied when commenting on the arithmetic mean of the variables in the study model, the researchers determined three levels, namely (weak, medium, and high), based on the following equation: Length of the category = (the upper limit of the alternative - the lower limit of the alternative)/number of levels.

$(5-1)/3 = 4/3 = 1.33$ . Thus, the levels are as follows: from 1 to 2.33 is weak, from 2.34 to 3.67 is average, and from 3.68 to 5 is high.

### Reliability and validity of the instrument

The stability of the study tool was confirmed using the value of Cronbach's Alpha for internal consistency, to ensure the stability of the study tool. Table No. (1) shows the stability coefficient for the study variables.

Table (1): The value of the reliability coefficient for the study variables

Variables type	Variables	No. of phrases	Cronbach's alpha
Independent variable	Data analysis and storage	5	0.910
	Real-time data processing	5	0.942
	Business performance management	5	0.888
	Competitive intelligence and decision support	5	0.891
	Business intelligence systems	20	0.970
Dependent variable	Crisis Management	10	0.952
<b>Overall reliability of the questionnaire</b>		<b>30</b>	<b>0.978</b>

Table No. (1) shows that the general reliability coefficient for the study's axes is high, reaching (0.976) for the total of the questionnaire's (30) items, while the reliability of the axes ranged between 0.888 as a minimum and 0.970 as a maximum. This indicates that the questionnaire has a high degree of reliability. Reliability can be relied upon in the field application of the study according to the Nunley scale, which adopts 0.70 as the minimum reliability. (Nunally & Bernstein, 1994).

**Internal consistency validity:**

The validity of the internal consistency of the questionnaire was verified by calculating the Pearson correlation coefficient between the scores of each of the five axis items and the total score to which the item belongs, using the statistical program SPSS V.25. The following tables show the correlation coefficients between each item of the first axis and the total score for the axis.

Table No. (2): Correlation coefficients between the score of each item and the total score of the first axis to which it belongs:

Data analysis and storage		Real-time data processing		Business performance management		Competitive intelligence and decision support		Crisis Management	
N	Correlation coefficient	N	Correlation coefficient	N	Correlation coefficient	N	Correlation coefficient	N	Correlation coefficient
1	**0.811	6	**0.901	11	**0.798	16	**0.836	21	**0.834
2	**0.896	7	**0.907	12	**0.871	17	**0.861	22	**0.872
3	**0.882	8	**0.889	13	**0.858	18	**0.889	23	**0.736
4	**0.861	9	**0.907	14	**0.844	19	**0.764	24	**0.873
5	**0.839	10	**0.902	15	**0.806	20	**0.827	25	**0.883
								26	**0.806
								27	**0.868
								28	**0.812
								29	**0.855
								30	**0.821

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table No. (2) shows that the values of the correlation coefficients for the study items ranged between (0.736) and (0.907), and they are statistically significant at the level of ( $\alpha = 0.01$ ), which indicates internal consistency between the items and the axis to which they belong.

Table No. (3): Correlation coefficients of the questionnaire axes with the total score of the questionnaire

Variables	Correlation coefficient
Data analysis and storage	0.839**
Real-time data processing	0.816**
Business performance management	0.857**
Competitive intelligence and decision support	0.752**
Crisis Management	0.753**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table No. (3) shows that the values of the correlation coefficients of the questionnaire axes with the total score ranged between (0.885) and (0.948), and they are statistically significant at the level of ( $\alpha= 0.01$ ), which indicates the validity and internal consistency of the questionnaire, and thus its results can be relied upon and trusted.

**Multicollinearity test:**

To ensure the absence of multiple linear correlation, the Variance Inflation Factor (VIF) and the allowable variance (Tolerance) were extracted. After conducting statistical processing, Table No. (4) indicates that the allowable variance factor for the independent variables was less than (1) and greater than ( 0.2) and the values of the variance inflation factor were less than (5), as this is an indication that there is no high correlation between the independent variables, and this indicates that the values are acceptable and that they are suitable for conducting multiple linear regression analysis (Hair et.al, 2018).

Table No. (4): Results of the Multicollinearity test between the independent variables

Variables	VIF	Tolerance.
Data analysis and storage	4.110	0.243
Real-time data processing	4.27	0.242
Business performance management	3.577	0.280
Competitive intelligence and decision support	3.085	0.324
Data analysis and storage	4.110	0.243

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The previous result was confirmed by using Pearson correlation coefficients between the dimensions of the future variable, as Table (5) indicates that there is no high multi-linear correlation between some dimensions of the independent variable, as the correlation coefficient values between them are less than (80%).

Table No. (5): Results of the Multicollinearity test between the independent variables

Variables	Data analysis and storage	Real-time data processing	Business performance management	Competitive intelligence and decision support
Data analysis and storage	1			
Real-time data processing	0.893**	1		
Business performance management	0.851**	0.832**	1	
Competitive intelligence and decision support	0.770**	0.802**	0.767**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Personal characteristics of the study sample members:**

This axis shows the data of the study population members, through which the demographic characteristics of the study population can be identified. These characteristics have been identified as follows:

Table (6): Distribution of study sample members according to demographic characteristics

Statement	Categories	Repetition	Percentage
Sex	Male	39	73.6%
	Female	14	26.4%
	<b>Total</b>	<b>53</b>	<b>100%</b>
Age	20 to 30 years	-	-
	31 to 40 years	5	9.4%
	41 to 50 years	31	58.5%
	Older than 50 years	17	32.1%
	<b>Total</b>	<b>53</b>	<b>100%</b>
Educational qualification	diploma	-	-
	Bachelor's	2	3.8%
	Master's	5	9.4%
	Ph.D	46	86.8%
	<b>Total</b>	<b>53</b>	<b>100%</b>
Type of the job	Administrative	8	15.1%
	Academic	45	84.9%
	<b>Total</b>	<b>53</b>	<b>100%</b>
Years of Experience	5 years or less	3	5.7%
	6 to 10 years	7	13.2%
	11 to 15 years	25	47.2%
	More than 15 years	18	34.0%
	<b>Total</b>	<b>53</b>	<b>100%</b>

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results of Table (6) showed that 73.6% of the study sample members were male, numbering 39 individuals, while 26.4% of them were female, numbering 14 individuals. It was found that 58.5% of the study sample members were between the ages of 41-50 years, numbering 31 individuals, and that 32.1% are over 50 years old, and they number 17 individuals, while 5% are between 31-40 years old, and they number 5 individuals. It was found that the majority of the study sample members, i.e. 84.6% of the sample members, have academic qualifications with a doctorate degree, and they number 46 individuals, while 9.4% of them

have a master's degree, numbering 5 individuals, and 3.8% have a bachelor's degree, numbering 2 individuals. This is due to the nature of the study sample, which consists of academic and administrative leaders at the university. Academic leaders constitute 84.9% of the 45 individuals in the sample, compared to 15.1% of the university's administrative leaders, who number 8 individuals. It was found that 47.2% of the study sample members had years of experience ranging between 11-15 years, and their number was 25 individuals, followed by the category of those with more than 15 years of experience, with a percentage of 34%, and their number was 18 individuals, followed by 13.2% of those whose years of experience ranged between 6-10. years, and their number is 7 individuals, while 5.7% have 5 years of experience or less, and their number is 3 individuals.

#### Fourth axis: Analysis of the study results

##### Description of the study variables:

This part deals with a description of the study variables and the study items, where the arithmetic means and standard deviations of the items were calculated, for the purpose of judging the degree of agreement, determining the relative importance of the items, and then the relative importance of the variables. By performing these steps, the results were as follows:

##### First: Description of the dimensions of business intelligence systems:

This part of the study relates to describing the dimensions of the independent variable, business intelligence systems, which provides an answer to the first question in the study problem, the results of which are shown in Table (7).

Table (7) Arithmetic means, standard deviations, and relative importance of the dimensions of business intelligence systems

Business intelligence systems variables	Mean	standard deviation	Percentage	Relative importance	Rank
Data analysis and storage	4.24	0.580	84.8%	High	1
Real-time data processing	4.11	0.692	82.2%	High	4
Business performance management	4.17	0.546	83.4%	High	2
Competitive intelligence and decision support	4.17	0.577	83.4%	High	3
<b>General scale</b>	<b>4.17</b>	<b>0.557</b>	<b>83.4%</b>	<b>High</b>	

The results in Table (7) show that the arithmetic mean values for the independent variable (business intelligence systems) had high scores, ranging between (4.11-4.24), where the dimension (collecting, analyzing and storing data) obtained the highest degree with a high degree of relative importance, and after the real-time processing of the data. At the very least, with a high degree of relative importance, the general index of the business intelligence systems dimension reached (4.17) and a percentage of (83.4%). Thus, it is clear that the level of relative importance of the attitudes of the study sample individuals towards business intelligence systems in the sector under study was within the high level, and the following is detailed Dimensions of business intelligence systems at King Abdulaziz University.

- **The first dimension: collecting, analyzing and storing data:**

Table No. (8) shows the arithmetic mean, standard deviation, and relative importance of the respondents' answers to the items (collecting, analyzing, and storing data), which is one of the dimensions of business intelligence systems, which was measured based on 5 items.

Table (8) Arithmetic means, standard deviations, and relative importance of items (collecting, analyzing, and storing data)

N	Paragraphs	standard deviation	Percentage	Relative importance	Rank
1	The university administration pays great attention to collecting and analyzing data related to its services.	4.34	0.649	High	1
2	The university has highly efficient databases.	4.28	0.717	High	3
3	The university stores data in secure ways that ensure its protection and continuity.	4.30	0.668	High	2
4	The university uses modern technologies to collect and analyze data to ensure ease of access and use.	4.13	0.652	High	5
5	The university uses multiple tools and software to collect, structure and analyze data.	4.15	0.690	High	4
	<b>General scale</b>	<b>4.24</b>	<b>0.580</b>	High	



Table (8) indicates that the relative importance of the general average of the paragraphs (collecting, analyzing, and storing data) came within the high level, if the average reached (4.24), and the paragraph “The university administration pays great attention to collecting and analyzing data related to its services” came in first place, on the one hand. Other: The paragraph “The university uses modern technologies to collect and analyze data that ensures ease of access and use” ranked last, and this result is partially consistent with the results of the study (Al-Amoush, 2021), which indicated that the Greater Amman Municipality has a high level of interest in data collection and analysis.

- **The second dimension: real-time data processing**

Table No. (9) shows the arithmetic mean, standard deviation, and relative importance of the respondents’ answers to the items (real-time processing of data), which is one of the dimensions of business intelligence systems, which was measured based on 5 items.

Table (9) Arithmetic means, standard deviations, and relative importance of items (real-time processing of data)

N	Paragraphs	standard deviation	Percentage	Relative importance	Rank
6	The university uses systems and software for real-time analysis and processing of data.	4.13	0.735	High	1
7	The data processing process provides information to stakeholders for different periods of time.	4.13	0.761	High	2
8	The university's data processing process ensures the creation of reports that facilitate the decision-making process.	4.08	0.805	High	4
9	The outputs of data processing operations are accurate and clear.	4.13	0.761	High	2
10	The university seeks to intensify its efforts in data processing operations.	4.08	0.781	High	3
	<b>General scale</b>	<b>4.11</b>	<b>0.692</b>	<b>High</b>	

Table (9) indicates that the relative importance of the general average of the paragraphs (real-time processing of data) came within the high level, if the average reached (4.11), and the paragraph “The university uses systems and software for analysis and real-time processing of data” came in first place, and on the other hand the paragraph ranked first. “The university’s data processing process ensures that reports are generated that facilitate the decision-making process.” In last place, this result is consistent with the results of the study (Al-Atoum, 2020), which indicated that Jordanian commercial banks in the city of Amman have a high interest in the adequacy of strategic techniques as one of the dimensions of business intelligence in analyzing and processing data and obtaining early warning signals of crises.

- **The third dimension: business performance management**

Table No. (10) shows the arithmetic mean, standard deviation, and relative importance of the respondents’ answers to the items (Business Performance Management), which is one of the dimensions of business intelligence systems, which was measured based on 5 items.

Table (10) Arithmetic means, standard deviations, and relative importance of the (Business Performance Management) paragraphs

N	Paragraphs	standard deviation	Percentage	Relative importance	Rank
11	The university relies on modern electronic systems to provide its services.	4.11	0.751	High	5
12	The university invests in smart programs and applications to increase the satisfaction of its service recipients.	4.17	0.700	High	3
13	Business intelligence systems help the university monitor performance and make proactive decisions.	4.17	0.612	High	2
14	Business intelligence systems help the university increase the efficiency of its operations and reduce its operational costs.	4.23	0.577	High	1
15	The university achieves savings in time and effort in its activities through business intelligence systems.	4.15	0.632	High	4
	<b>General scale</b>	<b>4.17</b>	<b>0.546</b>	<b>High</b>	

Table (10) indicates that the relative importance of the general average of the paragraphs (Business Performance Management) came within the high level, if the average reached (4.17), and the paragraph “Business intelligence systems help the university in raising the efficiency of its operations and reducing its operational costs” came in first place and among On the other hand, the paragraph “The university relies on modern electronic systems to provide its services” ranked last, and this result is consistent with the results of the study (Al-Atoum, 2020), which indicated that Jordanian commercial banks in the city of Amman have a high level of interest in managing business performance in an efficient manner. Dealing with crises in terms of preparedness, recovery, and learning from the crisis.

- **Fourth dimension: competitive intelligence and decision-making support**

Table No. (11) shows the arithmetic mean, standard deviation, and relative importance of the respondents’ answers to the items (competitive intelligence and decision-making support), which is one of the dimensions of business intelligence systems, which was measured based on 5 items.

Table (11) Arithmetic means, standard deviations, and relative importance of the items (competitive intelligence and decision-making support)

N	Paragraphs	standard deviation	Percentage	Relative importance	Rank
16	The university is keen to benefit from the successful experiences of other competing universities	4.15	0.744	High	3
17	The university is keen to provide distinguished academic services superior to other universities through business intelligence systems	4.23	0.750	High	1
18	The university uses competitive intelligence to detect future environment conditions and variables and make proactive decisions	4.15	0.744	High	3
19	The university's competitive intelligence enhances the ability to recognize the challenges and risks it may face and make appropriate decisions regarding them	4.17	0.580	High	2
20	The university is interested in building important partnerships that enhance its competitive capabilities and improve the quality of its strategic decisions	4.13	0.621	High	4
	<b>General scale</b>	<b>4.17</b>	<b>0.577</b>	<b>High</b>	

Table (11) indicates that the relative importance of the general average of the paragraphs (competitive intelligence and decision-making support) came within the high level, if the average reached (4.17), and the paragraph came: “The university is keen to provide distinguished academic services superior to other universities through “Business intelligence systems” ranked first, and on the other hand, the item “The university is interested in building important partnerships that enhance its competitive capabilities and improve the quality of its strategic decisions” ranked last, and this result is consistent with the results of the study (Al-Amoush, 2021), which indicated that competitive intelligence is applied In the Greater Amman Municipality, it is of high importance.

**Second: Description of the dependent variable (crisis management):**

Table No. (12) shows the arithmetic mean, standard deviation, and relative importance of the respondents’ answers to the items (collecting, analyzing, and storing data), which is one of the dimensions of business intelligence systems, which was measured based on 10 items.

Table (12) Arithmetic means, standard deviations, and relative importance of the (crisis management) paragraphs

N	Paragraphs	standard deviation	Percentage	Relative importance	Rank
21	The university has strategies and plans for managing crises of various kinds.	4.13	0.708	High	6
22	The university invests all its financial and human resources to confront crises	4.06	0.718	High	10
23	The university has a crisis management team.	4.15	0.568	High	3
24	The university has accurate databases that help in early prediction of potential crises and making quick and appropriate decisions.	4.13	0.680	High	5
25	The university has modern technological systems and programs that ensure business continuity during crises.	4.08	0.756	High	9
26	The university is building partnerships with relevant universities to raise its readiness in the face of crises.	4.09	0.597	High	8
27	The university has smart and modern communication systems that facilitate coordination between various levels and parties during crises.	4.11	0.670	High	7

N	Paragraphs	standard deviation	Percentage	Relative importance	Rank
28	The university sets clear and specific indicators to measure its performance in dealing with crises.	4.15	0.601	High	4
29	The university finds solutions and addresses problems quickly and accurately while dealing with crises.	4.21	0.600	High	1
30	The university periodically evaluates its strategies and plans to keep pace with changes in the face of crises.	4.19	0.652	High	2
26	<b>General scale</b>	<b>4.13</b>	<b>0.550</b>	<b>High</b>	

Table (12) indicates that the relative importance of the general average of the paragraphs (crisis management) came within the high level, if the average reached (4.13), and the paragraph “The university finds solutions and addresses problems quickly and accurately while dealing with crises” ranked first and out of On the other hand, the paragraph “The university invests all its financial and human resources to confront crises” ranked last, and this result is consistent with the results of the study (Ibrahim, 2020), which indicated that the availability of crisis management strategies at the University of Tikrit, as well as the study (Obeidat, 2022), which She indicated that there is a high level of moral impact of business intelligence on crisis management, and the study (Yassin, 2020), which indicated the contribution of managing strategic intelligence effectively and with high efficiency in enhancing crisis management in organizations.

### Testing the study hypotheses:

#### Main hypothesis test results:

This study is based on the following main hypothesis:

H01-There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of business intelligence systems in its dimensions (data collection, analysis and storage, real-time data processing, business performance management, competitive intelligence and decision support) on crisis management at King Abdulaziz University.

This hypothesis was tested using the Standardized Multiple Linear Regression test, which represents the answer to the third question in the study problem, and its results were as shown in Table No. (13).

Table (13) Results of testing the impact of business intelligence systems and its dimensions on crisis management at King Abdulaziz University

Dependent variable	Independent variable (Business intelligence systems)	Standard deviation coefficients		Standard coefficients	T. Value	T. Sig
		B coefficients	Standard Error	$\beta$ coefficient		
Crisis Management	(Constant)	0.759	0.328		2.312	0.025
	Data analysis and storage	0.344	0.163	0.362	2.106	0.040
	Real-time data processing	0.315	0.137	0.397	2.300	0.026
	Business performance management	-0.088-	0.144	-0.088-	-.611-	0.544
	Competitive intelligence and decision support	0.237	0.117	0.249	2.028	0.048
<b>R</b>		<b>R<sup>2</sup></b>		<b>F Value</b>		<b>F. Sig</b>
0.876		0.767		39.524		0.000

\* Correlation is significant at ( $\alpha \leq 0.05$ ) Tabular F value (2.37) DF= 4/48  
 Tabular T value (1.96)

Table (13) shows the results of the statistical test of this hypothesis model, which is represented by the presence of a set of dimensions of the independent variable, which are: data collection, analysis and storage, real-time data processing, business performance management, competitive intelligence and decision-making support, and one dependent variable representing crisis management.

It is noted from the table above that the correlation coefficient  $R = (0.876)$ , which indicates that there is a strong relationship between business intelligence and crisis management systems at King Abdulaziz University.

It is noted that there is a statistically significant effect of business intelligence systems on the dependent variable, crisis management, through the value of (F. Sig), which is (0.00), which is less than (0.05), and also through the calculated value of (F), which is (39.524), which is greater than its tabulated value. (2.37), which also represents the significance of this model at a degree of freedom (4/48), and the value of the coefficient of determination ( $R^2 = 0.767$ ) indicates that business intelligence systems in all its dimensions explained (76.7%) of the variance occurring in crisis management.

It appears from the results of the coefficients table for this hypothesis that the value of the beta coefficient for collecting, analyzing and storing data reached ( $\beta = 0.163$ ) and that the calculated value of (T) is (2.106), which is greater than its tabulated value (1.96) at the level of (Sig = 0.005) and is significant. The value of the beta coefficient for real-time data processing was ( $\beta=0.163$ ), and the calculated value of (T) was (2.300), which is greater than its tabular value (1.96) at the level of (Sig=0.026), and it is significant. The value of the beta coefficient for business performance management was ( $\beta =0.088$ ) and that the calculated value of (T) is (0.611), which is less than its tabulated value (1.96) at the level of (Sig=0.544) and is not significant. The value of the beta coefficient for competitive intelligence and decision-making support was ( $\beta=0.249$ ) and that the value of (T The calculated value (2.028) is greater than its tabulated value (1.96) at the level (Sig=0.048) and is significant, as shown in Table No. (13).

Based on the above, we cannot accept the null hypothesis (H0), and we accept the alternative hypothesis (Ha), which says: There is a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) for business intelligence systems in its dimensions (collecting, analyzing and storing data, real-time data processing, and performance management). Business, competitive intelligence and decision support) on crisis management at King Abdulaziz University.

### **Results of testing the first sub-hypothesis:**

H01.1-There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of collecting, analyzing and storing data as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

This hypothesis was tested using a simple regression test, and its results were as shown in Table (14).

Table (14) shows the results of the statistical test of this hypothesis model, which is represented by the presence of one independent variable: collecting, analyzing and storing data, and one dependent variable representing crisis management. It is noted from the table above that the correlation coefficient  $R = (83.4\%)$ , which indicates that there is a strong relationship between data collection, analysis, storage, and crisis management at King Abdulaziz University.

Table (14) Results of testing the impact of collecting, analyzing and storing data on crisis management at King Abdulaziz University

Dependent variable	Independent variable	Standard deviation coefficients		Standard coefficients	T. Value	T. Sig
		B coefficients	Standard Error	$\beta$ coefficient		
Crisis Management	(Constant)	0.776	0.314		2.473	0.017
	Data analysis and storage	0.791	0.073	0.834	10.786	0.000
<b>R</b>		<b>R<sup>2</sup></b>		<b>F Value</b>		<b>F. Sig</b>
0.834		0.695		116.340		0.00

\* Correlation is significant at ( $\alpha \leq 0.05$ ) Tabular F value (2.37) DF= 4/48 Tabular T value (1.96)

It is noted that there is a statistically significant effect of collecting, analyzing and storing data on the dependent variable crisis management, through the value of (T. Sig), which is (0.00), which is less than (0.05), and also through the value of the calculated (T), which is (10.786), which is greater than its value. The tabulation (2.37), which also represents the significance of this model at the degree of freedom (4/48), and the value of the coefficient of determination ( $R^2 = 0.695$ ) indicates that collecting, storing and analyzing data explained (69.5%) of the variance occurring in crisis management.

Based on the above, we cannot accept the null hypothesis ( $H_0$ ), and we accept the alternative hypothesis ( $H_a$ ) which says: There is a statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of collecting, analyzing and storing data as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

**Results of testing the second sub-hypothesis:**

H01.2-There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of real-time data processing as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University. This hypothesis was tested using a simple regression test, and its results were as shown in Table (15).

Table (15) shows the results of the statistical test of this hypothesis model, which is represented by the presence of one independent variable: real-time data processing, and one dependent variable representing crisis management. It is noted from the table above that the correlation coefficient  $R = (84.7\%)$ , which indicates that there is a strong relationship between real-time data processing and crisis management at King Abdulaziz University.



Table (15) Results of testing the impact of real-time data processing on crisis management at King Abdulaziz University

Dependent variable	Independent variable	Standard deviation coefficients		Standard coefficients	T. Value	T. Sig
		B coefficients	Standard Error	$\beta$ coefficient		
Crisis Management	(Constant)	1.366	0.246		2.312	0.000
	Real-time data processing	0.673	0.059	0.847	11.387	0.000
<b>R</b>		<b>R<sup>2</sup></b>		<b>F Value</b>		<b>F. Sig</b>
0.847		0.718		129.655		0.00

\* Correlation is significant at ( $\alpha \leq 0.05$ ) Tabular F value (2.37) DF= 4/48  
 Tabular T value (1.96)

It is noted that there is a statistically significant effect of real-time data processing on the dependent variable, crisis management, through the value of (T. Sig), which is (0.00), which is less than (0.05), and also through the calculated value of (T), which is (11.387), which is greater than its tabulated value. (2.37), which also represents the significance of this model at a degree of freedom (4/48), and the value of the coefficient of determination ( $R^2 = 0.718$ ) indicates that the real-time processing of the data explained (71.8%) of the variance occurring in crisis management.

Based on the above, we cannot accept the null hypothesis ( $H_0$ ), and we accept the alternative hypothesis ( $H_a$ ), which says: There is a statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of real-time data processing as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

**Results of testing the third sub-hypothesis:**

H01.3-There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of business performance management as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

This hypothesis was tested using a simple regression test, and its results were as shown in Table (16).

Table (16) shows the results of the statistical test of this hypothesis model, which is represented by the presence of one independent variable, which is: business performance management, and one dependent variable, which represents crisis management. It is noted from the table above that the correlation coefficient  $R = (74.2\%)$ , which indicates the existence of a strong relationship between management Business performance and crisis management at King Abdulaziz University.

Table (16) Results of testing the impact of business performance management on crisis management at King Abdulaziz University

Dependent variable	Independent variable	Standard deviation coefficients		Standard coefficients	T. Value	T. Sig
		B coefficients	Standard Error	$\beta$ coefficient		
Crisis Management	(Constant)	1.019	0.397		2.565	0.013
	Business performance management	0.747	0.095	0.742	7.897	0.000
<b>R</b>		<b>R<sup>2</sup></b>		<b>F Value</b>		<b>F. Sig</b>
0.742		0.550		62.367		0.000

\* Correlation is significant at ( $\alpha \leq 0.05$ ) Tabular F value= (2.37) DF= 4/48 Tabular T value=(1.96)

It is noted that there is a statistically significant effect of business performance management on the dependent variable, crisis management, through the value of (T. Sig), which is (0.00), which is less than (0.05), and also through the calculated value of (T), which is (7.897), which is greater than its tabular value. (2.37), which also represents the significance of this model at a degree of freedom (4/48), and the value of the coefficient of determination ( $R^2 = 0.550$ ) indicates that business performance management explained (55.0%) of the variance occurring in crisis management.

Based on the above, we cannot accept the null hypothesis ( $H_0$ ), and we accept the alternative hypothesis ( $H_a$ ) which says: There is a statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of business performance management as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

**Results of testing the fourth sub-hypothesis:**

H01.4 - There is no statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of competitive intelligence and decision-making support as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

This hypothesis was tested using a simple regression test, and its results were as shown in Table (17).

Table (17) Results of testing the impact of competitive intelligence and decision-making support on crisis management at King Abdulaziz University

Dependent variable	Independent variable	Standard deviation coefficients		Standard coefficients	T. Value	T. Sig
		B coefficients	Standard Error	$\beta$ coefficient		
Crisis Management	(Constant)	1.042	0.352		2.963	.005
	Competitive intelligence and decision support	0.741	0.084	0.779	8.867	.000
<b>R</b>		<b>R<sup>2</sup></b>		<b>F Value</b>		<b>F. Sig</b>
0.779		0.607		78.618		0.000

\* Correlation is significant at ( $\alpha \leq 0.05$ ) Tabular F value= (2.37) DF= 4/48 Tabular T value= (1.96)

Table (17) shows the results of the statistical test of this hypothesis model, which is represented by the presence of one independent variable: competitive intelligence and decision-making support, and one dependent variable representing crisis management. It is noted from the table above that the correlation coefficient  $R = (77.9\%)$ , which indicates that there is a strong relationship between competitive intelligence, decision-making support, and crisis management at King Abdulaziz University.

It is noted that there is a statistically significant effect of competitive intelligence and decision-making support on the dependent variable crisis management, through the value of (T. Sig), which is (0.00), which is less than (0.05), and also through the value of (T), which is calculated, and its value is (8.867), which is greater than Its tabular value is (2.37), which also represents the significance of this model at a degree of freedom (4/163), and the value of the coefficient of determination ( $R^2 = 0.607$ ) indicates that competitive intelligence and decision-making support explained (60.7%) of the variance occurring in management Crises.

Based on the above, we cannot accept the null hypothesis ( $H_0$ ), and we accept the alternative hypothesis ( $H_a$ ), which says: There is a statistically significant effect at a significant level ( $0.05 \geq \alpha$ ) of competitive intelligence and decision-making support as one of the dimensions of business intelligence systems on crisis management at King Abdulaziz University.

## **The fifth axis: Discussing the results of the study:**

The results showed that business intelligence systems are applied to a high degree at King Abdulaziz University. These results are consistent with the results of the Al-Amoush study (2021), which indicated that the Greater Amman Municipality applies business intelligence systems to a high degree. These results reflect the university's commitment to continuous innovation and modernization, and this high application of business intelligence systems enables the university to make maximum use of data to improve operations and make informed strategic decisions, which enhances its ability to compete and excel.

It also showed results indicating that the university pays great attention to collecting and analyzing data related to its services. This result is partly consistent with the results of the study by Al-Amoush (2021), which indicated that the Greater Amman Municipality has a high level of interest in data collection and analysis. This great interest that the university pays to collecting and analyzing data shows a deep understanding of the importance of data as a strategic resource, and this approach contributes to enabling the university to identify opportunities and challenges faster and more accurately, which contributes to enhancing crisis response and improving academic services.

The results indicated that the university uses systems and software for real-time analysis and processing of data. This result is consistent with the results of the study of Al-Atoum (2020), which indicated that Jordanian commercial banks in the city of Amman have a high interest in the adequacy of strategic techniques as one of the dimensions of business intelligence in analyzing and processing data and obtaining early warning signals of crises. The university's use of real-time analysis and processing systems and software is a vital step towards achieving operational efficiency, as these tools help enhance the university's ability to respond quickly to changes and challenges, and provide early warning signals that help maintain the stability of academic and administrative processes.

The results showed that the university helps business intelligence systems in raising the efficiency of its operations and reducing its operational costs. This result is consistent with the results of the Al-Atoum study (2020), which indicated that Jordanian commercial banks in the city of Amman have a high level of interest in business performance

management in the efficiency of dealing with... Crises in terms of preparedness, recovery, and learning from the crisis. The results showed that the university is keen to provide distinguished academic services superior to other universities through business intelligence systems. This result is consistent with the results of the Al-Amoush (2021) study, which indicated that competitive intelligence is applied in the Greater Amman Municipality with a high degree of importance. The university's focus on providing distinguished academic services through business intelligence systems is an indication of the university's pursuit of excellence and leadership, which contributes to enhancing the university's reputation and its scientific and academic standing. The results also indicated that the application of crisis management at King Abdulaziz University came within the high level, and this result is consistent with the results of Ibrahim's study (2020), which indicated that the availability of crisis management strategies at Tikrit University, and these results reflect the university's interest in applying effective strategies to deal with... crises, which enhances its ability to continue and recover quickly from emergency events. The results also indicate that there is a statistically significant effect of business intelligence systems on the dependent variable crisis management. These results are consistent with the results of Obeidat's (2022) study, which indicated that there is a significant effect of a high level of business intelligence on crisis management. These results confirm the crucial role that these systems play in enhancing the university's capabilities to predict, analyze, and respond to crises efficiently and effectively.

- **Results related to the impact of business intelligence systems on crisis management at King Abdulaziz University:**

The results showed that business intelligence systems with all their components have a statistically significant impact on crisis management at King Abdulaziz University. This explains the extent to which organizations need to apply business intelligence systems to improve their ability to manage crises. This is also a strong indicator that the university is using these systems effectively to analyze risks. And proactive planning, and this enhances the university's ability to deal with crises in a flexible and dynamic manner, which contributes to maintaining its stability and academic reputation. This result is consistent with the results of the Al-Amoush study (2021), which also showed that business intelligence systems have a statistically significant impact on crisis management. In the

Greater Amman Municipality. The study also proved that collecting, analyzing, and storing data has a statistically significant impact on crisis management at King Abdulaziz University, and this result is consistent with the results of the Al Olimat & Alkshali study (2017), which showed that strategic intelligence has a significant impact on crisis management methods in... Al-Bayt University in Jordan. The study showed that real-time processing of data has a statistically significant impact on crisis management at King Abdulaziz University, and this result is consistent with the results of the Obeidat (2022) study, which showed that strategic vigilance is a mediating variable in the impact of business intelligence on crisis management in Jordanian insurance companies. The study showed that business performance management has a statistically significant impact on crisis management at King Abdulaziz University, and this result is consistent with the results of the Al-Atoum study (2020), which showed that business performance management has a statistically significant impact on the preparedness of Jordanian commercial banks for the occurrence of crises. In addition, the study showed that competitive intelligence and decision-making support have a statistically significant impact on crisis management at King Abdulaziz University, and this result is consistent with the results of the Al-Ghatam study (2023), which showed that competitive intelligence has a statistically significant impact on the stages of crisis management.

The previous findings related to the impact of business intelligence systems on crisis management clearly show the vital role that these systems play in enhancing the capabilities of educational institutions to deal with crises and manage them efficiently and effectively.

## **Sixth Axis: Conclusions and Recommendations:**

- **Results:**

The results indicate the following:

1. Business intelligence systems in their various dimensions have a significant impact on crisis management at King Abdulaziz University. These results confirm that the use of business intelligence systems can help universities improve their ability to manage crises more effectively, and it is clear that there is a need for more research in This area is to understand how universities can use business intelligence systems more effectively to manage crises.

2. The results also show that academic and administrative leaders consider business intelligence systems a crucial tool for analyzing data and making strategic decisions during crises, which contributes to enhancing rapid and appropriate response.
3. The results also show that the university can benefit from business intelligence systems not only in improving internal processes, but also in enhancing its ability to compete and excel in the field of higher education.

- **Recommendations:**

In light of the findings of the current study, it recommends the following:

- 1- Enhancing the use of business intelligence systems at King Abdulaziz University and other universities to improve their ability to manage crises.
- 2- The necessary training must be provided to individuals to deal with crises more effectively using business intelligence systems.
- 3- Developing the analysis skills of those responsible for crisis management at the university to make the most of the collected and analyzed data.
- 4- The study also recommends conducting more research to understand how universities can use business intelligence systems more effectively to manage crises, and to consider applying preferences and good practices from universities and other institutions that successfully use business intelligence systems in crisis management.

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## أثر نظم ذكاء الأعمال على إدارة الأزمات بجامعة الملك عبدالعزیز من وجهة نظر القيادات الأكاديمية والإدارية

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المستخلص:

تهدف الدراسة الحالية إلى التعرف على أثر نظم ذكاء الأعمال على إدارة الأزمات بجامعة الملك عبد العزيز، ولتحقيق هذا الغرض اعتمدت الدراسة على المنهج الوصفي المسحي الذي يتناسب مع أهداف الدراسة باستخدام أسلوب دراسة الحالة، وقد تكون مجتمع الدراسة من القيادات الأكاديمية والإدارية بجامعة الملك عبد العزيز، بالتطبيق على عينة بسيطة من القيادات الأكاديمية والإدارية بالجامعة، وقد بلغ حجم العينة (53) مفردة. وتم استخدام الاستبانة كأداة لجمع البيانات الأولية، باستخدام مقياس ليكرت الخماسي، وتم تحليل البيانات باستخدام برنامج الحزم الإحصائية للعلوم الإنسانية SPSS. وقد توصلت الدراسة الحالية إلى مجموعة من النتائج أبرزها: أن جامعة الملك عبد العزيز تطبق مفهوم نظم ذكاء الأعمال ومفهوم إدارة الأزمات وأظهرت الدراسة وجود أثر ذي دلالة إحصائية عند مستوى الدلالة ( $0.05 \geq \alpha$ ) لنظم ذكاء الأعمال بأبعادها المختلفة على إدارة الأزمات بجامعة الملك عبد العزيز. وتستند الدراسة على الفرضية الرئيسية بأنه لا يوجد أثر ذو دلالة إحصائية لنظم ذكاء الأعمال بأبعادها المختلفة على إدارة الأزمات. ومع ذلك، فإن نتائج الدراسة تنفي هذه الفرضية، وتؤكد صحة الفرض البديل الذي يقترح وجود أثر ذو دلالة إحصائية لأبعاد نظم ذكاء الأعمال (جمع وتحليل البيانات وتخزينها، المعالجة الآتية للبيانات، إدارة أداء الأعمال، والذكاء التنافسي ودعم اتخاذ القرار) على إدارة الأزمات بجامعة الملك عبد العزيز. وفي ضوء ما توصلت إليه الدراسة الحالية من نتائج فإنها توصي بالآتي: تعزيز استخدام نظم ذكاء الأعمال في جامعة الملك عبد العزيز وغيرها من الجامعات لتحسين قدرتها على إدارة الأزمات.

الكلمات المفتاحية: نظم ذكاء الأعمال؛ إدارة الأزمات؛ جمع وتحليل وتخزين البيانات؛ الذكاء التنافسي ودعم اتخاذ القرار؛ المعالجة الآتية للبيانات