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Strategic Vigilance and Its Relation to Decision-Making in Sports Institutions

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Abstract:

This study explores the relationship between strategic vigilance (environmental and technological) and decision-making quality in sports institutions. Using a descriptive- analytical approach and a questionnaire, data were collected from (76) participants in sports directorates and multi-sports complexes in eastern Algeria.

Findings reveal a positive correlation between environmental and technological vigilance and improved decision-making. The study recommends enhancing training in analysis fields and promoting the use of foresight data in decision-making processes.

Keywords: Strategic Vigilance; Environmental Vigilance; Technological Vigilance; Decision-Making; Sports Institutions.

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1. INTRODUCTION

Algerian sports institutions face sudden social, economic, and technological shifts, making rapid adaptation and effective decision-making vital for continuity and performance. Strategic vigilance emerges as a key managerial tool, enabling the detection of such changes and the use of relevant information in decision-making. Within it, environmental vigilance focuses on legal, political, and social developments that shape institutional performance, while technological vigilance monitors innovations and fosters digital integration, thereby improving efficiency and decision quality. This study investigates the influence of environmental and technological vigilance on decision-making effectiveness in Algerian sports institutions, where application remains constrained by administrative challenges and traditional structures. The analysis is based on a field study conducted in sports organizations under the Directorates of Sports and Offices of Multi-Sports Complexes in eastern Algeria.

Problem Statement:

Algerian sports institutions are undergoing increasing transformations in their regulatory environments, encompassing both environmental and technological dimensions. In this regard, strategic vigilance has become a matter of considerable importance no longer merely an option for ensuring intelligent interaction with emerging challenges and opportunities, particularly with regard to decision-making.

Accordingly, the central research problem of this study is formulated as follows:

2.1. Research Questions :

- Is there a statistically significant relationship between strategic vigilance and decision-making within the Directorates of Sports and the Offices of Multi-Sports Complexes in the eastern provinces of Algeria?

From this primary inquiry, the following sub-questions arise:

- Is there a relationship between environmental vigilance and decision-making?
- Is there a statistically significant relationship between technological vigilance and decision-making?

2.2. Research Hypotheses:

The study seeks to test the following hypotheses:

2.2.1. Main Hypothesis:

There exists a statistically significant relationship between the implementation of environmental and technological vigilance activities and the decision-making process in the Directorates of Sports and the Offices of Multi-Sports Complexes in the eastern provinces of Algeria.



2.2.2. Sub-Hypothesis:

- There is a positive and statistically significant correlation between the level of implementation of environmental vigilance activities in sports institutions and the decision-making process.
- There is a positive and statistically significant correlation between the extent of adoption of technological vigilance tools and techniques and the decision-making process within the studied sports institutions.

3. Objectives of the Study:

This study seeks to achieve the following objectives:

- To identify the importance of strategic vigilance and how it relates to decision-making in the range of sports management.
- To highlight the role of environmental vigilance and its contribution to making sound and rational decisions.
- To examine the extent to which technological vigilance is practiced and its relationship to the administrative decision-making of sports institution managers.

4. Significance of the Study:

This study is significant as it monitors environmental changes (economic, social, legal) and their impact on the performance of sports institutions, while also evaluating sports managers' awareness of these changes and their ability to adapt. Moreover, it addresses a research gap by linking strategic vigilance with decision-making effectiveness in the sports context

5. Key Terms in the Study:

5.1. Definition of Strategic Vigilance

The term *vigila* is originally derived from Latin, which refers to radar surveillance and means conducting monitoring or guarding to protect and preserve a particular place or area (Sahmadi Imad & Belachi Abdelmalek, 2022, p. 296).

According to Lesca Humber, strategic vigilance is defined as “a continuous collective process carried out by a group of individuals, who voluntarily and proactively collect and utilize information in line with anticipated changes in the external environment, with the aim of creating business opportunities and reducing uncertainty risks” (Lesca, 2006, p. 266).

5.1.1. Terminological Definition:

Strategic vigilance is a continuous, structured process of proactively collecting and analyzing external information to help institutions anticipate

changes, seize opportunities, and reduce risks that could affect their future directions.

5.2. Environmental Vigilance:

Environmental vigilance refers to perceiving various economic, social and legal changes as quickly as possible, with the aim of anticipating opportunities and threats that may affect the institution in the future, thereby enabling timely and optimal decision-making (Kasmi Karima & Zahra Jallab, 2022, p. 220).

5.2.1. Terminological Definition:

Continuous monitoring and analysis of environmental changes in order to minimize the negative impact of activities and ensure compliance with environmental laws and standards.

5.3. Technological Vigilance:

Technological vigilance is defined as the monitoring and analysis of the scientific, technical and technological environment and its economic impacts in both the present and the future. It attempts to anticipate risks, threats and development opportunities. Hence, this type of vigilance focuses on technology development. (Sahmadi Imad & Belachi Abdelmalek, 2022, p. 297).

5.3.1. Terminological Definition:

A continuous process of monitoring and analyzing scientific and technical developments with the purpose of enhancing decision-making, anticipating opportunities and identifying technological threats within the institution.

5.4. Definition of Decision:

A decision is the process of selecting from available alternatives to solve a problem, overcome a crisis, or address a specific situation, after assessing the strengths and weaknesses of each option. Decision-making is thus a deliberate and structured process of evaluating alternatives to choose the most appropriate one for achieving desired objectives. (Tariq, 2016, p. 31).

5.4.1. Terminological Definition:

A decision is a systematic process of selecting the best option from available alternatives by analyzing their strengths and weaknesses, with the aim of solving a problem, addressing a situation, or achieving a goal.

5.4.2. Operational Definition:

It is the administrative procedure carried out by the manager or responsible official, relying on data from strategic vigilance systems (environmental or technological), to select the most suitable alternative for addressing external



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changes or technological developments, thereby ensuring institutional objectives and sustaining competitiveness.

5.5. The Decision-Making Process

The decision-making process passes through several integrated steps aimed at reaching the best possible alternative for solving a problem or dealing with a given situation (Al-Ashhab, 2015, p. 119).

5.6. Definition of the Manager

5.6.1. Linguistic Meaning:

The term *manager* is derived from the verb *to manage*, which originally means “to make something turn,” that is, to organize it and take charge of its affairs. It is also said: to manage a matter, meaning to supervise it and encompass it from all aspects. A *manager* (plural: managers) is the one who assumes the responsibility of running the affairs of an institution, a school, or a project, and is accountable for overseeing and organizing the workflow. (Abdulaziz, 1997, p. 531).

5.6.2. Terminological Meaning:

In terminology, the manager is defined as the person who achieves objectives through others, by performing the basic functions of management, which include planning, organizing, directing, and controlling. Therefore, anyone who engages in these activities is considered a manager in their respective position (Sayed, 1994, p. 168).

5.6.3. Operational Definition:

In this context, the manager is the individual within the sports complex who holds decision-making authority at the executive or upper management level, operating in a modern work environment that integrates technology and employs computerized methods for administrative and organizational tasks..

5.7. The Sports Complex:

A sports complex is a group of adjacent facilities designed for physical and sporting activities. As defined by Executive Decree No. 416/91, a sports facility is “any facility open to the public, specifically prepared for physical and sporting practices, and equipped with the technical, health, and safety requirements necessary for such activities.”

5.7.1. Terminological Definition of the Sports Complex:

A sports complex is an integrated space of adjacent facilities for various physical and sporting activities, meeting technical, health, and safety standards to

ensure quality practice and visitor safety, and generally open to the public within an organized framework..

5.8. Bureaus of Multi-Sport Complexes:

Bureaus of multi-sport complexes are administrative bodies with legal personality and financial independence (Executive Decree No. 492/05). Their role is to promote and develop physical and sporting practices across the province by supervising facilities and organizing activities.

6. Similar Studies:

6.1. Study of Mohamed Ibrahim Abdel-Fattah Suleiman (2024):

Title: The Role of Strategic Vigilance in Successful Administrative Decision-Making among the Boards of Sports Federations in the Arab Republic of Egypt. This study examined the role of strategic vigilance in enhancing administrative decision-making within Egyptian sports federation boards. Using the descriptive survey method on 350 participants from various federations (football, handball, volleyball, karate, wrestling, weightlifting), it found that strategic vigilance was weak across all dimensions (technological, competitive, organizational, environmental), and boards showed limited decision-making effectiveness. The results highlighted strategic vigilance as a key source of information supporting decision-making, and the study recommended learning from competing federations to improve performance and governance.

6.2. Study of Amr Djamal Nafea (2021):

Title: Strategic Vigilance and Its Role in Crisis Management at the Ministry of Youth and Sports in the Arab Republic of Egypt.

This study examined the use of strategic vigilance in predicting and managing crises at the Egyptian Ministry of Youth and Sports, using the descriptive method on a sample of 90 employees. It found no formal system or dedicated units for strategic vigilance, limiting the ministry's ability to handle future crises. The study recommended creating a specialized department to strengthen early and rapid crisis response.

6.3. Study of Dr. Haidar Mohammed Maslah and Others (2022):

Entitled "*Strategic Vigilance and its Relationship with Institutional Performance in the Youth and Sports Forums of the Central and Southern Regions of Iraq.*"

This study examined the relationship between strategic vigilance and institutional performance in Iraqi sports forums, aiming to develop measurement scales for both concepts and identify their connection. Using the descriptive-



analytical method with forum directors, the results showed a strong correlation: enhanced monitoring, anticipation, and analysis improved performance quality. The study recommended optimal use of resources, especially human and informational, to strengthen strategic vigilance and institutional performance.

7. Research Methodology and Field Procedures:

7.1. Exploratory Study:

An exploratory study was conducted on a sample of 13 directors of sports complexes affiliated with the Office of Multi-Sports in the eastern Algerian provinces. These individuals were outside the main study sample but within the research community. The purpose was to construct a questionnaire on *strategic vigilance and its relationship with decision-making in sports institutions*. The researcher relied on previous studies related to the subject that contributed to measuring variables. This stage was carried out during the period from **18/03/2024 to 30/05/2024**.

7.1.1. Result of the Exploratory Study:

The exploratory study aimed to collect preliminary information related to the topic “*strategic vigilance and its relationship with decision-making*” in sports institutions. It allowed the researcher to engage directly with several sports complexes in eastern Algerian provinces, gaining insight into administrative mechanisms, officials’ level of strategic awareness, and decision-making approaches. This also clarified the key obstacles to applying strategic vigilance, helping shape the questionnaire axes to match the study objectives. Finally, the study’s statistical population was defined by listing the targeted sports complexes.

7.2. Research Method:

The descriptive-analytical method was adopted for its suitability to the study’s subject.

7.3. Study Population and Sample:

The study population included all directors of sports institutions in the aforementioned eastern Algerian provinces. A comprehensive survey method was applied, consisting of 76 directors.

7.4. Research fields:

7.4.1. Human field:

Our study included directors currently working in various sports complexes in the eastern Algerian provinces.

7.4.2. Temporal framework:

The study was conducted during the period from 22 January 2025 to 28 May 2025. This period covered the preparation of the theoretical framework, the design of research tools, the distribution of questionnaires and the analysis of results.

7.4.3. Spatial framework:

The study was applied in sports complexes affiliated with the Office of Multi-Sports in the eastern Algerian provinces (**Souk Ahras, Guelma, El Tarf and Annaba**).

7.4.4. Data Collection Tool:

The researcher used a questionnaire after conducting the exploratory study, as it was considered the most appropriate tool for this research. The questionnaire, titled "*Strategic Vigilance and its Relationship with Decision-Making in Sports Institutions*", consisted of 24 items divided into two dimensions:

- The first dimension: Environmental Vigilance and its Relationship with Decision-Making in Sports Institutions (12 items).
- The second dimension: Technological Vigilance and its Relationship with Supporting Administrative Decision-Making for Directors of Sports Institutions (12 items).

7.5. Statistical Methods:

The data were analyzed using **SPSS 24**, following these steps:

7.5.1. Reliability Test:

The questionnaire's reliability was tested using Cronbach's Alpha coefficient, with values above **0.70** accepted.

7.5.2. Simple Correlation Test:

(Pearson correlation) was used to measure the relationship between strategic vigilance variables and the quality of decision-making.

7.6. Psychometric Properties of the Research Tool:

7.6.1. Validity of the Tool:

The validity of the questionnaire was assessed through internal consistency validity, using the correlation coefficient between each item and the axis it belongs to, in addition to its correlation with the overall questionnaire score.

For example:

- For the axis "*Environmental Vigilance and its Relationship with Decision-Making in Sports Institutions*", the correlation coefficients between the items and the overall score of the dimension ranged from 0.768 to 0.797, and all were statistically significant at an appropriate level of significance.
- As for the axis of "*Technological Vigilance and its Relationship with Administrative Decision-Making in Sports Institutions*.", the correlation coefficients between the items and the total score of the dimension ranged

from 0.808 to 0.913, all of which were statistically significant at the 0.01 and 0.05 levels.

These results indicate that the instrument's items demonstrate a high degree of internal validity, thereby confirming the tool's ability to measure accurately and reliably the dimensions of strategic vigilance and their relationship with decision-making in sports institutions.

7.6.2. Reliability of the Tool:

7.6.2.1. Split-Half Method:

The reliability of the study tool was verified using the *split-half method*, where the items of each dimension of the questionnaire were divided into two halves (odd and even items). The correlation coefficient between the two halves was then calculated, and the value was corrected using the *Spearman–Brown formula*.

Table 1. Split-Half Reliability Values for the Dimensions of the Study Tool.

Dimension	Number of Items	Correlation Coefficient Between Halves	Spearman–Brown Coefficient
Environmental Vigilance and Its Relationship with Decision-Making in Sports Institutions	12	0.76	0.86
Technological Vigilance and Its Relationship with Supporting Administrative Decision-Making	12	0.72	0.84
Questionnaire in total	24	0.78	0.88

Source: Prepared by the researcher using SPSS 24.

The results in the table indicate that all corrected reliability coefficient values obtained through the Spearman–Brown formula exceeded the minimum acceptable threshold (0.70), which reflects a high degree of reliability and confirms the trustworthiness of the study tool in measuring the variables of strategic vigilance and its relationship with decision-making in sports institutions.

7.6.2.2. Reliability of the Tool Using Cronbach's Alpha Coefficient:

Alongside the split-half method, Cronbach's Alpha was used to verify the questionnaire's internal consistency. The results showed that all dimensions scored above the 0.70 threshold, indicating good internal consistency and confirming the tool's reliability.

Table 2. Cronbach's Alpha Coefficients for the Dimensions of the Study Tool

Dimension	Number of Items	Cronbach's Alpha
Environmental Vigilance and Its Relationship with Decision-Making in Sports Institutions	12	0.82
Technological Vigilance and Its Relationship with Supporting Administrative Decision-Making	12	0.79
Overall Strategic Vigilance	24	0.85

Source: Prepared by the researcher using SPSS 24.

The table shows that all reliability coefficients are high and statistically significant at the 0.05 level, ranging from 0.79 in “Technological Vigilance and Its Relationship with Supporting Administrative Decision-Making” to 0.82 in “Environmental Vigilance and Its Relationship with Decision-Making in Sports Institutions.” The overall questionnaire reliability reached 0.85, confirming strong stability of results. Based on the split-half method and Cronbach’s Alpha, and as shown in Tables (1) and (2), the questionnaire demonstrates high reliability and is suitable for use in this study.

7.6.3. The Criterion Adopted in the Study:

In line with Table (3), which explains the weighted mean and relative weight according to the five-point Likert scale, the study relied on the *weighted arithmetic mean* in analyzing the responses of the sample members and determining their orientations toward each statement of the questionnaire.

The five-point Likert scale was employed, ranging from (1) = *Strongly Disagree* to (5) = *Strongly Agree*. The orientations were determined as clarified in the following table:

Table 3. Weighted Mean and Relative Weight for Interpreting Response Orientations According to the Likert Scale

Weighted Mean Value	Relative Weight (%)	Response Level	Orientation
1.00 – less than 1.80	Less than 36%	Very low	Very negative
1.80 – less than 2.60	36% – less than 52%	Low	Negative
2.60 – less than 3.40	52% – less than 68%	Moderate	Neutral
3.40 – less than	68% – less than	High	Positive



4.20	84%		
4.20 – 5.00	84% – 100%	Very high	Very positive

Source: Prepared by the researcher using SPSS 24.

This criterion is used to interpret the results of the questionnaire items and to determine the strength and approach of the responses related to Strategic Vigilance and Decision-making in sports institutions.

8. Presentation, interpretation and discussion of results:

8.1. Presentation and Discussion of the Results Related to the First Hypothesis:

Is there a statistically significant positive correlation between the level of application of environmental vigilance activities in sports institutions and the decision-making process?

To answer this question, the means, standard deviations and relative weights were calculated for all items related to the axis of environmental vigilance and its relationship with decision-making in sports institutions, as shown in **Table.4:**

Table 4. Results of environmental vigilance and its relationship with decision-making in sports institutions

Rank	Item No.	Statements	Mean	Std. Deviation	Relative Weight (%)	Level
1	2	The management analyzes the strengths and weaknesses associated with the external environmental context.	3.90	0.58	78.0	High
2	6	The management pays attention to analyzing the sports market and competitors.	3.88	0.63	77.6	High
3	1	The institution regularly monitors environmental changes affecting its sports activities.	3.85	0.62	77.0	High
4	12	The management takes into consideration the long-term effects of	3.84	0.60	76.8	High

		environmental changes.				
5	4	Administrative decisions take into account legal and regulatory changes.	3.81	0.60	76.2	High
6	10	There is internal coordination to analyze environmental information and employ it in decision-making.	3.80	0.59	76.0	High
7	7	Economic impacts on institutional performance are studied.	3.79	0.66	75.8	High
8	3	The institution relies on diverse sources to monitor the external environment.	3.76	0.65	75.2	High
9	8	The institution responds quickly to sudden environmental changes.	3.73	0.70	74.6	High
10	5	Social trends that may affect sports activities are monitored.	3.70	0.68	74.0	High
11	11	Staff members are trained to interpret influential environmental changes.	3.66	0.67	73.2	Moderate
12	9	Mechanisms exist within the institution to monitor weak environmental signals.	3.66	0.67	73.2	Moderate
Overall Mean	–	–	3.78	0.63	75.6	High

Source: Prepared by the researcher using SPSS 24.

Based on the means and standard deviations of responses regarding the first axis environmental vigilance and its relationship with decision-making among sports complex directors Table 4 ranks the statements in descending order by relative weight, using the lower standard deviation to break ties. The highest



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relative weight was 78.01 for statement No. 2: *“The management analyzes the strengths and weaknesses associated with the external environmental context.”* The lowest was 72.2 for statement No. 9: *“There are mechanisms within the institution to monitor weak environmental signals.”*

With regard to the remaining statements, the results were as follows:

- **Statement 2:** “The management analyzes the strengths and weaknesses associated with the external environmental context.” Ranked first with a mean of (3.90), a relative weight of (78.01) and a high level.
- **Statement 6:** “The management pays attention to analyzing the sports market and competitors.” Ranked second with a mean of (3.88), a relative weight of (77.6), and a high level.
- **Statement 1:** “The institution regularly monitors environmental changes affecting its sports activities.” Ranked third with a mean of (3.85), a relative weight of (77.0), and a high level.
- **Statement 12:** “The management takes into consideration the long-term effects of environmental changes.” Ranked fourth with a mean of (3.84), a relative weight of (76.8), and a high level.
- **Statement 4:** “Administrative decisions take into account legal and regulatory changes.” Ranked fifth with a mean of (3.81), a relative weight of (76.2), and a high level.
- **Statement 10:** “There is internal coordination to analyze environmental information and employ it in decision-making.” Ranked sixth with a mean of (3.80), a relative weight of (76.0), and a high level.
- **Statement 7:** “Economic impacts on institutional performance are studied.” Ranked seventh with a mean of (3.79), a relative weight of (75.8), and a high level.
- **Statement 3:** “The institution relies on diverse sources to monitor the external environment.” Ranked eighth with a mean of (3.76), a relative weight of (75.2), and a high level.
- **Statement 8:** “The institution responds quickly to sudden environmental changes.” Ranked ninth with a mean of (3.73), a relative weight of (74.6), and a high level.
- **Statement 5:** “Social trends that may affect sports activities are monitored.” Ranked tenth with a mean of (3.70), a relative weight of (74.0), and a high level.

- **Statement 11:** “Staff members are trained to interpret influential environmental changes.” Ranked eleventh with a mean of (3.66), a relative weight of (73.2), and a moderate level.

8.1.1. Analysis of the Results of the Environmental Vigilance Dimension and its Relationship with Decision-Making

The variation in statement results shows that administrations prioritize broad environmental analysis and observable factors but still lack foresight tools to detect subtle or emerging changes that often signal early threats or shifts in the external environment. This aligns with Haider Mohammed Moslih et al. (2022), who confirmed that strategic vigilance improves institutional performance by strengthening early monitoring and analysis of changes, thereby enhancing the quality of administrative decision-making.

These results differ from Mohammed Ibrahim Abdel-Fattah Suleiman (2024), who found weak strategic vigilance in Egyptian sports federations, harming decision-making. The discrepancy may stem from organizational frameworks and policies, as eastern Algerian sports complexes show greater emphasis on environmental analysis and strategic practices.

In this context, Amr Gamal Nafea (2021) stressed the need for formal systems of strategic vigilance, especially for crisis management an area aligning with a weakness found in this study: the lack of mechanisms to detect weak environmental signals, which limits anticipatory capacity for sudden challenges.

The results show a positive, statistically significant correlation between environmental vigilance and decision-making effectiveness, confirming both the sub-hypothesis and the general hypothesis on the link between strategic vigilance dimensions and successful administrative decisions. Strengthening environmental vigilance through in-depth analysis, early signal detection, and timely information use improves decision quality. The study concludes that strategic vigilance strongly correlates with decision-making, with a mean score of 3.78 and a relative weight of 75.6 in the directorates of sports and offices of multi-sport complexes in eastern Algeria.

8.2. Presentation and Discussion of the Results Related to the Second Hypothesis:

"There is a statistically significant positive correlation between the level of use of technological vigilance tools and techniques and the decision-making process within the sports institutions under study."

Table.5 Results of the Dimension of Technological Vigilance and its Relationship with Supporting Decision-Making in Sports Institutions

Ran k	Statements	Arithme tic Mean	Standar d Deviation	Relativ e Weight (%)	Lev el
1	The institution uses modern technologies to collect information related to the sports environment.	4.02	0.55	80.4	High
2	Managers rely on technological tools to analyze data and make decisions.	3.95	0.60	79.0	High
3	The institution provides integrated information systems to support decision-making.	3.92	0.58	78.4	High
4	Technology is used to monitor the performance of teams and players.	3.90	0.62	78.0	High
5	There is continuous training for employees on the use of new technologies.	3.88	0.59	77.6	High
6	Management relies on electronic databases to analyze sports information.	3.85	0.61	77.0	High
7	The institution provides technological early warning systems for unexpected changes.	3.82	0.65	76.4	High
8	Technology supports the speed and accuracy of decision-making in the institution.	3.79	0.63	75.8	High
9	Technological systems are regularly updated to keep pace with modern developments.	3.75	0.67	75.0	High
10	The institution uses technology to improve internal communication and information exchange.	3.70	0.70	74.0	High
11	There are some technical challenges facing the application of technological vigilance.	3.50	0.72	70.0	Mod erate
12	The efficiency of technology use is	3.48	0.74	69.6	Mod

	periodically evaluated within the institution.				erate
	Overall Mean	3.80	0.63	76.0	High

Source: Prepared by the researcher using SPSS 24.

8.2.1. Analysis of the Results of the Second Hypothesis:

"There is a statistically significant positive correlation between the level of use of technological vigilance tools and techniques and the decision-making process within sports institutions."

The results related to the second dimension of the study, represented by "Technological Vigilance and its Relationship with Supporting Decision-Making," revealed that the respondents indicated a high level of utilization of technology within sports institutions across the different dimensions of the decision-making process. The overall mean was (3.80) with a standard deviation of (0.63) and a relative weight of (76.0%). The statements were ranked in Table (05) in descending order of importance according to their relative weight, with the standard deviation adopted as a weighting factor in cases of equality. The results were as follows:

- Statement (7) "The institution uses modern technologies to collect information related to the sports environment", ranked first with a mean of (4.02) and a relative weight of (80.4%), which reflects that information monitoring represents the most prominent strength within the institution's technological system.

- This was followed by statement (3) "Managers rely on technological tools to analyze data and make decisions," with a mean of (3.95) and a relative weight of (79.0%), indicating a conscious tendency toward employing technological analytical tools as an integral part of the administrative process.

- Statement "The institution provides integrated information systems to support decision-making" came third, with a mean of (3.92) and a relative weight of (78.4%), serving as a positive indicator of the presence of an organizational information structure that supports intelligent management.

- Conversely, the statement "The efficiency of technology use is periodically evaluated within the institution" ranked last, with a mean of (3.48) and a relative weight of (69.6%), highlighting the absence of a clear mechanism for evaluating the effectiveness of the technological tools employed.

The results show a statistically significant positive correlation between technological vigilance and decision-making, confirming the second hypothesis.



Sports institutions demonstrated high technological use (mean = 3.80; SD = 0.63; relative weight = 76.0%), enhancing decision-making efficiency by improving responsiveness, speed, and accuracy.

However, issues such as lack of periodic evaluation and technical challenges highlight the need for stronger infrastructure and continuous system updates. These findings align with Haider Mohammed Moslih et al. (2022), who linked technological vigilance to better performance, and with Suleiman (2024), who stressed the role of information databases though his study showed weaker application in Egypt. They contrast with Nafea (2021), who found no formal technological vigilance system in the Egyptian Ministry of Youth and Sports, underscoring the relative strength of Algerian institutions.

9. Discussion of the Study Results in Light of the General Hypothesis

The general hypothesis of the study states that:

“There is a statistically significant correlation between strategic vigilance in its different dimensions (environmental and technological) and the decision-making process among the directors of sports complexes in the eastern Algerian provinces.”

The analysis showed consistently high average responses across environmental and technological vigilance dimensions, indicating strong awareness in sports institutions of anticipating external changes and using technology to enhance decision-making. These results confirm the general hypothesis, demonstrating a statistically significant correlation between strategic vigilance practices and decision-making, reflecting organizational maturity in strategic management.

10. Conclusions

Based on the findings from the field study and statistical analysis, the subsequent conclusions can be stated:

1. Strategic vigilance (environmental and technological) shows a significant positive correlation with decision-making, confirming the general hypothesis.
2. Environmental vigilance is strong in analysis of strengths, weaknesses, markets, and regulations but weak in detecting early signals.
3. Technological vigilance relies on systems, databases, and tools, though hindered by technical challenges and lack of periodic evaluation.
4. Eastern Algerian sports complexes display greater strategic maturity than Egyptian federations (Suleiman, 2024).

5. The absence of specialized vigilance units limits rapid response to changes, consistent with Nafea (2021) and Moslih et al. (2022).

11. Recommendations:

- Create permanent strategic vigilance units in directorates and sports complexes to monitor the environment, assess threats and opportunities, and supply anticipatory data to decision-makers.
- Implement foresight tools and early-warning indicators to detect weak environmental signals and enable timely responses.
- Improve human resource efficiency by training staff in modern analysis tools and promoting a culture of information-based decision-making.

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