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Strategic Improvisation as an Approach to Establishing Strategic Innovation: An Exploratory Study of the Opinions of a Number of Administrative Leaders in Private Universities in Kirkuk Governorate

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Abstract: Enhancing the level of strategic improvisation requires an effective role of administrative leadership in the universities under study in defining vision and objectives, establishing a specialized work team, analyzing data, making decisions, and conducting continuous evaluation. In light of this, the study primarily aimed to clarify the correlational relationship between strategic improvisation and strategic innovation in private universities in Kirkuk Governorate as a model.

To achieve the study's objective and answer its questions, the researcher employed the descriptive analytical approach. A questionnaire was designed and distributed to the study population, which consisted of all senior administrative leaders in the universities under study in Kirkuk Governorate. The study sample was selected using simple random sampling. The total number reached (128) individuals; questionnaires were distributed to the selected sample, and (110) completed questionnaires were retrieved.

After analyzing the data and testing the hypotheses, the study reached several main findings, the most important of which was that the level of adoption of the concept of strategic improvisation among administrative leaders in the private universities under study was high. This shows how these universities have embraced the concept and can therefore effectively face challenges and remain flexible enough. The research suggests enhancing strategic improvisation because this is long term investment to see the goals that the universities are aiming to achieve. It further advises the universities of study to focus more on facilitating the concept of strategic agility by empowering employees and providing the opportunities of designing a vision serving the work of the universities.

Keywords: Strategic Improvisation, Strategic Innovation, Private Universities



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1. Introduction

Modern day environment is experiencing a change of high speed in the organizational setting due to technology advancements, competition, and political and economic shifts. This has rendered stability a phenomenal state as opposed to a normal state of an organization. Such a dynamic environment no longer requires traditional strategic planning that could be used to respond to emergent situations or unforeseen reactions. Rather, more adaptable and flexible methods have been forced to be adopted, the greatest of which is strategic improvisation.

Strategic improvisation has been seen as one of the contemporary ideas in administrative thinking, because it involves both strategic thinking and instant implementation. It indicates how administrative leaders are capable of making instant decisions with extensive strategic understanding and organizational experience without requiring all information to be available or all the standard planning steps to be followed. This idea is reflected in its dimensions, such as strategic alertness, that reflects the capacity of the organization to feel the changes; strategic agility, that is the speed of reaction and the redistribution of resources; and organizational memory, that is the integration of the inner processes and flow of knowledge in the organization.

Conversely, strategic innovation can be considered as one of the timeless pillars to the survival and sustenance of modern universities, especially in the context of the higher education system that experiences growing pressures associated with academic competitiveness, accreditation and quality standards, changes in digital nature, and expectations of the stakeholders. Therefore, the significance of researching the correlation between strategic improvisation as a contemporary managerial strategy and strategic innovation as an organizational performance that helps to realize institutional excellence.

In this regard, the current exploratory paper aims to examine perceptions of a sample of administrative leaders in the universities of interest about the value of strategic improvisation and its different aspects in developing strategic innovation. It is done in a scientific approach and statistical analysis which help to establish a conceptual and a practical framework to improve university performance in a context of the ongoing change.

2. Methodological Framework

Research Problem

Similar to most higher educational institutions in developing settings, Iraqi universities have escalating issues to do with the paucity of resources, changing technology fast, the pressure to achieve accreditation of the institutions, and the rivalry over the institution image. Against this background, there is an underlying question of how far an administrative leader can go in embracing non-traditional behaviors and practices that will allow them to react to unexpected events and turn them into a creative opportunity.

Although strategic improvisation is important in universities, overdependence in formal procedures and administrative routines can restrain the capacity of the university to adapt rapidly to any emerging events thus undermining the chances of attaining strategic innovation. In this way, the main issue of the research will be the following question:

- Is there a significant effect of strategic improvisation on strategic innovation in the universities comprising the research sample?

From this main question, several sub-questions emerge, including:

1. Is there a significant effect of strategic alertness on strategic innovation in private universities?
2. Is there a significant effect of strategic agility on strategic innovation in private universities?
3. Is there a significant effect of the organizational cycle on strategic innovation in private universities?

Significance of the Study

The significance of the study stems from several aspects:

First: Theoretical Significance

- The study contributes to enriching the Arabic literature on strategic improvisation, which remains limited in coverage within the local academic environment.
- The current study addresses strategic innovation as one of the variables that universities seek to adopt within their field of work.
- It provides a conceptual framework linking strategic improvisation and strategic innovation within an integrated analytical model.

Second: Practical Significance

- Providing administrative leaders in private universities with scientific findings that help them enhance strategic improvisation practices.
- Supporting decision-makers in universities with statistical indicators that clarify the strengths and weaknesses of their strategic practices.
- Offering practical recommendations that can be generalized to other Iraqi universities seeking to strengthen strategic innovation as one of the contemporary topics that universities strive to adopt.

Objectives of the Study

The study seeks to achieve the following objectives:

1. To measure the level of availability of strategic improvisation, with its dimensions (strategic alertness, strategic agility, and organizational memory), among administrative leaders in private universities.
2. To identify the level of strategic innovation that reflects the degree of development in the universities under study.
3. To analyze the effect of the dimensions of strategic improvisation on strategic innovation using appropriate statistical methods.
4. To provide strategic recommendations that contribute to enhancing strategic innovation through the adoption of conscious and organized improvisational practices.

Research Hypotheses

Based on the research problem and its objectives, the following main hypothesis can be formulated:

- There is a significant effect of strategic improvisation on strategic innovation in the private universities comprising the research sample.

From this main hypothesis, the following sub-hypotheses are derived:

1. There is a significant effect of strategic alertness on strategic innovation in the private universities comprising the research sample.
2. There is a significant effect of strategic agility on strategic innovation in the private universities comprising the research sample.
3. There is a significant effect of organizational memory on strategic innovation in the private universities comprising the research sample.

Study Boundaries**Spatial Boundaries:**

The study is limited to private universities in Kirkuk Governorate, namely: Al-Qalam University, Al-Kitab University, Baba Gurgur University, and Al-Imam Ja'afar Al-Sadiq University.

Human Boundaries:

The study sample includes administrative leaders in the universities (deans, assistant deans, heads of departments, and directors of divisions and administrative units).

Temporal Boundaries:

The study was conducted during the year (2025), in which the data were collected and analyzed.

Thematic Boundaries:

The study is confined to analyzing the relationship between strategic improvisation, with its three dimensions, and strategic innovation, without expanding to other organizational variables.

Study Methodology

The analytical method of study is the descriptive one as it is the most appropriate to study administrative phenomena and to analyze the relationships between variables. The variables of the research were analyzed using two major axes. The axis one is the informational framework, which is grounded on the descriptive approach, containing the data obtained in various sources, books, journals, and academic theses. This information is then projected into field data using the analytical process, which explains the research variables in an empirical fashion by use of the research questionnaire adopted, and a combination of other relevant statistical procedures. This method represents the correctness and transparent nature of the findings and helps to propose the target research goals.

Data Collection and Analysis Methods

Two axes were used in gathering data and research information. The theoretical aspect was reflected in the first axis; it included sources, books, journals, periodicals, websites, theses and dissertations. The second axis involved field data, which was gathered using the research instrument, and explained in the questionnaire section in detail. These data were analyzed using a set of relevant statistical methods, with the assistance of the Statistical Package for the Social Sciences (SPSS) to conduct the descriptive analysis of the sample.

Questionnaire

The primary instrument relied upon in this study for obtaining information and data was the questionnaire. A questionnaire was developed comprising three sections distributed across its main components. Several Arabic and foreign scales related to the research topic were reviewed and adapted to suit the context of the present study.

Strategic Improvisation:

Strategic improvisation is considered one of the concepts that enhance organizational excellence in order to ensure survival and adaptation to the changes experienced by contemporary organizations within an unstable and rapidly evolving environment across all dimensions. The importance of improvisation for modern organizations often arises as a result of increasing levels of speed and turbulence in changing strategic environments. The level of turbulence is frequently regarded as a primary driver of improvisation, as dynamic and unpredictable environments are fertile grounds for unexpected and unplanned events that must be addressed as they emerge through strategic improvisation in business organizations.

The concept of strategic improvisation is defined by Wali & Hassan as the ability to integrate, build, and direct internal and external resources and capabilities to cope with rapid environmental changes [1]. Hu et al. indicated that it represents the ability to adapt to accelerated changes to confront crises in rapidly changing environments and to exploit opportunities through adaptation and optimal utilization of available resources within business organizations [2]. Furthermore, Al-Saadoun and Al-Mulla describe it as one of the strategic tools used by leaders in business organizations to anticipate sudden events and changes in order to reach successful options for overcoming obstacles and addressing problems that the organization may face in the future [3][4].

Based on the foregoing, it can be stated that strategic improvisation is among the most important tools employed by administrative leaders to adapt to rapid changes, exploit opportunities, and address future challenges occurring in business environments related to private universities.

The Importance of Strategic Improvisation

The importance of strategic improvisation arises from its consideration as one of the modern developments in the field of management and business organizations. Its significance stems from the following aspects [5][6]:

1. It is regarded as an important source for organizations to achieve competitive advantage through making decisions that support distinction and excellence in the business field.
 2. Strategic improvisation ensures rapid response by reducing the time required to make timely
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strategic decisions needed by the organization.

3. It is considered an added value to organizations, as it addresses problems under emergency conditions to achieve success in the highly complex environment faced by business organizations.

Dimensions of Strategic Improvisation

Researchers have differed in determining the dimensions of strategic improvisation:

1. Strategic Alertness:

It refers to the capabilities of effective leadership to design a set of activities and plans that help create motivation among subordinates, foster feelings of responsibility and ownership, influence the pillars of effective performance, increase their desire for knowledge, and reveal their latent energies in terms of ideas, innovations, and participation in decision-making. This cannot be achieved except through the development of a strategic alert system, which is one of the advanced information systems that provides the organization with the necessary information from the research stage to the stage of information exploitation [7].

2. Strategic Agility:

Strategic agility is considered one of the essential requirements for the success of institutions and for ensuring their survival and growth. It prepares the organization to accept change by generating multiple alternatives, mobilizing resources, developing skills, and taking actions capable of overcoming all obstacles to change at two levels. The first is organizational, which includes (strategic sensitivity, strategic response, and collaborative capabilities). The second is individual, which includes (alertness, motivation, commitment, self-management, and openness to others) [8].

3. Organizational Memory:

It is defined as the declarative memory and procedural memory retained by the organization, which can be used in decision-making. Strategic improvisation benefits from these memories because it relies on existing routines and patterns. On the other hand, declarative memory refers to the more general culture within institutions [1].

Strategic Innovation

Strategic innovation has become one of the fundamental pillars for organizational excellence in their field of work and for creating added value for customers that satisfies their needs. Innovation reflects the organizations' ability to search for new approaches to address external environmental influences. Enhancing the role of innovation in business organizations can achieve several competitive advantages, as innovation leads to extraordinary and creative outcomes, thereby achieving clear institutional differentiation. The determination of institutional performance is closely linked to the extent of effective control over organizational innovation [9].

Accordingly, the success and development of an institution fundamentally depend on its ability to adopt effective and influential innovative methods among employees in order to achieve high organizational performance [10].

Rashwan and Hussein indicated that innovation represents the essence of the ability to achieve success, as the primary goal of the institution is to accomplish tasks through others (managers) [11]. Therefore, the organization must possess the capability and motivation to accomplish these tasks, making social innovation a fundamental requirement for improving market performance.

Innovation is defined by Ghazal as "the process of transforming new knowledge into services that serve the organization's interests by meeting its requirements effectively and providing customer service in a manner different from other organizations operating in the business environment." [12]

Similarly, Salman defined it as "a synonym for creating a creative business strategy aimed at achieving the strategic objectives of the organization's existence, working to develop new skills and services that have not been previously applied in organizations within its specialization." [9]

Based on the above, strategic innovation in the universities under study can be viewed as the pursuit of unconventional ideas in work procedures and contexts, providing services to customers in a different manner from others, adopting strategies capable of accommodating multiple scenarios, and entering markets with strong competitiveness.

Importance of Strategic Innovation

Its importance stems from its effective role in enabling organizations to explore new developments and institutionalize them within their field of work to benefit from them. This includes the following [13]:

1. It contributes to increasing the competitiveness of emerging organizations against large organizations through their strategic creativity, which achieves competitive advantage.
2. Innovative organizations pose a significant challenge to traditional organizations because they possess knowledge that can be applied in the organization's interest.
3. It enables organizations to increase profits by maximizing revenues and reducing cost levels through the knowledge they possess and its proper employment within their institutions.
4. By adopting strategic innovation, organizations can develop rapidly within their business environment and eliminate traditional practices by utilizing knowledge in a manner that serves their future orientations.

Characteristics of Strategic Innovation

The characteristics of strategic innovation in business organizations are represented in the following [14][15][16][17][18][19]:

1. Developing the organization's activities at both the international and local levels.
2. Organizing international missions through knowledge exchange and commercial strategic partnership by using technology within the organization.
3. Creating cooperative networks with international groups.

Encouraging positive interactions among members and resolving all problems.

3. Result and Discussion

Section Three: Practical Aspect

Population and Sample of the Study

The study population consists of all administrative leaders working in private universities who hold leadership positions related to decision-making and strategic guidance within the university, such as deans, assistant deans, heads of departments, and directors of administrative divisions and units. Due to the nature of the population and the possibility of accessing it, the simple random sampling method was adopted to ensure objective and balanced representation of its members, where all individuals had an equal opportunity to be included in the sample.

The sample size reached (110) administrative leaders who were selected randomly, which is an appropriate size for conducting statistical analyses related to testing influence relationships and enhances the possibility of generalizing the results to the study population with an acceptable level of statistical confidence.

Table No. (1) illustrates the characteristics of the sample.

Variable	Categories	Frequencies	Percentage
Gender	Male	77	70.00%
	Female	33	30.00%
Total		110	100.00%
Age	Less than 30 years	17	15.45%
	30–40 years	27	24.55%
	41–50 years	35	31.82%
	Over 50 years	31	28.18%

Total		110	100.00%
Educational Qualification	Diploma	14	12.73%
	Bachelor's degree	22	%20.00
	Master's degree	35	%31.82
	PhD	39	%35.45
Total		110	100.00%
Experience	Less than 5 years	9	8.75%
	5–10 years	18	39.38%
	10–15 years	31	19.38%
	More than 15 years	52	32.50%
Total		110	100.00%

Source: Prepared by the researcher based on SPSS program results.

The results of Table (1) indicate that the majority of the sample were males, representing (70.00%), compared to (30.00%) females, reflecting the higher representation of males in leadership positions within private universities. It is also observed that the most represented age group was (41–50 years) with a percentage of (31.82%), followed by the group aged (over 50 years) with a percentage of (28.18%), indicating that the sample is predominantly of middle and advanced age, which reflects a level of administrative maturity.

In terms of educational qualification, the highest percentage of the sample is a PhD degree of percentage (35.45%), followed by the Master of degree of percentage (31.82%), and the level of education among the sample members is very high. With respect to years of experience, a percentage of (39.38%) under the category (5 years-10 years) ranked the highest followed by the category (more than 15 years) with the percentage of (32.50%) implying that medium and high levels of experience were available among the sample members, making their opinions reliable in relation to the topic of the study.

Validity of the Instrument

In order to test the tool validity, the questionnaire was showed to several business administration and strategic management specialized professors in private universities, and the goal was to check the applicability of the items to the study variables and their dimensions. The formulations, clarity, accuracy and relevancy of the statements to the research objectives were considered scientifically and relevant changes were done according to the observed results. This increases the apparent and content validity of the tool and proves that it is appropriate to measure the study variables in a scientifically sound way.

Fifth: Instrument Reliability

It is believed that reliability is one of the basic requirements of assessing measurement tools as it implies the similarity of the items to measure the same concept and yield relatively consistent results when applied to the same conditions of measurement. To ensure that the study instrument was reliable, Statistical Package Software of the Social Sciences (SPSS) was employed to derive the internal consistency coefficient (Cronbachs Alpha) of each variable of the study, and the questionnaire itself.

The findings revealed that the value of Cronbachs Alpha coefficient of strategic improvisation variable was (0.855), a high value and thus, a good internal consistency with the items. The Alpha of the strategic innovation variable (5 items) was (0.849) implying high extent of internal consistency. With regards to the questionnaire in general, the value of Cronbachs Alpha coefficient was (0.943), a very high value and this shows that the instrument possesses high degree of overall reliability.

In this regard, all values have been more than the statistically acceptable minimum value (0.70), which proves the appropriateness of the tool to statistical testing and the possibility to test the hypothesis and increases the confidence in the obtained findings.

Table No. (2) illustrates the Cronbach's Alpha reliability coefficient for the questionnaire dimensions.

Variable	Number of Items	Cronbach's Alpha Coefficient
Strategic improvisation	15	0.855
Strategic alertness	5	0.872
Strategic agility	5	0.798
Organizational memory	5	0.803
Strategic innovation	5	0.849
Questionnaire as a whole	20	0.943

Source: Prepared by the researcher based on SPSS results.

Seventh: Presentation and Analysis of Sample Members' Opinions Regarding the Study Variables

The following provides a detailed presentation of the questionnaire dimensions and the items included in each dimension:

Table No. (3) illustrates the means and standard deviations of the questionnaire dimension items.

Dimension	Item No.	Item	Mean	Standard Deviation	Level	Rank
Strategic alertness	1	University leadership is keen to continuously monitor environmental changes affecting its work.	3.81	1.07	High	4
	2	The administration has the ability to sense opportunities and threats before they occur.	3.90	0.97	High	2
	3	Information received from the external environment is analyzed quickly and accurately.	3.89	0.99	High	3
	4	The university relies on early indicators to make proactive decisions.	4.01	0.96	High	1
	5	Strategic information is regularly exchanged among leadership members.	3.78	1.07	High	5
	Overall level			3.88	1.01	High
Strategic agility	6	University responds quickly to sudden environmental changes.	3.79	1.04	High	3
	7	The administration has the ability to reallocate resources when necessary.	3.74	1.11	High	5
	8	Strategic plans are easily adjusted when new developments emerge.	3.81	0.98	High	2
	9	Administrative decisions are characterized by flexibility and speed of implementation.	3.81	0.97	High	1
	10	Management encourages rapid initiatives to address emergency problems.	3.77	1.12	High	4
	Overall level			3.78	1.04	High
Organizational memory	11	There is effective coordination between departments and administrative units within the university.	3.86	1.23	High	1

	12	Information flows smoothly between different administrative levels.	3.68	1.15	High	4
	13	Work teams contribute to supporting strategic decisions.	3.70	1.10	High	3
	14	The administration relies on teamwork to confront sudden challenges.	3.71	1.03	High	2
	15	Accumulated expertise within the university is utilized when making improvisational decisions.	3.65	1.10	High	5
	Overall level		3.72	1.12	High	
Strategic innovation	16	The university develops new strategic visions to keep pace with changes.	3.86	1.23	High	1
	17	The administration seeks to introduce non-traditional strategic initiatives.	3.68	1.15	High	4
	18	The university relies on new ideas to achieve competitive advantage.	3.70	1.10	High	3
	19	Strategies are redesigned when necessary to ensure continuous development.	3.71	1.03	High	2
	20	Administrative leaders contribute to establishing a culture of strategic innovation within the university.	3.65	1.10	High	5
	Overall level		3.72	1.12	High	

Source: Prepared by the researcher based on SPSS results.

The analysis results demonstrated that administrative heads of the investigated universities were highly alert in the aspect of strategy and that the overall mean of the analyzed aspect was (3.88) and the standard deviation (1.01), indicating a strong understanding of the need to be aware in the ecological variables and thus the need to sense and monitor them continuously. In this dimension, the top ranked was (4.01), which means that the university is proactive in decision-making by referring to early indicators. Conversely, the least rated item was Strategic information is regularly shared within the leadership team and the mean equaled (3.78) and hence there may be the need to increase the knowledge exchange channels among the leadership teams to foster coordination of knowledge.

The findings also revealed that strategic agility was highly attained, with the mean of (3.78) with a standard deviation (1.04) meaning that it was possible to change the university in response to changes. The first item, which had the highest mean of (3.81), was Administrative decisions are characterized by flexibility and speed of implementation, and then the second item which has a nearly equal mean was Strategic plans are easily adjusted when new developments emerge showing flexibility to adapt to the emerging changes. Conversely, the item The administration has the ability to reallocate resources when necessary was the last to be ranked with a mean of (3.74) and this can be interpreted to imply that there might be some procedural or structural barriers that restrict the flexibility of the resource reallocation.

The organization memory dimension registered a high level, too, with an overall mean of (3.72), and standard deviation of (1.12), showing that there is a good level of internal integration and coordination. The highest item (There is effective coordination between departments and administrative units within the university) scored (3.86) and this is a good sign of the effectiveness of the institution in terms of coordination between different departments and administrative units, and the last item (Accumulated expertise within the university is utilized when making improvisational decisions) scored (3.65), which means that the systematic use of tacit knowledge and accumulated experience should be improved.

In terms of strategic innovation, the findings revealed high level with an overall mean of (3.72) and the standard deviation is (1.12), which indicated a good orientation toward innovation strategic practices. The product The university develops new strategic visions to keep pace with

changes recorded the largest mean (3.86), which means that the issue of renewing future orientations was obviously considered. On the other hand, the least-ranked one was Administrative leaders help to create a culture of strategic innovation within the university, the mean of which is (3.65), which indicates that the cultural aspect that underlines innovation in the organizational environment may be reinforced.

On the whole, the findings show that the universities of interest have a high rate of implementing the strategic improvisation and strategic innovation dimensions. Nevertheless, it can be assumed that the areas associated with strategic information sharing, more open resource reallocation, enhanced leverage of the experience gained over time, and solid institutional culture of innovation should be improved to facilitate the shift to more dynamic and sustainable strategic performance.

Eighth: Testing the Study Hypotheses

1. Testing the main hypothesis which states: There is a significant effect of strategic improvisation on strategic innovation.

Table No. (4) illustrates the regression analysis results.

Independent Variable	Dependent Variable	Regression Coefficient (β)	Coefficient of Determination (R^2)	Calculated (F) Value	Calculated (t) Value	Sig	Significance
Strategic improvisation	Strategic innovation	0.612	0.227	43.743	6.633	0.001	Significant

Source: Prepared by the researcher based on SPSS results.

The outcomes of the regression analysis as shown in the table show that strategic improvisation had a significant and positive influence on strategic innovation in the universities under research with a regression coefficient (0.612). This implies that every one unit of strategic improvisation is likely to increase the level of strategic innovation by 0.612 points, indicating that improvisation has a great positive influence on the improvement of innovative practices at the university.

Regarding the explanatory power, the coefficient of determination (R) was 0.227 which shows that 22.7 per cent of changes in strategic innovation are explained by strategic improvisation and the rest of the percentage was explained by other factors that were not discussed in the study, including the institutional resources, organizational culture, or environmental factors.

Statistically, the results showed that the calculated (F) value was 43.743, which is statistically significant at the significance level of (0.05), confirming the suitability of the model in explaining the relationship between the two variables. The calculated (t) value reached 6.633, which was also significant at (Sig = 0.001), further supporting the statistical significance of the relationship between strategic improvisation and strategic innovation.

Based on these results, it can be concluded that strategic improvisation is an influential factor in establishing strategic innovation within the university, and the hypothesis regarding the significant effect of strategic improvisation on strategic innovation is accepted.

2. Testing the first sub-hypothesis which states: There is a significant effect of strategic alertness on strategic innovation.

Table No. (5) illustrates the results of the first sub-hypothesis.

Independent Variable	Dependent Variable	Regression Coefficient (β)	Coefficient of Determination (R^2)	Calculated (F) Value	Calculated (t) Value	Sig	Significance
Strategic alertness	Strategic innovation	0.819	0.539	178.103	13.318	0.001	Significant

Source: Prepared by the researcher based on SPSS results.

The results of testing the first sub-hypothesis indicate a strong positive and significant effect of strategic alertness on strategic innovation in the universities under study, where the regression coefficient (β) reached 0.819. This means that each one-unit increase in the level of strategic alertness is expected to lead to an increase of 0.819 in the level of strategic innovation, reflecting the strong impact of this dimension of strategic improvisation on enhancing innovative practices within the university.

In terms of explanatory power, the coefficient of determination (R^2) reached 0.539, indicating that 53.9% of the variations in strategic innovation can be explained by strategic alertness, which is a high level demonstrating the critical role of alertness in stimulating strategic innovation, while the remaining percentage is attributed to other factors not included in the study.

Statistically, the results showed that the calculated (F) value was 178.103, which is statistically significant at the significance level of (0.05), confirming the suitability of the model in explaining the relationship between the two variables. The calculated (t) value reached 13.318, which was also significant at (Sig = 0.001), further supporting the statistical significance of the relationship.

Based on these results, it can be concluded that strategic alertness is a highly influential factor in enhancing strategic innovation within the university, and the first sub-hypothesis is accepted.

3. Testing the second sub-hypothesis which states: There is a significant effect of strategic agility on strategic innovation.

Table No. (6) illustrates the results of the second sub-hypothesis.

Independent Variable	Dependent Variable	Regression Coefficient (β)	Coefficient of Determination (R^2)	Calculated (F) Value	Calculated (t) Value	Sig	Significance
Strategic agility	Strategic innovation	0.715	0.378	92.977	9.690	0.001	Significant

Source: Prepared by the researcher based on SPSS results.

The results of testing the second sub-hypothesis indicate a significant and positive effect of strategic agility on strategic innovation in the universities under study, where the regression coefficient (β) reached 0.715. This means that each one-unit increase in the level of strategic agility is expected to lead to an increase of 0.715 in the level of strategic innovation, reflecting the strong impact of this dimension of strategic improvisation in enhancing innovative practices within the university.

In terms of explanatory power, the coefficient of determination (R^2) reached 0.378, indicating that 37.8% of the variations in strategic innovation can be explained by strategic agility, while the remaining percentage is attributed to other factors not included in the study.

Statistically, the results showed that the calculated (F) value was 92.977, which is statistically significant at the significance level of (0.05), confirming the suitability of the model in explaining the relationship between the two variables. The calculated (t) value reached 9.690, which was also significant at (Sig = 0.001), further supporting the statistical significance of the relationship.

Based on these results, it can be concluded that strategic agility has a positive and significant

effect on enhancing strategic innovation within the university, and the second sub-hypothesis is accepted.

4. Testing the third sub-hypothesis which states: There is a significant effect of organizational memory on strategic innovation.

Table No. (7) illustrates the results of the third sub-hypothesis.

Independent Variable	Dependent Variable	Regression Coefficient (β)	Coefficient of Determination (R^2)	Calculated Value (F)	Calculated Value (t)	Sig	Significance
Strategic agility	Organizational memory	0.755	0.568	90.916	10.780	0.001	Significant

Source: Prepared by the researcher based on SPSS results.

The results of testing the third sub-hypothesis indicate a significant and positive effect of organizational memory on enhancing strategic innovation in the universities under study, where the regression coefficient (β) reached 0.755. This means that each one-unit increase in the level of organizational memory is expected to lead to an increase of 0.755 in the level of organizational effectiveness of memory, reflecting the significant role of memory in improving coordination and integration between departments and administrative units.

In terms of explanatory power, the coefficient of determination (R^2) reached 0.568, indicating that 56.8% of the variations in organizational memory can be explained by strategic innovation, while the remaining percentage is attributed to other factors not included in the study.

Statistically, the results showed that the calculated (F) value was 90.916, which is statistically significant at the significance level of (0.05), confirming the suitability of the model in explaining the relationship between the two variables. The calculated (t) value reached 10.780, which was also significant at (Sig = 0.001), further supporting the statistical significance of the relationship.

Based on these results, it can be concluded that organizational memory has a positive and significant effect on enhancing strategic innovation in the universities under study, and the third sub-hypothesis is accepted.

4. Conclusion and Recommendations

First: Conclusions

1. The results of the analysis showed that the level of strategic alertness among administrative leaders in the universities under study was high, reflecting the adoption of this concept by these universities, which enables them to effectively confront challenges and maintain sufficient flexibility.
2. The results of testing the first sub-hypothesis indicate a strong positive and significant effect of strategic alertness on strategic innovation in the universities comprising the research sample, contributing to enhancing universities' ability to develop effective future plans.
3. The results of testing the second sub-hypothesis indicate a significant and positive effect of strategic agility on strategic innovation in the universities under study.
4. Organizational memory has a positive and significant effect on enhancing strategic creativity, as it contributes to storing information in a way that supports decision-making based on knowledge that serves the nature and work of universities.

Second: Recommendations

1. The study recommends strengthening strategic improvisation as it represents a long-term investment to ensure the achievement of the objectives that universities seek to attain.
2. Increasing the attention of the universities under study to supporting the concept of strategic

agility by empowering employees and creating opportunities to formulate a vision that serves university work.

3. Strategic improvisation should be adopted as a criterion for appointing administrative leaders to leadership positions in the universities under study due to its impact on organizational success.
4. Administrative leaders in the universities under study should be given the necessary flexibility to utilize their personal experience in making appropriate decisions regarding problems encountered during work.

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