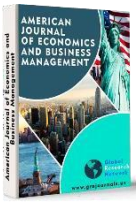

American Journal of Economics and Business Management

Vol. 8 Issue 4 | **pp.** 1739-1762 | **ISSN:** 2576-5973
Available online @ https://www.globalresearchnetwork.us/index.php/ajebm

Article

Evaluating The Performance of Non-Profit Units using a Responsibility, Accounting System: an Applied Study at Al-Noaman Hospital

Ali Naser Alwan*[1]

1. College of Business Economics, AL-Nahrain University, Al-Jadriya, Baghdad Iraq
* Correspondence: ali.nasir@nahrainuniv.edu.iq

Abstract: The research aims to demonstrate the importance of applying responsibility accounting in non-profit units and its role in evaluating the performance of responsibility centers by shedding light on responsibility centers. The research problem is to illustrate the reality of the performance of non-profit units using the responsibility accounting system in hospitals. Additionally, the research problem highlighted the weakness of the accounting infrastructure: some units may not possess the necessary accounting infrastructure to effectively implement the responsibility accounting system The study aims to understand the performance of non-profit units using the responsibility accounting system in hospitals by measuring the performance of responsibility accounting centers and identifying the significance of differences between the average scores of sample individuals on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the gender variable. The descriptive analytical method was used, which is considered one of the most suitable methods for the current study's objectives, questions, and hypotheses. The research reached a set of results and recommendations, the most prominent of which is the lack of clarity in defining responsibility centers and allocating costs to them, which may lead to difficulty in accurately and effectively evaluating the performance of each center.

Keywords: Performance Evaluation, Non-Profit Units, Responsibility Accounting System

Citation: Alwan. A. N. Evaluating The Performance of Non-Profit Units using a Responsibility, Accounting System: an Applied Study at Al-Noaman Hospital. American Journal of Economics and Business Management 2025, 8(4), 1739-1762.

Received: 10th Apr 2025
Revised: 15th Apr 2025
Accepted: 20th Apr 2025
Published: 28th Apr 2025

1. Introduction

The world has recently witnessed a steady growth of non-profit organizations over the past four decades. With this growth, the importance of performance evaluation for this sector of organizations has emerged. In the early days of this sector, there was little interest in the performance evaluation function, but it has become indispensable, especially in the non-profit sector [1].

Performance is considered a fundamental and important concept for business organizations in general, and there are various definitions of performance, including: It is the organization's ability to survive, adapt, and grow within the framework of the strategic goals it seeks to achieve, with strategic success being paramount [2]. Institutional performance measures the organization's ability to use its resources efficiently and produce outputs that align with its goals and are suitable for its users. Marketing performance is the level of achievement of the organization's goals set in the marketing plan. And marketing performance measurement can be defined as the evaluation of the

relationship between marketing activities and company performance, which is what we will focus on through this study [3].

The research addressed the methodology in the first section, included the theoretical aspect in the second section, allocated the third section to the practical aspect, and finally the fourth section which includes the conclusions and recommendations.

2. Materials and Methods

The current research aims to:

1. Identifying the reality of the performance of non-profit units using a responsibility accounting system in hospitals
2. Shedding light on the system and centers of responsibility, and ensuring the commitment to implementing the policies and objectives of the research unit sample.
3. Identifying the significance of the differences between the average scores of the sample members on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the gender variable.
4. Identifying the significance of differences between the means of sample scores on the performance evaluation questionnaire of non-profit units using a responsibility accounting system in hospitals according to the variable of educational qualification.

The significance of the differences between the average scores of the sample members on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the variable of years of experience.

Causes of the research and its issues:

The responsibility accounting system has significant benefits and many advantages in evaluating the performance of units and companies; however, its application methods are still weak and unclear. The following issues and reasons can be formulated:

1. What is the performance of non-profit units using the responsibility accounting system in hospitals?
2. Weak accounting infrastructure: Some units may not have the necessary accounting infrastructure to effectively implement a responsibility accounting system.

Importance of the research:

The research derives its importance from the significance of the responsibility accounting system, the identification of responsibility centers and authorities, and its application in non-profit units such as hospitals.

Research hypotheses:

There are no statistically significant differences between the arithmetic means of the individuals' scores in the sample on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the gender variable.

There are no statistically significant differences between the arithmetic means of the individuals' scores in the sample on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the variable of educational qualification.

There are no statistically significant differences between the mean scores of individuals in the sample on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the variable of years of experience.

Research methodology and field of application:

The descriptive-analytical approach was used, which is considered one of the most suitable methodologies for the current study's objectives, questions, and hypotheses, as this approach is beneficial in monitoring the research phenomenon. As for the field of application, the health sector represented by Al-Nu'man General Hospital was chosen due to the importance of this sector in the overall national economy, in addition to being one of the specialized sectors characterized by the presence of large and diverse activities and the ability to measure responsibility centers within it.

Literature Review

The Second Axis

Theoretical Framework

The concept of a responsibility accounting system: The large size of enterprises and the expansion of their operations lead to the inability of the general manager to make all the necessary administrative decisions for their management. Therefore, some powers and authorities must be delegated to lower administrative levels with clearly defined responsibilities. Planning and control systems in the enterprise or unit are developed according to responsibility centers. A responsibility accounting system can be defined as a system that specializes in gathering accounting information, studying accounting data, analyzing it, and presenting it through reports that include individuals' responsibilities towards their duties, achieving effective control and performance evaluation, which helps management focus on the decision-making process in setting operational plans and budgets and monitoring their implementation continuously [4]. In general, responsibility centers in the organization can be divided into four responsibility centers: cost centers, revenue centers, profit centers, and investment centers, which will be discussed in detail.

Cost Center: The manager is responsible only for the costs, as the manager is only responsible for the costs under their control. This is because the cost center incurs costs only and does not generate any returns or revenues. The inputs used in producing a specific output are measured by comparing the actual inputs used with the inputs previously determined in the operating budget [5].

Revenue Center: The manager of the revenue center is primarily responsible for revenue realization, and the sales department is a prominent example of a revenue center. The sales department manager is also responsible for the costs related to selling and distribution, which fall under their control and supervision [6].

Profit Center: A profit center is responsible for making decisions related to both revenues and costs specific to its center. For example, a branch of a certain company that produces a specific product and sells it to others is considered a profit center. Similarly, a branch of a certain bank in a specific area is considered a profit center, as the branch manager is responsible for the branch's revenues and costs.

Investment center: The investment center is defined as the center responsible for revenues, costs, and investment in the economic unit's assets, where the manager is not only responsible for profit performance but also for the investments being executed. The focus of investment center managers is to achieve a satisfactory return on investment. Investment centers can be considered separate entities where managers are entrusted with overall responsibility for inputs, outputs, and investments [7].

The Concept of Performance Evaluation and Non-Profit Organizations:

Performance evaluation can be defined as an objective examination that diagnoses policies, systems, operations management, and activity results in the entities under supervision. It compares achievements with plans, results with rules, and practices with policies to discover deviations and identify the causes of waste, extravagance, misuse, and exploitation, and to propose suggestions that address these deviations and extravagance, in order to direct performance towards achieving effectiveness and economic efficiency.

Masoudi sees it as the degree to which a number of performance and administrative standards apply to an individual or group through a systematic scientific system that includes establishing specific foundations and rules that consider various specializations, experiences, and the nature of work. ،As a result of this process, the general long-term strategic framework of the unit is formed, reflecting the future direction of the economic unit. The performance evaluation process holds great importance within the economic unit, as it reflects the unit's ability to utilize its resources and its capacity to achieve the unit's goals through the activities it undertakes. The importance of the performance evaluation process can be summarized in the following aspects:

It helps compare the actual performance of various activities with standards and budgets to ensure that the actual performance aligns with the set objectives [8].

Improving employee performance and administrative development, distinguishing between deserving staff for promotion and non-productive staff that should be let go. The performance evaluation process helps in preparing an effective system for incentives, promotions, and identifying competencies.

It assists in the practical translation of all decisions made at all levels within the unit, and for performance to be effective, there must be seriousness and integrity in decision-making.

Non-profit organizations are defined as voluntary groups that do not aim for profit and obtain half or more of their income from private sources (donations, grants, aids) and their work revolves around a specific issue [9]. They are a union, association, institution, or charitable fund that does not seek profit, or any other legal entity under the relevant legal system and is not part of the government sector [10]. The Human Development Report issued by the National Planning Institute in Cairo also defines them as voluntary civil organizations. Membership and activity express individuals' desire to take the initiative and principles in engaging in various social activities to serve local and international developmental and humanitarian purposes, primarily relying on self-efforts and funding by encouraging individuals, different organizations, and governments to allocate more funding for its various activities. Al-Khudr also added that the organization is non-profit, also known as a non-profit organization. It is any organization that primarily aims to support, advocate, or engage in a number of public or private activities without any commercial interest or profit motive. This form of organization is active in a wide range of fields such as humanitarian aid, the environment, animal protection, education, the arts, healthcare, social issues, charitable institutions, politics, religion, research, sports, and other endeavors [11].

One of the most prominent challenges is the growth of marketing in non-profit organizations: In recent years, marketing has become a key component in the strategies of non-profit organizations such as hospitals, universities, museums, artistic teams, and even places of worship. There has also been a noticeable interest in marketing within government organizations, such as campaigns for water and energy conservation, known as Social Marketing Campaigns. This continuous growth presents more challenges for marketing managers in determining the roles that marketing can play and the applicability of traditional marketing methods to individuals, ideas, and public organizations.[12]

The process of developing performance indicators is a crucial task fraught with risks in organizations of all kinds. This process becomes more complex in non-profit organizations, where there is no single interest or defined group, making the need for homogeneity among the interests of multiple parties and groups more complicated. Thus, developing indicators that encompass multiple objectives and meet the interests of various parties is more dangerous and more challenging to achieve [13]. Here, the search for how to translate these numerous indicators to fit within the organization's choices and then incorporate them into its various activities becomes essential. This matter is not easy and requires management with high professional expertise. Non-profit organizations revolve

around a mission and vision that are unclear, making it difficult to find a strong connection between them and strategic goals and operational objectives. Additionally, these organizations need to develop specific concepts for their operational mechanisms and performance measurement tools to translate performance into clear indicators across various administrative levels. Furthermore, the evolution of business organizations, from being economic units that produce in the most efficient ways and best means to being cells more open to the environment, and their existence meeting the interests of many internal and external groups, all this requires the development of measurement tools and the establishment of standards to translate the actual perspective of the business. This complicates the performance measurement process for non-profit organizations even more [14].

In the framework of the technological and technical perspective of business, which focuses on improving production processes and reducing resource waste to increase profits in response to the demands of a competitive market economy, the operational methods of non-profit organizations often find themselves misaligned with this approach. For example, achieving resource efficiency and output accuracy becomes difficult due to the intangibility of these processes on one hand and the challenge of establishing precise and specific indicators and measurements on the other. The technological and technical perspective becomes limited in many aspects of the non-profit sector in translating the organization's mission into specific performance measurements. In the traditional view of rights and ownership, non-profit organizations are also more complex than private business organizations. ‹Considering that ownership in the latter is clearer and more defined, shareholders in the private sector, through their relationship with professional management, strengthen control methods and work mechanisms to achieve their interests, which usually involve maximizing investment value and increasing the shares of these organizations. It is quite difficult to transfer this perspective to non-profit organizations, especially when it is known that the numerous groups do not share the same preferences, making it challenging to find management, delegation, and coordination mechanisms that respect organizational goals, which are themselves a real management issue. On the other hand, the view that organizations are a gathering that meets the needs, expectations, and aspirations of numerous internal and external stakeholders is also clearer and more defined in private business organizations compared to non-profit organizations. What complicates this matter is the stakeholder approach, which requires every organization to identify the various individuals who influence it and are influenced by it, and to understand their different aspirations, so that it can translate them into objectives. These objectives then become the various dimensions of performance that the organization aims to achieve and improve upon each time. It is not easy to prioritize those most important and integrated groups in setting the organization's vision and mission in non-profit organizations. A feeling arises among all these groups that they have the right to make important decisions based on their influence through the information and data they obtain within the nature of these organizations. However, the embodiment of this right is not clear due to the inability to find tangible measurements and indicators for concepts that may seem unclear and undefined. We conclude from the above that performance management and evaluation in non-profit organizations is a process fraught with many risks due to the nature of work in such types of business organizations. The process of establishing standards and indicators for evaluating and measuring performance in order to improve management in non-profit organizations requires significant efforts. However, this does not prevent modern trends in performance evaluation and measurement, such as the balanced scorecard, from being a suitable method for evaluating performance in these organizations if they can develop their experience and improve their work mechanisms.

3. Results and Discussion

Research Population:

The research population consisted of all hospital employees for the year 2024-2025.

Research Sample:

The research sample consisted of 75 male and female workers selected using a simple random sampling method.

Table 1 presents the demographic distribution of the study sample (N = 75), comprising 48% males and 52% females. Most participants hold a Bachelor's degree (69.3%), while 30.7% have pursued graduate studies. Experience levels are nearly balanced, with 49.3% having less than 10 years and 50.7% having 10 years or more.

The following table shows the sample distribution according to the research variables:

Table 1. Distribution of The Sample According to Research Variables.

Percentage	Number	Variable Categories	Variable
48%	36	**Males**	Gender
52%	39	**Females**	
69.3%	52	**Bachelor's**	Academic
30.7%	23	**Graduate Studies**	Qualification
49.3%	37	**Less than 10 years**	Number of Years of
50.7%	38	**10 years or older**	Experience
100%	**75**	Total	

Figure 1 illustrates the gender distribution of the research sample, showing a nearly balanced representation. Males constitute 48% of the sample, while females account for 52%. However, the figure incorrectly labels the female portion as 5%, which contradicts the accurate data presented in Table 1 and requires correction.

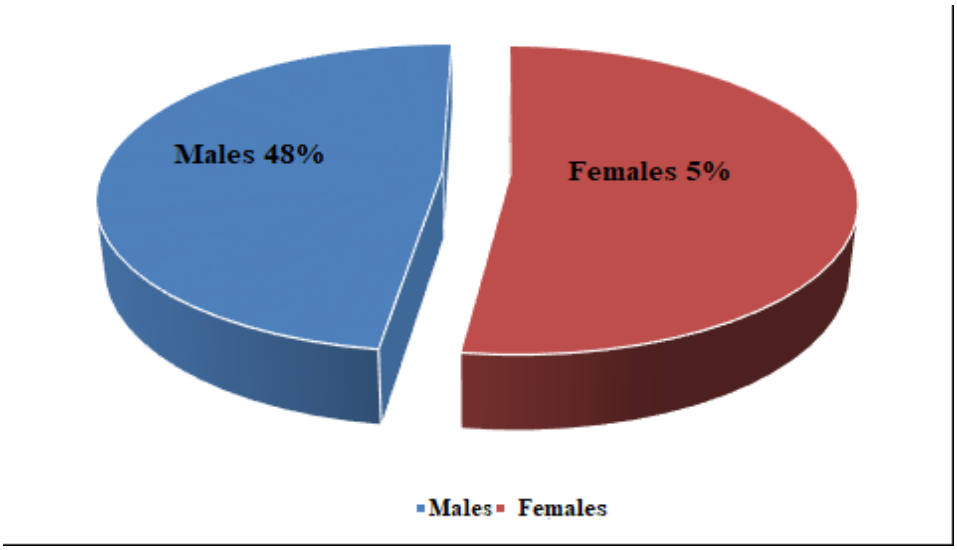

Figure 1. Distribution of The Research Sample According to The Gender Variable.

Figure 2 depicts the distribution of the research sample based on academic qualifications. The majority of participants (69.3%) possess a Bachelor's degree, while 30.7% have pursued graduate-level education. This indicates a predominant

representation of undergraduate qualifications among the sample, highlighting the potential influence of academic background on the study's outcomes.

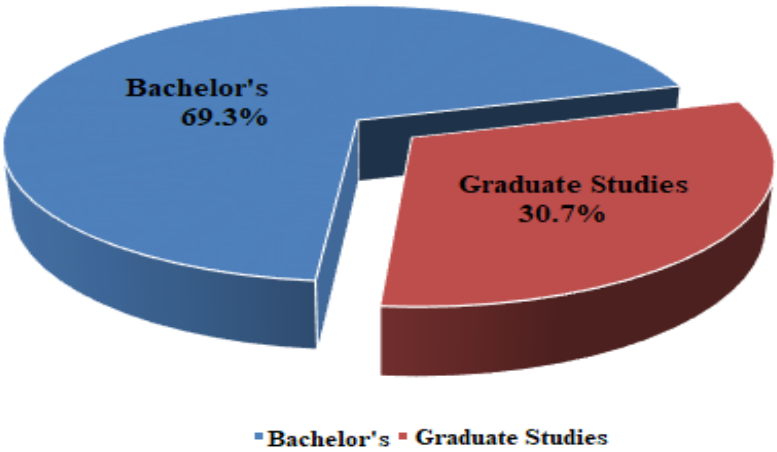

Figure 2. Distribution of The Research Sample According to The Academic Qualification Variable.

Figure 3 presents the distribution of the research sample by years of experience. Participants with 10 years or more of experience represent 50.7% of the sample, while those with less than 10 years account for 49.3%. This nearly equal distribution suggests a balanced representation across experience levels within the study.

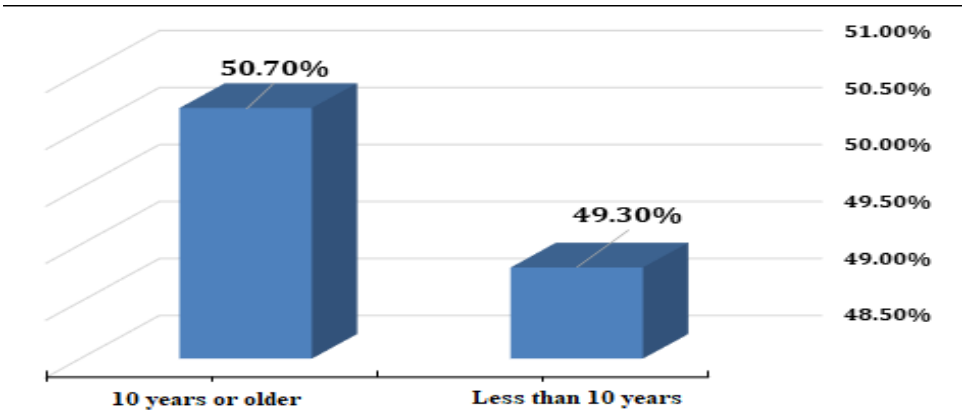

Figure 3. Distribution of The Research Sample According To The Variable of Number of Years of Experience.

Research Tool: The questionnaire was used as a tool to collect information and data related to this research, as it suits the nature, objectives, and methodology of the study. The questionnaire was prepared after reviewing the literature and previous studies related to the evaluation of the performance of non-profit units using the responsibility accounting system in hospitals, in addition to the scientific references that addressed this topic. Based on these sources, the questionnaire was constructed according to the following steps: -The initial version of the questionnaire

The questionnaire in its initial form consisted of a data form that includes the research variable (gender) and the questionnaire items, which number (25) items distributed across five axes: - The first axis: Cost Responsibility Center with 5 items. - The second axis: Revenue Responsibility Center with 5 items. - The third axis: Profitability Responsibility Center with 5 items. - The fourth axis: Investment Responsibility Center

with 5 items. - The fifth axis: Total Responsibility Centers and their relationship with performance evaluation with 5 items.

Verification of the questionnaire's validity: The validity of the questionnaire was verified in two ways: A- Content validity: The initial version of the questionnaire, consisting of (25) items, was presented to a group of judges who were asked to express their opinions and make suggestions considering the linguistic formulation, appropriateness in selecting the subject items, and their relevance to the questionnaire's axes. The judges provided their feedback, and based on their observations and opinions, the following actions were taken: The linguistic formulation of the items was revised, and the variables of educational qualification and years of experience were added to the research variables.

B- Construct validity: It was confirmed by studying the internal consistency of the questionnaire by calculating the correlation coefficients between the scores of each item and the score of the axes to which they belong in the questionnaire, as well as calculating the correlation coefficients of the axes with the total score of the questionnaire after applying it to a pilot sample consisting of (25) individuals who are outside the main research sample. The results are as shown in the following tables, see Table 2.

Tabel 2. Correlation Coefficients of The Scores of The First Axis Item (Cost Center Financial Efficiency) with The Total Score of The Axis.

Correlation Coefficient	Coefficient Paragraph	Correlation	Paragraph
0.745	**4**	0.764	1
0.737	**5**	0.552	2
		0.379	3

It is evident from the previous table that the correlation coefficients of the item scores with the axis score they belong to in the questionnaire were all statistically significant at the significance level (0.01 or 0.05), and the values of these coefficients ranged between (0.379-0.764), see Table 3.

Table 3. Correlation Coefficients of The Scores of The Second Axis Item (Revenue Center And Performance Improvement) With The Total Score of The Axis.

Correlation Coefficient	Coefficient Paragraph	Correlation	Paragraph
0.754	**9**	0.772	6
0.801	**10**	0.553	7
		0.716	8

It is evident from the previous table that the correlation coefficients of the item scores with the axis score they belong to in the questionnaire were all statistically significant at the 0.01 significance level, with values ranging between 0.553 and 0.801, see Table 4.

Table 4. Correlation Coefficients of The Scores of The Third Axis Item (Profitability Center And Financial Disclosure) with The Total Score of The Axis.

Correlation Coefficient	Coefficient Paragraph	Correlation	Paragraph
0.591	**14**	0.643	11
0.813	**15**	0.781	12
		0.694	13

It is evident from the previous table that the correlation coefficients of the item scores with the axis score they belong to in the questionnaire were all statistically significant at the 0.01 significance level, with these coefficients ranging between 0.591 and 0.81, see Table 5.

Table 5. Correlation Coefficients of The Scores of The Fourth Axis Item (Investment) with The Total Score of The Axis.

Correlation Coefficient	Coefficient Paragraph	Correlation	Paragraph
0.423	**19**	0.659	16
0.770	**20**	0.810	17
		0.787	18

It is evident from the previous table that the correlation coefficients of the item scores with the axis score they belong to in the questionnaire were all statistically significant at the significance level (0.01 or 0.05), and the values of these coefficients ranged between (0.423-0.810), see Table 6.

Table 6. Correlation Coefficients of The Scores of The Fifth Axis Item (Total Responsibility Centers and Their Relationship to Job Satisfaction) with The Total Score Of The Axis.

Correlation Coefficient	Coefficient Paragraph	Correlation	Paragraph
0.799	**24**	0.725	21
0.842	**25**	0.814	22
		0.685	23

It is evident from the previous table that the correlation coefficients of the item scores with the score of the axis to which they belong in the questionnaire were all statistically significant at the significance level (0.01), and the values of these coefficients ranged between (0.685-0.842), Table 7.

Table 7. Correlation Coefficients of The Axes Scores with The Total Score of The Questionnaire.

Correlation Coefficient	Axis
0.868	Axis 1: Cost Responsibility Center
0.891	Axis 2: Revenue Responsibility Center
0.896	Axis 3: Profitability Responsibility Center
0.880	Axis 4: Investment Responsibility Center
0.875	Axis 5: Total Responsibility Centers and Performance Evaluation

It is clear from the previous table that the correlation coefficients of the axes' scores with the total score of the questionnaire were all statistically significant at the significance level (0.01). The value of these coefficients reached, in order, (0.868-0.896). Therefore, the questionnaire is characterized by good indicators of its structural validity.- Verification of the questionnaire's reliability: The reliability of the questionnaire was verified by calculating the internal consistency reliability using Cronbach's alpha. The researcher calculated the internal consistency reliability of the questionnaire as a whole and for each

section using Cronbach's alpha. The following table shows the internal consistency coefficients using Cronbach's alpha, Table 8.

Table 8. Internal Consistency Coefficient Values for The Questionnaire.

Number Of Items Cronbach's Alpha Coefficient Value	Number Of Items Cronbach's Alpha Coefficient Value	Axis
0.835	5	Axis 1: Cost Responsibility Center
0.822	5	Axis 2: Revenue Responsibility Center
0.864	5	Axis 3: Profitability Responsibility Center
0.859	5	Axis 4: Investment Responsibility Center
0.837	5	Axis 5: Total Responsibility Centers and Performance Evaluation
0.901	25	The Survey as a Whole

It is evident from the previous table that the reliability coefficients using Cronbach's alpha ranged for the axes between (0.822-0.864) and for the questionnaire as a whole (0.901), which is a high value. Therefore, the questionnaire is characterized by a high degree of reliability. Consequently, the questionnaire is characterized by high validity and reliability indicators, and thus it is ready to be applied to the main research sample due to the availability of high indicators of its validity and reliability.

The final version of the questionnaire: The final version of the questionnaire consisted of a data form that included the research variables (gender, educational qualification, number of years of experience) and the questionnaire items, which numbered (25) items distributed across five axes.:

Table 9 outlines the finalized structure of the questionnaire, comprising 30 items distributed across five axes. Each axis Cost Center, Revenue Center, Profit Center, Investment Center, and Total Responsibility Centers with Performance Evaluation contains five items. Collectively, these components form a comprehensive instrument for evaluating responsibility centers and overall performance.

Table 9. Questionnaire Axes and Items in Their Final Form.

Number of Items	Items	Axis
5	1-5	Axis 1: Cost Center
5	6-10	Axis 2: Revenue Center
5	11-15	Axis 3: Profit Center
5	16-20	Axis 4: Investment Center
5	21-25	Axis 5: Total Responsibility Centers, Performance Evaluation
25	1-30	The Survey as a Whole

Survey correction: Responses on the survey were determined according to the five-point Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree), corresponding to the following scores (5, 4, 3, 2, 1) respectively.

Survey correction: Responses on the survey were determined according to the five-point Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree), corresponding to the following scores (5, 4, 3, 2, 1) respectively.

Survey correction: Responses on the survey were determined according to the five-point Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree), corresponding to the following scores (5, 4, 3, 2, 1) respectively..

Research Procedures: The following procedures were followed to complete the research:

Reviewing the literature from theoretical references and previous studies related to the topic of evaluating the performance of non-profit units using the responsibility accounting system in hospitals

Defining the research population and its sample consisting of (75) individuals. Preparing the research tool.

Presenting the questionnaire to expert reviewers. - Applying it to the exploratory sample to verify its validity and reliability.

Applying the questionnaire to the main research sample.

Extracting results using appropriate statistical laws. - Writing recommendations and suggestions. The Statistical Package for the Social Sciences (SPSS 24) was used to analyze the data, to conduct the following statistical methods: - Frequencies and percentages to determine the distribution of the research sample according to the variables (gender, educational qualification, number of years of experience). - Pearson correlation coefficient to verify the structural validity of the questionnaire.

Cronbach Alpha coefficient to calculate the internal consistency reliability of the questionnaire.

The means and standard deviations of the responses to the research question. - Independent Samples Test to reveal the differences between the means of the responses of the research sample members on the questionnaire according to the variables (gender, educational qualification, number of years of experience). Presentation of the research question results, discussion, and interpretation: Research question: What is the reality of the performance of non-profit units using the responsibility accounting system in hospitals? To answer this question, the arithmetic means, standard deviations, agreement levels, and rankings of the sample respondents' answers to the questionnaire were extracted. To determine the level of agreement, the length of the five-point Likert scale cells (minimum and maximum limits) was calculated. The range (5-1=4) was then divided by the highest value on the scale to obtain the cell length, i.e., (4÷5=0.80). After that, this value was added to the lowest value on the scale (the beginning of the scale, which is one) to determine the upper limit of this cell. Thus, the lengths of the cells became as follows:

Cronbach Alpha coefficient to calculate the internal consistency reliability of the questionnaire.

The means and standard deviations of the responses to the research question. - Independent Samples Test to reveal the differences between the means of the responses of the research sample members on the questionnaire according to the variables (gender, educational qualification, number of years of experience). Presentation of the research question results, discussion, and interpretation: Research question: What is the reality of the performance of non-profit units using the responsibility accounting system in hospitals? To answer this question, the arithmetic means, standard deviations, agreement levels, and rankings of the sample respondents' answers to the questionnaire were extracted. To determine the level of agreement, the length of the five-point Likert scale cells (minimum and maximum limits) was calculated. The range (5-1=4) was then divided by the highest value on the scale to obtain the cell length, i.e., (4÷5=0.80). After that, this value was added to the lowest value on the scale (the beginning of the scale, which is one) to determine the upper limit of this cell. Thus, the lengths of the cells became as follows, see Table10.

Table 10. Likert Scale Cell Length and Corresponding Degree of Agreement.

Values	Approval Level
1-1.79	Very low
1.80-2.59	Low
2.60-3.39	Medium
3.40-4.19	High
4.20-5	Very high

Axis One: Financial Efficiency

Table 11 summarizes respondents' perceptions regarding the cost responsibility center. All five items received a high degree of agreement, with mean scores ranging from 3.92 to 4.05. The overall mean of 3.99 and a low standard deviation (.135) indicate consistent and strong support for the cost center's role in hospital accounting.

Table 11. Arithmetic Means, Standard Deviations, And Degree of Agreement on The First Axis (Cost Center) of The Questionnaire.

Rank	Degree Of Agreement	Standard Deviation	Arithmetic Mean	Item	
1	High	.226	4.05	What is the level of understanding of hospital staff regarding the responsibility accounting system and the cost responsibility center?	1
3	High	.115	4.01	The responsibility accounting system (cost center) contributes to the identification and collection of hospital expenses and costs.	2
2	High	.162	4.03	The responsibility accounting system contributes to enhancing the efficient use of available resources and calculating the total cost for each department or unit in the hospital.	3
4	High	.445	3.93	The responsibility accounting system (cost center) allows for the identification of operating costs for units within the hospital.	4
5	High	.359	3.92	The responsibility accounting system (cost center) provides accurate financial information about the performance of each department or division, based on the services provided in the hospital.	5
	High	**.135**	**3.99**	Axis 1: Cost Responsibility Center	

It is evident from the previous table that the approval rating for the first axis (cost center) was high with an average of (3.99). Item 1 (What is the level of understanding among hospital employees of the responsibility accounting system and the cost responsibility center) ranked first with a high score and an average of (4.05). Meanwhile, item 5 (The responsibility accounting system (cost responsibility center) provides accurate financial information about the performance of each department or division according to the service provided in the hospital) ranked last with a high approval rating and an average of (3.92). Thus, the approval score in the first axis (Cost Responsibility Center) was high, reflecting the individuals' (employees') awareness of the importance of the responsibility accounting system in evaluating the performance of the service provided by the hospital. Item 1 ranked first, indicating the employees' understanding of this system and its significant role in distributing authority among all hospital departments. As for item 5, although it ranked last, its evaluation remains high, but it may be related to challenges in the accuracy of financial data or the difficulty in accessing precise

information about the performance of each department immediately, which could lead to discrepancies in estimates. This reflects the general understanding of the importance of the responsibility accounting system in improving the financial efficiency of the hospital according to the nature of the service provided, but its application in some aspects may need further improvement to ensure the accuracy of the information and ease of access to it.

Axis Two: Operational Performance

It is evident from the previous table that the approval rating for the second axis (Revenue Center) was high with a mean score of (3.72). Item 10 (The responsibility accounting system helps determine the total revenue for the service provided to patients) was prioritized with a high approval rating and a mean score of (4.16). Meanwhile, item 8 (The responsibility accounting system provides managers with effective tools to monitor actual performance compared to the plan) ranked last with a high approval rating and a mean score of (3.53). It was found that the approval rating for the second axis (revenue center) was high, indicating that the responsibility accounting system is considered an important factor in measuring total revenue and service-based revenue within the hospital. Item 10 ranked first for determining total revenue, see Table12.

Table 12. Arithmetic Means, Standard Deviations, and Degree of Agreement on The Second Axis (Revenue Center) of The Questionnaire.

Rank	Degree Of Agreement	Standard Deviation	Arithmetic Mean	Item	
2	High	.197	4.04	What is the level of employee awareness of the concept of the revenue center and performance improvement?	6
3	High	.759	3.45	The revenue center contributes to enhancing coordination between units and departments within the hospital.	7
5	High	.600	3.53	The accountability system provides managers with effective tools to monitor actual performance compared to planned performance.	8
4	High	.946	3.41	The responsibility accounting system (revenue center) can improve the quality of healthcare services provided to patients and calculate their costs.	9
1	High	.823	4.16	The responsibility accounting system helps determine the total revenues for services provided to patients.	10
	High	**.390**	**3.72**	Axis 2: Revenue Center	

However, item 8, despite its high approval, ranked last, perhaps because providing tools for monitoring actual performance may be perceived as less direct than identifying and solving problems. Managers may face challenges in effectively using these tools and the granted authority methods, or the technical resources may be insufficient to ensure accurate follow-up, leading to a disparity in the evaluation of this point compared to the problem identification item

Axis Three: Profit Center

It is evident from the previous table that the approval rating for the third axis (Profit Center) was high with an average of (3.83). Item 14 (The responsibility accounting system for the profit center contributes to the pursuit of profits and cost reduction) ranked first with a high approval rating and an average of (4.05), while item 13 (The responsibility accounting system for the revenue center contributes to providing reports on costs and revenues related to the hospital units and departments) ranked last with a high approval rating and an average of (3.60). We find that the approval rating for the third axis (profit

center) was high, indicating that the responsibility accounting system effectively contributes to enhancing the financial position and supporting profits within the hospital. Item 14 ranked first because it relates to the pursuit of achieving profits for the hospital and reducing costs by eliminating non-value-adding activities, which is essential for any unit or establishment striving to achieve its goals. As for item 13, although it ranked last, it still received high approval. This may be due to the fact that cost and revenue reports provide accurate information to stakeholders such as regulatory bodies. Its evaluation might also be linked to the unclear impact of the responsibility accounting system, as financial reports must be issued and announced periodically regardless of the responsibility center, see Table13.

Table 13. Arithmetic Means, Standard Deviations, and Degree of Agreement on The Third Axis (Profit Center).

Rank	Degree Of Agreement	Standard Deviation	Arithmetic Mean	Item	
2	High	.992	4.04	What is the level of employee awareness of the Responsibility Accounting System for the Profit Center?	11
3	High	.855	3.84	The Responsibility Accounting System (Profit Center) provides a clear mechanism for calculating revenue from services provided to patients by comparing the cost of the service with the revenue collected.	12
5	High	.885	3.60	The Responsibility Accounting System for the Revenue Center contributes to providing reports on costs and revenues related to hospital units and departments.	13
		.899	4.05		
1	High	1.112	3.63	What is the level of employee awareness of the Responsibility Accounting System for the Profit Center?	14
4	High	**.597**	**3.83**	The Responsibility Accounting System (Profit Center) provides a clear mechanism for calculating revenue from services provided to patients by comparing the cost of the service with the revenue collected.	15

Axis Four: Investment Center

It is evident from the previous table that the approval rating for the fourth axis (investment) was high with an average of (3.49). Item 20 (the investment center supports and provides responsibility accounting with greater authority in purchasing hospital assets) ranked first with a high approval rating and an average of (3.76). Meanwhile, item 18 (the responsibility accounting system for the investment center helps in accurately determining responsibilities for each unit) ranked last with a moderate approval rating and an average of (3.23). The high level of agreement on the fourth axis (investment) reflects the hospital staff's understanding of the importance of the responsibility accounting system and its method of operation. Item 20 ranked first because it relates to

providing a reliable database to support a specific mechanism in how to act in purchasing the hospital's assets (research sample), which is essential in enhancing the effectiveness of the responsibility accounting system and properly directing performance. The investment center will provide accurate and reliable data on how to distribute powers, contributing to making well-informed and sound decisions, making it a key axis in performance evaluation.. As for item 18, despite its high approval rating, it came in last place due to the difficulties the system may face in accurately determining responsibilities for each unit. This may be due to the challenges faced by modern accounting systems, including the responsibility accounting system, in clearly defining responsibilities in large and complex work environments such as hospitals, where operations are intertwined between many departments. These factors may make the implementation of this item more difficult in actual execution compared to providing data to support decision-making, see Table 14.

Table 14. Arithmetic Means, Standard Deviations, and Degree of Agreement on The Fourth Axis (Investment) of The Questionnaire.

Rank	Degree Of Agreement	Standard Deviation	Arithmetic Mean	Item	
3	High	.623	3.49	The extent of employees' understanding of responsibility accounting and the investment center.	16
4	High	.639	3.41	The responsibility accounting system provides the investment center with a specific mechanism for disposing of the hospital's funds and assets.	17
5	High	.781	3.23	The responsibility accounting system helps the investment center accurately define responsibilities for each unit.	18
2	High	.575	3.56	The Investment Center provides and supports decisions related to long-term capital investments.	19
1	High	.566	3.76	The Investment Center supports and provides accountability for greater centralization of authority in the acquisition of hospital assets.	20
	High	**.388**	**3.49**	Axis 4: Investment	

Axis Five: Responsibility Accounting and Performance Evaluation

It is evident from the previous table that the approval rating for the fifth axis (Responsibility Accounting and Performance Evaluation) was high with an average score of (3.51). Item 23 (The responsibility accounting system supports administrative organization by defining responsibility centers and granting managers the necessary authority to make decisions) ranked first with a high approval rating and an average score of (3.76). Meanwhile, item 24 (Top management loses control and oversight over departments and centers when the responsibility accounting system is implemented) ranked last with a medium approval rating and an average score of (3.11). Thus, the approval rating for the fifth axis (responsibility accounting and performance evaluation) was high, reflecting the role of the responsibility accounting system in supporting efforts to evaluate and improve performance and achieve job satisfaction within the hospital sample of the study. Item 23 ranked first because it focuses on the organization process, defining responsibility centers, and the level of authority granted to these centers, which is an essential aspect contributing to the overall efficiency of the hospital's performance. Continuous evaluation helps employees identify their strengths and weaknesses and work

on improving their performance, creating a sense of achievement and progress. As for item 24, despite its importance, it ranked last due to potential challenges in understanding and comprehending the level of authority granted. قد This is related to the lack of clarity regarding the authority granted between the center and the senior management within the hospital, which leads to a relatively lower evaluation compared to other items, see Table 15.

Table 15. Arithmetic Means, Standard Deviations, and Degree of Agreement on The Fifth Axis (Responsibility Accounting and Performance Evaluation) of The Questionnaire.

Rank	Degree Of Agreement	Standard Deviation	Arithmetic Mean	Item	
3	High	.540	3.71	The responsibility accounting system helps identify training needs and improve the performance of hospital employees.	21
2	High	.481	3.72	The responsibility accounting system contributes to increasing employee job satisfaction.	22
1	High	.732	3.76	The responsibility accounting system supports administrative organization by defining responsibility centers and granting managers the necessary decision-making authority.	23
5	Medium	.953	3.11	Senior management loses control and oversight over departments and centers when a responsibility accounting system is implemented.	24
4	Medium	.790	3.25	The responsibility accounting system contributes to stimulating team spirit and teamwork among employees, which contributes to improving their performance.	25
	High	**.384**	**3.51**	Axis 5: Responsibility Accounting and Performance Evaluation	

Regarding the questionnaire axes

It is evident from the previous table that the overall approval rating for the questionnaire was high, with a mean score of (3.71), indicating that the performance of non-profit units using the responsibility accounting system in hospitals was high. Axis 1 (Cost Center) ranked first with a high approval rating and a mean score of (3.99), while Axis 4 (Investment Center) ranked last with a high approval rating and a mean score of (3.49). Thus, we find that the performance of non-profit units using the responsibility accounting system in hospitals was high, indicating that this system is considered an effective tool for supporting and improving performance. The cost center axis ranked first because it reflects the system's ability to improve the management and distribution of financial resources, calculate patient costs, and provide accurate information that helps achieve optimal use of these resources, which is essential for the operation of hospitals that rely on efficient resource management to achieve their goals. Focusing on the cost center axis is often a priority because it has a direct impact on the sustainability of operations. As for the investment center axis... Despite its importance, it came in last place because it requires a higher level of integration between administrative systems, such as precise responsibility assignment and continuous performance monitoring. Challenges related to the practical implementation of this axis, such as a lack of human resources or unclear roles, as well as the mechanisms for distributing powers and responsibilities, may be the reason for the lower average evaluation compared to other axes. This indicates the need to develop more effective mechanisms to enhance this position, see Table 16.

Table 16. Arithmetic Means, Standard Deviations, and Degree of Agreement on The Questionnaire Axes.

Ranking	Degree Of Agreement	Standard Deviation	Arithmetic Mean	Axis	
1	High	.135	3.99	Axis 1: Cost Center	1
3	High	.390	3.72	Axis 2: Profit Center	2
2	High	.597	3.83	Axis 3: Profit Center	3
5	High	.388	3.49	Axis 4: Investment Center	4
4	High	.384	3.51	Axis 5: Responsibility Accounting and Performance Evaluation	5
	High	**.181**	**3.71**	The Survey as a Whole	

Figure 4 illustrates the arithmetic means of responses across questionnaire axes. The cost center axis scored highest (3.99), followed by the profit center (3.83) and revenue center (3.72). Lower means were noted for investment center (3.49) and responsibility and performance evaluation (3.51), indicating varying perceived importance among accounting center functions.

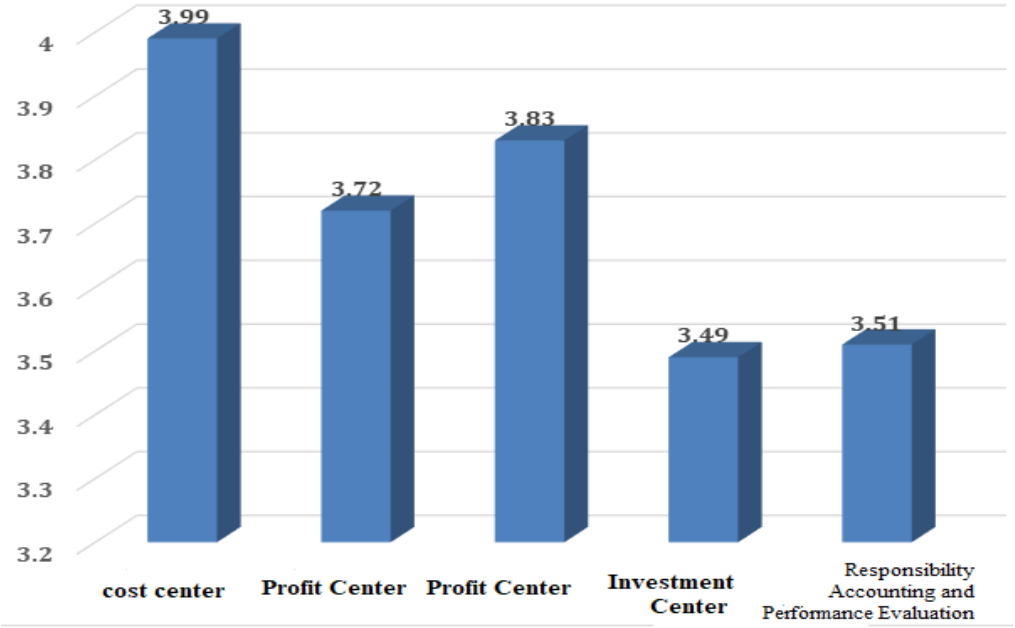

Figure 4. Arithmetic Means of Impotence Scores on The Questionnaire Axes.

Presentation

Research hypotheses results, discussion, and interpretation:

The first hypothesis: There are no statistically significant differences between the average scores of the sample members on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the gender variable.

To verify the validity of this hypothesis, an Independent Samples Test was used to study the significance of the differences between the average scores of individuals in the sample on the questionnaire according to the gender variable, and the results were as shown in the following table 16.

Table 16. Results of The T-Test For The Significance of The Difference Between The Average Scores of The Sample Members on The Questionnaire according to The Gender Variable.

Decision	Probability Value	Degree Of Freedom Probability	T Value	Standard Deviation	Arithmetic Mean	Number	Gender	Axis
Not significant	0.481	73	0.709	.124	3.98	36	Males	Axis 1: Cost Center Axis
				.145	4.00	39	Females	
Not significant	0.606	73	0.518	.387	3.74	36	Males	Axis 2: Revenue Center
				.397	3.70	39	Females	
Not significant	0.985	73	0.018	.503	3.83	36	Males	Axis 3: Profit Center
				.680	3.83	39	Females	
Not significant	0.221	73	1.234	.390	3.43	36	Males	Axis 4: Investment Center
				.384	3.54	39	Females	
Not significant	0.525	73	0.638	.430	3.54	36	Males	Axis 5: Responsibility Accounting and Performance Evaluation
				.339	3.48	39	Females	
Not significant	0.902	73	0.124	.175	3.71	36	Gender	The Survey as a Whole
				.188	3.71	39	Males	

It can be stated that the (t) value for the entire questionnaire or for any of its axes was not statistically significant, as its p-value was greater than the default level of 0.05. This means that there are no statistically significant differences between the average scores of the sample members on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the gender variable, see Figure 5.

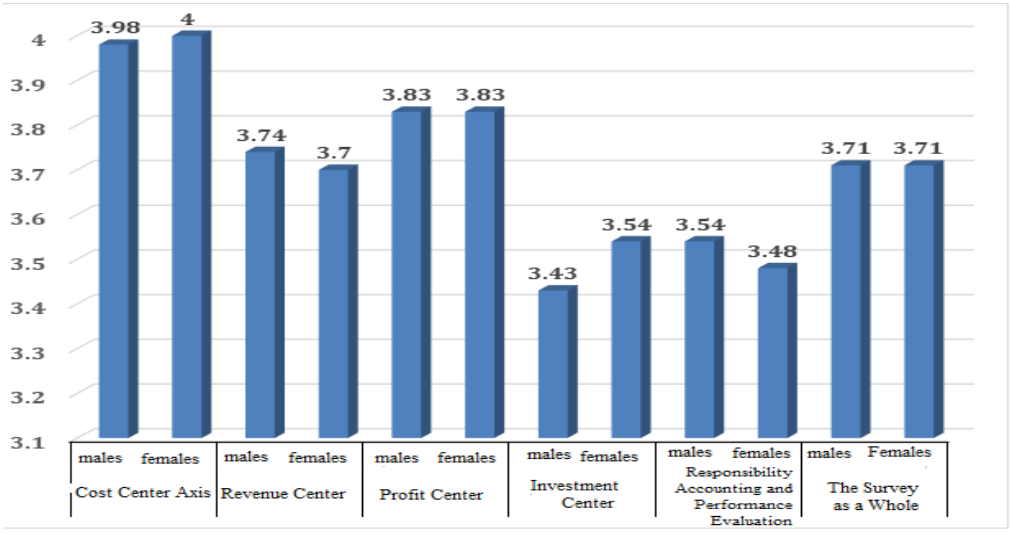

Figure 5. Arithmetic Means of The Sample Individuals' Answers to The Questionnaire as A Whole and its Axes According to The Gender Variable.

It has been found that there are no statistically significant differences between the average scores of the sample members on the performance evaluation questionnaire for non-profit units using the responsibility accounting system in hospitals according to the gender variable. This reflects that the system is perceived with the same efficiency and effectiveness by everyone regardless of gender. This indicates that responsibility accounting relies on standardized and fair procedures applied to all employees, making performance evaluation an objective process unaffected by individual differences such as gender.. The nature of work in hospitals also requires adherence to strict professional and administrative standards, where the priority is to achieve organizational goals free from bias. Additionally, the reason for this may be the similarity in roles and responsibilities between genders within these units, which reflects on the similarity of their experiences with the system. The absence of differences also indicates that the system focuses on achieving results regardless of personal differences, thereby enhancing fairness and transparency in administrative performance within hospitals.

The second hypothesis: There are no statistically significant differences between the mean scores of the sample individuals on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the variable of educational qualification. To verify the validity of this hypothesis, an Independent Samples Test was used to study the significance of the differences between the average scores of the sample members on the questionnaire according to the variable of educational qualification, and the results were as shown in the following Table 17.

Table 17. Results of The T-Test For The Significance of The Difference Between The Average Scores of The Sample Members on The Questionnaire According to The Educational Qualification Variable.

Decision	Probability Value	Degree Of Freedom Probability	T Value	Standard Deviation	Arithmetic Mean	Number	Academic Qualification	Axis
significant	0.020	73	2.379	.130	3.97	52	Bachelor's	Axis 1: Cost Center
				.134	4.04	23	Graduate Studies	

significant	0.019	73	2.409	.384	3.65	52	Bachelor's	Axis 2: Revenue Center
				.366	3.88	23	Graduate Studies	
significant	0.041	73	2.085	.588	3.74	52	Bachelor's	Axis 3: Profit Center
				.575	4.04	23	Graduate Studies	
significant	0.031	73	2.193	.254	3.43	52	Bachelor's	Axis 4: Investment Center
				.571	3.63	23	Graduate Studies	
significant	0.031	73	2.198	.360	3.45	52	Bachelor's	Axis 5: Responsibility Accounting and Performance Evaluation
				.405	3.65	23	Graduate Studies	
significant	0.000	73	5.292	.163	3.65	52	Bachelor's	The Survey as a Whole
				.133	3.85	23	Graduate Studies	

It is evident from the previous table that the t-value for the questionnaire as a whole and for its two axes was statistically significant, as the p-value was greater than the default significance level of 0.05. This means that there are statistically significant differences between the mean scores of the sample members on the performance evaluation questionnaire for non-profit units using the responsibility accounting system in hospitals, according to the variable of academic qualification, with the differences favoring postgraduate degrees, see Figure 6.

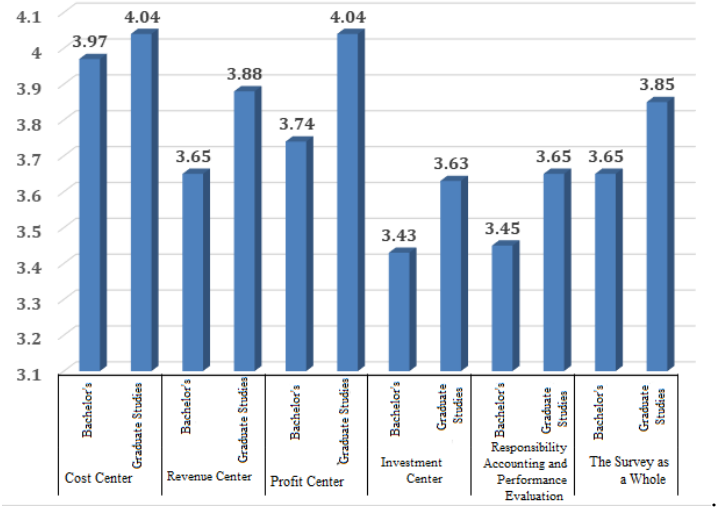

Figure 6. Arithmetic Means of The Sample Individuals' Answers to The Questionnaire as A Whole and its Axes According to The Educational Qualification Variable.

The presence of statistically significant differences between the average scores of the sample individuals on the performance evaluation questionnaire for non-profit units using the responsibility accounting system, according to the variable of educational qualification, particularly in favor of higher studies, indicates that the level of education affects individuals' understanding of the system and their evaluation of it. Individuals with higher qualifications possess a deeper understanding of accounting and administrative concepts and the mechanisms of the responsibility accounting system, making them more capable of analyzing its benefits and accurately evaluating its performance. Additionally, higher education enhances critical thinking, which helps individuals comprehend the relationship between the system and the achievement of organizational goals. Furthermore قد Postgraduate degree holders are more familiar with best practices in accounting and managerial responsibility, which makes them appreciate the effective role of the system in improving performance. On the other hand, less qualified individuals may find it difficult to grasp the technical aspects of the system, leading to a different evaluation of it. These differences highlight the importance of enhancing awareness and continuous training for all employees to ensure a unified understanding and greater effectiveness of the system. Hypothesis Three: There are no statistically significant differences between the mean scores of the sample members on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the variable of years of experience. To verify the validity of this hypothesis, an Independent Samples Test was used to study the significance of the differences between the means of the sample members' scores on the questionnaire according to the variable of years of experience, and the results were as shown in the following Table 18 .

Table 18. Results of The T-Test for The Significance of The Difference Between The Mean Scores of Sample Members on The Questionnaire According to The Variable of Number of Years of Experience.

Decision	Probability Value	Degree Of Freedom Probability	T Value	Standard Deviation	Arithmetic Mean	Number	Number Of Years Of Experience	Axis
significant	0.000	73	3.711	.125	3.94	37	10 years or less	Axis 1: Cost Center
				.124	4.04	38	More than 10 years	
significant	0.041	73	2.080	.417	3.63	37	10 years or less	Axis 2: Revenue Axis
				.345	3.81	38	More than 10 years	
significant	0.044	73	2.047	.590	3.69	37	10 years or less	Axis 3: Investment Axis Center
				.580	3.97	38	More than 10 years	
significant	0.033	73	2.168	.277	3.39	37	10 years or less	Axis 4: Profit Center

				.457	3.58	38	More than 10 years	
significant	0.010	73	2.657	.390	3.39	37	10 years or less	Axis 5: Responsibility Accounting and Performance Evaluation
				.347	3.62	38	More than 10 years	
significant	0.000	73	5.589	.155	3.61	37	Number of years of experience	The Survey as a Whole
				.149	3.81	38	10 years or less	

It is evident from the previous table that the t-value for the questionnaire as a whole and for its two axes was statistically significant, as the probability value was greater than the default significance level of 0.05. This means that there are statistically significant differences between the average scores of the sample members on the performance evaluation questionnaire for non-profit units using the responsibility accounting system in hospitals, according to the variable of years of experience, with the differences favoring those with more than 10 years of experience, see Figure 7.

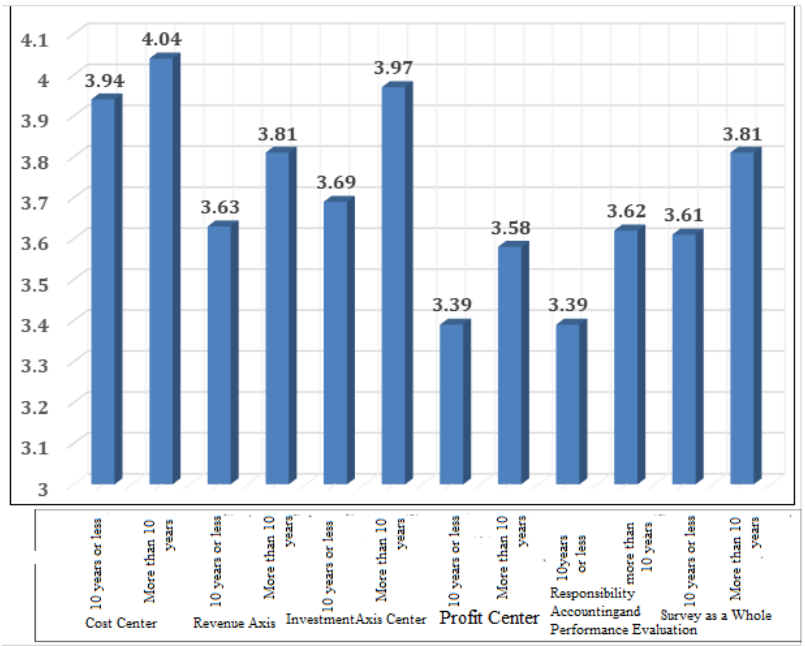

Figure 7. Arithmetic Means of The Sample Members' Answers to The Questionnaire as A Whole and its Axes According to The Variable of The Number of Years of Experience.

4. Conclusion

The study concludes that the implementation of the responsibility accounting system in non-profit healthcare units, particularly at Al-Noaman Hospital, demonstrates a high overall performance level across all evaluated responsibility centers. Notably, the cost center received the highest evaluation, highlighting its critical role in enhancing financial efficiency and resource allocation. However, the investment center, though rated positively, exhibited relatively lower effectiveness, reflecting challenges in assigning

precise responsibilities and decision-making authority. The findings also reveal that variables such as educational qualification and years of experience significantly influence the perception and effectiveness of the system, suggesting that higher educational levels and longer experience correlate with more favorable assessments of the system's utility. Conversely, gender was found to have no significant effect, indicating a broadly equitable application of the system. These insights underscore the necessity of refining organizational structures, enhancing data transparency, and delivering targeted training to address existing gaps. Future research should delve deeper into the operational integration of responsibility centers in diverse non-profit settings and explore longitudinal impacts of continuous system refinements on organizational performance and staff development.

Recommendations

The Fourth Axis (Research Results, Most Important Recommendations and Proposals)

Summary of Research Results:

There is a lack of clarity in defining responsibility centers and allocating costs to them, which may lead to difficulty in accurately and effectively evaluating the performance of each center.

The performance of non-profit units using the responsibility accounting system in hospitals was high, with the cost center ranking first with a high level of agreement, while the investment center ranked last with a high level of agreement.

There are no statistically significant differences between the mean scores of individuals in the sample on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the gender variable

The hospital's organizational structure did not meet any of the requirements for implementing a responsibility accounting system due to the lack of separation of responsibilities and authorities.

There are statistically significant differences between the mean scores of individuals in the sample on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the variable of academic qualification, with differences favoring higher degrees.

There are statistically significant differences between the mean scores of individuals in the sample on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the variable of years of experience, with differences favoring more than 10 years of experience.

The hospital's organizational structure did not meet any of the requirements for implementing a responsibility accounting system due to the lack of separation of responsibilities and authorities.

There are statistically significant differences between the mean scores of individuals in the sample on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the variable of academic qualification, with differences favoring higher degrees.

There are statistically significant differences between the mean scores of individuals in the sample on the performance evaluation questionnaire of non-profit units using the responsibility accounting system in hospitals according to the variable of years of experience, with differences favoring more than 10 years of experience.

Providing specialized training programs for medical and administrative staff on the responsibility accounting system, targeting less experienced groups to develop their capabilities in applying this system efficiently.

Leveraging the extensive experience of more seasoned employees to develop and improve the responsibility accounting system by involving them in setting work policies and development plans.

Enhancing financial transparency in all departments of non-profit units, ensuring the provision of accurate and updated data that contributes to improved decision-making.

Periodically evaluating the performance of the responsibility accounting system by involving employees in reviewing its applications to ensure alignment with hospital needs and performance improvement.

Increasing awareness of the importance of responsibility accounting centers among all employees through awareness programs that focus on their role in improving the operational and administrative performance of the units.

REFERENCES

[1] M. Abbas and M. A. A. Awad, *An Introduction to Research Methodology in Education and Psychology*. Jordan: Dar Al-Maseera for Publishing and Distribution, 2007.

[2] A. F. Al-Zoubi, "Business plan as a consulting approach in developing institutional performance," *Int. Sci. Forum on Entrepreneurship, Opportunities and Limitations of the Business Plan, Idea, Preparation, and Implementation*, Mohamed Kheidar Biskra Univ., Apr. 17–19, 2012.

[3] M. S. Idris and T. M. M. Al-Ghalabi, *Strategic Performance Management Series, Strategic Performance Guidance: Paving and Alignment*. Amman: Dar Wael Publishing, 2009.

[4] A. Maârouf and W. Al-Wahshi, "Balanced scorecard: A translation of strategy and measurement of performance – Case study of 'Sidal' Group," *1st Nat. Conf. on the Reality of Management Control Techniques in Algerian Institutions: Analyzing the Existing to Anticipate Future Innovations*, Univ. of M'sila, May 13–14, 2013.

[5] A. Y. Al-Shamili, *Performance Improvement Program*, 1st ed. Cairo: Dar Al-Fajr Publishing and Distribution, 2017.

[6] A. Al-Masoudi and A. Ali, "The use of the sustainable balanced scorecard to evaluate sustainable strategic performance," Baghdad, Iraq, 2016.

[7] S. M. M. Al-Amiri and T. M. M. Al-Ghalabi, *Management and Business*. Amman: Dar Wael for Publishing, Distribution, and Printing, 2008, p. 42.

[8] G. Speckbacher, "The economics of performance management in nonprofit organization," *Nonprofit Manage. & Leadership*, vol. 13, no. 3, pp. 279–294, Spring 2003.

[9] T. T. Tran, T. H. Dinh, and H. A. Nguyen, "The effects of organization size and managers' education background on responsibility accounting: Evidences from Vietnamese cement enterprises," in *Proc. Conf.*, 2020, pp. 611–618.

[10] Ritika and M. Rani, "The role of responsibility accounting in organization structure," *Int. J. Sci. Technol. Manage.*, vol. 4, 2015.

[11] I. Q. Alshomaly, "Performance evaluation and responsibility accounting," *J. Manag. Res.*, vol. 5, no. 1, 2013.

[12] J. Cutt, "Accountability, efficiency, and the 'bottom line' in non-profit organizations," *Can. Public Adm.*, vol. 25, no. 3, pp. 311–331, 1982.

[13] L. Francisco and M. C. Alves, "Accounting information and performance measurement in a nonprofit organization," in *Performance Measurement and Management Control: Global Issues*, Emerald Group Publishing Limited, 2012, pp. 465–487.

[14] H. Duan, "A survey of non-profit organizations evaluation methods," *Asian Soc. Sci.*, vol. 6, no. 8, pp. 30–36, 2010.

[15] A. Medina-Borja and K. Triantis, "A conceptual framework to evaluate performance of non-profit social service organisations," *Int. J. Technol. Manag.*, vol. 37, no. 1–2, pp. 147–161, 2007.