



## Strategic Supremacy of Organizations in Dynamic Environments: An Agility Perspective

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### ABSTRACT

**Purpose:** The main purpose of the research is to highlight a new business model based on the concept of agility with its different components that enable organizations to achieve strategic supremacy in light of dynamic environments.

**Methodology:** The research used the descriptive approach to analyze data obtained from two samples consisting of (106) heads of scientific departments, as well as (420) faculty members working at (11) private faculties in the Middle Euphrates region in Iraq .

**Findings:** The research found that achieving strategic supremacy is possible when organizations are able to ensure the required level of agility, whether at the organizational level, leadership or employees.

**Research implications:** The research concludes that agile organizations can be more effective in a dynamic business environment and achieve strategic supremacy when they are practicing a new business model based on the perspective of agility.

**Originality and value:** The research contributes in creating a growing interest in agility theory to help organizations deal with the continuous changes in the external environment whether it is in the education sector or other places. It also helps leaders in the surveyed faculties to identify agility competencies that still need to be developed at all levels in order to ultimately achieve strategic supremacy.

**Keywords:** Strategic supremacy, environmental dynamism, leadership agility, employees' agility, organizational agility

## **INTRODUCTION**

Since the beginning of the eighties of the twenty centuries, organizations have clearly felt the great danger threatening them represented by environmental dynamism, therefore it was natural for them to search for a way to deal with this dynamism and control the new situation that imposed itself as a growing existential threat. Researchers involved in the field of strategic management moved to investigate radical solutions to get rid of this disturbing situation. D' Aveni was one of the researchers who presented the concept of strategic supremacy which was characterized by the multiplicity of its constituent tributaries , as the Austrian school of competition led by Schumpeter and Porter's strategies. This concept produced what might be called "organizations of supremacy" that are able to exercise power and influence not only in their own region, but also on the spheres of influence of other organizations. The difficulties facing organizations to reach strategic supremacy require them to redefine their resources and policies and to make major transformations and integrated empowerment strategies if they want to achieve this goal. It had to discuss the possible strategy to confront this competitive scene, a discussion that was of interest to those concerned at Lehigh University in the state of Pennsylvania, which worked on subjecting all these variables to study and analysis to produce a report, which came under the title "Strategy of manufacturing companies in the 21 st century", through which it responded to the changing business environment by adopting the concept of agility which became one of the most important competitive advantages for organizations and the most responsive to continuous changes in volatile markets.

In this concept, human resources represented the most important weapon in which organizations intend to face threats and invest in opportunities. Nothing can be achieved without agile human resources, whether at the level of leadership or employees, because they are the ones leading the battle for integrated strategic supremacy under conditions of rapid change and escalating complexity. This study adopted the strategic choice as the most effective approach in dealing with dynamic environments because it contains a proactive approach emphasized by organizations and their departments in facing environmental changes.

## **RESEARCH PROBLEM**

The increasing complexity of contemporary business environment has led to instability and a tendency to continuous change (Khosravi, 2011), which made traditional models and previous

business priorities lose their ability to face organizational and environmental challenges (Jafarnejad, Shahi, 2007). An increasing body of literature indicates that long-term success of any organization requires mastering the art of strategic supremacy, which represents one of the most important insights that help organizations to continue to compete, develop, and survive in conditions of rapid competitive actions and counter-competitor responses (D'Aveni, et al. 2010), because winning in the field of business requires a special kind of strength and influence to enable the organization to maneuver and outperform its competitors.

Most research in strategic management relies on leadership as a decisive factor for describing successful organizations, ensuring their survival, continuity, and ability to compete in environments characterized by rapid and inconsistent changes under conditions of complexity and uncertainty.

Despite the theoretical support for the role that organizational agility can play in achieving strategic supremacy for organizations, there are no empirical studies on the impact of agility as a comprehensive perspective on strategic supremacy, as well as the scarcity of empirical studies that have dealt with the human dimension of agility (leadership agility, employee agility) and its implications for the agility of the organization in general. This gap prompted the researchers to delve into this topic by addressing the nature of relationships between the variables of the study.

### **Research questions**

1. To what extent do faculty members perceive the level of leadership agility in their faculties?
2. Is there a sufficient perception among educational leaders in the researched faculties about the level of agility that characterizes faculty members ?
3. Is there a sufficient perception of educational leaders about the level of agility of their faculties?
4. Did any of the faculties under study achieve strategic supremacy over their counterparts in any of its fields?
5. What is the nature of the roles that agility with its basic elements (leadership agility, employees' agility, organizational agility) can play in promoting strategic supremacy in faculties under study?
6. What is the impact that dynamic environments can have on strategic supremacy of the faculties under study?

### **Research objectives:**

The main objectives of the study are :

1. Detection of the level of agility of faculty deans from the point of view of faculty members therein?
2. Detecting whether faculty members have the necessary agility to ensure agility of their faculties.
3. Diagnosing the level of strategic supremacy in the surveyed faculties from the point of view of educational leaders.
4. Identifying the extent of dynamism that characterizes the environment in which private universities and faculties operate within their borders and the extent of its impact on strategic supremacy.
5. Determine the nature of the impact that organizational agility can have on strategic supremacy of the faculties under study.
6. Providing decision makers in private faculties in Iraq with a number of recommendations that would enhance strategic supremacy of their faculties.

### **Research approach**

The study followed the descriptive approach for analyzing data obtained through questionnaire, which aims to reveal whether the faculties included in the study have the necessary agility to ensure strategic supremacy.

### **Population and sample**

The researchers chose universities and faculties in the Middle Euphrates region in Iraq as a field of study. The research sample consisted of (106) scientific department heads and( 420) faculty members in (11) private universities and faculties in the Middle Euphrates region in Iraq.

### **Research tool**

The study used the questionnaire which consists 5 sections, each of which is dedicated to one of the five variables of the study .These variables are leadership agility with its dimensions ( anticipating change, creating confidence, initiate action, liberate thinking, evaluate results according to Horney et al ,2010 ) , employees agility with its dimensions proactivity , adaptability , and resilience according to (Aladwan , 2017) , organizational agility with its dimensions ( sensing agility, decision making agility, acting agility ) according to (Nafei, 2016) , environmental dynamism based on the scale developed by (Miller and Friesen, 1982) and (Jap,

1999) , and strategic supremacy ( sphere of influence, competitive configuration, and competitive pressure ) according to (Al-Yasiri, Al-Tai, and Al-Sharifi, 2017) based on (D'Aveni, 1999) and (Strikwerda, 2005) after adjusting their paragraphs to suit Iraqi work environment.

### **Validity of tool**

A pre-test was conducted to find out the clarity of the questions and the time required to answer. Then the questionnaire was presented to a group of experts for the purpose of arbitration .The researchers also conducted a test to determine the validity of the questionnaire through (34) research sample members . The correlation coefficients ranged from 68%-69% for Leadership agility, 64%-69% for organizational agility, 66%-69% for employees' agility, 63%-70% for strategic supremacy, and 64%-66% for environmental dynamism.

### **Reliability of the tool**

The study used the (Alpha Cronbach) method to confirm tool reliability. It was found that the reliability coefficients were (93%) for leadership agility and organizational agility, (91%) for strategic supremacy, (84%) for employees' agility, and (83%) for environmental dynamism which indicate the applicability of the questionnaire.

### **Review of literature**

The early definition of agility in 1982 may belong to (Brown & Agnew, 1982). They believe that agility of organizations that represents the ability to respond quickly to dynamic conditions requires a focus on clear objectives and the ability of human resources to adapt to the requirements of those conditions. (Bullinger, 1991: 11) gives a different definition, related to the organization behavior towards environment. He believes that agility means moving the organization behavior towards the environment in order to enable it to comprehensively respond to the ever-changing markets. (Dove, 1993) described it as organization ability to be effective in responding to needs and opportunities in a proactive and responsive manner when the results are unclear .

It also refers to the ability of an organization to accelerate activities on the critical path, and thus it is a direct indicator of the organization competitiveness based on time (Kumar & Motwani, 1995). From the viewpoint of (Meredith & Francis, 2000) and (Bessant et al. 2002) agility lies in the ability of organization to gain a competitive advantage through seizing opportunities and responding to threats intelligently, quickly and proactively. (Mishra et al. 2014) linked agility

with an organization's strategic ability to adapt quickly to sudden and unplanned changes in market opportunities and pressures.

From the previous presentation of the concept of agility , we can clearly see the lack of consensus about it . However, reactivity, rapid response, and the need for change are the essence of agility. Although the concept extended to cover large areas of economy and business sectors, it settled on four frameworks to describe the concepts that define it, or at least the various elements proposed to measure it (Wendler, 2013)

- Employees agility
- Organization agility
- Manufacturing agility
- Software Development agility

What is important for this study is the search for the two kinds of agility that are related to the human dimensions , namely leadership agility and employees agility and their implications for organizational agility and strategic supremacy .

### **Leadership agility**

In a world of dynamic environments, the need for change becomes more important to ensure success and continuity and the key to effective change is leadership. If change is a process of moving to a desired future situation and dealing with emerging problems, then change is about leadership. According to (Kornelsen, 2019) the world of dynamic environments requires an agile leadership which promotes cooperation and effective communication between generations and allows organizations to be more innovative, flexible and fluid.

Leadership agility is defined as the ability of leader to quickly sense environmental changes and utilize these changes as opportunities . It is the ability to lead effectively under conditions of rapid change and escalating complexity (Joiner, 2009). Agile leaders demonstrate steady confidence in dealing with uncertainty, complexity and ambiguity (Hoogerhuis & Olson, 2010). In essence, it is up to leadership that can pull organization out of clutter and uncertainty (Langley, 2015).The importance of leadership agility is highlighted in that it pushes the direction

of investing the maximum potentials and capabilities of employees, investing creative ideas and transforming them into the desired results.

### **Employees agility**

There is no consensus about defining employees agility . Some researchers had adopted a definition of employees agility from the perspective of capability , for example (Kidd, 1994) considered agility of employees as a capacity that includes two basic elements, namely ability of employees to react to changes in appropriate and timely ways and ability of employees to exploit those changes and benefit from them as opportunities . (Goldman et, all, 1993) defined it as the ability to respond to changes in appropriate methods and at the right time. It means investing changes and taking advantage as an opportunity. Others approached employees agility from the perspective of behavior, for example (Plonka, 1997) believes that agile employees deal with a high level of uncertainty and complexity, and that they have greater independence in responding to unexpected changes . In fact responding to changes is not enough , they need adaptive and proactive behavior.

### **Strategic supremacy**

(D'Aveni , 1994) has introduced the concept of strategic supremacy based on excessive competition to provide insight into how organizations grow and decline within their spheres of influence. He forced Wall Street analysts, investment funders, and mergers and acquisitions experts to reconsider how executives are evaluating diversification strategies and to undermine the strategic management approach for long decades that based on sustaining competitive advantage in a clear contradiction to literature of sustainable competitive advantage. Theoretically, the basis for the concept of strategic supremacy according to (D'Aveni, et al. 2010) is that the advantages of organizations are not sustainable, but are temporary in nature and therefore the goal is to develop a framework that helps organizations to succeed in competition, and survive in conditions of rapid competitive actions and counter-responses of competitors, which make sustainability of advantage impossible.

While (D'Aveni) emphasized that organizations with strategic supremacy belong to an open system that respond to environmental changes and interacts with them as opportunities, (Strikwerda, 2002) introduced a definition in which he affirmed that they are process structures

for mapping out the sphere of influence of organization that decides to improve its relative strength, as well as establishing strategic intent of the organization for each part of the scope. In his view, the strength of strategic supremacy mentioned by (D'Aveni) is the organizational structure that defines strategic intent. In sum, the essence of strategic supremacy is to change the rules of the game and create the rules that competitors who want to play must obey.

### **Environmental dynamism**

Researchers and scholars have dealt with environmental dynamism from multiple angles. (Milliken, 1987) considered environmental dynamism as the speed of changes in the product, the frequency of changes in customer preferences and the operating environment of organization. (Davis et al. 2009) proposed four dimensions that paint a picture of dynamic environment, stressing the importance of interconnectedness between them, namely speed, complexity, uncertainty and unpredictability. Roberts (2015) confirmed that changes in technology, customer preferences, and fluctuations in demand are the most important characteristics of dynamic environments. ( Kwiotkowska 2018) believed that environmental dynamism is embodied in organization inability to predict behaviors of customers and competitors, speed of change in market trends and innovations and research and development achieved in industry. The concept adopted by this study is identical to the viewpoint of (Miller & Friesen, 1983) in that environmental dynamism is embodied in the speed of changes that occur in external environment of organization and the unpredictability of those changes.

### **Conceptual framework and hypotheses development**

Figure (1) reflects the hypothesized model illustrating the relationships between study variables. It examines the effect relationships between leadership agility, employees agility , organizational agility and strategic supremacy. It also examines the moderating effect of environmental dynamism.



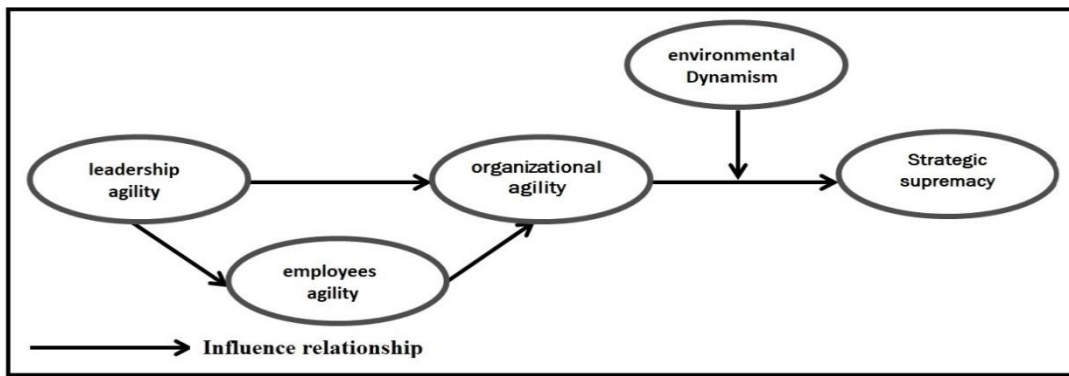


Figure (1) Study hypothesis

### Effect of leadership agility on organizational agility

Several studies indicated that adopting long-term focus and practicing leadership agility behaviors in all activities of the organization enhance its agility levels (Young, 2013). (Kevin Romijn, 2016) also mentioned that agile leadership provide team and individuals with all factors that help organization in the transformation process.(Brandt, et all.2018) confirmed that leadership is very crucial for organizational agility, and it appears to be the required condition for many organizations wanting to shift towards agility. Accordingly, we can formulate the first hypothesis as follow:

*H1: The high levels of leadership agility enhance organizational agility.*

### Effect of leadership agility on employees agility

Studies that have examined the relationship between leadership agility and employees agility have stated that agile employees can lead a shift towards change, but they cannot influence that shift without presence of other aspects, including leadership agility (Detollenaere, 2017), (Pourkarimi & Mazari, 2017). In order to be agile, leader must clarify the agile concept to his people, believe in agile values and principles, promote, teach, apply, and defend them and sympathize with them as individuals working with him not working for him (Medinilla, 2012). Based on the aforementioned, we can suppose that:

*H2: leadership agility enhances employees agility.*

### Effect of employees' agility on organizational agility

The results of studies on organizational agility and employee's agility supported the relationship between them to the extent that (Chonko & Jones, 2005) and (Muduli, 2013) believe that it is not possible to switch to organizational agility without agility of employees. (Yaghoubi & Dahmardeh, 2010) and (Breu, et al. 2001) confirms the existence of many influencing links between employee's agility and organizational agility. They say that a positive relationship between them cannot be ignored, which is sufficient to justify the suggestion of the 3rd hypothesis as follows:

*H3: Employees agility enhances organizational agility.*

### **Effect of organizational agility on strategic supremacy**

Management literature was mingy regarding the relationship between organizational agility and strategic supremacy except for some interesting signs. (D'Aveni (1999) indicates that organizations having strong agility are able to maintain their strategic supremacy in spite of market fluctuations (Beck, & Hall, 2016). On this basis, we can formulate the **4th** hypothesis as follows:

*H4: Organizational agility enhances strategic supremacy of organizations.*

### **The mediating role of employees' agility between leadership agility and organizational agility**

As organizational agility can be enhanced directly through leadership agility and employee's agility, in this case we can assume the following:

*H5: Employees agility mediates the relationship between leadership agility and organizational agility.*

### **The mediated role of organizational agility between leadership agility and strategic supremacy.**

Based on the aforementioned relationships we can assume the following:

*H6: Organizational agility mediates the relationship between leadership agility and strategic supremacy.*

### **The moderating role of environmental dynamism**

All literature on strategic management emphasizes the influence of environments on the success or failure of organizations. (Ackoff & Emery, 2005) believe that any change that occurs in environment results in a change in the state of organization. Organization theorists such as (Emery & Trist, 1969; Feibleman & Friend, 1969; Terreberry, 1968 ; Thompson, 1967) had recognized the need for organizations to interact with their environments if they are to survive (Mensah, 1981). Therefore, it can be assumed that there is an interactive role of environmental dynamism in the relationship between organizational agility and strategic supremacy . Based on the above, we can formulate the 7<sup>th</sup> hypothesis as follows:

*H7: Environmental dynamism moderates the relationship between organizational agility and strategic supremacy.*

### **Population and sample**

Given the increasing importance that private education sector in Iraq began to occupy and the large number of staff with high academic and professional qualifications, and the geographical spread of private universities and colleges in all governorates of Iraq, it was chosen as an applied field of study. In spite of the establishment of private colleges in Iraq since 1988 when the first three private colleges were established ( Al Turath University College, Al Mansour University College, and Al-Rafidain University College ), all of which were in the capital Baghdad , but there is an increasing number of universities and colleges that established after the year 2003 . The total number of private universities and colleges became (61) universities and colleges at the present time which created a severe situation in the competition among those institutions to obtain the largest possible number of students. The study included (11) colleges and universities that were selected from among the (17) private colleges in the Middle Euphrates region in Iraq. The study sample was divided into two parts, one consisted of 106 heads of departments and the other consisted of (420) faculty members.

## METHODOLOGY

The researchers adopted the qualitative approach in studying the relationships between study variables because of its ability to describe a problem and develop specific framework for it, and use it in determining the results (Khader, 2013). The main chosen tool for this study was the questionnaire which was electronically sent to practitioners and answered by email. The questionnaire included (117) questions divided into two categories. The first category was directed to heads of departments consists of 56 questions, 21 of which were dedicated to assessing agility of faculty members in its dimensions (proactive, adaptive, and flexibility), (15) questions were devoted to assess organizational agility (sensor agility, decision-making agility, agility to act), and 5 questions about one-dimensional environmental dynamism, while the remaining 15 questions were devoted to assessing strategic supremacy (areas of influence, competitive configuration, and competitive pressure). The second category that consists of 60 questions were directed to faculty members to identifying their views on the extent of leadership agility (anticipating change, creating confidence, initiating action, liberating thinking, and evaluating results) among department heads. A pre-test was conducted to find out the clarity of the questions and the time required to answer. Then the questionnaire was presented to a group of experts for the purpose of arbitration. The researchers also conducted a test to determine the validity and reliability of the questionnaire. To test direct and indirect influential relationships, the researchers adopted the Structural Equation Modeling approach (SEM), because it is a powerful tool that has the ability to deal with large numbers of independent and dependent variables, as well as the ability to deal with latent variables. The study also used the Sobel test, to test the significance of the results of indirect effect hypotheses.

### Research measurements

The research used the following measurements as shown in table (1).

**Table (1) research measurements**

	Variables	The scale
1	Leadership agility	Sample, 2010
2	Employees agility	Aladwan, 2017. Based on Alavi, 2014.
3	Organizational agility	Nafei, 2016 based on (Park, 2011)
4	Environment dynamism	Schilke, 2014 based on the scale developed by (Miller and Friesen, 1983)

		and (Jap, 1999).
5	Strategic supremacy	(Al-Yasiri, Al-Tai and Al-Sharifi, 2017) based on (D'Aveni, 1999) and (Strikwerda, 2005)

### Hypotheses testing

The **1st** hypothesis is concerned with testing the effect of leadership agility on organizational agility. As it can be seen from table (2), there is a significant effect relationship that supports the validity of the 1st hypothesis regarding relationship between leadership agility and organizational agility ( $\beta=0.95$ ,  $P<0.01$ ,  $CR=18.711$ ). The content of this result indicates that colleges that have a high level of leadership agility will be able to increase level of organizational agility. It is also noted from table (2) that leadership agility explains (69%) of the change in organizational agility, while (31%) of that change is due to intervention of other factors not included in the model. The value of ( $CR=18.11$ ,  $P<0.01$ ) also confirms the existence of significant sign in explaining organizational agility through leadership agility.

The **2<sup>nd</sup>** hypothesis focuses on the effect of leadership agility on employees agility. It appears from table (2) there is a significant effect relationship that supports the validity of the 2<sup>nd</sup> hypothesis ( $\beta=.917$ ,  $P<0.01$ ,  $CR=22.480$ ). The implication of this result indicates that colleges that have a high level of leadership agility will be able to increase the level of employees agility. It is also evident from table (2) that agility of leadership contributes to the explanation of (78%) of the change in employees agility, while (22%) of that change is due to intervention of other factors not included in the model. The value of ( $CR=22.480$ ,  $P<0.01$ ) also confirms the existence of significant sign of employees agility through agility of leadership.

The **3<sup>rd</sup>** hypothesis deals with the effect relationship between employees agility and organizational agility. It can be seen from table (2) there is a significant effect relationship that supports the validity of this hypothesis ( $\beta=.908$ ,  $P<0.01$ ,  $CR=22.480$ ). This result indicates that colleges that have a high level of employee agility will be able to increase the level of organizational agility. It is evident from table (2) that agility of employees explains (84%) of the change in organizational agility, while (16%) is due to the intervention of other factors not included in the model. The value of ( $CR=46.739$ ,  $P<0.01$ ) also confirms the existence of significant sign in the interpretation of organizational agility through agility of employees.

The 4<sup>th</sup> hypothesis predicts that organizational agility has a positive impact on the level of strategic supremacy. Table (2) shows that there is a significant effect relationship that supports the validity of the 4<sup>th</sup> hypothesis ( $\beta=.807$ ,  $P<0.01$ ,  $CR=28.782$ ) which concerns the influence relationship between organizational agility and strategic supremacy. The content of this result indicates that colleges that have a high level of organizational agility will be able to achieve a high level of strategic supremacy.

It is seen through data presented in table (2) that organizational agility contributes to the explanation of (66%) of the change in strategic supremacy, while (34%) of that change is due to the intervention of other factors not included in the statistical model. The value of ( $CR=28.782$ ,  $P<0.01$ ) also confirms the existence of significant sign in explaining strategic supremacy through organizational agility.

**Table (2):** Summary of regression trajectories and regression coefficients for testing the four hypotheses

Independent Variable	Path	Dependent Variable	S.R.W	Estimate	S.E.	C.R.	P	R <sup>2</sup>
Leadership Agility	→	Organizational Agility	.83	.948	.051	18.711	***	0.69
Leadership Agility	→	Employees agility	.88	.917	.045	22.480	***	0.78
Employees agility	→	Organizational Agility	.92	.908	.019	46.739	***	0.84
Organizational Agility	→	Strategic Supremacy	.81	.807	.028	28.782	***	0.66

The 5<sup>th</sup> hypothesis is concerned with the mediating role of employees agility between leadership agility and organizational agility. Table (3) presents the influence paths for extracting the indirect effect of that hypothesis, which includes the coefficients (Beta), the critical ratio (CR) and the statistical significance (P). The data show the amount of direct and indirect influence and the total effect of this hypothesis.

**Table 3:** Paths and parameters of the 5th hypothesis test

Independent Variable	Path	Dependent Variable	S.R.W	Estimate	S.E.	C.R.	P
Leadership Agility	→	Employees agility	.883	1.014	.045	22.520	***
Leadership Agility	→	Organizational Agility	.152	.173	.091	1.906	.057
Employees agility	→	Organizational Agility	.782	.775	.073	10.677	***

Regression Weights: (Group number 1 – Default model)

**Table 4:** The direct, indirect, and total effects of the 4th hypothesis test

Relation Between Variables	Direct Effect	Indirect Effect	Total Effect	R2
Organizational Agility → Leadership Agility	.152	-	0.842	0.84
Organizational Agility → Employees agility → Leadership Agility	-	0.690		

Source: outputs of the Amos program.V.20.

It is clear from the table (4) that there is direct effect of leadership agility on organizational agility, with value of ( $\beta = .152$ ), but this effect is not significant. The employee agility value was ( $\beta = 0.690$ ). The results above indicate that the direct effect between leadership agility and organizational agility is negated in the presence of the mediating variable agility of employees, and this means a complete mediation of the agility variable of workers and not partially. Thus, a change of one unit in the agility of leadership affects the organizational agility indirectly through employees agility by (0.69). As for the value of the interpretation coefficient (R2), it reached (84%), which means that the agility of the leadership and the agility of the workers explain a rate of (84%) of the changes that occur in the organizational agility, and the remaining percentage of (16%) is due to other variables. Not included in the statistical model, and these results confirm that there is no direct effect of leadership agility on organizational agility in the presence of the employees agility variable, and there is a total (complete) indirect effect of leadership agility on organizational agility through employees .

The researchers used the (Sobel) test to verify the significance of the assumptions about the mediating role of the aforementioned variables, and it is noted from the results of the table () that the hypothesized relationship is significant at the level (1%) because its (Z-Value) value was greater than (1.96) ). These results indicate that the indirect effects of this variable are real and significant, and indicate the mediation of the agility variable of employees in the relationship between leadership agility and organizational agility.

**Table 5:** Sobel test results for mediating employee's agility variable

Path	Inputs	Sobel test – Z-Value	p-value
Leadership Agility → Employees agility → Organizational Agility	1= 0.917 3= 0.908 Sa= 0.045 Sb= 0.019	18.745 **	P< .01

**The 6<sup>th</sup> hypothesis** takes into consideration the mediating role of organizational agility between leadership agility and strategic supremacy. Table (6 ) presents the influence paths for extracting the indirect effect of the 6<sup>th</sup> main hypothesis, which includes coefficients (Beta), critical ratio (CR) and statistical significance (P). As for the data shown in the table (7), they show the amount of direct and indirect influence and the total effect of this hypothesis.

**Table 6:** Paths and parameters of the seventh hypothesis test

Independent Variable	Path	Dependent Variable	S.R.W	Estimate	S.E.	C.R.	P
Leadership Agility	→	Organizational Agility	.80	.945	.054	17.345	***
Leadership Agility	→	Strategic supremacy	.52	.610	.076	7.986	***
Organizational Agility	→	Strategic supremacy	.40	.398	.060	6.582	***

Regression Weights: (Group number 1 – Default model)



**Table (7) The direct, indirect, and total effects of the seventh hypothesis test**

Relation Between Variables	Direct Effect	Indirect Effect	Total Effect	R2
Leadership Agility→ Strategic supremacy	.519	-	0.839	0.76
Leadership Agility→ Organizational Agility →Strategic supremacy	-	0.320		

Source: outputs of the Amos program. V.20

As for the value of the interpretation coefficient (R2), it was (0.76), which means that leadership agility and organizational agility explain a rate of (76%) of the changes that occur in strategic superiority, and the remaining (24%) is due to other non-involved variables. These results confirm the existence of a direct effect of leadership agility on strategic supremacy, and there is an indirect partial effect of leadership agility on strategic supremacy through organizational agility .

The researchers used the (Sobel) test to verify the significance of the assumptions about the mediating role of the aforementioned variables. It is noted from the results of table (8) that the assumed relationship is significant at the (1%) level because its (Z-Value) value was greater than (1.96). These results indicate that the indirect effects of this variable are real and significant, and they indicate the mediation of the organizational agility variable in the relationship between leadership agility and strategic supremacy.

**Table (8) Sobel's test results for mediating the organizational agility variable**

Path	Inputs	Sobel test – Z-Value	p-value
Leadership agility → Organizational agility → Strategic supremacy	1= 0.948 3= 0.807 Sa= 0.051 Sb= 0.028	15.621 **	P< .01

The above results indicate that there is a direct effect between leadership agility and strategic supremacy of (0.519) and an indirect effect in the case of the presence of the mediating variable,

organizational agility, with a value of (0.32). This means a partial mediation of the organizational agility variable and not complete. Thus, a change of one unit in leadership agility affects strategic supremacy directly by (52%) and indirectly through organizational agility by (0.32), and therefore the direct and indirect total impact has reached (0.839), and within the level of morality ( 1%) as indicated by the coefficient (CR), whose value was greater than the value of (1.96), a value that indicates the significance of the test. As for the value of the interpretation coefficient (R2), it reached (0.76), which means that leadership agility and organizational agility explain a rate of (76%) of the changes that occur in strategic supremacy, and the remaining (24%) is due to other non-involved variables. In the research, these results confirm the existence of a direct effect of leadership agility on strategic supremacy, and there is an indirect partial effect of leadership agility on strategic supremacy through organizational agility at the level of private colleges, the research sample. The researchers used the (Sobel) test to verify the significance of the assumptions regarding the mediating role of the aforementioned variables. It is noted from the results of Table (9) that the assumed relationship is significant at the (1%) level because its (Z-Value) value was greater than (1.96). These results indicate that the indirect effects of this variable are real and significant, and they indicate the mediation of the organizational agility variable in the relationship between leadership agility and strategic supremacy.

### **The 7<sup>th</sup> hypothesis**

The researchers adopted the program (spss v.23) to conduct tests of the interactive model. Table (9) shows the parameters of the graduated linear regression analysis for testing the seventh main hypothesis related to determining the interactive role of environmental dynamism in enhancing the effect of organizational agility on strategic supremacy, as the first model represents the regression model that includes the effect of only two variables, namely, organizational agility and environmental dynamism in enhancing strategic supremacy. While the second regression model shows the presence of the interaction variable between organizational agility and environmental dynamism, as well as the variables of the first model.

**Table (9) Graded regression parameters of the 6<sup>th</sup> main hypothesis test**

Model	The regression coefficients	T test	Sig	R <sup>2</sup>	ΔR <sup>2</sup>	F test
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		standard	non-standard					
First	Organizational agility	.813	.805	27.589	.000	.664		
	Environmental dynamism	.006	.004	.201	.841			
Second	Organizational agility	.829	.820	28.183	.000	.674	.01	286.632
	Environmental dynamism	-.003-	-.002-	-.107-	.915			
	Interactive V.			3.539	.000			

It is clear from the table that the explanatory ability of the first regression model reached ( $R^2 = 0.664$ ) and it reached in the second model ( $R^2 = 0.674$ ), and this indicates the existence of a positive difference between the two models in the value of ( $R^2$ ) amounted to ( $0.01$ ) and this difference is due to the entry of the interaction variable (Interactive Variable) count as a third variable in the second regression model, as it is clear from the table that the calculated F value of the model amounted to ( $F = 286.632$ ), which indicates the significance of the tested regression model, As for the role of the interaction variable in the model, it is represented in the non-standard regression value, which amounted to ( $0.166$ ), which is a significant value because the calculated (t) value reached ( $3.955$ ), which is a significant value at the level ( $0.000$ ), and this result confirms the validity of accepting the 7th main hypothesis and this indicates on the interactive role of environmental dynamism in enhancing the impact of the organizational agility variable on the strategic supremacy.

## Conclusions

The following are the main conclusions of the study :

1. It could be seen that there is a direct effect of leadership agility on organizational agility, but this effect is limited, as it is also seen that there is an indirect effect of leadership agility on organizational agility through employee's agility . It is obvious that leadership agility variable is able to explain most of the changes in employees' agility in the colleges under study. Nearly two-thirds of changes that occur in organizational agility is through employees' agility, this means that leadership agility is able to influence employees' agility more than its ability to influence organizational agility.

2. It was found that an employee's agility is able to influence organizational agility greater than leadership agility. Most of the changes that occur in organizational agility can be explained by the agility of employees . This conclusion is consistent with the content of literature on organizational agility, as it confirms the active role of employees' agility to reach organizational agility .

3. The results of the study showed a limited interactive role of environmental dynamism on the relationship between organizational agility and strategic supremacy . It appears that the faculties under study enjoy a kind of environmental stability or dominate a kind of desired majors for students, or they monopolize a percentage of the beneficiary students who have no other options, such as the faculty location near their areas of residence or availability of the desired majors or benefiting from reduced admission rates. However, there is a possibility to employ this dynamism to enhance the impact of organizational agility on strategic supremacy in order to serve objectives of faculties or universities.

## REFERENCES

- Ackoff, R. L., Ackoff, R. L., & Emery, F. E. (2005). *On purposeful systems: An interdisciplinary analysis of individual and social behavior as a system of purposeful events*. Transaction Publishers. Book
- Aladwan, Z. S. (2017). *The Impact of Knowledge Management Processes on Workforce Agility: An Empirical Investigation at Pharmaceutical Companies in Jordan*. Unpublished master thesis, Middle East University, Amman, Jordan. [Http://scholar.alaqsa.edu.ps/id/eprint/3603](http://scholar.alaqsa.edu.ps/id/eprint/3603)
- Alavi, S., Abd. Wahab, D., Muhamad, N., & Arbab Shirani, B. (2014). Organic structure and organizational learning as the main antecedents of workforce agility. *International Journal of Production Research*, 52(21), 6273-6295.[<https://doi.org/10.1080/00207543.2014.919420>]
- Atuahene-Gima, K. (2003). The effects of centrifugal and centripetal forces on product development speed and quality: how does problem solving matter?. *Academy of management journal*, 46(3), 359-373. <https://doi.org/10.5465/30040629>
- Beck, T. E., & Lengnick-Hall, C. A. (2016). Resilience capacity and strategic agility: Prerequisites for thriving in a dynamic environment. In *Resilience Engineering Perspectives*, Volume 2(pp. 61-92). CRC Press.
- Bessant, J., Knowles, D., Briffa, G., & Francis, D. (2002). Developing the agile enterprise. *International Journal of Technology Management*, 24(5-6), 484-497.<https://doi.org/10.1504/IJTM.2002.003066>
- Brandt, E. N., Kjellström, S., Andersson, A. C., & Hallencreutz, J. (2018) Leadership in agile organizations.
- Breu, K., C.J. Hemingway, M. Strathern and D. Bridger, 2001. Workforce agility: The new employee strategy for the knowledge economy. *J. Inform. Technol.*, 17(1): 21-31
- Brown, J. L., & Agnew, N. M. (1982). Corporate agility. *Business Horizons*, 25(2), 29-33. [https://doi.org/10.1016/0007-6813\(82\)90101-X](https://doi.org/10.1016/0007-6813(82)90101-X)
10. Bullinger, H. J. (1999). Turbulent times require creative thinking: new European concepts in production management. *International Journal of Production Economics*, 60, 9-27.
- Chonko, L. B., & Jones, E. (2005a). The need for speed: Agility selling. *Journal of Personal Selling & Sales Management*, 25(4), 371-382.DOI: 10.1080/08853134.2005.10749071
- D'Aveni, R. A., & Gunther, R. E. (1994). Hypercompetitive rivalries: Competing in highly dynamic environments. Free Pr.
- D'Aveni, R. A. (1998). Waking up to the new era of hypercompetition. *Washington Quarterly*, 21(1), 183-195.
- D'Aveni, R. A. (1999). Strategic supremacy through disruption and dominance. *Sloan management review*, 40(3), 127-136.
- D'Aveni, R. A., Dagnino, G. B., & Smith, K. G. (2010). The age of temporary advantage. *Strategic management journal*, 31(13), 1371-1385.

- D'Aveni, R. A., Gunther, R. E., & Cole, J. (2001). *Strategic supremacy: How industry leaders create growth, wealth, and power through spheres of influence*. Simon and Schuster.
- Davis, J. P., Eisenhardt, K. M., & Bingham, C. B. (2009). Optimal structure, market dynamism, and the strategy of simple rules. *Administrative Science Quarterly*, 54, 413–452. <https://doi.org/10.2189/asqu.2009.54.3.413>
- Denning, S. (2016). How to make the whole organization “Agile”. *Strategy & Leadership*, 44(4), 10-17. <https://doi.org/10.1108/SL-06-2016-0043>
- Dess, G. G., & Beard, D. W. (1984). Dimensions of organizational task environments. *Administrative science quarterly*, 52-73. <https://doi.org/10.2307/2393080>
- Detollenaere, B. (2017). AGILE WORKERS, THE WHITE RAVENS OF THE COMPANY?
- Dove, R. (1994). Tools for analyzing and constructing agility. In *Proceedings of the Third Annual Agility Forum Conference/Workshop*, Austin, TX.
- Ewusi-Mensah, K. (1981). The external organizational environment and its impact on management information systems. *Accounting, Organizations and Society*, 6(4), 301-316. [https://doi.org/10.1016/0361-3682\(81\)90010-6](https://doi.org/10.1016/0361-3682(81)90010-6)
- Feibleman, J. K. (1969). The philosophy of adolescence. *Adolescence*, 4(16), 477.
- Gill, R. (2002). Change management--or change leadership? *Journal of change management*, 3(4), 307-318. <https://doi.org/10.1080/714023845>
- Goldman, S. L., & Nagel, R. N. (1993). Management, technology and agility: the emergence of a new era in manufacturing. *International Journal of Technology Management*, 8(1-2), 18-38. <https://doi.org/10.1504/IJTM.1993.025758>
- Highsmith, J. (2013). *Adaptive leadership: Accelerating enterprise agility*. Book.
- Horney, N., Pasmore, B., & O'Shea, T. (2010). Leadership agility: A business imperative for a VUCA world. *Human Resource Planning*, 33(4), 34.
- Jansen, J. J., Van den Bosch, F. A., & Volberda, H. W. (2005). Exploratory innovation, exploitative innovation, and ambidexterity: The impact of environmental and organizational antecedents. *Schmalenbach Business Review*, 57(4), 351-363 <https://doi.org/10.1007/BF03396721>
- Javad Pourkarimi, Ebrahim Mazari.(2017) The mediating role of self-development on relationship between transformational leadership and human capital agility. 20.1001.1.23221518.1396.6.2.5.4
- Jiao, H., Alon, I., & Cui, Y. (2011). Environmental dynamism, innovation, and dynamic capabilities: the case of China. *Journal of Enterprising Communities: People and Places in the Global Economy*, 5(2), 131-144. <https://doi.org/10.1108/17506201111131550>
- Joiner, B. (2009). Creating a culture of agile leaders: A developmental approach. *People and Strategy*, 32(4), 28.

- Joiner, W. B., & Josephs, S. A. (2007). Leadership agility: Five levels of mastery for anticipating and initiating change (Vol. 307). John Wiley & Sons.
- Kathleen, H., & Eric, O. (2010). Agile whole leadership: How to become an agile leader.
- Romijn, K. (2016). Agile Leadership, Shared Leadership, or No Leadership: Understanding the Balance of Leadership Styles and Decision Making Responsibilities in Agile Organizations. (Thesis Master) ICT in Business and the Public Sector, LIACS, Leiden University.
- Kidd, P. T. (1994). Agile Manufacturing "Forging new Frontiers" Addison-Wesley. Publication Company Inc.
- Kornelsen, J. (2019). The Quest to Lead (with) Millennials in a VUCA-World: Bridging the Gap Between Generations. In *Leading in a VUCA World* (pp. 27-41). Springer, Cham. [https://doi.org/10.1007/978-3-319-98884-9\\_2](https://doi.org/10.1007/978-3-319-98884-9_2)
- Kotze, J. G. (2003). Strategic supremacy in the hypercompetitive 21st century. *South African Journal of Economic and Management Sciences*, 6(1), 99-117. <https://hdl.handle.net/10520/EJC31378>
- Kumar, A. And Motwani, J. (1995), "A methodology for assessing time-based competitive advantage of manufacturing firms", *International Journal of Operations & Production Management*, Vol. 15 No. 2, pp. 36-53. <https://doi.org/10.1108/01443579510080409>
- Kwiotkowska, A., & Gębczyńska, M. (2018). The Relationship between Environmental Uncertainty and Enterprise Performance. A Fuzzy-Set Analysis. *Multidisciplinary Aspects of Production Engineering*, 1(1), 809-816. DOI10.2478/mape-2018-0102
- Mcarthur, A. W., & Nystrom, P. C. (1991). Environmental dynamism, complexity, and munificence as moderators of strategy-performance relationships. *Journal of Business Research*, 23(4), 349-361. [https://doi.org/10.1016/0148-2963\(91\)90020-X](https://doi.org/10.1016/0148-2963(91)90020-X)
- Medinilla, Á. (2012). Agile management: Leadership in an agile environment. Springer Science & Business Media. DOI10.1007/978-3-642-28909-5
- Meredith, S. And Francis, D. (2000), "Journey towards agility: the agile wheel explored", *The TQM Magazine*, Vol. 12 No. 2, pp. 137-143. <https://doi.org/10.1108/09544780010318398>
- Miller, D., & Friesen, P. H. (1983). Strategy-making and environment: the third link. *Strategic management journal*, 4(3), 221-235. <https://doi.org/10.1002/smj.4250040304>
- Miller, D., & Friesen, P. H. (1983). Strategy-making and environment: the third link. *Strategic management journal*, 4(3), 221-235. <https://doi.org/10.1002/smj.4250040304>
- Milliken, F. J. (1987). Three types of perceived uncertainty about the environment: State, effect, and response uncertainty. *Academy of Management review*, 12(1), 133-143. <https://doi.org/10.5465/amr.1987.4306502>

- Mishra, S., Datta, S., Mahapatra, S. S., & Debata, B. R. (2014). Alignment of dimensions towards modelling organisational supply chain agility. *International journal of services and operations management*, 17(1), 88-106. DOI 10.1504/IJSOM.2014.057997
- Muduli, Ashutosh, Workforce Agility: A Review of Literature (July 4, 2013). *The IUP Journal of Management Research*, Vol. XII, No. 3, July 2013, pp. 55-65, Available at SSRN: <https://ssrn.com/abstract=2350029>
- Nafei, W. A. (2016). The Effect of Organizational Agility on Quality of Work Life: A Study on Commercial Banks in Egypt. *International Journal of Business and Management*, 11(6), 271-285. Doi:10.5539/ijbm.v11n6p271
- Orski, K. (2017). What's your agility ability?. *Nursing management*, 48(4), 44-51. Doi: 10.1097/01.NUMA.0000511922.75269.6a
- Plonka, F. E. (1997). Developing a lean and agile work force. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 7(1), 11-20. [https://doi.org/10.1002/\(SICI\)1520-6564\(199724\)7:13.0.CO;2-J](https://doi.org/10.1002/(SICI)1520-6564(199724)7:13.0.CO;2-J)
- Raschke, R., & David, J. S. (2005). Business process agility. *Proceedings of the 11th Americas Conference on Information Systems*, Omaha, NE, USA, August, pp. 355-360 <https://aisel.aisnet.org/amcis2005/180>
- Roberts, N. (2015). Absorptive capacity, organizational antecedents, and environmental dynamism. *Journal of Business Research*, 68(11), 2426-2433[79-en] <https://doi.org/10.1016/j.jbusres.2015.02.019>
- Sambamurthy, V., Bharadwaj, A., & Grover, V. (2003). Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS quarterly*, 237-263. <https://doi.org/10.2307/30036530>
- Schilke, O. (2014). On the contingent value of dynamic capabilities for competitive advantage: The nonlinear moderating effect of environmental dynamism. *Strategic management journal*, 35(2), 179-203. <https://doi.org/10.1002/smj.2099>
- Sharifi, H., & Zhang, Z. (1999). A methodology for achieving agility in manufacturing organisations: An introduction. *International journal of production economics*, 62(1-2). [https://doi.org/10.1016/S0925-5273\(98\)00217-5](https://doi.org/10.1016/S0925-5273(98)00217-5)
- Sherehiy, B., & Karwowski, W. (2014). The relationship between work organization and workforce agility in small manufacturing enterprises. *International Journal of Industrial Ergonomics*, 44(3), 466-473. <https://doi.org/10.1016/j.ergon.2014.01.002>
- Sohi, R. S. (1996). The effects of environmental dynamism and heterogeneity on salespeople's role perceptions, performance and job satisfaction. *European Journal of Marketing*, 30(7), 49-67. <https://doi.org/10.1108/03090569610123816>



- Storey, J., Emberson, C. And Reade, D. (2005), "The barriers to customer responsive supply chain management", *International Journal of Operations & Production Management*, Vol. 25 No. 3, pp. 242.<https://doi.org/10.1108/01443570510581853>
- Strikwerda, Hans, (2002a), "Strategic Supremacy\_Operational excellence is not sufficient; your firm needs a power strategy" , Nolan, Norton & Co., All rights reserved.
- Strikwerda, J., & Rijnders, D. 2005." Possible End Games in the European Postal Market: Qui Bone?" In MA Crew, & PR Kleindorfer (Eds.), *Regulatory and Economics Changes in the Postal and Delivery Sector*. Amsterdam: Kluwer Academic Publishers.Book
- Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, 58(4), 13-35.<https://doi.org/10.1525/cmr.2016.58.4.13>
- Terreberry, S. (1968). The evolution of organizational environments. *Administrative science quarterly*, 590-613.<https://doi.org/10.2307/2391535>
- Terreberry, S. (1968). The evolution of organizational environments. *Administrative science quarterly*, 590-613.<https://doi.org/10.2307/2391535>
- Thomas, L. G., & D'Aveni, R. (2009). The changing nature of competition in the US manufacturing sector, 1950—2002. *Strategic Organization*, 7(4), 387-431.<https://doi.org/10.1177/1476127009348561>
- Vokurka, R. J., & Fliedner, G. (1998). The journey toward agility. *Industrial Management & Data Systems*, 98(4), 165-171. <https://doi.org/10.1108/02635579810219336>
- Wendler, R. (2013). The structure and components of agility—a multi-perspective view. *Informatyka Ekonomiczna/Business Informatics*, 2(28), 148-169
- Yaghoubi, N. M., & Dahmardeh, M. R. (2010). Analytical approach to effective factors on organizational agility. *Journal of basic and applied scientific research*, 1(1).
- Yang, C., & Liu, H. M. (2012). Boosting firm performance via enterprise agility and network structure. *Management Decision*, 50(6), 1022-1044.
- Young, A. G. (2013). Identifying the impact of leadership practices on organizational agility. Pepperdine University. <https://digitalcommons.pepperdine.edu/etd/386>
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319–340.[doi:10.1016/0883-9026\(93\)90003-N](https://doi.org/10.1016/0883-9026(93)90003-N)  
[https://doi.org/10.1016/0883-9026\(93\)90003-N](https://doi.org/10.1016/0883-9026(93)90003-N)
- Zhang, Z. And Sharifi, H. (2000), "A methodology for achieving agility in manufacturing organizations", *International Journal of Operations & Production Management*, Vol. 20 No. 4, pp. 496-512. [https://doi.org/10.1016/S0925-5273\(98\)00217-5](https://doi.org/10.1016/S0925-5273(98)00217-5)