



Strategic Monitoring and Its Impact on Organizational Sustainability: An Analytical Study in Baghdad Health Directorates (Karkh, Rusafa, and Medical City)

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Abstract:

This paper analyzes how Strategic Monitoring (SM) affects the Organizational Sustainability (OS) of some selected Baghdad Health Directorates in Iraq and attempts to establish how economic, social, and environmental sustainability can be achieved through SM, which includes strategic intelligence, strategic thinking, and strategic vigilance. A descriptive-analytical methodology has been used in which data was gathered using a structured questionnaire administered to 60 middle management officials of the directorates. The data were processed through suitable statistical tools using regression and correlation methods with the help of SPSS software. Results indicate that there exists a strong and significant positive relationship between SM and OS, with SM accounting for 65.6% variance in sustainability outputs. The two dimensions of SM having the greatest impact upon OS were found to be strategic intelligence and strategic thinking, followed by strategic vigilance. This will stress supporting and developing the SM capabilities in fighting environmental challenges, enhancing responsiveness, and ensuring sustain performances. From a practical standpoint, the study implies that the health sector's decision-makers can capitalize on embedding strategic monitoring practices to enhance decision-making and foster long-term sustainability. The study fills a much-needed gap in literature by providing an empirical connection between SM and OS in the public health setting. This promotes institutional mechanisms stressing continuous learning, environmental scanning, and proactive leadership.

Keywords: Strategic Monitoring, Organizational Sustainability, Strategic Intelligence, Public Health Management, Baghdad Health Directorates.

1. Introduction:

Institutions have focused on important monitoring practices to improve OS outcomes. Given the effectiveness and importance of SM in all countries, many projects and businesses identify its benefits and strive to strengthen and establish their processes (Kimani & Mundia, 2017).

SM was introduced in the early 1980s within the framework of new management theory as part of result-based management practices (Mhina, 2017), indicating rapid development and the need for effective strategies (Milosevic et al., 2023). Monitoring takes into account appropriate steps such as metrics, data, and analyses to assist in the continuous operation within the institution while developing and adapting future SM programs (Gregory et al., 2022). This aligns with the definition by (Kiboi et al., 2018) of SM as a set of processes, indicators, and employees to ensure accountability and to measure and implement monitoring programs in institutions according to planned objectives to achieve the desired evaluation results (Kwareh et al., 2024). This was confirmed by the study (Al-Afandy & Al-Ali, 2023) that the idea of SM has become one of the most important conceptual frameworks in the literature related to strategic management, as it provides a practical way to achieve dexterity within the institution. Therefore, institutions are keen on their intelligence, way of thinking, and strategic vigilance that enable them to adequately prepare for the requirements of the external environment, represented by the opportunities and challenges it presents, to remain on the path of continuous achievement, exploration, and evaluation. While (Smith & Gray, 2021) defined SM as the effective management of public life through the identification of social and environmental feedback among human and institutional communities that depend on it. Regarding OS, it began with United Nations agencies in the 1970s and focused on global environmental sustainability issues. The meaning of "sustainability" was expanded in the early years of the 21st century according to Wright, who supported social, financial, health, & educational sustainability issues as the foundational idea for environmental sustainability (Barnard & Van der Merwe, 2016). However, at the beginning of the 21st century, the world witnessed and continues to witness many vital and important developments and changes through which institutions aim to achieve a set of goals, the most important of which are survival, excellence, and growth in work to achieve OS (Obaid, 2021). Therefore, OS, according to (Kim & Hall, 2021), has become an important concept in today's business world, and sustainability performance has become a major concern for many institutions worldwide, providing long-term opportunities for growth and development, financial viability, and competitive advantages (Althnayan et al., 2022), as well as interconnectedness through instilling a culture of sustainability (Assoratgoon & Kantabutra, 2023). In light of this, many studies have concluded that OS is the organization's ability to make a positive contribution to sustainability development by providing economic, social, and environmental benefits simultaneously (Turan & Cetinkaya, 2022). This was confirmed by the study (Oliari, 2021), which stated that it is an organizational activity aimed positively at contributing to achieving balanced sustainability in the aspects of economy, society, and environment in the short, medium, and long term.

Therefore, we suggest that SM may enhance, improve, and strengthen OS. In this context, according to the study by (Kimutai, 2013), SM takes on its importance as a critical element in planning and executing business, as management can identify the weaknesses and strengths in the organization it manages by monitoring and using information to make sound strategic decisions. The dimensions of SM consist of strategic intelligence, strategic thinking, and strategic vigilance, according to the study by (Al-Afandy & Al-Ali, 2023). While the concept of OS is linked to the Triple Bottom Line (TBL), it is a hierarchical model that divides the operating system into pillars (economy, society, and environment), and addresses them in a balanced manner with the principles of organizational management (Gelencsér et al., 2021). Thus, the dimensions of OS are divided into three dimensions based on the Triple Bottom Line: economy, society, and environment (Singh et al., 2016), (Koç & Bastas, 2019), (SEZEN-GÜLTEKİN & ARGON, 2020), (Vargas-Hernández, 2021), (Rahman et al., 2023). However, it is not clearly and precisely known how SM affects OS when applied in service institutions, especially in health departments.

This study dedicates the necessary efforts to bridge this research gap by clarifying the impact of SM on OS, in light of the challenges and dynamic difficulties faced by the health departments in Baghdad, which the researched departments must adapt to (given their significant responsibility for the prosperity of the health and research reality in the country), to achieve a prominent position among global institutions. Therefore, the research problem lies in answering the main research question (Q1):

Is there an impact of SM and its dimensions (strategic intelligence, strategic thinking, and strategic vigilance) on OS?

This leads to three sub-questions:

- 1- does strategic intelligence affect OS?
- 2- does strategic thinking affect OS?
- 3- does strategic vigilance affect OS?

According to the previous questions, this study aims to measure the extent of availability and impact of SM and its dimensions in OS in the studied departments. The results can be obtained that may contribute to practices related to SM and OS.

2. Literature Review And Hypotheses Development:

Some previous studies have discussed SM and OS, but not in a comprehensive and precise manner, to the best of the researchers' knowledge. Therefore, the current study attempts to link them in a detailed and practical way so that its results contribute to serving those interested and researchers in this field. In the following paragraphs, some previous studies that have been beneficial in this regard will be clarified.

The study of (Kimani & Mundia, 2017) aimed to Assess the Impact of SM Practices on the Sustainability of Youth Self-Help Group Projects. The essence of the study was the accessibility of information, capacity building, project evaluation, and effective reporting.

A descriptive research design was adopted to answer the study questions from the intentionally targeted sample of 138 respondents, managed using structured questionnaires with quantitative data analysis. The study concluded that group leaders had appropriate management skills and that monitoring reports were available for evaluation and analysis. The study then recommended that projects could enhance feedback regarding project monitoring for decision-making. This is what the current study should reflect the availability of information, capacities, work evaluation, reporting, and the skills that management should possess to make appropriate decisions and enhance the work and sustainability of health institutions.

A study of (Biwott et al., 2017) confirmed this by providing information on "The Role of Monitoring and Evaluation in Project Sustainability, Especially the Constituency Development Fund Projects in Kenya." It is noted that monitoring and evaluation assist managers in implementing and tracking projects with the ability to utilize available resources. It also provides decision-makers with planning strategies and project sustainability, guiding future actions, of

which sustainability is an essential aspect. This study assessed the role of monitoring and evaluation in project sustainability. A team of four individuals was used to review the literature and gather information. The results showed that monitoring and assessment significantly impact the sustainability of projects funded by the Constituency Development Fund. Therefore, it is essential in the current study to include monitoring and evaluation and focus on information and analysis for the sustainability of health institutions through their senior management, as most of the institutions funded by the government require effective management to implement SM and achieve OS.

The study conducted by (Saviano et al., 2018) focused on "integrating a sustainability perspective into the monitoring system of healthcare organizations." It relied on two main hypotheses:

1) the evolution of the work model towards a broad perspective of sustainability approaches, and
 2) the development of monitoring systems in healthcare institutions towards an approach based on monitoring, to assess the efficiency and effectiveness of targeted services. The study's methodology was developed based on:

1) a literature review relevant to the topic, focusing on its trends and gaps, and
 2) adopting an applied approach as a conceptual framework and integrating it into the business model. The study's results presented a monitoring model and a sustainable system for building "management monitoring systems for healthcare" with the concept of (continuous sustainable systems), through which a sustainability perspective can be integrated into the management monitoring system of healthcare institutions. This study shows that it aligns with the current study in many aspects regarding literature review, the applied field, monitoring the efficiency and effectiveness of the services provided, as well as creating a hypothetical model that links SM with OS.

However, the study of (Meqdadi et al., 2020), clarified the extent of "investigating the impact of monitoring strategies on the spread of sustainability and its monitoring within supply chains through core companies" and how employees engage and contribute to the implementation of these strategies. This study addressed three case studies conducted with these companies.

It relied on an interactive approach to guide the analysis of core company strategies for implementing and disseminating sustainability within their networks. The results showed the impact of the monitoring strategy and that it is a prerequisite for the spread of sustainability. (Bilderback, 2023) emphasized the promotion of sustainable practices and the improvement of employee satisfaction. This current study reinforced the possibility of employee participation in assisting management with monitoring and their contribution to its implementation at the organizational level to achieve and spread OS effectively.

While the study of (Negulescu et al., 2022) included a proposed approach to monitor the implementation of the sustainable development strategy, and that the future of upcoming generations is related to sustainability. Through the effective intervention of the work environment in organizational processes, risk management, and social aspects will improve. The study emphasized that it is not enough to merely identify an effective approach to greening the organization - managers and leaders need effective tools to monitor and control the implementation of this approach. Therefore, the study aimed to provide theoretical and practical contributions to sustainable development management based on qualitative theoretical research, analysis, comparison, conclusions, and visualization. It also evaluated the monitoring of strategy implementation to prepare the conditions for integrated management strategies and models for establishing green institutions (Kara et al., 2023).

This study lacks the impact of SM on OS, but it opened the door for the current study, suggesting that the future of institutions goes beyond monitoring, control, implementation, analysis, evaluation, and sustainability, and can instead move towards creating green institutions with an integrated management strategy.

Through measuring the availability extent of SM and OS in the researched departments and based on the previous studies addressed, we hypothesize the following:

The main hypothesis of the research: There is a significant effect of SM and its dimensions on the OS of the surveyed departments. From this main hypothesis, three sub-hypotheses branch out, which may be proven or disproven:

H1: There is a significant impact of strategic intelligence on OS.

H2: There is a significant impact of strategic thinking on OS.

H3: There is a significant impact of strategic vigilance on OS.

3. Methodology:

3.1. The research sample:

The researchers adopted a purposive sampling method, where a sample was selected that included all middle management directors in Baghdad Health Directorates, numbering 60 respondents. This sample meets the criteria for achieving the study's objectives, and Table 1 shows the percentage of the research sample for the surveyed directorates. It is evident from the results in the table below that the directors selected by gender had a higher percentage of males (70%). As for age, the age group of 31-40 had the highest percentage (45%), followed by the group of 41-50 with a percentage of 35%, which combines youth and experience in providing services, which helps in obtaining new and accurate information as well. It is also clear that these directorates acquire and encourage youthful energy while maintaining expertise in their middle management.

Regarding academic qualifications, holders of bachelor's degrees had the highest percentage (62%), which is consistent with the youth age group, but it would be better for senior management to enhance their middle management with holders of higher degrees or to facilitate and encourage these groups to complete their higher studies to strengthen management with an academic category that provides better quality services. In terms of job position, department managers had the highest percentage (50%), which represents the system adopted according to the organizational structure in these departments. Finally, regarding years of service, the category with 16 years or more obtained the highest percentage (50%), indicating the presence of knowledge, skill, and experience among the research community members in providing services.

Table 1: The percentage of the research sample.

Personal information		Repetition	Percent
Gender	Male	42	%70
	Female	18	%30
	Total	60	%100
Age	30 years and less	-	-
	31-40	27	%45
	41-50	21	%35
	51 years or more	12	%20
	Total	60	%100
Academic qualification	PhD	11	%18
	Master's	6	%10
	High diploma	5	%8
	Bachelor's diploma	37	%62
	1	%2	
	Total	60	%100
Job position	Assistant General Director	3	%5
	Department Director	30	%50
	Division Manager	27	%45
	Total	60	%100
Years of service	5 years and less	2	%3
	6-10	7	%12
	11-15	21	%35
	16 years or more	30	%50
	Total	60	%100

3.2. The research tools:

The researchers relied on the descriptive analytical approach for data collection and statistical analysis to test the main research hypothesis and the sub-hypotheses. They used the scale (Al-Afandy and Al-Ali, 2023) for the independent variable of SM, and the scale (Althnayan, 2022) for the dependent variable of OS. Statistical programs (Excel) and (SPSS) were also used as quantitative tools, and the main tool was the questionnaire to collect data related to the current research according to the five-point Likert scale, as it is considered one of the important measures in the managerial aspect, as well as to answer the study questions and formulate and understand its results.

3.3. The definitions of research variables:

Table (2) illustrates the most important things that the researchers mentioned in the definition of the main variables, which represent the independent variable (SM) and its dimensions, as well as the dependent variable (OS) and its dimensions.

Table 2: Main variables and their dimensions

Research variables		The concept	The source
The independent variable	Strategic monitoring	SM means the continuous and systematic monitoring of the extent to which activities comply with the strategy and correcting them based on this evaluation. (Van Rees et al., 2022) added that SM can be learned from research and development and improved methodology and practices over time.	(Vahidi & Bagheri, 2022)
The dimensions	Strategic Intelligence	Kuosa (2011), defined it as the collection, processing, analysis, and dissemination of information with high strategic value. According to (Muttalak Al-Daouri & Khalid Atrach, 2021), institutions with a high degree of strategic intelligence can predict the future and create an ideal vision for their goals. Through conducting strategic analysis of both internal and external variables, institutions can adapt to potential changes and achieve business success, growth, and performance.	(Zarafili & Zarafili, 2023)
	Strategic Thinking	Blanco et al (2020) indicated that strategic thinking is a vital element in strategy development and a cognitive, reflective, and mission-oriented process that seeks to produce new strategies that can occur before, during, or after strategic planning. It also represents the ability to analyze and evaluate information to identify and anticipate opportunities and challenges in decision-making and planning within the institution, and to suggest the necessary actions to achieve goals.	(Amanah et al., 2022) (Henriquez-Calvo & Diaz-Martinez, 2023)
	Strategic Vigilance	It is a continuous process in which the environment is monitored and analyzed, as well as collecting information continuously to identify opportunities to seize and threats to avoid and mitigate their impacts. (Karima & Zohra, 2021) considered strategic vigilance to be an integrated system in the monitoring and observational process to search for information from various entities related to the institution (commercial, competitive, technological, environmental), and to process it in a way that enables the institution to make strategic decisions that achieve excellence in the long-term.	(Alshaer, 2020) (Altarawneh, 2023)

The dependent variable	OS	It was defined by the World Commission on Environment and Development (1987), known as the (Brundtland Commission), was defined as a process that "meets the needs of the present without compromising the ability of future generations to meet their own needs".	(Crucke et al., 2022) (Zahrani, 2022), (Rahman et al., 2022), (Demastus & Landrum, 2024)
The dimensions	Economy	According to the Global Reporting Initiative (GRI), economic sustainability is "the organization's impacts on the economic conditions of stakeholders and economic systems at local, national, and global levels". To ensure long-term survival, these institutions must maintain their economic stability and sustainability.	(Rahman et al., 2022)
	Society	It is the institution's ability to meet current business needs and the needs of stakeholders to enhance and preserve the natural and human resources necessary for the future.	(Althnayan et al., 2022)
	Environment	Morelli defines it as meeting the needs for resources and services for current and future generations without compromising the health of the ecosystems that provide them, and more specifically, as a state of balance, resilience, and interconnectedness that allows human society to meet those needs without exceeding them.	(Özel, 2021)

3.4. The study model:

The current study model aims to show the relationship between the main and sub-variables related to the current study, through which the main idea of this study is clarified, as illustrated in Figure 1.

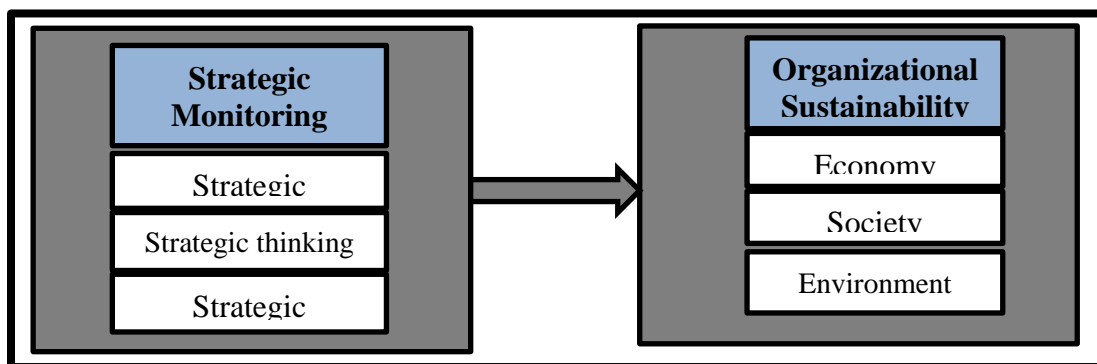


Figure1: The study model

Source: prepared by the researchers.

4. Results:

4.1. Descriptive analysis of study variables:

This paragraph focuses on describing and analyzing the responses collected from the sample of this study "to assess the availability of concepts related to the phenomenon under study." Statistical methods (mean, standard deviation, and coefficient of variation) were used to describe and analyze the independent variable (SM) and its dimensions, as shown in Table 3.

Table 3: Descriptive analysis indicators for the independent variable (SM) and its dimensions

	Sub-dimensions	Arithmetic mean	Standard deviation	Coefficient of difference	Dimensions arrangement
Dimensions of SM	Strategic Intelligence	3.617	0.667	18.447	First
	Strategic Thinking	3.630	0.678	18.672	Second
	Strategic Vigilance	3.377	0.741	21.948	Third
The strategic monitoring variable		3.541	0.620	17.500	

Source: SPSS V.28 program.

Table 3 shows the results of the descriptive analysis of the dimensions of the independent variable (SM). The dimension of strategic intelligence measures the level of strategic intelligence of senior management in Baghdad Health Directorates, and it was found that this dimension achieved an overall arithmetic mean of 3.617 with a good evaluation level, and a standard deviation of 0.667, which indicates the degree of variation in opinions about this dimension, with a coefficient of variation of 18.447%. It was given the importance ranking of first, indicating that senior management in Baghdad Health Directorates enjoys a good level of strategic intelligence and planning ability, but it needs further development to enhance its capacity to develop effective strategies to improve health services. In terms of strategic thinking, this dimension achieved an overall arithmetic mean of 3.630 with a good evaluation level, and a standard deviation of 0.678, indicating the degree of variation in opinions, with a coefficient of variation of 18.672%, and it was given a ranking of second, indicating that senior management in Baghdad Health Directorates shows a good interest in strategic thinking and benefits from intellectual skills to adapt to changes in the environment. Meanwhile, strategic vigilance measures the level of strategic vigilance of senior management in Baghdad Health Directorates. It was found that this dimension achieved an overall arithmetic mean of 3.377 with an average evaluation level, a standard deviation of 0.741, and the coefficient of variation of 21.948%. This dimension received a ranking of third, indicating that the results show that senior management in Baghdad Health Directorates demonstrates an average interest in strategic vigilance and works to enhance it to adapt to environmental changes. This indicates that this dimension is important but not the most important among the other studied dimensions of the SM variable.

Table 4 illustrates the statistical methods (mean, standard deviation, and coefficient of variation) that were used to describe and analyze the dependent variable (OS) and its dimensions as follows.

Table 4: Descriptive analysis indicators for the dependent variable (OS) and its dimensions

	Sub-dimensions	Arithmetic mean	Standard deviation	Coefficient of difference	Dimensions arrangement
Dimensions of OS	Economy	3.517	0.745	21.183	First
	Society	3.163	0.732	23.150	Second
	Environment	3.213	0.791	24.601	Third
The organizational sustainability variable		3.298	0.709	21.505	

Source: SPSS V.28 program.

Table 4 illustrates the results of the descriptive analysis of the dimensions of the dependent variable (OS). The economic dimension achieved an overall mean of 3.517 with a good rating level, and a standard deviation of 0.745, indicating a degree of variation in opinions regarding this dimension, with a coefficient of variation of 21.183%. It achieved the importance of the (first) arrangement, indicating that the level of interest of senior management in the economic dimension in the surveyed departments was generally good, as management takes into account the importance of financial performance, providing funds, and achieving employee satisfaction, which positively reflects on the institution's revenues. Regarding the social dimension, it is clear that this dimension achieved an overall mean of 3.163 with an average evaluation level, and a standard deviation of 0.732, indicating a degree of variation in opinions, with a coefficient of variation of 23.150%. It was given a ranking importance of second, indicating that the interest of senior management in the surveyed directorates regarding the social dimension was generally average, meaning that the institution may not pay sufficient attention to social aspects that can directly affect employees and the institution's public image in the society. Meanwhile, the environmental dimension achieved an overall mean of 3.213 with an average evaluation level, a standard deviation of 0.791, and a coefficient of variation of 24.601%. It was given a ranking importance of third, indicating that the interest of senior management in the environmental dimension in the researched directorates was generally average.

Despite these directorates recognizing the importance of sustainable environmental performance within the institution, they have not reached the desired level. Therefore, there should be an increase in environmental awareness among employees and a commitment to comprehensively assessing the environmental impact.

In general, Table 5 illustrates the summary of the specific results for the research variables. The SM variable shows a mean of 3.541, indicating a good level, and a standard deviation of 0.620, suggesting a degree of variation in the opinions of this sample, with a coefficient of variation of (17.500). These results confirm that SM enjoys a good level of attention and application among the research sample individuals, placing it in the first rank. Meanwhile, the OS variable shows a mean of 3.298, indicating an average level of availability, and a standard deviation of 0.709, indicating a degree of variation in opinions, with a coefficient of variation of 21.505. This reflects that the top management's interest in the OS variable in the researched directorates was not at an ambitious level, requiring a review of strategies and a reassessment of the approach toward achieving OS, placing it in second rank.

Table 5: Descriptive Analysis Indicators for Research Variables

	The research variables	Arithmetic mean	Standard deviation	Coefficient of difference	Dimensions arrangement
1	SM variable	3.541	0.620	17.500	First
2	OS variable	3.298	0.709	21.505	Second

Source: SPSS V.28 program.

4.2. Hypothesis Testing:

4.2.1. Testing the main hypothesis using simple linear regression:

The effect of the independent variable SM and its dimensions on the dependent variable OS has been verified, which can be expressed by the following hypothesis: "There is a significant effect of SM in OS" at a significance level of 0.05. Table 6 and Figure 2 illustrate the statistical indicators of the effect of SM on OS. In general, the value of the regression coefficient (Fixed term) (α) was 0.001, which is considered the lowest value for OS. At the same time, the marginal slope coefficient (β) was 0.931, indicating that a change in SM by 1 positively affects OS by 0.931. This relationship has a very high statistical significance, as the t-test value (Sig.=0.000 < 0.05). The regression model explains 65% of the changes occurring in OS, as confirmed by the Adj (R^2) value of 0.656. The extracted F-value was 113.551, which significantly exceeds the estimated tabular value (4) with statistical significance (Sig.=0.000 < 0.05). Additionally, the extracted t-value is 10.656, indicating that the effect of the parameter (β) is a real effect, as an increase in the effect by one unit leads to an increase in OS by 93%. Based on the results of this study, it is clear that SM significantly enhances OS.

This confirms the validity of the main hypothesis, which states that "there is a significant effect of SM in OS." The estimated equation can be represented as follows: OS (Y) = 0.001+ 0.931* SM (X)

Table 6: Analyzing the impact of SM and its dimensions on OS

The dependent variable	Dimensions of the SM variable			(R)	(R^2)	Adj R^2	(F)	(t)	Sig
OS	(Strategic Intelligence)	(α)	0.48	0.73	0.537	0.529	67.333	8.206	0.000
		(β)	0.77						
	(Strategic Thinking)	(α)	0.56	0.71	0.517	0.508	61.973	7.872	0.000
		(β)	0.75						
	Strategic Vigilance	(α)	0.95	0.72	0.524	0.516	63.791	7.987	0.000
		(β)	0.69						
	Main hypothesis SM	(α)	0.00	0.81	0.662	0.656	113.551	10.656	0.000
		(β)	0.93						

F tabular =4 ,t- tabular =2

Decision/Interpretation: The validity of the hypothesis is proven, indicating a significant relationship between SM and its dimensions on OS at the level of individual tests.

Source: SPSS V.28 outputs.



Figure 2: The analysis of the impact of strategic monitoring on organizational sustainability

Source: Smart PLS4 program outputs.

As for, the sub-hypotheses are as follows:

▪ **Testing the first sub-hypothesis:** There is a statistically significant effect of the strategic intelligence dimension in OS. Table 6 shows that the value of the regression coefficient (Fixed term) (α) was 0.480, which is considered the lowest value that can be achieved in OS. At the same time, the marginal slope coefficient (β) was 0.779, indicating that a change in strategic intelligence by 1 positively affects OS by 0.779. This relationship has a high statistical significance, as the t-test value was (Sig.=0.000 < 0.05).

▪ The regression model explains 52% of the changes occurring in OS, as confirmed by the Adj(R²) coefficient of determination of 0.529. The extracted F-value was 67.333, which significantly exceeds the estimated tabular value (4) with statistical significance (Sig.=0.000 < 0.05). It is also evident from the extracted t-value, which was 8.206, that the effect of the parameter (β) is real, and an increase in the effect by one unit leads to an increase in OS by 77%. This confirms the validity of the first sub-hypothesis derived from the main hypothesis, which states that there is a statistically significant effect of strategic intelligence on OS. The estimated equation can be represented as follows:

$$OS(Y) = 0.480 + 0.779 * \text{Strategic intelligence}(X1)$$

▪ **Testing the second sub-hypothesis:** There is a significant effect of the strategic thinking dimension in OS. Table 6 shows that the value of the regression coefficient (Fixed term) (α) was (0.568), which is considered the lowest value that can be achieved in OS. At the same time, the marginal slope coefficient (β) was 0.752, indicating that a change in strategic thinking by 1 positively affects OS by 0.752. This relationship has a high statistical significance, as the t-test value was (Sig.=0.000 < 0.05). The regression model explains (50%) of the changes occurring in OS, as confirmed by the Adj (R²) value of (0.508). The extracted F-value was 61.973, which significantly exceeds the estimated tabular value (4) with statistical significance (Sig.=0.000 < 0.05). As shown by the extracted t-value (7.872), the effect of the parameter (β) is real, as an increase in the effect by one unit will lead to an increase in OS by 75%. This confirms the validity of the second sub-hypothesis derived from the main hypothesis, which states (there is a significant effect of strategic thinking on OS). The estimated equation can be represented as follows:

$$OS(Y) = 0.568 + 0.752 * \text{Strategic thinking}(X2)$$

▪ **Testing the third sub-hypothesis:** There is a statistically significant effect of the strategic vigilance dimension in OS. Table 6 shows that the value of the regression coefficient (Fixed term) (α) was (0.959), which is considered the lowest value that can be achieved in OS. At the same time, the marginal slope coefficient (β) was 0.693, indicating that a change in strategic vigilance by 1 positively affects OS by (0.693). This relationship has high statistical significance, as the t-test value was (Sig.=0.000 < 0.05). The regression model explains 51% of the changes occurring in OS, as confirmed by the Adj (R²) value of 0.516. The extracted F-value was 63.791, which significantly exceeds the estimated tabulated value (4) of statistical significance (Sig.=0.000 < 0.05). The extracted t-value, which was 7.987, shows that the effect of the parameter (β) is a real effect, as an increase in the effect by one unit leads to an increase in OS by 69%. This confirms the validity of the third sub-hypothesis derived from the main hypothesis, which states that there

is a statistically significant effect of strategic vigilance in OS. The estimated equation can be represented as follows: $OS (Y) = 0.959 + 0.693 * \text{Strategic vigilance (X3)}$

5. Discussion:

The current study addressed some previous studies that contributed to supporting and enhancing the theoretical aspect of the current study. Regarding the results of the study conducted in Baghdad Health Directorates, SM results indicate that senior management is concerned with its ability to exercise strategic intelligence and planning in work; thus, this dimension received the first rank, with a mean of 3.617, a standard deviation of 0.667, and a coefficient of variation of 18.447. It is also evident that they benefit from strategic thinking, especially cognitive skills, to adapt and prepare for any emergencies, which is why it achieved the second rank in importance, with a mean of 3.630, a standard deviation of 0.678, and a coefficient of variation of 18.672. Additionally, senior management in the surveyed directorates shows a moderate interest in strategic vigilance, which is why it received the third rank in importance, with a mean of 3.377, a standard deviation of 0.741, and a coefficient of variation of 21.948.

Despite the lack of sufficient interest in strategic vigilance, efforts are being made to enhance these health directorates. However, the results of OS indicated that health directorates, in general, pay good attention to the economy despite their need to improve financial performance, capabilities, and resources. And it received the first rank in importance, with arithmetic mean 3.517, a standard deviation of 0.745, and a coefficient of variation of 21.183. The senior management in the researched directorates shows a reasonable interest in the society dimension in general and needs more diversity in work performance; thus, it received the second rank, with an arithmetic mean of 3.163, a standard deviation of 0.732, and a coefficient of variation of 23.150. It can be said that senior management is generally concerned with the environmental dimension; however, it requires the participation and responsiveness of employees to this importance to reach an appropriate level of ambition. Therefore, it received the third rank in importance, with an arithmetic mean of 3.213, a standard deviation of 0.791, and a coefficient of variation of 24.601.

In general, it was shown that the SM variable ranked first, with a mean of 3.541, a standard deviation of (0.620), and a coefficient of variation of 17.500. These results confirm that SM is being applied at a good level by the research sample individuals. At the same time, the OS variable ranked second in importance, with a mean of 3.298, a standard deviation of 0.709, and a coefficient of variation of 21.505, which requires senior management to pay more attention to OS.

Using these strategies can help the health directorates in Baghdad to enhance and improve their performance efficiently and effectively to achieve tangible and distinguished results that continuously meet the needs and expectations of society. This study, compared to previous studies, shows differences in the statistical methods used in the analysis, as well as differences in their application. The reliance of the current study on the questionnaire for data collection confirms that this study is applied, and it is a recent research project implemented in Baghdad Health Directorates. Thus, the current study is considered the first study that accurately links the two variables according to the researchers' knowledge.

6. Conclusion:

The results of the current study showed during statistical analysis that there is a statistically significant correlation and effect between SM and OS at the overall level of the research. These results indicated that achieving OS is well-dependent on the attention and implementation of SM. The more monitoring and intelligence of senior management in health directorates increases, the more interest the research community will have in SM to improve OS. The efforts made by the researched directorates in applying SM positively reflect on achieving OS, due to its clear and effective impact through its dimensions (strategic intelligence, strategic thinking, and strategic vigilance).

Furthermore, if senior management applies the contents of the research, it will effectively contribute to improving SM and thus achieving and developing OS in those researched departments. Therefore, the researcher recommends that these directorates pay attention to the strategic vigilance possessed by senior management responsible for SM to achieve OS more effectively, particularly through developing strategic skills and adapting to changing circumstances. It is clear that the variable of SM and its dimensions directly affect the variable of OS in Baghdad Health Directorates, which proved the validity of the main research hypothesis as well as its sub-hypotheses. Therefore, the concept of SM should be enhanced and improved in the researched directorates, and through this, the level of OS will be raised.

Authors Declaration:

Conflicts of Interest: None

-We Hereby Confirm That All The Figures and Tables In The Manuscript Are Mine and Ours. Besides, The Figures and Images, which are Not Mine, Have Been Permitted Republication and Attached to The Manuscript.

- Ethical Clearance: The Research Was Approved by The Local Ethical Committee in The University.

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