

# The Level of Business Intelligence in Non-Governmental Organizations in Palestine

Mazen J. Al Shobaki<sup>1</sup>, Suliman A. El Talla<sup>2</sup>, Mahmoud T. Al Najjar<sup>3</sup>

<sup>2</sup>College of Intermediate Studies – Al-Azhar University – Gaza, Palestine.

<sup>1</sup>mazen.alshobaki@gmail.com, <sup>2</sup>Eltallasuliman@gmail.com, <sup>3</sup>malekzain750@gmail.com

**Abstract:** *The study aimed to identify the level of business intelligence in its dimensions (data reliability, information technology, competitive intelligence, analytical ability, business management performance, immediate analytical processing) in NGOs in the southern Palestinian governorates. The study used the analytical descriptive approach, and a structured questionnaire was used to collect data. Which contribute to the development of the objectives of the study, and the study population consists of employees in Non-Governmental Organizations in the southern Palestinian governorates, and a random sample was used to collect data from the study community, as the sample reached (184) individuals, and the results of the study showed that the general estimate of business intelligence came with a high level and weight Relative (90.49%), and the arrangement of business intelligence dimensions was as follows: (data reliability, information technology, competitive intelligence, analytical ability, business management performance, and instant analytical processing). The study presented a set of recommendations, the most important of which are: the need for the organization to use modern technological systems to analyze and make its own reports, to work on employing the use of business intelligence techniques in detecting new competitors, and predicting their strategies.*

**Keywords:** Business Intelligence, Non-Governmental Organizations, Southern Governorates, Palestine.

## Introduction

The tremendous developments brought about by the information revolution imposed on organizations the need to develop a set of new methods and methods in managing organizational work with all its components, which prompted organizations to collect the huge amount of data, whether from the organization's internal or external environment, and process and analyze it in order to obtain information. That contribute to achieving the wishes of the beneficiaries, anticipating their future needs, and exploiting the available opportunities (Hamdan et al., 2020). From this standpoint, it has become necessary for organizations to take advantage of business intelligence systems to provide them with the necessary information required for decision-making.

Modern management cannot turn into rigid functions that do not seek development and modernization (Al Najjar et al., 2022), but rather it must always seek to adopt development initiatives to raise its performance levels and achieve continuous improvement in order to renew its roles and increase its levels of internal and external efficiency (Hamdan et al., 2020), it has become necessary for departments to modernize their administrative methods by introducing modern expert systems in order to ensure survival, continuity, and the ability to achieve a competitive advantage that meets the needs and desires of beneficiaries (Muhammad et al., 2021).

Business intelligence is one of the contemporary topics that contribute to the sustainability of organizations, and it can also be used to develop administrative systems that simulate some elements of human intelligence, which allow deductive operations to be carried out.

## Problem Statement

Modern technical and knowledge progress is a major driver for organizations all over the world to take a rapid pace towards transforming into organizations that adopt technological developments as the latest management style that has spread recently to replace traditional organizations in enterprise management (Owda et al., 2019), as it works to rearrange its positions And to take advantage of this technology in the practical framework of its tasks and roles and enhance it to serve the technical side and achieve the aspirations and hopes of institutions and contribute to the survival and competitiveness of these institutions, and in order to face the challenges and rapid technological changes facing administrative work in Non-Governmental Organizations of various types and specializations, the need has emerged to use modern methods and tools that include Intelligent systems for business with the aim of providing the necessary information to support decision makers (Owda et al., 2019)) and keeping pace with these challenges, which reflects an image that distinguishes the organization from other organizations.

## Research Questions

From the foregoing, a number of questions were concluded that the study will answer, as follows:

**Q1-:** What is the level of business intelligence in NGOs in the southern Palestinian governorates?

**Q2-:** Are there significant differences in the respondents' responses about business intelligence in Non-Governmental Organizations in the southern Palestinian governorates, according to personal and organizational data?

## Research Objectives

Based on the established research questions, this study aims to achieve the following objectives:

1. Identifying the reality of business intelligence in NGOs in the southern Palestinian governorates.
2. Showing differences in respondents' responses about business intelligence in NGOs in the southern Palestinian governorates, according to personal and organizational data.
3. Coming up with recommendations that contribute to supporting decision-making to support business intelligence in NGOs.

### Research Importance

The aspects of the importance of the study can be identified from the contribution and the expected addition from it, as follows:

1. It deals with the issue of business intelligence as one of the topics currently raised in the arena of scientific and technical research and has a direct impact on the efficiency of institutions of all kinds.
2. It urges the development of the organizational structure for managing Palestinian NGOs, based on business intelligence.

### Limitations and Directions for Research

The scope of the study shall be as follows:

1. **Objective limits:** The study focused on identifying the level of business intelligence in Non-Governmental Organizations.
2. **Human Limit:** The study was conducted on employees in the NGOs under study in Palestine, who responded electronically by filling out the questionnaire.
3. **Spatial Boundaries:** The study was conducted in the southern Palestinian governorates.
4. **Time Limits:** This study was implemented in 2023 and therefore represents the reality at this time.

### Literature Reviews

- Study of (Al-Balawi, 2023) entitled "The Impact of Innovative Leadership on Improving Business Intelligence from the Viewpoint of Faculty Members at Tabuk University", which aimed to identify the impact of innovative leadership on improving business intelligence from the viewpoint of faculty members at Tabuk University, The analytical descriptive approach was used to achieve the objectives of the study, and a questionnaire was designed to collect data from the study sample of (140) faculty members, and the results showed that there is a statistically significant effect between innovative leadership and business intelligence in the university under study. Appropriate capabilities to develop the capabilities of faculty members and adopt new ideas.
- Study of (Muhammad and Al-Murad, 2022) entitled "Diagnosing Business Intelligence Dimensions - An Exploratory Study of the Opinions of a Sample of Administrative Leaders in Asia Cell Communications Company in Iraq, which aimed to identify the diagnosis of business intelligence dimensions (data sources, data integration, data warehouse, data analysis, information presentation) in the Asiacelell company, and the

researchers used the analytical descriptive approach, and a questionnaire was designed to collect data from the study sample of (150) employees of the company under study, and the study showed that business intelligence dimensions are developed to high degrees in company.

- Study of (Hassan and Kazem, 2022) entitled "The Role of Business Intelligence in Achieving Sustainable Development - An Applied Study in the Ministry of Science and Technology", which aimed to study the impact of business intelligence in achieving sustainable development in the Ministry of Science and Technology, and the researchers adopted the descriptive analytical approach to achieve the objectives of the study A questionnaire was designed to collect data with the study sample of 40 employees from the ministry under study. The study showed that business intelligence in the ministry contributes to achieving sustainable development.
- A study (Nafi, 2018) entitled "The Impact of Big Data on Business Intelligence: A Field Study of Jordanian Telecom Companies", which aimed to identify the impact of big data on business intelligence in Jordanian telecom companies. The researcher used the analytical descriptive approach, and to collect data a special questionnaire was designed. And distributed to the study sample of 213 employees working in the companies under study, and the study showed that there is an impact of big data on business intelligence.
- Study of (Saleh et al., 2017) study entitled "The Role of Business Intelligence in Achieving the Dimensions of Efficient Response to the Consumer - A Study of the Opinions of a Sample of Managers in Retail Stores of International Business Organizations - Erbil and Dohuk Governorates, which aimed to identify the role of business intelligence in achieving the dimensions of efficient response To the consumer, and to achieve the objectives of the research, the analytical descriptive approach was used, and the data was collected by distributing a special questionnaire that was distributed to (100) employees of international business organizations operating within the governorates of Erbil and Dohuk. Positive correlation between business intelligence and efficient consumer response.

### Comment on Previous Studies

By reviewing previous studies, we note that the studies emphasized the importance of applying the requirements of governance, and the following is a review of the similarities and differences between the current study and previous studies to clarify the research gap that the research seeks to cover.

### The Benefits of the Current Study from Previous Studies

The current study benefited from previous studies in the following:

- Learn about the latest studies on business intelligence.
- Enriching the study with the theoretical aspect due to the large amount of information contained in each study.

- Determine the variables of the study and formulate its hypotheses.
- Choosing the appropriate method for the study, which is the descriptive analytical method.
- Determine the study tool, which is the questionnaire, as an appropriate tool for the subject of the study.
- Building conclusions and final recommendations, and comparing results.

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

What distinguishes this study from previous studies is that it:

- According to the researchers, this study is considered one of the relatively rare studies that dealt with business intelligence in NGOs in Palestine.
- The study was developed on Non-Governmental Organizations in the southern Palestinian governorates.

#### **Conceptual Frameworks**

Business intelligence is one of the modern approaches that have been widely popular in contemporary business organizations, and data collection, processing, analysis, and provision of necessary information are among the basics of this approach, as databases are provided, in addition to the use of a set of means, applications, and methods that help in better decision-making (Owda et al., 2019), in addition to adding business value and enabling organizations to adapt to new conditions. Business intelligence is defined as the process of collecting data from internal and external sources, analyzing it, storing and reporting, analytical processing, predictive analytics, and performance management.

The researchers define it procedurally as a management philosophy through the use of a set of tools that work to collect, manage and purify information within the purpose of efficient and effective decision-making.

Intelligence has different types that are applied in the modern business environment, including artificial intelligence, economic intelligence, military intelligence, marketing intelligence, physical intelligence, tactical intelligence, spatial intelligence, and spatial intelligence.

#### **The Importance of Business Intelligence**

Al-Ghazzawi (2011) believes that the importance of business intelligence lies in the following points:

- Formulating strategic objectives by identifying the strengths and weaknesses of the internal environment of the organization and comparing them with the opportunities and challenges expected from the external environment, and comparing these results with the resources that the organization possesses.
- Supporting the organization's infrastructure through the information it provides to the organization.
- Increasing the expansion of new business practices such as managing customer relations, strategic alliances, and external procurement.
- Contribute to increasing the efficiency of the intelligence of business organizations.

- Converting data into information and then into knowledge.
- Provide a graphical interface to display knowledge.
- Increasing the market share of the organization, entering new labor markets, and targeting new clients.

#### **Business Intelligence Goals**

Mirkhan and Rizgar (2015) see that the goals of business intelligence lie in the following points:

- Investing and developing expertise in the field of business through strategic thinking.
- Good planning to meet business requirements.
- Seizing opportunities to improve customers' expectations and the services they wish to receive.
- Unify access to information by beneficiaries through information sharing.
- Simplify the decision-making process by obtaining timely information.
- Dissemination of information at all administrative levels.

#### **Business Intelligence Success Factors**

- Supporting senior management, providing financial support, obliging all employees to participate in the implementation of activities, and removing all obstacles that reduce the success of the project.
- Good management from the administration in charge of implementing business intelligence by owning high-efficiency technologies, and leading business intelligence towards success.
- Determine the expectations expected from its implementation, such as performance and quality expectations, and protect the interests of stakeholders.

#### **Dimensions of Business Intelligence**

Many researchers and those interested, including (Hassan and Kazem, 2022), wrote about the dimensions of business intelligence, which can be summarized in the following points:

- **Real-Time Analytical Processing:** A technology that helps manage, process, and display data in a multidimensional environment, for analysis purposes, in addition to supporting and enhancing decision-making and generating reports based on the data warehouse.
- **Business Performance Management:** Business performance management is considered as the basic framework that expresses the organization and analysis of business methodologies, processes and related systems to guide and direct the overall performance of the organization.
- **Competitive Intelligence:** It is the process of collecting data in an ethical manner, analyzing it, and disseminating it in an accurate, clear, and specific way, in a timely and sufficient manner in the business environment.
- **Data Reliability:** It is considered one of the most important issues, as reliability refers to the need for data to be highly reliable and free from errors, and that depends on the sources that must be of a high degree of reliability.

- **Information Technology:** The use of technology is a means to support administrative operations, and it is a communication tool within organizations with the internal and external environment, so the organization's management must set a clear structure for information technology that it adopts in its work.
- **Analytical Ability:** It is a basic issue that refers to the ability of a business intelligence system to explore different flows of data, provide appropriate intelligence, and integrate information into decision-making activities in all units of the organization.

The researchers believe that business intelligence consists of a set of components, the most prominent of which are:

- On-line analytical processing systems.
- Private data warehouse.
- Data control panel.
- Technologies that contribute to displaying information, reports, dashboards, and scorecards.
- Data mining tools.
- Business performance management.

**Methodology and Procedures**

The study methodology and procedures are considered a main axis through which the applied side of the study is accomplished. Accordingly, the researchers touched on the procedures that were followed in preparing the study by

**Table 1:** Scores of the scale used in the questionnaire

Response	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Degree	1	2	3	4	5

**The Standard Used In the Study**

To determine the criterion adopted in the study, the length of the cells was determined in the five-point Likert scale by

calculating the range between the degrees of the scale (5-1 = 4) and then dividing it by the largest value in the scale to obtain the length of the cell as shown in the following table:

**Table 2:** The criterion adopted in the study

Arithmetic Mean	Relative Weight	Degree Of Approval
From 1.8 - 1	From 35.9% - 20%	Very Weak
From 2.59- 1.8	From 51.9% - 36%	Weak
From 3.39-2.6	From 67.9 -% 52 %	Medium
From 4.19-3.4	From 83.9% - 68%	Big
Greater Than 4.2	Greater Than 84%	Very Large

In order to interpret the results of the study and judge the level of response, the researchers relied on arranging the arithmetic averages at the level of the domains of the questionnaire, and the level of the paragraphs in each domain, and the researchers determined the degree of approval according to the test approved for the study.

**Validity of the Study Tool**

The validity of the questionnaire reflects the measurement of the paragraphs of the questionnaire, what it was prepared to measure. The validity of the questionnaire has been verified through the following:

**The Validity of The Internal Consistency:** It means "the extent to which each paragraph of the questionnaire is

consistent with the axis to which this paragraph belongs. It was calculated on the sample of the exploratory study of (30) questionnaires, by calculating the correlation coefficients between each paragraph and the total score of the axis to which it belongs.

**Internal Consistency Results for the Business Intelligence Hub**

The following tables show the correlation coefficient between each paragraph of the "Business Intelligence" domains and the total score for each domain, which shows that the correlation coefficients shown are a function at a significant level ( $\alpha \leq 0.05$ ), and thus the domain is considered valid for what was set to measure it.

**Table 3:** The results of the validity of the internal consistency of the field of immediate analytical processing



#	Item	Pearson Correlation Coefficient	Probability Value (Sig.)
1.	Data analysis systems provide organization with a high degree of detail.	.504	*0.004
2.	Business intelligence systems accurately contribute to the retrieval of data and information.	.594	*0.001
3.	The organization uses modern technological systems to analyze and make its own reports.	.691	*0.012
4.	The efforts of business intelligence systems in the organization are important in terms of the ability to obtain data and information in a timely manner	.737	*0.000
5.	Data analysis systems formulate reports on the performance of the organization for different periods of time	.706	*0.000
6.	Data analysis systems display information in a clear manner.	.618	*0.000

\*The correlation is statistically significant at the level of significance ( $\alpha \leq 0.05$ ).

**Table 4:** The results of the validity of internal consistency for the field of business administration performance

#	Item	Pearson Correlation Coefficient	Probability Value (Sig.)
1.	Business intelligence systems are sufficient to achieve the basic goals associated with the performance of the organization.	.811	*0.000
2.	Business intelligence promotes the reduction of errors committed during the implementation of the business.	.875	*0.000
3.	Business intelligence contributes to the correct flow of data and information between all departments of the organization at the right time.	.881	*0.000
4.	Business intelligence helps you get all operations done in one place.	.794	*0.000
5.	The use of business intelligence in the organization is a factor in the selection and implementation of business strategy.	.881	*0.000

\*The correlation is statistically significant at the level of significance ( $\alpha \leq 0.05$ ).

**Table 5:** Results of internal consistency validity for the field of competitive intelligence

#	Item	Pearson Correlation Coefficient	Probability Value (Sig.)
1.	Competitive intelligence informs about new technology that can affect the performance of the organization.	.750	*0.000
2.	Competitive intelligence provides the organization with a relatively clear picture of the future business environment in which the organization operates.	.752	*0.000
3.	Competitive intelligence predicts competitor strategies	.889	*0.000
4.	Competitive business intelligence contributes to the detection of new competitors.	.830	*0.000
5.	Competitive intelligence allows executives to choose the appropriate competitive dimensions.	.723	*0.000
6.	Competitive intelligence enhances the organization's readiness to respond early and effectively to events and opportunities.	.848	*0.000

\*The correlation is statistically significant at the level of significance ( $\alpha \leq 0.05$ ).

**Table 6:** The results of the validity of the internal consistency of the field of data reliability

#	Item	Pearson Correlation Coefficient	Probability Value (Sig.)
1.	Data reliability helps managers make more accurate decisions	.772	*0.000
2.	Data reliability reduces the level of indecision among decision makers.	.874	*0.000
3.	The external data acquired for business intelligence is reliable, validated, and appropriate to the organization's activities.	.817	*0.000
4.	Internal business intelligence data is reliable.	.913	*0.000
5.	The reliability of data and information enables business intelligence to reach the required outputs	.846	*0.000

\*The correlation is statistically significant at the level of significance ( $\alpha \leq 0.05$ ).

**Table 7:** The results of the validity of internal consistency in the field of information technology

#	Item	Pearson Correlation Coefficient	Probability Value (Sig.)
1.	Information technology enables the storage, acquisition, analysis, and organization of data, information, and knowledge within business intelligence systems.	.691	*0.000
2.	Information technology helps provide information from its variety of sources to build the database of business intelligence.	.873	*0.000
3.	Information technology facilitates the exchange of information between employees.	.776	*0.000
4.	The organization uses software to help provide business intelligence information.	.810	*0.000
5.	The use of information technology is a way to support business intelligence systems	.914	*0.000

\*The correlation is statistically significant at the level of significance ( $\alpha \leq 0.05$ ).

**Table 8:** The results of the validity of the internal consistency of the field of analytical ability

#	Item	Pearson Correlation Coefficient	Probability Value (Sig.)
1.	The organization uses appropriate software for data analysis	.958	*0.000
2.	Analytical capabilities improve the outputs used in the decision-making process.	.797	*0.000
3.	Data analytics capabilities are at the core of the business intelligence process	.882	*0.000
4.	Analytical systems in the organization work on linking different data to convert them into information and knowledge.	.958	*0.000
5.	The organization has future plans to develop data analytical capabilities based on business intelligence.	.658	*0.000

\*The correlation is statistically significant at the level of significance ( $\alpha \leq 0.05$ ).

**Construction Validity:** It means "the extent of consistency of each domain of the total score of the axis to which the field is developed, and it was calculated on the sample of the survey study, which amounted to (30) questionnaires, by calculating the correlation coefficients between each domain and the total score of the axis to which it belongs".

**Table 9:** The results of the building validity of the business intelligence axis

#	Domain	Pearson Correlation Coefficient	Probability Value (Sig.)
1.	Instant Analytical Processing	.487	*0.006
2.	Business Management Performance	.635	*0.000
3.	Competitive Intelligence	.914	*0.000
4.	Data Reliability	.835	*0.000
5.	Information Technology	.802	*0.000
6.	Analytical Ability	.894	*0.000

\*The correlation is statistically significant at the level of significance ( $\alpha \leq 0.05$ ).

**Reliability:** The stability of the questionnaire means that the questionnaire gives the same results if it is reapplied several times in succession, and it also means to what degree the scale gives close readings each time it is used, or what is the degree of its consistency, consistency and continuity when it is used repeatedly at different times.

The researchers verified the stability of the study questionnaire through Cronbach's Alpha Coefficient, and the results were as shown in Table (10).

**Table 10:** Cronbach's alpha coefficient to measure the stability of the resolution

Domain	Number Of Paragraphs	Cronbach's Alpha coefficient
Instant Analytical Processing	6	0.713
Business Management Performance	5	0.900
Competitive Intelligence	6	0.885
Data Reliability	5	0.896
Information Technology	5	0.861
Analytical Ability	5	0.903
<b>Business intelligence score</b>	32	0.946

It is clear from the results shown in Table No. (11) That the value of Cronbach's alpha coefficient is high for each domain, ranging between (0.713, 0.900), while it reached (0.946) for all items of the business intelligence axis, and this means that the stability is high and statistically significant. Thus, the resolution in its final form is applicable. The researchers have confirmed the validity and stability of the questionnaire, which makes them fully confident in the validity and validity of the questionnaire for analyzing the results, answering the study's questions.

**Statistical Description of the Study Sample:**

The following table shows the statistical description of the members of the study community according to personal data. The number of respondents filling out the study questionnaire was (184) employees in Non-Governmental Organizations in the southern governorates (gender, age group, academic qualification, job title, years of service, governorate) and the results are shown. In the following table:

**Table 11:** Statistical description of the study sample according to personal and organizational data (n = 184)

Variable	Category	The Number	%
Gender	Male	144	78.3
	Female	40	21.7
Qualification	Diploma	12	6.5
	Bachelor's	132	71.7
	Postgraduate	40	21.7
Age Group	Less Than 30	16	8.7
	From 30 To Less Than 40	108	58.7
	From 40 to less than 50	36	19.6
	50 years and over	24	13.0
Job Title	Member of the Board of Directors	48	26.1
	Manager	36	19.6
	Head of the Department	56	30.4
	employee	44	23.9
Years Of Service	Less than 5 years	12	6.5
	5 - less than 10 years	96	52.2
	10- Less than 15 years old	52	28.3
	15 years and over	24	13.0
Governorate	North Governorate	24	13.0
	Gaza Governorate	104	56.5
	Central Governorate	24	13.0
	Khan Yunis Governorate	24	13.0
	Rafah Governorate	8	4.3

**Answering Study Questions and Testing Hypotheses**

To answer the questions of the study, the arithmetic and relative mean, standard deviation, and the arithmetic mean were used.

**Q1-:** What is the level of business intelligence in NGOs in the southern Palestinian governorates?

To answer this question, the arithmetic mean, relative weight, standard deviation, and arrangement were used. The results are shown in the following table:

**Table 12:** The arithmetic and relative mean and standard deviation for each paragraph of the "Business Intelligence" axis

#	Item	Arithmetic Mean	Standard Deviation	Relative Weight	Ranking
1.	Instant Analytical Processing	4.2935	0.42420	85.87%	6
2.	Business Management Performance	4.5087	0.42993	90.17%	5
3.	Competitive Intelligence	4.5616	0.47571	91.23%	3
4.	Data Reliability	4.6304	0.50348	92.61%	1
5.	Information Technology	4.6174	0.44809	92.35%	2
6.	Analytical Ability	4.5348	0.54048	90.70%	4
	<b>Business intelligence score</b>	4.5244	0.37528	90.49%	

From the previous table, it can be concluded that the field "Data Reliability" came in the first place with an arithmetic average of (92.61%), which is very high. Followed by the field of "information technology" in the second place with an

arithmetic mean (92.35%) and a very high degree of approval as well.

While the field "immediate analytical processing" came last with an arithmetic average of (85.87%), a very high degree of agreement.

The total score for the business intelligence axis came with an arithmetic mean of (4.524), with a relative weight of

**Table 13:** The arithmetic and relative mean and standard deviation for each paragraph of the field of "immediate analytical processing"

#	Item	Arithmetic Mean	Standard Deviation	Relative Weight	Ranking
1.	Data analysis systems provide organization with a high degree of detail.	4.33	0.555	86.60%	3
2.	Business intelligence systems accurately contribute to the retrieval of data and information.	4.39	0.489	87.80%	1
3.	The organization uses modern technological systems to analyze and make its own reports.	4.09	0.805	81.80%	6
4.	The efforts of business intelligence systems in the organization are important in terms of the ability to obtain data and information in a timely manner	4.26	0.707	85.20%	5
5.	Data analysis systems formulate reports on the performance of the organization for different periods of time	4.33	0.695	86.60%	3
6.	Data analysis systems display information in a clear manner.	4.37	0.527	87.40%	2
<b>All paragraphs of the field together</b>		4.2935	0.42420	85.87%	

From the previous table, it can be concluded that Paragraph No. (2) "Business intelligence systems contribute accurately to data and information retrieval" came first with a relative weight of (87.80%), a very high degree of approval.

Paragraph No. (3) "The organization uses modern technological systems to analyze and compose its own

**Table 14:** The arithmetic and relative mean and standard deviation for each item in the field of "Business Administration Performance"

#	Item	Arithmetic Mean	Standard Deviation	Relative Weight	Ranking
1.	Business intelligence systems are sufficient to achieve the basic goals associated with the performance of the organization.	4.35	0.562	87.00%	5
2.	Business intelligence promotes the reduction of errors committed during the implementation of the business.	4.43	0.497	88.60%	4
3.	Business intelligence contributes to the correct flow of data and information between all departments of the organization at the right time.	4.61	0.532	92.20%	1
4.	Business intelligence helps you get all operations done in one place.	4.59	0.536	91.80%	2
5.	The use of business intelligence in the organization is a factor in the selection and implementation of business strategy.	4.57	0.497	91.40%	3
<b>All paragraphs of the field together</b>		4.5087	0.42993	90.17%	

From the previous table, it can be concluded that paragraph no. (3) "Business intelligence contributes to the correct flow of data and information between all departments of the organization in a timely manner" came first with a relative weight of (92.20%), very large.

Paragraph No. (1) "Business intelligence systems are sufficient to achieve the basic objectives related to the

(90.49%). This means that there is a very high degree of agreement by the respondents on the paragraphs of this axis.

The following tables show the order of the paragraphs for each domain in the business intelligence axis:

reports" ranked last with an arithmetic average of (81.80%), a high degree of agreement.

The total score for the field of "immediate analytical processing" came with a relative weight equal to (85.87%), and this means that there is a very high degree of agreement by the respondents on the paragraphs of this field.

performance of the organization" ranked last with a relative weight of (87.00%), a very high degree of approval.

The total score for the field of "Business Administration Performance" came with an arithmetic average of (90.17%), and this means that there is a very high degree of agreement by the sample members on the paragraphs of this field.



**Table 15:** The arithmetic and relative mean and standard deviation for each paragraph of the field of "competitive intelligence"

#	Item	Arithmetic Mean	Standard Deviation	Relative Weight	Ranking
1.	Competitive intelligence informs about new technology that can affect the performance of the organization.	4.67	0.470	93.40%	1
2.	Competitive intelligence provides the organization with a relatively clear picture of the future business environment in which the organization operates.	4.57	0.497	91.40%	3
3.	Competitive intelligence predicts competitor strategies	4.50	0.653	90.00%	5
4.	Competitive business intelligence contributes to the detection of new competitors.	4.50	0.686	90.00%	5
5.	Competitive intelligence allows executives to choose the appropriate competitive dimensions.	4.54	0.541	90.80%	4
6.	Competitive intelligence enhances the organization's readiness to respond early and effectively to events and opportunities.	4.59	0.647	91.80%	2
<b>All paragraphs of the field together</b>		4.5616	0.47571	91.23%	

From the previous table it can be concluded that Paragraph No. (1) "Competitive intelligence guides about new technology that can affect the organization's performance" came first with a relative weight of (93.40%), a very large degree.

Paragraph No. (3) "Competitive intelligence helps predict competitors' strategies" and Paragraph No. (4) "Competitive

business intelligence contributes to detecting new competitors" ranked last with a relative weight of (90.00%), a very high degree of approval.

The total score for the field of "competitive intelligence" came with an arithmetic average of (91.23%), and this means that there is a very high degree of agreement by the respondents on the paragraphs of this field.

**Table 16:** The arithmetic and relative mean and standard deviation for each paragraph of the "Data Reliability" field

#	Item	Arithmetic Mean	Standard Deviation	Relative Weight	Ranking
1.	Data reliability helps managers make more accurate decisions	4.67	0.593	93.40%	1
2.	Data reliability reduces the level of indecision among decision makers.	4.61	0.572	92.20%	3
3.	The external data acquired for business intelligence is reliable, validated, and appropriate to the organization's activities.	4.61	0.644	92.20%	3
4.	Internal business intelligence data is reliable.	4.59	0.647	91.80%	5
5.	The reliability of data and information enables business intelligence to reach the required outputs	4.67	0.514	93.40%	1
<b>All paragraphs of the field together</b>		4.6304	0.50348	92.61%	

From the previous table, it can be concluded that Paragraph No. (1) "The reliability of data helps managers make decisions more accurately" and Paragraph No. (5) "The reliability of data and information enables business intelligence to reach the required outputs" came in the first place with a relative weight of (93.40). %) That is, to a very large extent.

Paragraph No. (4) "Internal business intelligence data is considered reliable" ranked last with a relative weight of (91.80%), a very high degree of approval.

The total score for the field of "data reliability" came with an arithmetic mean of (92.61%), and this means that there is a high degree of agreement by the respondents on the paragraphs of this field.

**Table 17:** The arithmetic and relative mean and standard deviation for each paragraph of the field of "Information Technology"

#	Item	Arithmetic Mean	Standard Deviation	Relative Weight	Ranking
1.	Information technology enables the storage, acquisition, analysis, and organization of data, information, and knowledge within business intelligence systems.	4.74	0.440	94.78%	1
2.	Information technology helps provide information from its variety of sources to build the database of business intelligence.	4.61	0.532	92.17%	4

3.	Information technology facilitates the exchange of information between employees.	4.67	0.555	93.48%	2
4.	The organization uses software to help provide business intelligence information.	4.43	0.714	88.70%	5
5.	The use of information technology is a way to support business intelligence systems	4.63	0.527	92.61%	3
<b>All paragraphs of the field together</b>		4.6174	0.44809	92.35%	

From the previous table, it can be concluded that Paragraph No. (1) “Information technology allows the possibility of storing, acquiring, analyzing and organizing data” came in the first place with a relative weight of (94.78%), a very high degree of agreement.

Paragraph No. (4) "The organization uses software to assist in providing information related to business intelligence" ranked

last with a relative weight of (88.70%), a high degree of approval.

The total score for the field of "Information Technology" came with an arithmetic mean of (92.25%), and this means that there is a very high degree of agreement by the respondents on the paragraphs of this field.

**Table 18:** The arithmetic and relative mean and standard deviation for each paragraph of the “Analytical Ability” field

#	Item	Arithmetic Mean	Standard Deviation	Relative Weight	Ranking
1.	The organization uses appropriate software for data analysis	4.50	0.686	90.00%	4
2.	Analytical capabilities improve the outputs used in the decision-making process.	4.59	0.536	91.74%	1
3.	Data analytics capabilities are at the core of the business intelligence process	4.52	0.685	90.43%	3
4.	Analytical systems in the organization work on linking different data to convert them into information and knowledge.	4.57	0.539	91.30%	2
5.	The organization has future plans to develop data analytical capabilities based on business intelligence.	4.50	0.653	90.00%	4
<b>All paragraphs of the field together</b>		4.5348	0.54048	90.70%	

From the previous table, it can be concluded that Paragraph No. (2) “Analytical capabilities improve the outputs used in the decision-making process” came in the first place with a relative weight (91.74%), i.e. a very high degree of agreement.

Paragraph No. (1) “The organization uses appropriate software for data analysis” and Paragraph No. (5) “The organization has future plans to develop data analytical capabilities based on business intelligence” came last with a relative weight of (90.00%), i.e. a very high degree of approval.

The total score for the field of "analytical ability" came with an arithmetic average of (90.70%), and this means that there

is a very high degree of agreement by the sample members on the paragraphs of this field.

**Q2-:** Are there significant differences in the respondents' responses about business intelligence in Non-Governmental Organizations in the southern Palestinian governorates, according to personal and organizational data?

To answer this question, the Independent Sample T\_Test was used to test the differences due to the variable (gender), and the One Way ANOVA test was used to test the differences due to the variables (age group, educational qualification, job title, and years of service). Governorate), which consists of more than two groups, and the following are the results of the differences according to the variables of personal data, and the following table shows that.

**Table 19:** The results of testing the differences in the average response of respondents about business intelligence attributed to personal and organizational data

Personal And Organizational Data		Business Intelligence					
		Arithmetic Mean	Standard Deviation	Relative Weight	Statistical Test Value	Significance Level	Result
Gender	Male	4.5133	.38954	90.27%	T = -0.762	0.447	There are no differences
	Female	4.5644	.31990	91.29%			
Qualification	Diploma	4.8519	.14169	97.04%	F = 13.601	0.000	There are differences
	Bachelor's	4.5608	.37572	91.22%			
	Postgraduate	4.3061	.30768	86.12%			

Personal And Organizational Data		Business Intelligence					
		Arithmetic Mean	Standard Deviation	Relative Weight	Statistical Test Value	Significance Level	Result
Age Group	Less Than 30	4.7569	.20868	95.14%	F = 9.456	0.000	There are differences
	From 30 To Less Than 40	4.5591	.35937	91.18%			
	From 40 to less than 50	4.5327	.31566	90.65%			
	50 years and over	4.2009	.43263	84.02%			
Years Of Service	Less than 5 years	4.8519	.14169	97.04%	F = 23.218	0.000	There are differences
	5 - less than 10 years	4.6025	.29843	92.05%			
	10- Less than 15 years old	4.5218	.37423	90.44%			
	15 years and over	4.0537	.34630	81.07%			
Job Title	Member Of The Board Of Directors	4.4824	.42652	89.65%	F = 2.105	0.101	There are no differences
	Manager	4.6062	.27087	92.12%			
	Head Of The Department	4.4500	.39261	89.00%			
	Employee	4.5980	.35119	91.96%			
Governorate	North Governorate	4.4296	.34656	88.59%	F = 3.676	0.007	There are differences
	Gaza Governorate	4.6077	.34703	92.15%			
	Central Governorate	4.4269	.43106	88.54%			
	Khan Yunis Governorate	4.4519	.38686	89.04%			
	Rafah Governorate	4.2361	.36526	84.72%			

The previous table shows the results of testing the differences in the average response of respondents about business intelligence attributed to personal and organizational data, and if the level of statistical significance is greater than 0.05 we conclude that there are no statistically significant differences in the average response of respondents about business intelligence attributed to personal and organizational data, while if the level of significance The statistic is less than 0.05. We conclude that there are statistically significant differences in the average response of the respondents about business intelligence due to personal variables, and the results of the previous table show the following:

- With regard to the gender variable: the value of the significance level was (0.447 greater than 0.05). We conclude that there are no statistically significant differences in the average response of the respondents about business intelligence due to the gender variable.

- Regarding the educational qualification variable: the value of the significance level was (0.000 less than 0.05). We conclude that there are statistically significant differences in the average response of the respondents about business intelligence due to the educational qualification variable, where the differences were in favor of diploma holders or less compared to holders of postgraduate qualifications.
- For the age group variable: the value of the significance level was (0.000 less than 0.05). We conclude that there are statistically significant differences in the average respondents' response about business intelligence due to the age group variable, where the differences were for the younger age group 30 years or less compared to the older age group "50 years and over". "
- Regarding the years of service variable: the value of the significance level was (0.000 less than 0.05). We

conclude that there are statistically significant differences in the average respondents' response about business intelligence due to the years of service variable, where the differences were in favor of the least years of service "less than 5 years" compared to the larger service categories. 15 years and over.

- Regarding the job title variable: the value of the significance level was (0.101 greater than 0.05). We conclude that there are no statistically significant differences in the average response of the respondents about business intelligence due to the job title variable.
- Regarding the governorate variable: the value of the significance level was (0.007 less than 0.05). We conclude that there are statistically significant differences in the average response of the respondents about business intelligence due to the governorate variable, where the differences were in favor of the respondents in the NGOs in Gaza Governorate compared with the NGOs in Rafah Governorate.

### Conclusions

The following Results and recommendations were reached:

- The total degree of business intelligence came with an arithmetic average of (4.52), and a relative weight of (90.49%). This means that there is a very high degree of agreement by the respondents on the paragraphs of this axis.
- The total score for the field of "Instant Analytical Processing" with an arithmetic mean of (85.87%), and this means that there is a very high degree of agreement on the paragraphs of this field.
- The total score for the field of "Business Administration Performance" with an arithmetic average of (90.17%), and this means that there is a very high degree of agreement on the paragraphs of this field.
- The total score for the field of "competitive intelligence" with an arithmetic average equal to (91.23%), and this means that there is a very high degree of agreement on the paragraphs of this field.
- The total score for the field of "Data Reliability" with an arithmetic average equal to (92.61%), and this means that there is a very high degree of agreement on the paragraphs of this field.
- The total score for the field of "Information Technology" with an arithmetic mean of (92.35%), and this means that there is a very high degree of agreement on the paragraphs of this field.
- The total score for the field of "Analytical Ability" with an arithmetic mean of (90.70%), and this means that there is a very high degree of agreement on the paragraphs of this field.
- There are no statistically significant differences in business intelligence according to the variables (gender, job title).

- There are statistically significant differences in business intelligence according to the variables (educational qualification, age group, years of service, and governorate).

### Recommendations

In light of the results, there are a set of recommendations, as follows:

- The need for the organization to use modern technological systems to analyze and make its own reports.
- Work to strengthen business intelligence systems in the organization in order to achieve the basic objectives related to the performance of the organization.
- Employing the use of business intelligence techniques in detecting new competitors and predicting their strategies.
- Working on the use of special software to help provide information related to business intelligence.
- The need for the organization to have future plans to develop data analytical capabilities based on business intelligence.

### References

- [1]Al Hila, A. A., et al. (2018). "University Governance as an Input to Strengthen Partnership with Local Community Organizations-A Comparative Study between Public and Private Universities." *International Journal of Academic Multidisciplinary Research (IJAMR)* 2(8): 35-61.
- [2]Al Najjar, Mahmoud T., Al Shobaki, Mazen J. and El Talla, Suliman (2022). The Level of Creativity among NGOs Organizations in Palestine, *International Journal of Academic Accounting, Finance & Management Research(IJAAFMR)*, 6 (12): 69-82
- [3]Al Shobaki, Mazen J., Al Najjar, Mahmoud T. and El Talla, Suliman (2022). The Reality of Intellectual Capital among NGOs Organizations in Palestine, *International Journal of Academic Management Science Research (IJAMSR)*, 6 (12): 87-100
- [4]Alamgir, M. Corporate Governance (2007). A Risk Perspective, paper presented to: Corporate Governance and Reform: Paving the Way to Financial Stability and Development, a conference organized by the Egyptian Banking Institute, Cairo, May 7 – 8
- [5]Al-Hila, A. A., et al. (2017). "The Impact of Applying the Dimensions of IT Governance in Improving e-training-Case Study of the Ministry of Telecommunications and Information Technology in Gaza Governorates." *International Journal of Engineering and Information Systems (IJEAIS)* 1(7): 194-219.
- [6]Al-Hila, A. A., et al. (2017). "The Impact of the Governance of Private Universities in Building Partnership with NGOs Operating in Gaza Strip." *International Journal of Engineering and Information Systems (IJEAIS)* 1(9): 11-30.
- [7]Alshaer, I. M. A., et al. (2017). "Governance of Public Universities and Their Role in Promoting Partnership with Non-Governmental Institutions." *International Journal of Engineering and Information Systems (IJEAIS)* 1(9): 214-238.
- [8]Hamdan, M. K., et al. (2020). "Clarity of Vision and Its Relationship to the Creative Behavior of NGOs." *International Journal of Academic Management Science Research (IJAMSR)* 4(4): 55-82.

- [9]Hamdan, M. K., et al. (2020). "Creative Behavior in Palestinian NGOs between Reality and Expectations." *International Journal of Academic Multidisciplinary Research (IJAMR)* 4(3): 91-107.
- [10]Hamdan, M. K., et al. (2020). "Strategic Sensitivity and Its Impact on Boosting the Creative Behavior of Palestinian NGOs." *International Journal of Academic Accounting, Finance & Management Research (IJAAMR)* 4(5): 80-102.
- [11]Hamdan, M. K., et al. (2020). "The Reality of Applying Strategic Agility in Palestinian NGOs." *International Journal of Academic Multidisciplinary Research (IJAMR)* 4(4): 76-103.
- [12]Nafi, Wesam Ibrahim, (2018) *The Impact of Big Data on Business Intelligence*, Master Thesis published , Middle East University, Faculty of Business , Amman – Jordan.
- [13]Owda, R. O., et al. (2019). "Design Thinking and Its Impact on Decision Making In NGOs." *International Journal of Academic Information Systems Research (IJASIR)* 3(8): 1-11.
- [14]Owda, R. O., et al. (2019). "Design Thinking and Its Use in NGOs in Gaza Strip." *International Journal of Academic Multidisciplinary Research (IJAMR)* 3(7): 41-52.
- [15]Owda, R. O., et al. (2019). "Managing the Design of Operations in Local NGOs in Gaza Strip." *International Journal of Academic Information Systems Research (IJASIR)* 3(7): 37-47.
- [16]Owda, R. O., et al. (2019). "The Reality of Decision Making in NGOs in Gaza Strip." *International Journal of Academic Multidisciplinary Research (IJAMR)* 3(8): 1-10.

**Arabic References in Roman Scripts:**

- [1] Al-Balawi, Nadia (2023). The impact of innovative leadership on improving business intelligence from the point of view of faculty members at the University of Tabuk. *International Journal of Humanities and Social Sciences*, Volume (5), Issue (41), Iraq.
- [2]Al-Ghazzawi, Ali (2011). The impact of target cost on achieving competitive advantage. Jordanian public shareholding engineering industries companies. Master Thesis. Al-Azhar University, Gaza, Palestine.
- [3]Hassan, Anwar, Kazem, Bushra (2022). The role of business intelligence in achieving sustainable development: an applied study in the Ministry of Science and Technology. *Journal of the College of Education, University of Wasit*. Volume (49), Issue (1). Baghdad, Iraq.
- [4]Mirkhan, Khaled, Rizgar Moghdid (2015). Strategic analysis of internal resources by adopting the (VRIO) tool and its impact on business intelligence - an exploratory study of the opinions of a sample of managers in private companies in the city of Erbil. *Zanko Magazine*, Volume (19), Issue (3). Salahaddin University. Iraq.
- [5]Muhammad, Maha and Al-Murad, Nibal (2022). Diagnosing the dimensions of business intelligence - an exploratory study of the opinions of a sample of administrative leaders in Asia Cell Communications Company in Iraq. *Tikrit Journal of Administrative and Economic Sciences*. Volume (18), Issue (59), Part Two, Iraq.
- [6] Muhammad, Soraya, Barakat, Muhammad, Al-Yazji, Ahmed (2021). The role of artificial intelligence in government requirements in government institutions - a case study of the Ministry of Communications and Information Technology. *Journal of the Islamic University of Gaza*, Volume (29), Issue (33). Gaza, Palestine.
- [7]Saleh, Sarmad, Ismail, Hadi, Ali, Ari (2017). Entitled "The Role of Business Intelligence in Achieving the Dimensions of

Efficient Response to the Consumer - A Study of the Opinions of a Sample of Managers in Retail Stores of International Business Organizations - Erbil and Dohuk Governorates." *The Academic Journal of Nawroz University*, Vol. (6), No. (1). Iraq.