NIU Journal of Management Sciences Copyright©2026
Nexus International University ISSN: *3007-1887;* 12(2): 191-200

Integrating Accounting and Non-Accounting Information Values and Their Impact on Decision-Making: A Case Study at Al-Mowasat Private Hospital

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Abstract. With the increasing demands of the healthcare sector, the need for integrated and valuable accounting and non-accounting information has become essential to supporting decision-makers and improving decision-making outcomes. Value integration of information is a modern approach that contributes to providing more relevant and reliable information, thereby enhancing the efficiency of decision-making processes within healthcare institutions.
This study aimed to demonstrate the impact of value integration of accounting and non-accounting information on decision quality. It did so by integrating a decision analysis framework, specifically the Expected Value of Complete Information (EVPI) and Expected Value of Partial Information (EVSI), to measure the value of information and analyze its role in supporting decisions within the healthcare sector. The study employed a descriptive-analytical methodology, using a case study at Al-Mowasat Private Hospital. Data was collected through direct interviews with managers and the accountant, examination of official records and documents, content analysis, and the utilization of relevant data and reports to achieve the study's objectives. The results indicated that value integration of accounting and non-accounting information contributes to improving decision quality by reducing the error rate in decision-making.

Keywords: Value integration of information, Decision-making.

1. Introduction

Healthcare organizations operate in a constantly changing and increasingly complex environment, making the quality of decisions a crucial factor in achieving operational efficiency and improving the level of healthcare services. Accounting information alone is no longer sufficient to support decision-makers; there is a pressing need to integrate it with non-accounting information, such as operational, medical, and administrative data, as well as performance indicators, to create a more comprehensive information base capable of interpreting the organizational reality and supporting the decision-making process.

The integration of accounting and non-accounting information is a modern concept that focuses on maximizing the benefit derived from information by combining its various sources. This contributes to providing a comprehensive view of the organization's reality and its internal and external environment. This integration enhances decision-makers' ability to evaluate available alternatives, reduces ambiguity, and improves the efficiency of resource allocation, which positively impacts the quality and effectiveness of decisions.

The importance of integration accounting and non-accounting information is particularly evident in healthcare institutions, where managerial decisions involve financial, operational, and clinical considerations that require accurate, reliable, and comprehensive information. The high cost associated with decision errors, together with the dynamic nature if the healthcare environment, increases the need for information of high value that combines both accounting and non-accounting dimensions. Such integration enables healthcare organizations to respond more efficiency to environmental changes with improving operational efficiency and the quality of healthcare services.

Although considerable attention has been devoted to examining the role of information in decisions-making, most previous studies have investigated accounting information and non-accounting

information independent or have addressed the value of information as a separate concept. Comparatively few Studies have explored the integration of the value of accounting and non-accounting information and its influence on decision quality, particularly within the healthcare sector. This gap highlights the need for further empirical research to provide a clearer understanding of this relationship.

Accordingly, the significance of the present study lies in its examination of how integrating the value of accounting and non-accounting information affects decision quality through a case study of Al-Mowasat Private Hospital. The study is expected to enrich the accounting literature on the value of information while providing practical evidence that may assist healthcare institutions in improving their information systems and enhancing the quality of managerial decision-making.

2. Theoretical Framework and Previous Studies

2.1 Literature Review

Accounting and management literature has consistently emphasized the critical role of information in supporting managerial decision-making, particularly in healthcare institutions where effective decisions depend on the availability of accurate and reliable information. A study by Bouhadi and Lahmar (2017) found that information systems constitute a key component of decision support, as qualified personnel, well-developed databases, software applications, and communication networks collectively enhance the quality of decisions-making within healthcare organizations likewise, a study by Rashwan (2020) reported that the integration of accounting information systems with big data analysis strengthens decision-makers' ability to process and interpret information more efficiently, leading to improvements in both decisions quality and healthcare services delivery.

Other researchers have examined on the value of information as an important approach to improving decisions-making in the healthcare sector. Tuffaha et al. (2014) argued that value of information analysis provides a rigorous methodological framework for quantifying uncertainty in healthcare decisions and determining whether additional research is warranted before adopting new healthcare technologies or allocating limited resources. Similarly, Bindels et al. (2016) concluded that although value analysis represents a valuable tool for supporting healthcare decisions-making, its practical implementation remains limited because of technical and organizational barriers. This necessitates the development of more effective mechanisms for its implementation and for utilizing its outputs to support decision-making.

In light of recent developments, studies have focused on using data to improve decisions within healthcare institutions. Orlu et al. (2023) demonstrated that low-quality information, with its associated uncertainty, ambiguity, and incompleteness, negatively impacts the sustainability of decisions and the efficiency of healthcare services, emphasizing the importance of developing methods to address these problems and improve information quality. The study by Basile et al. (2024) also concluded that the effective use of data contributes to improved risk management, resource allocation, diagnostic support, and enhanced quality of healthcare services, while emphasizing the need for more integrated approaches to leveraging data to support decision-making within healthcare organizations.

Previous studies agree that information is a fundamental element in improving the quality of decisions within healthcare institutions. However, they have addressed the role of information systems, the value of information, or data utilization separately, without focusing on the integration of accounting and non-accounting information as an approach to enhancing decision quality. Furthermore, most studies have relied on survey methodologies or systematic reviews, whereas the current study offers an applied approach through a case study of Al-Mowasat Private Hospital. This case study contributes to clarifying the impact of integrating accounting and non-accounting information on decision quality and enriches the accounting literature in the healthcare environment.

2.2 Information Value

Information value is a fundamental concept in the decision analysis literature. It refers to the expected benefit obtained from using information to support decision-making relative to the cost incurred in acquiring and processing that information. The value of Information is determined not simply by its availability but by its capacity to improve decisions outcomes through more accurate evaluation, more effective comparison of alternatives, and a higher likelihood of selecting the most appropriate course of action. The concept was formally developed by Howard (1966), who introduced it as a framework for assessing the benefits of information under conditions uncertainty. His approach was grounded Bayesian

Decision Analysis, which is closely associated with utility theory.

Together, these approaches evaluate the expected benefits of obtaining additional information before a decision is made, enabling decision-making to compare the expected gains with the costs of acquiring that information (Keisler, 2013).

The importance of information value becomes more evident in dynamic and complex environments, where decisions are exposed to greater uncertainty because of incomplete or insufficient information. In such situations, evaluating the value of information helps decision-making determine whether acquiring additional information is justified or whether the available information is sufficient to support an informed decision. Accordingly, value of information analysis promotes the efficient allocation of resources by discouraging investment in information that has the potential to improve decision outcomes significantly (Wilson, 2015; Tuffaha et al., 2014).

2.3 Accounting and Non-Accounting Information

Accounting information is defined as financial and monetary information generated by the accounting system according to recognized accounting principles and standards, after processing and classifying the entity's economic data. Its purpose is to provide reliable and relevant information used in planning, control, performance evaluation, and economic and administrative decision-making (Romney). (Steinbart, 2018; Horngren et al., 2014).

In contrast, non-accounting information refers to qualitative or quantitative information obtained from internal or external sources outside the accounting system. This includes market, competitive, technological, organizational, and environmental information, and is used to support and broaden the scope of decision-making (Chenhall, 2003; Romney & Steinbart, 2018). It also encompasses any information not included in a company's financial statements. It is not limited to financial aspects or accounting figures but focuses on operational and behavioral dimensions and the parties involved in economic activity (Mantiri et al., 2023).

2.4 Integrating the Value of Accounting and Non-Accounting Information

In this study, the integration of information value refers to maximizing the expected benefit of combining accounting and non-accounting information to support decision-making, compared to the cost of obtaining and processing that information. This concept is based on the premise that the full value of information cannot be realized by relying solely on accounting information or non-accounting information. Instead, the expected benefits of information are maximized when both types are integration within comprehensive information framework, taking into account the cost associated with acquiring and processing that information. This concept assumes that each type of information contributes a distinct perspective to understanding organizational activities, while their integration enhances information quality and strengthens its capacity to support the decision-making process (Veltri & Silvestri, 2020).

Information integration does not aim to increase the volume of available data, but rather to maximize its value. Integrating of accounting and non-accounting information provides decision-makers with more relevant and comprehensive information, thereby enhancing their ability to utilize it effectively (Veltri & Silvestri, 2020). As a result, the expected benefit derived from using information outweigh the costs acquiring and processing it, reflecting the fundamental concept of information value in decision analysis literature (Glynn et al., 2022).

2.5 The Decision-Making Process

The decision-making process is one of the most important managerial functions, as it provides the foundation upon which organizations select the most appropriate alternatives to achieve their objectives. A decision is not merely regarded as a choice among several alternatives, rather, it is a systematic process that involves identifying the problem, evaluating the available alternatives, and selecting the option that is most likely to achieve the desired outcomes based on the available information (Dean & Sharfman, 1996; Bejleri et al., 2022).

The effectiveness of the decisions-making process depends largely on the quality of the information available to decision-maker relies. Accurate and relevant information improves the ability to analyze alternatives, estimate expected outcomes, and reduce the likelihood of error in selection. Conversely, relying on incomplete or irrelevant information can lead to less efficient decisions and negatively impact the achievement of organizational goals (Borgonovo et al., 2026).

2.6 The Relationship Between Information Value Integration and Decision Making

Decision making is at the heart of administrative work in contemporary organizations. The quality of a decision depends on the quality of available information and its ability to reduce uncertainty and improve predictions of future outcomes. Therefore, the value of information is not measured simply by its availability, but rather by the expected benefit of using it to improve decisions compared to the cost of acquiring and processing it. This forms the theoretical basis for the concept of information value in decision analysis literature (Glynn et al., 2022).

The concept of information value integration is based on the idea that the true value of information is not achieved through a single type of information, but rather through the integration of accounting information, which reflects financial performance, with non-accounting information that explains operational, strategic, and environmental factors. This integration contributes to reducing uncertainty and improving the explanatory power of information, leading to a greater net benefit derived from its use compared to its cost. Integrating accounting and non-accounting information contributes to a more comprehensive understanding of organizational performance, enhancing the interpretation performance outcomes in light of operational, strategic, and environmental factors, and improving the quality of information used in the decision-making process (Veltri & Silvestri, 2020).

The importance of integrating the value of accounting and non-accounting information is particularly evident in service organizational, especially in the healthcare sector, where managerial decisions require balance financial efficiency, healthcare services quality, and compliance with regulatory standards. Relying solely on accounting information is insufficient to support effective decision-making, instead it should be integrated with non-accounting information. Such integration provides a more comprehensive understanding of healthcare organizational performance and enhances management's ability to make decisions that promote economic efficiency while maintaining service quality and long-term sustainability (Cavicchi et al., 2019).

3. Research Methodology

The study population comprised Al-Mowasat Private Hospital. The study sample included managers and accountants working at the hospital, who were purposively selected of their direct involvement in the study topic and their ability to provide the data and information required to achieve the study objectives. Data was collected through interviews with the participants, in addition to reviewing official records, documents, and relevant financial and administrative reports, as well as conducting content analysis to obtain the data necessary for measuring and analyzing the study variables. The theoretical framework and the interpretation of the findings were also informed by the relevant literature and previous studies.

Measurement Model

The basic model examines the direct effect of the integration of information value on decision quality:

$$\text{Decision Quality}_{ij} = \beta_0 + \beta_1 \text{Vol}_{ij} + \beta_2 \text{Controls}_{ij} + \varepsilon_{ij}$$

Independent Variable: Value Integrity of Information (VoI)

This variable measured by the difference in the expected value of a decision when additional information is available compared when such information is unavailable (Raiffa & Schlaifer, 1961). Dimensions: Expected Value of perfect Information (EVPI) and Expected Value of sample Information (EVSI).

Dependent Variable (DV): Decision Quality

This is measured using archival hospital data obtained from the hospital, includes the error rates (Bedford, 2016). The following equation was used to calculate this indicator:

Error Rate = $\left(\frac{\textbf{\textit{number of transactions containing}}}{\textbf{\textit{total number of transactions}}}\right)$

Control Variables

These variables include hospital size (measured by total assets), organizational structure (measured by the degree of centralization), and control packages. Malmi & Brown (2008) emphasize that control packages-including planning, cybernetic, reward, and compensation and cultural controls-influence the way information is utilized, making them important control variables. The following equations were used in the study:

Hospital Size = Total Assets

Organizational Structure (Degree of Centralization) = (Number of Decisions Made by Senior Management) / (Total Decisions)

I. Organizational Units

J. Hospital

Coding the Study Variables

The study adopted a set of symbols to denote its variables and dimensions, as follows:

• X: Represents the independent variable (information value), and consists of:
o X1: Full information value – equipment purchase decisions.
o X2: Full information value – pricing of health services and tests.
o X3: Partial information value – equipment purchase decisions.
o X4: Partial information value – pricing of health services and tests.
• Y: Represents the dependent variable, and consists of:
o Y1: Error rate.
• C: Represents the control variables, which include:
o C1: Hospital size.
o C2: Organizational structure (degree of centralization).
o C3: Control packages (arithmetic mean of the control variable).

1.3 Statistical Analysis and Discussion of Results

Descriptive Statistics

The following table includes some general statistics used to determine the most important general characteristics of the studied variables. The arithmetic mean, median, highest and lowest values, and standard deviation were calculated, in addition to the Jark-Pera test to determine whether the distribution of the dependent variables is normal. The hypothesis used here is that the data distribution is normal.

Table No. (1): General Statistics for the Studied Variables

	X1	X2	X3	X4	Y1	C1	C2	C3
Mean	66762715	17343803	33577416	11988130	2.270998	1.55E+10	0.611324	3.569617
Median	69256629	16358817	34130078	11482366	2.130000	1.55E+10	0.606000	3.600000
Maximum	87100000	23400000	43019699	17550000	3.210000	1.61E+10	0.718000	3.970000
Minimum	44356660	13000000	22100000	8450000.	1.850000	1.50E+10	0.522000	3.200000
Std. Dev.	14313653	3167349.	7039301.	2841525.	0.420565	3.62E+08	0.062297	0.273188
Jarque-Bera	1.178062	1.748079	1.316994	1.731147	2.699318	1.094845	1.119305	1.548504
Probability	0.554865	0.417263	0.517629	0.420810	0.259329	0.578439	0.571408	0.461049

The mean and median values show a clear convergence between them for most variables, indicating the absence of sharp deviations in the data distribution. It is also evident that the variables of total information value (X1), partial information value (X2), equipment purchase decisions (X3), and healthcare service pricing (X4) have high values, which is normal given their monetary nature. As for the performance variables, the mean error rate (Y1) was approximately 2.27, with moderate variance as shown by the standard deviation (0.42), indicating limited differences between time periods. Regarding dispersion, the standard deviation values indicate acceptable variance in the data without sharp fluctuations, especially for organizational variables such as the degree of centralization (C2) and control packages (C3). The Jarque-Bera test showed that all values had a probability level greater than 0.05, indicating that the data follow a normal distribution. This supports the validity of using parametric statistical methods in the analysis, and the following histograms further confirm the normality of the distribution. From the above, we note that descriptive statistics indicate that the data are characterized by relative stability and normal distribution, with acceptable variance between variables, which enhances the reliability of the results and the possibility of relying on the standard models used in the analysis.

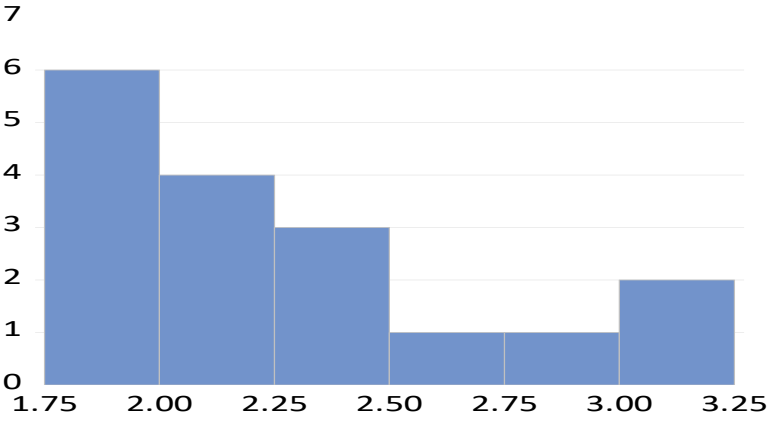

Figure (1)

Frequency distribution and Jark-Pera test for normality

First: Direct Effect Analysis of Variables with Respect to Error Rate y1

Results of the Effect of the Variable x1 on Error Rates in Device Purchase Decisions

The researcher extracted the results of the regression table, which includes an analysis of the effect of the value of complete information (x1) on the error rate (y1) with and without the introduction of control variables. This was done to test the stability of the relationship, determine the true role of each variable, and draw conclusions. The results are presented in the following table:

Table No. (2): Results of the Effect of Variable x1 on y1 with and without Control Variables

dependent variable	Independent variable + control	Coefficient of determination	a test F	The constant	regression coefficient	Std. Error	atest t	moral
Y1	X1	0.567742	23.64176	3.704768	-2.11E-08	4.34E-09	-4.862279	**0.0001**
	X1	0.734050	19.32069	13.40688	-1.00E-08	5.70E-09	-1.761016	**0.1001**
	C1				-6.76E-10	2.25E-10	-2.997365	**0.0096**
	X1	0.843070	37.60586	-0.232143	-7.42E-09	4.27E-09	-1.735692	**0.1046**
	C2				4.904685	0.981890	4.995145	**0.0002**
	X1	0.782925	25.24685	6.473246	-8.17E-09	5.20E-09	-1.572542	**0.1381**
	C3				-1.024407	0.272241	-3.762862	**0.0021**

In the first model, which represents the relationship between the independent variable (X1) and the dependent variable (Y1), the results showed a significant inverse effect, with a regression coefficient of (-2.11E-08) at a significance level of (0.0001). the results indicate that an increase in the value of complete information contributes to reduction in the error rate. In the first model, the coefficient of determination (R^2), was (0.5677), indicating that 56.7% of the variations in the error rate was explained by the independent variable. After introducing the first control variable, hospital size (C1), inthe second model, the effect of the independent variable (X1) became statistically insignificant, (0.1001). in contrast, hospital size (C1) exhibited a significant negative coefficient of (0.0096), indicating that larger hospital tend to experience lower error rate. The explanatory power of the model also increased, with (R^2) rising to 0.7340. This reflects an improvement in explaining changes in the dependent variable. In the third model, after introducing the degree of centralization (C2), the independent variable (X1) remained statically insignificant, whereas the control variable (C2) showed a positive and statistically significant effect with a p-value of 0.0002. This model achieved the highest explanatory power, with an (R^2) value of 0.8431, suggesting that the degree of centralization is one of the most influential factors affecting the error rate. The fourth model, which includes control packages (C3), showed that this variable had a statistically significant negative effect, with a p-value of 0.0021, while variable (X1) remained insignificant. The explanatory power of this model, represented by the coefficient of determination (R^2), reached 0.7829, further highlighting the importance of organizational factors in explaining performance. Overall, the findings indicate that the independent variable, representing by the value of complete information, had a significant effect in the initial model, however, this effect disappeared after the control variables were introduced. The control variables, particularly the degree of centralization, played significant role in explaining variations in the error rate, emphasizing the important of organizational factors in improving performance and reducing errors within the institutions.

Results of the effect of variable x2 on the error rate (y1) in healthcare services pricing:

The regression results were analyzed to examine the effect of healthcare services pricing (X2) on the error rate (Y1), both before and after introducing the control variables. This analysis was conducted to assess the stability of the relationship, determine the contribution of each variable, and draw the study conclusions. The results are presented in the table:

Table No. (3): Results of the effect of variable x2 on the error rate y1 with and without control variables

dependent variable	Independent variable + Control variable	Coefficient of determination	A test F	The constant	regression coefficient	Std. Error	A test t	moral
Y1	X2	0.293260	6.224221	3.518116	-7.19E-08	2.88E-08	-2.494839	**0.0248**
	X2	0.712120	17.31567	20.93548	4.25E-08	3.17E-08	1.341069	**0.2013**
	C1				-1.25E-09	2.78E-10	-4.513281	**0.0005**
	X2	0.900983	63.69499	-4.292830	6.74E-08	1.87E-08	3.600416	**0.0029**
	C2				8.824471	0.951977	9.269623	**0.0000**
	X2	0.790913	26.47888	7.704264	4.59E-08	2.61E-08	1.761323	**0.1000**
	C3				-1.745250	0.302339	-5.772496	**0.0000**

In the first model, which illustrates the simple relationship between the independent variable (X2) – pricing of healthcare services or tests – and the dependent variable (Y1) – the results showed a significant inverse effect, with a regression coefficient of -7.19E-08 and a significance level of 0.0248. the results that increasing the value of information related to healthcare services or diagnostic tests pricing (X2) contributes to reducing the error rate. In the first model, the coefficient of determination (R^2) was 0.2933, indicating that 29.3% of the variation in the error rate was explained by this variable. After introducing hospital size (C1) as a control variable in the second model, the relationship changed. The effect of variable (X2) became statistically insignificant (P-value = 0.2013), and its coefficient changed to positive value, indicating a weaker direct effect after controlling for hospital size. In contrast, hospital size (C1) showed a statistically significant negative coefficient (P-value = 0.0005), indicating that larger hospital size tends to have lower error rate. The explanatory power of the model also increased substantially, with (R^2) rising to (0.7121), indicating a considerable improvement in explaining the variation in the dependent variable. In the third model, after introducing the degree of centralization (C2), variable (X2) became positive and statistically significant (P-value = 0.0029), suggesting that an increasing in this variable was associated with a higher error rate in the presence of the control variable. The degree of centralization (C2) also exhibited a positive and statistically significant effect (P-value = 0.0000). this model achieved the highest explanatory power among all the models (R^2) value of (0.9010), indicating that centralization was one of the most influential factors affecting the errors. In the fourth model, which includes control packages (C3) variable (X2) remained statistically insignificant (P-value = 0.1000), while the variable (C3) had a statistically significant negative effect (P-value = 0.0000). indicating that improving in organizational factors contributed to a reducing the error rate. The explanatory power, represented by the coefficient of determination (R^2) of the model, reached (0.7909), confirming the importance of these factors in explaining performance. Overall, the findings indicate that variable (X2) initially had a significant negative effect; however, this effect was not stable, as it either became statistically insignificance or changed direction after the control variables were introduced. This suggests the presence of overlap or indirect influence among the study variables. In addition, the control variables, particularly (C2) and (C3), showed a significant effect in explaining the error rate, highlighting the importance of organizational factors in determining performance levels within the institutions.

Results of the Effect of Variable x3 (Partial Information Value for Device Purchase Decisions) on the Error Rates

The researcher analyzed the regression results to examine the effect of device of partial information value for device purchase decisions (X3) on the error rates (Y1), both with and without the inclusion of control variables. This analysis was conducted to assess the stability of the relationship, identify the contribution of each variable, and draw the study conclusions. The results are presented in the table:

Table No. (4): Results of the Effect of Variable x3 on y1 with and without Control Variables

dependent variable	Independent variable + control	Coefficient of determination	A test F	The constant	regression coefficient	Std. Error	A test t	moral
Y1	X3	0.467016	13.14344	3.641931	-4.08E-08	1.13E-08	-3.625388	**0.0025**
	X3	0.936992	104.0978	15.99058	-3.14E-08	4.11E-09	-7.627769	**0.0000**
	C1				-8.18E-10	8.00E-11	-10.21894	**0.0000**

	X3	0.979855	340.4791	0.021439	-2.61E-08	2.40E-09	-10.88706	**0.0000**
	C2				5.113142	0.270843	18.87860	**0.0000**
	X3	0.952845	141.4459	7.222199	-2.84E-08	3.62E-09	-7.863313	**0.0000**
	C3				-1.119471	0.093212	-12.00994	**0.0000**

Based on the above results, and in the first model representing the relationship between the equipment purchase decisions variable and the dependent variable, the error rate, the results showed a significant inverse effect, with a regression coefficient of (-4.08E-08) at a significance level of (0.0025). This result indicates that improving the quality of information related to device equipment purchase decisions contributes to reducing the error rate. In the first model, the coefficient of determination (R^2) was (0.4670), indicating that 46.7% of the variations in the error rate was explained by this variable. After introducing hospital size (C1), as a control variable in the second model, the variable representing the partial information value for device purchase decisions(X3) maintained its statistically significant negative effect (P-value = 0.0000), and the strength of this effect increased, as reflected by the absolute value of the t-test. In addition, hospital size, exhibited a statistically significant negative coefficient, indicating that larger hospital size to experience lower errors rates. the explanatory power of the model also increased substantial, with (R^2) reaching (0.9370), indicating a marked improvement in explaining the variation in the dependent variable. In the third model, after introducing the degree of centralization (C2), the variable equipment the partial information value for device purchase decisions variable remained statistically significant with a negative effect coefficient (p-value = 0.0000). meanwhile, the degree of centralization, showed a positive and significant coefficient, indicating that greater centralization was associated with a higher error rate. This model also achieved the highest explanatory power among the estimated models, with an R^2 value of (0.9799), demonstrating that combining the partial information value for device purchase decisions with organizational factors, particularly the degree of centralization, provides a strong explanation of the variation in the error level. In the fourth model, which includes the control package variable (C3), this variable was found to have a significant negative effect (p-value = 0.0000), while the equipment purchases decisions variable continued to exhibit a significant negative effect. The explanatory power (R^2) of the model reached (0.9528), confirming the importance of organizational factors in explaining performance alongside this variable. From the above, it can be concluded that the device purchase decision variable (X3) represents one of the most important factors influencing the error rate. Unlike some other variables, this variable was not affected by the introduction of control variables, indicating that its effect is direct and real, and not due to interference with organizational factors. Control variables, especially the degree of centralization and hospital size, showed strong, significant effects, reflecting the important role of organizational factors in improving performance and reducing errors within institutions.

Results of the effect of the variable x4 on error rates y1

The researcher extracted the results of the regression table, which includes an analysis of the effect of the value of partial information on the pricing of health services or tests (X4) on the error rate (Y1), with and without the introduction of control variables. This analysis was conducted to assess the stability of the relationship, determine the contribution of each variable, and draw the study conclusions. The results are presented in the table:

Table No. (5): Results of the effect of variable x4 on the error rate y1 with and without control variables

Dependent variable	Independent variable + control	Coefficient of determination	A test F	The constant	regression coefficient	Std. Error	A test t	moral
Y1	X4	0.106113	1.780654	2.848985	-4.82E-08	3.61E-08	-1.334411	**0.2020**
	X4	0.768287	23.20984	21.31322	6.10E-08	2.57E-08	2.372350	**0.0325**
	C1				-1.28E-09	2.02E-10	-6.325214	**0.0000**
	X4	0.925707	87.22195	-3.443653	6.65E-08	1.42E-08	4.683605	**0.0004**
	C2				8.044561	0.647309	12.42769	**0.0000**
	X4	0.836639	35.84988	7.718437	5.88E-08	2.09E-08	2.808792	**0.0139**
	C3				-1.723614	0.217837	-7.912386	**0.0000**

In the first model, which represents the relationship between the healthcare service or examination pricing variable (x4) and the dependent variable (error rate y1), the results showed that this variable had a non-significant inverse effect, with a regression coefficient of -4.82E-08 at a significance level of 0.2020. This result indicate that this variable has no significant effect on explaining the error rate in the first model. The coefficient of determination (R^2) was 0.1061, indicating that the variable explained only 10.61% of the variation in the error rate, reflecting its limited explanatory power when considered independently. After introducing hospital size (C1) as a control variable in the second model, the relationship changed considerably. The variable representing the partial information value for healthcare service or examination pricing (X4) became positively and significantly affected, with a significance level of 0.0325, indicating that an increase in the variable was associated with a higher error rate controlling for hospital size. In addition, hospital size exhibited a statistically significant negative coefficient (P-value = 0.0000), indicating that larger hospital size contributes to reducing errors. The explanatory power of the model also increased substantially, with (R^2) reaching 0.7683. In the third model, after introducing the degree of centralization variable (C2), the variable representing the partial information value for healthcare services or diagnostic test pricing remained positive and statistically significant (P-value = 0.0004). The degree of centralization(C2), also showed a positive and highly significant coefficient, indicating that greater centralization was associated with higher errors rate. This model achieved a high explanatory power, with an R^2 value of 0.9257, suggesting that organizational factors, particularly the degree of centralization, strengthened the explanation of the relationship between this variable and the error rates. In the fourth model, which included the control package (C3), the partial information value for healthcare services or diagnostic test pricing remained statistically significant with a positive effect (P-value = 0.0139). meanwhile, control packages(C3) exhibited a statistically significant negative effect, indicating that improving the organizational factors contributes to reducing the errors rate. The explanatory power (R^2) of the model reached 0.8366, further emphasizing the importance of the control variables in explaining performance.

Overall, the findings indicate that the partial information value for healthcare service or examination test pricing (X4) had an unstable effect. Although it was not statistically significant in the model without control variables, it became statistically significant and changed to positive direction after the control variables were introduction. This suggests that the effect may be indirect and is substantially influenced by organizational factors, particularly hospital size and degree of centralization. The results also demonstrate that these organizational factors play a important role in shaping the relationship, as they change the effect the variable from insignificant to significant, highlighting the sensitivity of pricing decisions to the organization's internal environment.

4. Conclusions and Recommendations

The study findings indicated the integrating of the value of accounting and non-accounting information is a key factor in supporting decision-making within healthcare institutions. It contributes to providing more relevant, reliable, and comprehensive information, enabling decision-makers to evaluate available alternatives more accurately. The findings also showed that integrating financial information with operational and technical information enhances management's ability to make well-informed decisions, particularly those related to purchasing medical equipment. These decisions demonstrated a more stable impact compared to other types of decisions, reflecting the importance of relying on integrated information when making investment decisions in the healthcare sector.

The study also showed that the effectiveness of information depends not on the quantity of available data, but on its integration and its ability to provide added value to decision-makers. The findings further indicated that information utilization varies according to the nature of the decision and the organizational context. Organizational factors, including hospital size, degree of centralization, and control mechanisms, play a significant role in enhancing information utilization and improving decision quality. These findings suggest that development in the organizational environment in which they operate. Based on these findings, the study recommends strengthening the integration of accounting and non-accounting information in the design and developing of information that supports decision-making. It also recommends enhancing databases by integrating financial, operational and administrative information to improve decision-making efficiency and resource utilization. In addition, healthcare institutions should strengthen control mechanisms to encourage the effective use of integrated information in evaluating and selecting alternatives. Finally, future research should examine the integration of the of accounting and non-accounting information in other sectors and investigate its impact on additional organizational performance indicators.

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