

## Article

# The Role of Proactive Leadership in Enhancing Organizational Immunity: An Exploratory Study at the College of Agriculture, Tikrit University

Firas Hussein Alwan<sup>1</sup>

1. Department of Business Administration, College of Administration and Economics, Tikrit University, Iraq

\* Correspondence: [Firas\\_maw2005@tu.edu.iq](mailto:Firas_maw2005@tu.edu.iq)

**Abstract:** The current study aims to identify the role of proactive leadership through its dimensions represented by (proactive personality and proactive behavior) in enhancing organizational immunity through its dimensions represented by (organizational learning, organizational memory, and organizational genes), based on an exploratory study conducted at the College of Agriculture, Tikrit University. The study adopted the descriptive-analytical approach to answer the study questions and achieve its objectives. A questionnaire was adopted as a tool for collecting data from the study population, which comprised (140) faculty members. The questionnaire was distributed to a random sample of (103) faculty members within the College of Agriculture at Tikrit University as the field of the study. The results obtained from this sample regarding the questionnaire items were extracted using the statistical program (SPSS V.24), which is suitable for this type of data and provides accurate analytical results. The study reached several conclusions based on accurate findings, the most prominent of which was that the leaders of the College of Agriculture possess proactive personalities, according to the consensus of the faculty members (the research sample), as the arithmetic means were higher than (3), the hypothetical mean, for all items of this dimension. This indicates that the leaders of this college anticipate potential changes that may occur in the college due to their vigilant proactive mindset, which enables them to rapidly monitor changes and identify the associated opportunities and risks. The results also demonstrated a strong effect of proactive leadership on organizational immunity at both the overall level and the dimensional level in the College of Agriculture, according to the results of the effect test. This confirms the importance of the proactive leadership style practiced at the College of Agriculture in influencing its organizational immunity through the flexible plans and organizational procedures possessed by this leadership, which go beyond current work requirements toward future work requirements. The current study has achieved added value by shedding light on an important proactive leadership style for all organizations, particularly the organization under study, which contributes to the early exploration of changes in the internal and external environment of the College of Agriculture, identifying the opportunities and risks they entail, and utilizing them to enhance the immunity of the college under study.

**Citation:** Alwan, F. H. The Role of Proactive Leadership in Enhancing Organizational Immunity: An Exploratory Study at the College of Agriculture, Tikrit University. International Journal on Economics, Finance and Sustainable Development (IJEFSO) 2026, 8(2), 291-320

Received: 13<sup>th</sup> Mar 2026Revised: 28<sup>th</sup> Apr 2026Accepted: 15<sup>th</sup> May 2026Published: 30<sup>th</sup> Jun 2026

**Copyright:** © 2026 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)

**Keywords:** Proactive Leadership, Organizational Immunity, Organizational Genes, Tikrit University

## 1. Introduction

Many changes and developments emerge in the environments surrounding organizations, carrying opportunities and risks that may increase their profitability and stability or hinder their performance and weaken their stability. Therefore, organizations seek to strengthen their internal environment by achieving coordination among their organizational units in a manner that enhances their ability to confront these risks that threaten their existence and undermine their stability and competitiveness. In this context, organizational immunity contributes to enhancing the organization's ability to survive and maintain its competitive position amid these continuous disruptions, given its

capacity for adaptation and rapid organizational response to the accelerating events and developments in the work environment. This is based on core capabilities that enable the organization to detect sources of threats and respond to them, transforming them into a source of learning and continuous development. The organization possesses appropriate mechanisms for dealing with such threats and achieving positive outcomes. Its ability to store data on all activities carried out by the organization and the events it has experienced, as well as its ability to analyze such data and transform it into information for decision-makers at the appropriate time and with high speed, provides it with immunity by enabling rapid response to and processing of challenges that represent organizational ailments that weaken its performance. Thus, the organization maintains its activities against any external threat, with these procedures serving as an immune system for identifying the causative factors and attempting to eliminate or mitigate them.

In contrast to the need to build an organization with strong immunity and the ability to withstand and adapt, proactive leadership emerges as a leadership style based on moving beyond traditional reactions to events and shifting toward anticipating the future and taking early action in response to potential changes. This is due to the leader's proactive personality, which enables him to identify challenges in the work environment at an early stage and seize opportunities, driven by a spirit of perseverance and initiative that enables him to plan ahead for events and establish procedures appropriate to the nature of the situation confronting the organization. By virtue of the experience possessed by a proactive leader, he does not wait for a problem to emerge before beginning to deal with it. Rather, he carefully examines the internal and external environment, anticipates challenges and opportunities, and then directs the available resources to confront these challenges. The nature of the relationship between proactive leadership and organizational immunity confirms that an organization's possession of mechanisms and resources that assist it in confronting threats may not be sufficient unless leadership capable of proactively activating and directing these capabilities is available.

The importance of the current study lies in its examination of topics characterized by novelty and vitality for all organizations, including the organization under study, relating to proactive leadership monitoring of environmental changes to preserve the immunity of the organizations under study and enhance their organizational performance. The current study aims to clarify the nature of the relationship between the two variables and the extent to which proactive leadership contributes to enhancing organizational immunity in the colleges under study.

The researcher faced challenges represented by the weak response of the study sample members to the questionnaire items, despite obtaining the necessary approvals, due to their limited time, which resulted in a lengthy period being required to answer the questionnaire items. The study was divided into several sections. The first section addressed the study methodology, while the second section presented proactive leadership, and the third section discussed organizational immunity. The fourth section included the field aspect of the study, while the fifth section presented the conclusions and recommendations.

## **2. Materials and Methods**

### **Research Methodology**

#### **Preface:**

The study methodology contributes to reaching accurate and highly credible results through the proper diagnosis of the study problem, represented by its variables, followed by clarifying its importance and the outcomes it may lead to at both the theoretical and practical levels, identifying the objectives it seeks to achieve, and then testing the hypothesized relationships among its variables, based on which the study model was determined.

### First: Study Problem

Contemporary organizations, in their various forms, face numerous challenges arising from continuous changes in the work environment, which cause instability, increased levels of competition, and growing internal pressures. These challenges require organizations to be resilient and intensify their adaptation procedures and efforts to keep pace with these transformations. However, this remains relative, as organizations in different sectors are exposed to varying levels of such pressures, requiring organizational immunity to confront them. Competition reaches its highest levels within educational sectors or knowledge-based sectors. Since the college under study belongs to the educational sector, competition is at its highest levels, which requires proactive leadership capable of anticipating future changes, identifying ways to benefit from and confront them, and enhancing the immunity of the college under study to face and adapt to these changes.

Accordingly, the study problem is identified through the following main question: **What is the role of proactive leadership in enhancing the organizational immunity of the college under study?** This main question is further divided into the following sub-questions:

- a. To what extent are the dimensions of proactive leadership available in the college under study?
- b. To what extent are the dimensions of organizational immunity available in the college under study?
- c. Is there a correlation between proactive leadership and organizational immunity at the overall level and at the dimensional level?
- d. Does proactive leadership affect organizational immunity at the overall level and at the dimensional level?
- e. Do the opinions of the study sample regarding proactive leadership and organizational immunity vary?

### Second: Study Importance

The importance of this study stems from its variables, which are characterized by novelty, as well as their relevance to organizations in general and the organization under study in particular. Its importance can be identified at both the theoretical and practical levels as follows:

#### A. Theoretical Level

1. Contributing to enriching the literature related to the study variables by enhancing knowledge and theoretical perspectives concerning proactive leadership and organizational immunity.
2. Addressing a knowledge gap by establishing an intellectual linkage between the variables of proactive leadership and organizational immunity, thereby providing an additional body of knowledge that can benefit future studies.
3. Enriching the Arab administrative literature with intellectual contributions that represent a cumulative body of knowledge and a building block in the development of the Arab administrative school, as this study represents the intellectual output of an Arab researcher.

#### B. Practical Level

1. Assisting leaders in the colleges under study in addressing the challenges they face by highlighting a proactive leadership style that demonstrates the importance of anticipating events and preparing for them.
2. Enhancing the organizational immunity of the colleges under study by identifying the strengths and weaknesses in their operations, as diagnosed based on the statistical results obtained from these colleges.
3. Providing recommendations based on reliable field findings that contribute to improving decision-making processes and enhancing the college's ability to adapt to continuous changes in the work environment.

### Third: Study Objectives

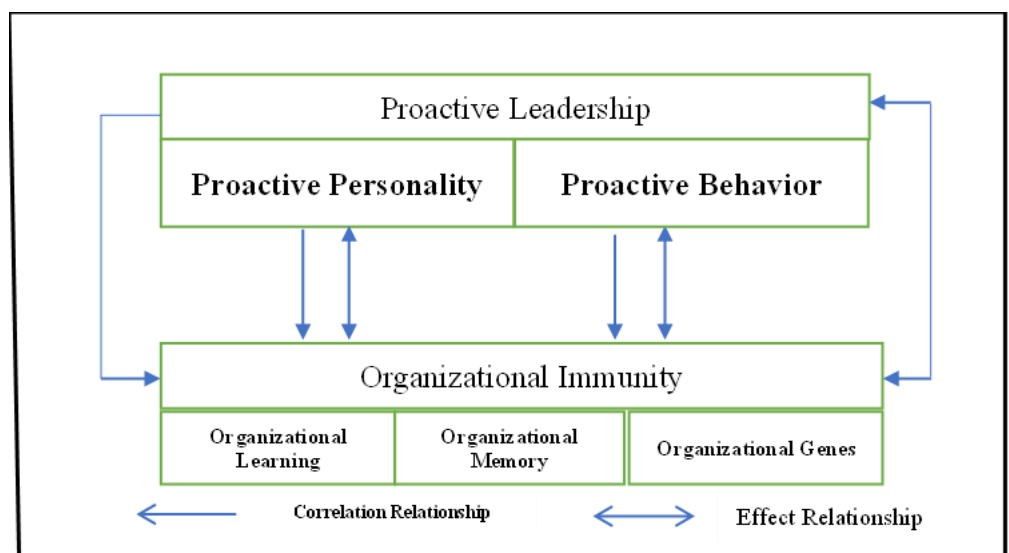
The study seeks to achieve the following objectives:

- To identify the extent to which the dimensions of proactive leadership are available in the college under study.
- To identify the extent to which the dimensions of organizational immunity are available in the college under study.
- To determine the relationship between proactive leadership and organizational immunity at the overall level and at the dimensional level.
- To determine the effect of proactive leadership on organizational immunity at the overall level and at the dimensional level.
- To determine the variation in the opinions of the study sample regarding proactive leadership and organizational immunity.

### Fourth: The Hypothetical Framework of the Study and Its Hypotheses

#### A. The Hypothetical Framework of the Study

The hypothetical framework illustrates the logical relationships among the variables and dimensions of the study. It also guides the steps for conducting the study to achieve its objectives and address its research problem. Figure (1) presents the hypothetical framework of the study.



Source: Prepared by the Researcher

Figure 1. The Hypothetical Framework of the Study

#### B. Study Hypotheses:

The study is based on several main hypotheses from which the following sub-hypotheses are derived:

- The dimensions of proactive leadership are available in the organization under study.
- The dimensions of organizational immunity are available in the organization under study.
- There is a statistically significant positive correlation between proactive leadership and organizational immunity at the overall level and at the dimensional level.
- There is a statistically significant effect of proactive leadership on organizational immunity at the overall level and at the dimensional level.
- The opinions of the study sample regarding proactive leadership and organizational immunity vary.

#### Fifth: Study Boundaries

1. **Knowledge Boundaries:** Represented by the two study variables (proactive leadership and organizational immunity).
2. **Human Boundaries:** Represented by a sample of faculty members at the College of Agriculture, Tikrit University.
3. **Spatial Boundaries:** The study was conducted at the College of Agriculture, Tikrit University as the field of the study.
4. **Temporal Boundaries:** The study was conducted during the period from 1/6/2025 to 1/9/2025.

#### Sixth: Study Methodology

The current study adopted the descriptive-analytical approach, which enables the researcher to **accurately describe the phenomenon under study in a scientific manner, analyze and interpret the related data, and arrive at findings that answer the study questions and achieve its objectives**, thereby contributing to providing a comprehensive picture of the study topic and utilizing the findings to provide appropriate conclusions and recommendations.

#### Seventh: Data Collection Methods

To achieve the specified objectives of the study, the researcher addressed and enriched its details at both the theoretical and practical levels through the following methods:

##### A. Theoretical Level

To gain a comprehensive understanding of the study topic represented by its independent and dependent variables, the researcher utilized theoretical perspectives derived from previous Arabic and foreign studies, including theses, dissertations, journals, periodicals, conferences, and books, in addition to the resources available through the World Wide Web (Internet) for completing the theoretical aspect of this study.

##### B. Practical Level

To test the formulated study hypotheses, field data were collected from the study field, represented by the College of Agriculture, Tikrit University, through surveying the opinions of faculty members using a questionnaire prepared by the researcher specifically for this purpose. Descriptive and inferential analyses were conducted on these data to obtain and discuss the findings and assess the hypotheses. The analysis was conducted using several statistical methods, including the arithmetic mean, standard deviation, frequencies, percentages, Pearson correlation coefficient, and the linear regression equation model, using the statistical program (SPSS Ver. 24), in addition to Microsoft Excel.

The study variables (proactive leadership and organizational immunity) were measured through a questionnaire prepared by the researcher. The questionnaire was structured into three main sections. The first section focused on describing the characteristics of the sample members according to seven demographic characteristics: (1. Gender, 2. Age, 3. Educational Attainment, 4. Academic Rank, 5. Years of Service, 6. Job Position, 7. Academic Department). The second section focused on measuring the proactive leadership variable (the independent variable) through 10 statements divided into two dimensions: (A. Proactive Personality, B. Proactive Behavior), with five statements for each dimension. The third section was devoted to measuring the organizational immunity variable (the dependent variable) through 12 statements divided into three dimensions: (A. Organizational Learning, B. Organizational Memory, C. Organizational Genes), with four statements for each dimension. Table (1) presents the coding of the research variables and dimensions. The responses of the sample members were quantified using a five-point Likert scale, where the response (**Strongly Disagree**)

was assigned a score of (1), **(Disagree)** a score of (2), **(Somewhat Agree)** a score of (3), **(Agree)** a score of (4), and **(Strongly Agree)** a score of (5).

**Table 1.** Coding of Questionnaire Form Items

| No. | Variables                   | Sub-dimensions          | Code | Measurement Indicators | Sources                                                               |
|-----|-----------------------------|-------------------------|------|------------------------|-----------------------------------------------------------------------|
| 1   | Demographic Characteristics | Gender                  | D1   | ....                   | Prepared by the researcher                                            |
|     |                             | Age                     | D2   | ....                   |                                                                       |
|     |                             | Academic Qualification  | D3   | ....                   |                                                                       |
|     |                             | Academic Title          | D4   | ....                   |                                                                       |
|     |                             | Years of Service        | D5   | ....                   |                                                                       |
|     |                             | Job Position            | D6   | ....                   |                                                                       |
|     |                             | Academic Department     | D7   | ....                   |                                                                       |
| 2   | Proactive Leadership (X)    | Proactive Personality   | XX1  | X1-X5                  | (Wu & Wang, 2011, 300)<br>(Al-Fahmi, 2024, 453-454)                   |
|     |                             | Proactive Behavior      | XX2  | X6-X10                 | (Ali, 2024, 42)<br>(Kadhim, 2024, 348)<br>(Shaker et al., 2023, 1050) |
| 3   | Organizational Immunity (Y) | Organizational Learning | YY1  | Y1-Y4                  | (Al-Nuqaira, 2021, 237-238)                                           |
|     |                             | Organizational Memory   | YY2  | Y5-Y8                  | (Saeed, 2025, 55)<br>(Aljader et al., 2024, 76)                       |
|     |                             | Organizational Genes    | YY3  | Y9-Y12                 | (Majeed & Lafta, 2022, 7021)                                          |

**Source:** Prepared by the Researcher According to Demographic Characteristics

#### **Eighth: Testing the Validity and Reliability of the Questionnaire**

The validity of the questionnaire was tested by adopting face validity, whereby the initial version of the questionnaire was presented to six specialized experts in organizational theory and organizational behavior at Tikrit University. This was done to verify the extent to which the statements of the questionnaire accurately represented what was intended to be measured in terms of the variables and dimensions. The experts provided several formal, scientific, and linguistic comments, most of which were taken into consideration, thereby supporting the reliability of the questionnaire. The final version was then adopted for data collection by distributing it to the sample members.

The reliability of the questionnaire was tested using Cronbach's alpha coefficient, which requires the calculated value to be no less than (0.70) for the questionnaire to be considered reliable. This means that if the questionnaire were administered again to the same individuals under similar conditions, similar results would be obtained. The results showed that the Cronbach's alpha coefficients for the research variables were high and

exceeded the hypothetical value of (0.70). The coefficient was (0.928) for the proactive leadership variable, (0.926) for the organizational immunity variable, and (0.955) for the questionnaire as a whole. These values enhance the reliability of the data collected through the questionnaire for subsequent statistical analysis procedures.

### **Ninth: Description of the Study Field, Population, and Sample**

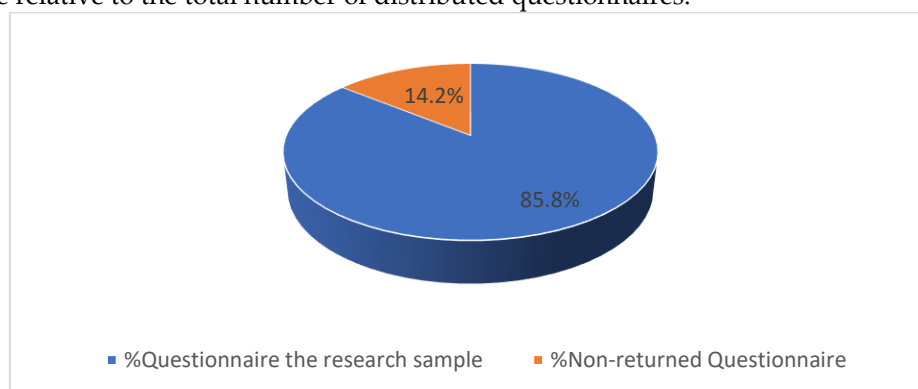
#### **A. Description of the Study Field**

The study focused on the higher education sector as its field, specifically the College of Agriculture at Tikrit University, which is one of the academic scientific institutions established at Tikrit University in (1993) to provide educational and research programs in agricultural sciences for its students and the community. The college comprises (8) academic departments, including the Department of Food Sciences, Field Crops, Agricultural Economics and Extension, Plant Protection, Horticulture and Landscape Engineering, Agricultural Machinery and Equipment, Animal Production, and Soil Sciences and Water Resources. It also contains training facilities and practical fields that support the educational and research processes of students, including a modern dairy laboratory, a mushroom production laboratory, and plastic greenhouses. It was selected as the research field for the following reasons:

1. The suitability of the field to the study problem, which examines the role of proactive leadership in enhancing organizational immunity, as the College of Agriculture faces continuous environmental changes at both the academic and agricultural levels.
2. The field under study has a competent teaching staff with numerous patents that have benefited the academic community and relevant entities, which confirms the proactive awareness of leadership and its direction of teaching staff toward exploiting environmental opportunities and addressing challenges.
3. The field under study possesses an organizational environment that requires a high level of adaptability, making it suitable for studying organizational immunity.

#### **B. Study Population and Sample**

The study population consisted of the academic teaching staff at the college, numbering (140) faculty members. A random sample was selected from this target population after determining its size using the Steven Thompson method. According to this method, the minimum sample size was (103). Figure (2) shows the percentage of the sample relative to the total number of distributed questionnaires.



**Figure 2.** Percentage of the Study Sample Questionnaires

### **Tenth: Description of the Study Sample Characteristics**

Table (2) shows the distribution of the sample members according to demographic information (1. Gender, 2. Age, 3. Educational Attainment, 4. Academic Rank, 5. Years of Service, 6. Job Position, 7. Academic Department). This distribution was conducted to identify the demographic characteristics of the sample members using several methods, including frequencies and percentages.

**Table 2.** Description of the Sample Members According to Demographic Information

| Information                      | Catego<br>ries                | Frequenc<br>y | Percentag<br>e % | Ran<br>k | Informa<br>tion                      | Catego<br>ries                                            | Frequenc<br>y | Percen<br>tage % | Ran<br>k |
|----------------------------------|-------------------------------|---------------|------------------|----------|--------------------------------------|-----------------------------------------------------------|---------------|------------------|----------|
| 1. Gender                        | Male                          | 66            | 64.1             | 1        | 6. Job<br>Position                   | Acade<br>mic<br>Staff<br>(witho<br>ut<br>positio<br>n)    | 71            | 69.0             | 1        |
|                                  | Female                        | 37            | 35.9             | 2        |                                      | Unit<br>Head                                              | 14            | 13.6             | 2        |
| 2. Age                           | 30<br>years<br>or less        | 3             | 2.9              | 4        | 7.<br>Academi<br>c<br>Departm<br>ent | Section<br>Head                                           | 4             | 3.9              | 4        |
|                                  | 31–40<br>years                | 39            | 37.9             | 2        |                                      | Depart<br>ment<br>Head                                    | 3             | 2.9              | 5        |
|                                  | 41–50<br>years                | 47            | 45.6             | 1        |                                      | Other                                                     | 11            | 10.7             | 3        |
|                                  | 50<br>years<br>and<br>above   | 14            | 13.6             | 3        |                                      | Food<br>Science                                           | 10            | 9.7              | 5        |
| 3. Academic<br>Qualificatio<br>n | Master'<br>s                  | 26            | 25.2             | 2        |                                      | Field<br>Crops                                            | 9             | 8.7              | 6        |
|                                  | Ph.D.                         | 77            | 74.8             | 1        |                                      | Agricul<br>tural<br>Econo<br>mics<br>and<br>Extensi<br>on | 14            | 13.6             | 3        |
| 4. Academic<br>Rank              | Assista<br>nt<br>Lectur<br>er | 19            | 18.4             | 4        |                                      | Plant<br>Protect<br>ion                                   | 19            | 18.4             | 2        |
|                                  | Lectur<br>er                  | 28            | 27.2             | 2        |                                      | Hortic<br>ulture<br>and<br>Landsc<br>ape<br>Garden<br>ing | 11            | 10.7             | 4        |

| Information            | Catego<br>ries                 | Frequenc<br>y | Percentag<br>e % | Ran<br>k | Informa<br>tion | Catego<br>ries                                         | Frequenc<br>y | Percen<br>tage % | Ran<br>k |
|------------------------|--------------------------------|---------------|------------------|----------|-----------------|--------------------------------------------------------|---------------|------------------|----------|
| 5. Years of<br>Service | Assista<br>nt<br>Profess<br>or | 34            | 33.0             | 1        |                 | Agricul<br>tural<br>Machin<br>ery and<br>Equip<br>ment | 6             | 5.8              | 7        |
|                        | Profess<br>or                  | 22            | 21.4             | 3        |                 | Animal<br>Produc<br>tion                               | 28            | 27.2             | 1        |
|                        | 10<br>years<br>or less         | 30            | 29.1             | 2        |                 | Soil<br>Science<br>and<br>Water<br>Resour<br>ces       | 6             | 5.8              | 8        |
|                        | 11–20<br>years                 | 42            | 40.8             | 1        |                 |                                                        |               |                  |          |
|                        | 21–30<br>years                 | 26            | 25.2             | 3        |                 |                                                        |               |                  |          |
|                        | 31<br>years<br>and<br>above    | 5             | 4.9              | 4        |                 |                                                        |               |                  |          |

**Source:** Prepared by the Researcher According to Demographic Information

The following details can be observed from Table (2):

1. Regarding gender, the majority of the sample members were males, accounting for (64.1%), whereas females accounted for only (35.9%). This indicates that the college under study focuses on appointing teaching staff whose qualifications are compatible with academic, field, and agricultural work, as reflected in the higher percentage of males.
2. Regarding age, the (41–50 years) age group recorded the highest level of representation within the sample, at (45.6%), whereas the (30 years or younger) group recorded the lowest level of representation, at (2.9%). This finding confirms the availability of intellectual maturity among the study sample, given that age provides them with balance and enables them to accomplish academic tasks based on the accumulated experience acquired throughout their careers.
3. Regarding educational attainment, the PhD group recorded the highest level of representation within the sample, at (74.8%), whereas the Master's degree group recorded the lowest level of representation, at (25.2%). This indicates the study sample's interest in developing their knowledge and training themselves to attain higher levels of knowledge in a manner that provides the college under study with the advantage of possessing a knowledgeable human resource.
4. Regarding academic rank, the Assistant Professor group recorded the highest level of representation within the sample, at (33%), whereas the Assistant Lecturer group recorded the lowest level of representation, at (18.4%). This finding confirms the academic awareness among the teaching staff under study regarding the importance of the scientific research they conduct, which is consistent with

their academic rank and the requirements for obtaining it. It also serves the field, as the research conducted consists of applied research that addresses a real problem or develops a product.

5. Regarding years of service, the (11–20 years) group recorded the highest level of representation within the sample, at (40.8%), whereas the (31 years or more) group recorded the lowest level of representation, at (4.9%). This finding confirms the availability of accumulated knowledge among the college's teaching staff (the study sample), resulting from continuous learning over many years and from conducting field and laboratory experiments. In addition, this group falls within the youth category, whose members possess skills and have the capacity for continuous learning.
6. Regarding job position, the Teaching Staff without Administrative Position group recorded the highest level of representation within the sample, at (69%). These percentages are consistent with the organizational structure of the college, work requirements, and administrative levels, whereby the largest proportion consists of teaching staff who represent the largest knowledge base in the college and are assigned teaching duties as well as some administrative tasks. Their category also includes the "Other" group, which accounted for (10.7%), comprising teaching staff responsible for laboratories, agricultural fields, and poultry.
7. Regarding academic department, the Animal Production group recorded the highest level of representation within the sample, at (27.2%), whereas the Agricultural Machinery and Equipment and Soil Sciences and Water Resources groups recorded the lowest level of representation, at (5.8%). This finding confirms the availability of administrative and academic knowledge diversity, which is reflected in the overall performance of the college under study.

## **Literature Review**

### **Proactive Leadership**

#### **Preface:**

Organizations face numerous changes and economic fluctuations within the work environment, resulting in risks that may weaken their performance or opportunities that may strengthen their position. In both cases, leadership is required to monitor these changes in order to anticipate and address them or adapt to them through the plans it develops and the procedures it implements, thereby mitigating their impact or maximizing the revenues and benefits derived from them, with the aim of enhancing its activities.

#### **First: The Concept of Proactive Leadership**

It is the leader's ability and capacity to perform leadership tasks based on self-initiative, directed toward the future, while ensuring the success and continuity of the organization's current activities in a manner that enhances the organization's position in effecting changes in the work environment [1]. It is a future-oriented leadership style that effectively identifies future opportunities and ways of benefiting from them, while anticipating challenges and confronting them or encompassing them to the greatest extent possible. Here, the proactive personality emerges in utilizing planning skills to maintain the organization's competitive position by creating a new reality or a better work environment [2]. This indicates that the leadership mindset must be present in the organization's current and future activities, which was reinforced by Murniasih [3], who stated that it represents leaders' tendency to initiate proactive changes in the work environment, driven by vigilance, opportunity exploitation, and an initiative-oriented spirit, as well as perseverance in confronting challenges. Thus, they take action to bring about change, as they are more inclined to update their knowledge and skills and identify new production processes rather than adapt to the environment at the expense of the organization.

This leadership takes stakeholders into consideration in its interactions, as confirmed by Zhang et al. [4], who described it as the behavior of leaders who demonstrate positive self-initiative when dealing with stakeholders both inside and outside the organization, in addition to their voluntary pursuit of assuming relevant responsibilities to achieve economic and social development goals in a planned manner.

Based on the preceding researchers' propositions, the researcher concludes that proactive leadership represents a leadership style that focuses on consolidating the organization's current and future position, driven by a spirit of initiative and an impetus toward achieving sustainable goals through work procedures that reinforce this orientation while taking into consideration the requirements of the production process and the interests of the parties involved.

### **Second: The Importance of Proactive Leadership**

The importance of proactive leadership at the organizational level is evident in making organizations of various types prepared to seize opportunities in the surrounding environment as a result of initiating the required changes at an early stage and taking the necessary actions that achieve creative outcomes in the work environment, including encouraging employees to adopt creative work behavior and accomplish tasks in innovative ways [3]. The importance of proactive leadership is also demonstrated through the capabilities possessed by proactive leaders, which are reflected in the organization's performance and outcomes. These capabilities include dealing with risks and errors, envisioning future realities, crisis management, innovation, flexible management, identifying employees' skills and capabilities, and developing and enhancing employees' capabilities [5]. Its importance can be highlighted as follows [6]:

1. Its ability to engage in strategic planning that achieves long-term objectives.
2. Enhancing the organization's competitive advantage.
3. Flexibility in dealing with changes, which provides it with the ability to adapt and survive.
4. Innovation based on changing the existing situation through procedures that reinforce this orientation.
5. The ability to deal with crises facing the organization.
6. Developing the organizational culture and creating an organizational climate that promotes innovation.
7. The ability to anticipate future challenges and deal with them.
8. Teamwork to solve problems and identify appropriate alternatives.

It is evident from the foregoing that the importance of proactive leadership lies in its ability to formulate strategic plans focused on achieving long-term objectives, while establishing flexible procedures that enable the organization to benefit from environmental opportunities within an organizational culture based on the principle of achieving excellence over competitors by leveraging opportunities to achieve organizational innovation.

### **Third: Dimensions of Proactive Leadership**

The dimensions of proactive leadership constitute the fundamental pillars upon which this leadership style is based. Researchers have devoted considerable attention to them due to their importance to organizations of various types. A consensus has been reached among researchers [1], [6], [7], [2], [8], and others regarding its dimensions, represented by the two dimensions of proactive personality and proactive behavior, which were adopted by the researcher in this study for the following reasons:

1. These dimensions are consistent with the field under study.
2. They comprehensively reflect the characteristics of proactive leadership, as they combine the individual's personality and the behavior resulting from it, which achieves distinguished organizational performance.
3. They have been tested in service sectors, and the studies have reached positive results.

4. There is consensus among many researchers from different environments regarding the effectiveness of these dimensions.

A. Proactive Personality: It is associated with the behaviors of proactive leaders who take the initiative and engage in activities that go beyond the actual requirements of the job [9]. Wu and Wang [1] indicated that proactive individuals search for opportunities, demonstrate initiative, take action, and persevere until they reach the end by bringing about change. They actively engage in the following six behaviors:

1. Searching for opportunities for change.
2. Setting effective, change-oriented goals.
3. Anticipating and mitigating problems.
4. Doing different things or doing things differently.
5. Taking appropriate action.
6. Achieving results.

What makes a proactive personality valuable to the organization is that it does not merely undertake procedures and activities related to improving the organization's current conditions, but also ensures the search for future learning opportunities and engagement in activities that enhance the organization's current and future position [2].

B. Proactive Behavior: It is the behavior through which the leader seeks to improve the productivity of both the individual and the organization by focusing on strategies that ensure the organization's long-term sustainability and achieve organizational success by benefiting from current and future opportunities [7]. Individuals characterized by proactive behavior take the initiative, anticipate and address problems, and seize opportunities to achieve future goals in the work environment [4]. This does not occur independently of the organization's internal environment, which requires early changes to be made in a manner that makes the production process more efficient and effective, prevents problems from occurring, and introduces new work methods that are compatible with the opportunities captured from the surrounding environment [10].

### **Organizational Immunity**

### **Organizational Immunity**

#### **Preface:**

Organizations are vital entities that interact with and are influenced by the surrounding environment. This interaction sometimes causes organizational diseases that weaken their immunity and hinder their performance. Therefore, organizations seek to strengthen their immunity through methods and approaches that enable them to achieve adaptation and harmony with the surrounding environment or eliminate such diseases.

#### **First: The Concept of Organizational Immunity**

This organizational concept was derived from the human immune system, comparing the organization to the human body, as it reflects how the body detects viruses and other threats, recognizes them, and then defends and resists them to protect itself against them [11]. This indicates that the human body undertakes several processes to protect itself from risks, which is also the case with organizations that undertake processes to protect their organizational entity. As indicated by Al-Jader et al. [12], these are complex processes undertaken by the organization to protect its organizational entity from the effects arising from the surrounding environment. It represents the organization's ability to undertake a set of procedures aimed at maintaining its activities against any external threat. These procedures serve as an immune system for identifying causal factors and attempting to eliminate them, thereby representing an integrated operating system that seeks to utilize the available capabilities and efforts to maintain the stability and security of organizations, protect them from risks, increase their ability to confront expected and unexpected threats, and develop their mechanisms to ensure their stability and sustainability in a manner that achieves their competitive objectives [13]. Accordingly, it constitutes a set of essential functions within the organization that work together to form a strong defense against external environmental threats, in addition to internal

organizational risks that may affect its performance, as well as its efficiency and effectiveness in utilizing resources and implementing objectives [14]. From this, it can be concluded that organizational immunity refers to the organization's ability to confront internal and external challenges by utilizing flexible processes, procedures, and activities that enable it to deal with changes in the surrounding environment and the risks arising from them that threaten its production processes. Thus, it represents a protective barrier against organizational maladies.

### **Second: Requirements for Enhancing Organizational Immunity**

Organizations need to provide several requirements to achieve organizational immunity, which enhances their ability to confront changes. The most important of these are as follows [15]:

1. The presence of leadership characterized by effectiveness, wisdom, and organizational foresight.
2. Providing an appropriate infrastructure that is consistent with the requirements of the transition toward digitalization.
3. The availability of a flexible organizational structure that assists in managing change processes and responding to the environment.
4. The existence of an organizational culture that supports organizational transformation processes toward more immune organizations.
5. Continuous monitoring to avoid organizational errors that weaken immunity.
6. Adopting empowerment and delegation as a working approach to achieve participation in performing tasks and making decisions.
7. Distributing responsibilities and tasks according to a job-position matching system.

### **Third: Dimensions of Organizational Immunity**

The dimensions of organizational immunity represent the pillars upon which this immune system, which exists in all organizations at varying levels, is based. Many researchers have agreed on these dimensions—organizational memory, organizational learning, and organizational genes—including Al-Naqira [16], Saeed [11], Al-Jader et al. [12], and Lafta and Majeed [13]. These dimensions were adopted for the following reasons:

1. Their consistency with the objectives and orientations of the current study.
2. Their suitability to the field under study.
3. The agreement of most studies regarding them across various service sectors.

The following is a detailed discussion of these dimensions:

1. **Organizational Memory:** It is an accumulated set of data, information, and knowledge generated throughout the history of the organization's existence, which the organization stores for the purpose of subsequent reuse [13]. This indicates the information repository that is utilized when making decisions regarding a particular matter. As indicated by Alwan and Talib [17], it is a record for storing and distributing data and providing the organization with a comprehensive picture of previous success and failure factors, the influences surrounding the organization, and the modifications made to rules, regulations, and even the organizational structure. In this way, it represents the memory of organizational immunity, which reveals internal organizational capabilities and threats arising from the surrounding environment, while identifying the organization's own reality and enhancing its ability to respond rapidly to problems and provide immediate solutions.

2. **Organizational Learning:** It is the process of generating experiences and knowledge, while preserving them and ensuring their dissemination within the boundaries of the organization. It results from increased knowledge accumulation and contributes to its expansion, with several internal and external factors participating in its creation [12]. Organizational learning is viewed as a continuous process arising from individuals' social interactions and behaviors. It involves acquiring new information and concepts that can be used to influence the way organizational activities are performed. Learning also

provides the company with a competitive advantage over competitors [18]. Here, two main types of organizational learning can be distinguished, as stated by the literature:

1. **Adaptive Learning:** It is based on traditional learning methods that focus on benefiting from the experiences, practices, and ideas of others and utilizing them in organizational performance. It is referred to as **single-loop learning**.
2. **Generative Learning:** It is known as creative learning or **double-loop learning**, with creativity as its defining characteristic. It relies on new ideas and innovative work methods and approaches to achieve the organization's objectives.
3. **Organizational Genes:** Also referred to as organizational DNA, they represent the organization's unique signature that distinguishes it from others and enables it to adapt strongly to competition. They consist of a natural genetic imprint belonging to a particular organization, such as natural defenses, including competitiveness, market position, and market share, as well as an acquired genetic imprint resulting from the organization's elimination of environmental risks and subsequent recovery. This resembles immune cells generated as a result of the organization's exposure to an environmental influence, enabling it to recover from it and become immune to that risk [19].

They are also referred to as the organization's strategic capabilities. The concept represents a metaphorical term that illustrates the fundamental factors of the organization that determine its identity and constitute its unique characteristics upon which its success depends. It makes the organization different from other organizations and provides it with an effective way to address problems and find solutions. It also helps the organization identify its hidden strengths [13].

#### **Fourth: The Intellectual Relationship Linking the Study Variables**

Organizations whose leaders possess the ability to introduce proactive work patterns are characterized by greater effectiveness and success, as a positive relationship emerges between their performance and proactive capabilities, constituting a strong barrier against the surrounding environmental changes [5]. This provides organizations with the capability and protection that enhance their growth and long-term survival [6], as they possess leadership approaches that strengthen their immunity and long-term sustainability.

What also strengthens the functioning of the organization's immune system is consolidating the bonds between leadership and employees, whereby declared organizational values are activated to increase employees' trust in organizational procedures. Since employees are in constant contact and interaction with the organization's internal and external variables, gaining their trust becomes an important factor in strengthening procedures for consolidating organizational immunity [20]. It is evident from the foregoing that organizations that anticipate environmental risks and threats through their procedures reduce potential errors that weaken their immunity and increase learning and acquired immunity.

### **3. Result**

#### **Fieldwork**

##### **Preface**

As a continuation of the study methodology adopted, and in order to achieve its objectives and test its hypotheses, this section conducts a systematic analysis of the data collected from the study sample. Statistical methods, such as the arithmetic mean and standard deviation, are employed to determine the extent of agreement among the study sample regarding its statements, while the hypotheses are tested by determining the relationships and effects among its variables.

##### **First: Description and Diagnosis of the Study Variables**

Table (3) presents a description of the questionnaire statements for both study variables (proactive leadership and organizational immunity). This analysis was

conducted using a number of statistical methods, such as the arithmetic mean and standard deviation.

**Table 3.** Description of Proactive Leadership and Organizational Immunity Items

| No. | Items / Statements                                                                                                    | Mean | Standard Deviation | Relative Importance (%) | Coefficient of Variation (%) | Rank |
|-----|-----------------------------------------------------------------------------------------------------------------------|------|--------------------|-------------------------|------------------------------|------|
| -   | Variable: Proactive Leadership                                                                                        |      |                    |                         |                              |      |
| -   | A. Proactive Personality                                                                                              |      |                    |                         |                              |      |
| X1  | They sense potential changes occurring in the organization and deal with them.                                        | 3.85 | 0.809              | 77.1%                   | 21.0%                        | 2    |
| X2  | They possess an alert mindset capable of seizing expected environmental opportunities.                                | 3.86 | 0.805              | 77.3%                   | 20.8%                        | 1    |
| X3  | They possess the skill to formulate strategic plans that respond to changes in the surrounding environment.           | 3.80 | 0.867              | 75.9%                   | 22.8%                        | 5    |
| X4  | They take environmental changes into consideration before making organizational decisions.                            | 3.82 | 0.825              | 76.3%                   | 21.6%                        | 4    |
| X5  | They take organizational measures that go beyond current work requirements toward potential future work requirements. | 3.83 | 0.810              | 76.5%                   | 21.2%                        | 3    |
| -   | B. Proactive Behavior                                                                                                 |      |                    |                         |                              |      |
| X6  | They work on improving organizational performance to ensure long-term organizational sustainability.                  | 3.98 | 0.686              | 79.6%                   | 17.2%                        | 1    |
| X7  | They capitalize on current and future opportunities in the surrounding environment to achieve organizational success. | 3.90 | 0.798              | 78.1%                   | 20.5%                        | 2    |
| X8  | They set future goals stemming from their strategic vision.                                                           | 3.83 | 0.818              | 76.7%                   | 21.3%                        | 4    |
| X9  | They make early organizational changes if they sense a potential threat facing the organization.                      | 3.67 | 0.833              | 73.4%                   | 22.7%                        | 5    |
| X10 | They introduce new work methods consistent with the opportunities seized from the surrounding environment.            | 3.88 | 0.758              | 77.7%                   | 19.5%                        | 3    |
| -   | Variable: Organizational Immunity                                                                                     |      |                    |                         |                              |      |
| -   | A. Organizational Learning                                                                                            |      |                    |                         |                              |      |

| No. | Items / Statements                                                                                                                   | Mean | Standard<br>Deviation | Relative<br>Importance<br>(%) | Coefficient<br>of Variation<br>(%) | Rank |
|-----|--------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------|-------------------------------|------------------------------------|------|
| Y1  | The organization's leadership encourages a culture of continuous learning for academic staff to acquire new expertise and knowledge. | 3.96 | 0.779                 | 79.2%                         | 19.7%                              | 1    |
| Y2  | Leadership shares updated information with academic staff regarding the provision of educational services.                           | 3.85 | 0.809                 | 77.1%                         | 21.0%                              | 3    |
| Y3  | Training programs are provided to enhance the skills and expertise of academic staff.                                                | 3.87 | 0.893                 | 77.5%                         | 23.1%                              | 2    |
| Y4  | The organization learns from the experiences of other similar organizations in enhancing organizational performance.                 | 3.78 | 0.839                 | 75.5%                         | 22.2%                              | 4    |
| -   | B. Organizational Memory                                                                                                             |      |                       |                               |                                    |      |
| Y5  | The organization possesses databases to store and utilize knowledge.                                                                 | 3.87 | 0.776                 | 77.5%                         | 20.0%                              | 1    |
| Y6  | The organization's leadership enables all academic staff to access the organization's databases.                                     | 3.69 | 0.817                 | 73.8%                         | 22.1%                              | 4    |
| Y7  | The organization's leadership retrieves previous experiences from memory files to avoid organizational deviations.                   | 3.76 | 0.857                 | 75.1%                         | 22.8%                              | 3    |
| Y8  | The organization continuously updates database systems to preserve its acquired knowledge.                                           | 3.77 | 0.819                 | 75.3%                         | 21.7%                              | 2    |
| -   | C. Organizational Genes (DNA)                                                                                                        |      |                       |                               |                                    |      |
| Y9  | The organization possesses established organizational values among employees when performing their work.                             | 3.82 | 0.776                 | 76.3%                         | 20.4%                              | 2    |
| Y10 | The organization is distinguished by possessing all qualifications that enable it to respond to work requirements.                   | 3.76 | 0.747                 | 75.1%                         | 19.9%                              | 4    |
| Y11 | The organization's leadership was able to avoid current problems previously faced by the organization.                               | 3.83 | 0.830                 | 76.7%                         | 21.6%                              | 1    |

| No. | Items / Statements                                                            | Mean | Standard Deviation | Relative Importance (%) | Coefficient of Variation (%) | Rank |
|-----|-------------------------------------------------------------------------------|------|--------------------|-------------------------|------------------------------|------|
| Y12 | The organization recovered from environmental risks that occurred previously. | 3.81 | 0.805              | 76.1%                   | 21.2%                        | 3    |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (3) that there is a high level of agreement with all statements (X1–X10) of the proactive leadership variable, according to the perceptions of the sample members among the teaching staff working at the College of Agriculture/University of Tikrit. The calculated arithmetic mean for all statements exceeded the hypothetical value of 3, in addition to the high relative importance. The results of the following dimensions can also be observed:

- **Proactive Personality Dimension:** Statement No. (X2), represented by (*They possess an alert mindset capable of seizing anticipated environmental opportunities*), recorded the highest level of agreement, with an arithmetic mean of (3.86), whereas Statement No. (X3), represented by (*They possess the skill of developing strategic plans that respond to changes in the surrounding environment*), recorded the lowest level of agreement, with an arithmetic mean of (3.80). The results of the arithmetic means for all items of this dimension were higher than the hypothetical mean (3), confirming that the leaders of the colleges under study possess the insight, alert mindset, and planning skills necessary to sense environmental changes occurring in the college under study, deal with them, and transform them to the benefit of their college.

- **Proactive Behavior Dimension:** Statement No. (X6), represented by (*They work to improve organizational performance in a manner that ensures the organization's long-term sustainability*), recorded the highest level of agreement, with an arithmetic mean of (3.98), whereas Statement No. (X9), represented by (*They make early organizational changes when they sense a potential risk to the organization*), recorded the lowest level of agreement, with an arithmetic mean of (3.67). The results of this dimension confirm that the leaders of the college under study work to consolidate current processes through the changes they implement within the organizational environment and coordinate its resources to confront challenges and enhance performance and outcomes, extending from the short term to the long-term future in a manner that achieves sustainability for the college.

It is also observed from Table (3) that there is a high level of agreement with all statements (Y1–Y12) of the organizational immunity variable, according to the perceptions of the sample members among the teaching staff working at the College of Agriculture/University of Tikrit. The calculated arithmetic mean for all statements exceeded the hypothetical value of 3, in addition to the high relative importance. The following can also be observed:

- **Organizational Learning Dimension:** Statement No. (Y1), represented by (*The organization's leadership encourages a culture of continuous learning to enable teaching staff to acquire new experiences and knowledge*), recorded the highest level of agreement, with an arithmetic mean of (Y4), whereas Statement No. (Y4), represented by (*The organization benefits from the experiences of other similar organizations in enhancing organizational performance*), recorded the lowest level of agreement, with an arithmetic mean of (3.78). The results of the agreement among the opinions of the teaching staff constituting the research sample confirm that the college leadership makes every effort to develop and enhance their academic capabilities and improve their performance through creating a suitable environment and climate, focusing on cultural aspects, and providing moral and material support programs and academic training programs.

- **Organizational Memory Dimension:** Statement No. (Y5), represented by *(The organization possesses databases for storing knowledge and benefiting from it)*, recorded the highest level of agreement, with an arithmetic mean of (3.87), whereas Statement No. (Y6), represented by *(The organization's leadership enables all teaching staff to access the organization's databases)*, recorded the lowest level of agreement, with an arithmetic mean of (3.69). The results indicate that the college possesses a good database containing organizational experiences it has previously undergone, whether at the academic or administrative level, as well as current capabilities for storing and analyzing data and utilizing it as information upon which leaders rely to make decisions and direct resources and teaching staff in the process of transferring, sharing, and retaining knowledge, in order to develop organizational processes, avoid future deviations, and reduce financial costs.

- **Organizational Genes Dimension:** Statement No. (Y11), represented by *(The organization's leadership has been able to avoid current problems that the organization has previously faced)*, recorded the highest level of agreement, with an arithmetic mean of (3.83), whereas Statement No. (Y10), represented by *(The organization is characterized by possessing all the qualifications that enable it to respond to work requirements)*, recorded the lowest level of agreement, with an arithmetic mean of (3.76). All results of the items of this dimension confirm that the college possesses core capabilities, organizational values, and a culture that represent organizational chromosomes carrying unique codes, providing teaching staff with common characteristics and granting the college the ability to identify environmental risks, deal with them, and recover from organizational maladies that affect it. Meanwhile, the low standard deviation values and the low values of the coefficient of variation, which are below the hypothetical value of the coefficient of (50%) for all statements, indicate consistency and a lack of dispersion in the sample responses, thereby supporting the reliability of the arithmetic mean results in representing the overall sample.

#### Second: Descriptive Analysis of the Variables and Dimensions

Table (4) presents the descriptive analysis of the research variables (proactive leadership and organizational immunity) across all their dimensions. This analysis was conducted using a number of statistical methods, such as the arithmetic mean and standard deviation.

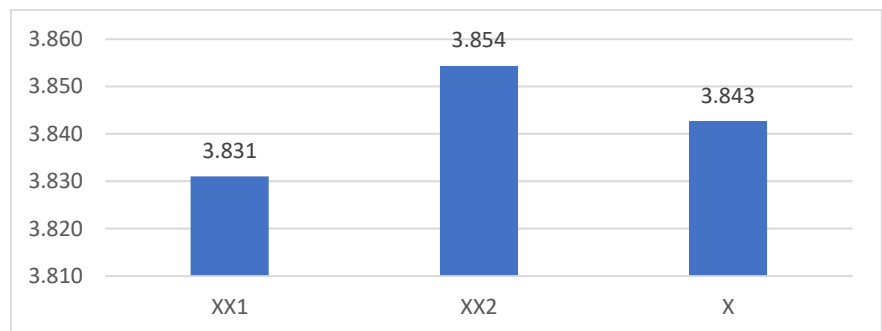
**Table 4.** Description of Research Variables

| Variables and Dimensions   | Code | Mean  | Standard Deviation | Minimum | Maximum | Relative Importance (%) | Coefficient of Variation (%) | Skewness |
|----------------------------|------|-------|--------------------|---------|---------|-------------------------|------------------------------|----------|
| A. Proactive Personality   | XX1  | 3.831 | 0.680              | 1.80    | 5.00    | 76.6%                   | 17.7%                        | -0.102   |
| B. Proactive Behavior      | XX2  | 3.854 | 0.650              | 1.80    | 5.00    | 77.1%                   | 16.9%                        | -0.373   |
| Proactive Leadership       | X    | 3.843 | 0.625              | 1.80    | 5.00    | 76.9%                   | 16.3%                        | -0.256   |
| A. Organizational Learning | YY1  | 3.867 | 0.686              | 1.50    | 5.00    | 77.3%                   | 17.7%                        | -0.481   |
| B. Organizational Memory   | YY2  | 3.772 | 0.674              | 1.50    | 5.00    | 75.4%                   | 17.9%                        | -0.437   |

| Variables and Dimensions | Code | Mean  | Standard Deviation | Minimum | Maximum | Relative Importance (%) | Coefficient of Variation (%) | Skewness |
|--------------------------|------|-------|--------------------|---------|---------|-------------------------|------------------------------|----------|
| C. Organizational Genes  | YY3  | 3.803 | 0.668              | 1.50    | 5.00    | 76.1%                   | 17.6%                        | -0.575   |
| Organizational Immunity  | Y    | 3.814 | 0.604              | 1.50    | 5.00    | 76.3%                   | 15.8%                        | -0.650   |

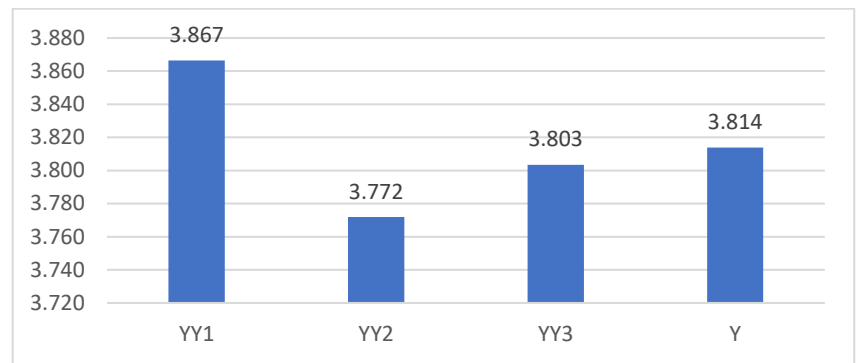
**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (4) that there is a high level of agreement regarding the availability of the proactive leadership variable with its dimensions (A. Proactive Personality, B. Proactive Behavior), according to the perceptions of the sample members among the teaching staff working at the College of Agriculture/University of Tikrit. The calculated arithmetic mean exceeded the hypothetical value of (3) for the variable and all of its two dimensions, in addition to the high relative importance. The arithmetic mean of the proactive leadership variable reached (3.843), with a relative importance of (76.9%). Regarding the dimensions, it is observed that dimension (B. Proactive Behavior) recorded the highest level of agreement, with an arithmetic mean of (3.854), whereas dimension (A. Proactive Personality) recorded the lowest level of agreement, with an arithmetic mean of (3.831). Figure (3) shows the level of agreement for the proactive leadership variable with its two dimensions.



**Figure 3.** Level of Agreement Regarding the Proactive Leadership Variable with Its Two Dimensions

It is observed from Table (4) that there is a high level of agreement regarding the availability of the organizational immunity variable with its dimensions (A. Organizational Learning, B. Organizational Memory, C. Organizational Genes), according to the perceptions of the sample members among the teaching staff working at the College of Agriculture/University of Tikrit. The calculated arithmetic mean exceeded the hypothetical value of (3) for the variable and all of its dimensions, in addition to the high relative importance. The arithmetic mean of the organizational immunity variable reached (3.814), with a relative importance of (76.3%). Regarding the dimensions, it is observed that dimension (A. Organizational Learning) recorded the highest level of agreement, with an arithmetic mean of (3.867), followed by dimension (C. Organizational Genes), with an arithmetic mean of (3.803), whereas dimension (B. Organizational Memory) recorded the lowest level of agreement, with an arithmetic mean of (3.772). Figure (4) shows the level of agreement regarding the organizational immunity variable with its two dimensions.



**Figure 4.** Level of Agreement Regarding the Organizational Immunity Variable with Its Three Dimensions

The low standard deviation and the low coefficient of variation, which is below the hypothetical value of the coefficient of (50%) for both research variables with all their dimensions, indicate the presence of consistency and a lack of dispersion in the responses of the sample members. This supports the reliability of the arithmetic mean results in representing the total sample.

#### **Eighth: Normality Test**

The normality of the data was verified by conducting a normality test on the data using the skewness coefficient (Skewness). Data are considered normally distributed if the value of the skewness coefficient falls within the range of +1 to -1. Referring to Table (4), it is observed that the calculated skewness coefficient values for all variables and dimensions fall within the specified ranges. This indicates that they approximate a normal distribution and satisfy the normality assumption, enabling the researcher to use parametric statistical methods to test the research hypotheses instead of non-parametric methods, which are considered less accurate in obtaining results.

#### **Third: Testing the Availability Hypotheses**

This section included two main hypotheses, as follows:

A. First Main Hypothesis (H1): The dimensions of proactive leadership are available in the organization under study.

To test this hypothesis, the (One-Sample T-Test) was used. This test is employed to determine the significance of differences between the arithmetic means of the proactive leadership variable with all its dimensions and the hypothetical arithmetic mean. Table (5) presents the test results.

**Table 5.** Test of Differences in the Availability of the Proactive Leadership Variable and All Its Dimensions

| Variables and Dimensions | Code | Test Value = 3 |     |                 |
|--------------------------|------|----------------|-----|-----------------|
|                          |      | t              | df  | Sig. (2-tailed) |
| A. Proactive Personality | XX1  | 12.412         | 102 | 0.000           |
| B. Proactive Behavior    | XX2  | 13.346         | 102 | 0.000           |
| Proactive Leadership     | X    | 13.690         | 102 | 0.000           |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (5) that the value of (t) was statistically significant at a significance level of less than (5%), indicating the presence of significant differences between the means of the proactive leadership variable with all its dimensions and the hypothetical mean. Accordingly, the proactive leadership variable with all its dimensions is available in the organization under study. This indicates that the college under study possesses proactive leadership characterized by proactive personality and behavior,

enabling it to monitor changes before they occur and develop appropriate plans to enhance adaptation and alignment and benefit from available opportunities. Therefore, the first main hypothesis is accepted.

**B. Second Main Hypothesis (H2): The dimensions of organizational immunity are available in the organization under study.**

To test this hypothesis, the (One-Sample T-Test) was used. This test is employed to determine the significance of differences between the arithmetic means of the organizational immunity variable with all its dimensions and the hypothetical arithmetic mean. Table (6) presents the test results.

**Table 6.** Test of Differences in the Availability of the Organizational Immunity Variable and All Its Dimensions

| Variables and Dimensions   | Code | Test Value = 3 |     |                 |
|----------------------------|------|----------------|-----|-----------------|
|                            |      | t              | df  | Sig. (2-tailed) |
| A. Organizational Learning | YY1  | 12.823         | 102 | 0.000           |
| B. Organizational Memory   | YY2  | 11.616         | 102 | 0.000           |
| C. Organizational Genes    | YY3  | 12.197         | 102 | 0.000           |
| Organizational Immunity    | Y    | 13.686         | 102 | 0.000           |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (6) that the value of (t) was statistically significant at a significance level of less than (5%), indicating the presence of significant differences between the means of the organizational immunity variable with all its dimensions and the hypothetical mean. Accordingly, the organizational immunity variable with all its dimensions is available in the organization under study. Therefore, the second main hypothesis is accepted.

**Fourth: Testing the Correlation Hypotheses**

This section included one hypothesis, as follows:

**C. Third Main Hypothesis (H3):** There is a statistically significant positive correlation between proactive leadership and organizational immunity at the overall level and at the dimensional level.

To test this hypothesis, the Pearson correlation coefficient (Pearson) was calculated to determine the significance, strength, and direction of the relationship between proactive leadership and organizational immunity. Table (7) presents the test results.

**Table 7.** The Relationship Between Proactive Leadership and Organizational Immunity

| Variables and Dimensions | Statement | YY1     | YY2     | YY3     | Y       |
|--------------------------|-----------|---------|---------|---------|---------|
| XX1                      | Pearson   | 0.564** | 0.629** | 0.700** | 0.706** |
|                          | Sig.      | 0.000   | 0.000   | 0.000   | 0.000   |
| XX2                      | Pearson   | 0.683** | 0.651** | 0.751** | 0.778** |
|                          | Sig.      | 0.000   | 0.000   | 0.000   | 0.000   |
| X                        | Pearson   | 0.662** | 0.680** | 0.771** | 0.789** |
|                          | Sig.      | 0.000   | 0.000   | 0.000   | 0.000   |

(\*\*). Statistically significant at a significance level of 1%; (\*). Statistically significant at a significance level of 5%.

It is observed from Table (7) that there is a statistically significant positive (direct) relationship at a significance level of less than (5%) between the proactive leadership variable with its two dimensions (A. Proactive Personality, B. Proactive Behavior) and the organizational immunity variable with its three dimensions (A. Organizational Learning, B. Organizational Memory, C. Organizational Genes). This means that an increase in the level of availability of the proactive leadership variable with its two dimensions at the College of Agriculture/University of Tikrit under study will be accompanied by an increase in the level of the organizational immunity variable with its three dimensions at this college. Therefore, the third main hypothesis is accepted at both the overall level and the dimensional level.

#### **Fifth: Testing the Effect Hypothesis**

This section included one hypothesis, as follows:

**D. Fourth Main Hypothesis (H4):** There is a statistically significant effect of proactive leadership on organizational immunity at the overall level and at the dimensional level.

To test this hypothesis, three simple linear regression equations were developed to estimate the value of organizational immunity through the Proactive Personality dimension in Equation (1), through the Proactive Behavior dimension in Equation (2), and through the proactive leadership variable as a whole in Equation (3). This was done to determine the effect of the proactive leadership variable and its two dimensions on organizational immunity. Table (8) presents the effect results.

**Table 8.** The Impact of Proactive Leadership on Organizational Immunity at the Overall and Dimensional Levels

| Equation | Explanatory Variable | Dependent Variable | $\beta_0$ | $\beta$ | T (Sig.)       | F (Sig.)        | R <sup>2</sup> |
|----------|----------------------|--------------------|-----------|---------|----------------|-----------------|----------------|
| 1        | XX1                  | Y                  | 1.411     | 0.627   | 10.026 (0.000) | 100.519 (0.000) | 0.499          |
| 2        | XX2                  | Y                  | 1.028     | 0.723   | 12.453 (0.000) | 155.077 (0.000) | 0.606          |
| 3        | X                    | Y                  | 0.886     | 0.762   | 12.894 (0.000) | 166.268 (0.000) | 0.622          |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (8) that:

1. According to Equation (1), the validity of the regression model is confirmed by the value of (F), which amounted to (100.519) at a significance level of less than (5%). This indicates the possibility of estimating the value of organizational immunity through the Proactive Personality dimension. The value of (T), amounting to (10.026) at a significance level of less than (5%), also indicates a significant effect. Furthermore, the positive beta regression coefficient ( $\beta$ ), amounting to (0.627), indicates that the effect is positive, meaning that an increase of one unit in the Proactive Personality dimension will be accompanied by an enhancement in the levels of organizational immunity by (63%) in the overall organization under study. Meanwhile, the coefficient of determination ( $R^2$ ), amounting to (0.499), indicates that the Proactive Personality dimension explains (49.9%) of the changes occurring in the organizational immunity variable, while the remaining percentage is attributable to other factors not included in the current model. This indicates that the proactive personality of leaders enhanced the organization's immunity and its ability to engage in organizational learning and efficiently utilize organizational memory. Accordingly, the first sub-hypothesis, which states that there is an effect of the Proactive Personality dimension on organizational immunity, is accepted.

2. According to Equation (2), the validity of the regression model is confirmed by the value of (F), which amounted to (155.077) at a significance level of less than (5%), indicating the possibility of estimating the value of organizational immunity through the

Proactive Behavior dimension. The value of (T), amounting to (12.453) at a significance level of less than (5%), indicates a significant effect. Furthermore, the positive beta regression coefficient ( $\beta$ ), amounting to (0.723), indicates that the effect is positive, meaning that an increase of one unit in the Proactive Behavior dimension will be accompanied by an enhancement in the levels of organizational immunity by (72%) in the overall organization under study. Meanwhile, the coefficient of determination ( $R^2$ ), amounting to (0.606), indicates that the Proactive Behavior dimension explains (60.6%) of the changes occurring in the organizational immunity variable, while the remaining percentage is attributable to other factors not included in the current model. These results confirm that the leadership of the college under study possesses proactive behavior based on a strategic vision that has enhanced the college's immunity. Accordingly, the second sub-hypothesis, which states that there is an effect of the Proactive Behavior dimension on organizational immunity, is accepted.

3. According to Equation (3), the validity of the regression model is confirmed by the value of (F), which amounted to (166.268) at a significance level of less than (5%), indicating the possibility of estimating the value of organizational immunity through proactive leadership as a whole. The value of (T), amounting to (12.894) at a significance level of less than (5%), indicates a significant effect. Furthermore, the positive beta regression coefficient ( $\beta$ ), amounting to (0.762), indicates that the effect is positive, meaning that an increase of one unit in the Proactive Behavior dimension will be accompanied by an enhancement in the levels of organizational immunity by (76%) in the overall organization under study. Meanwhile, the coefficient of determination ( $R^2$ ), amounting to (0.622), indicates that proactive leadership as a whole explains (62.2%) of the changes occurring in the organizational immunity variable, while the remaining percentage is attributable to other factors not included in the current model. The results, both dimensionally and overall, confirm that the colleges under study possess proactive leadership capable of identifying the challenges and opportunities facing the college and taking proactive measures to address them in a manner that contributes to enhancing its organizational immunity.

Based on the results of the three aforementioned regression equations, it can be stated that **the fourth main hypothesis of the study is accepted, which states that there is an effect of proactive leadership on organizational immunity at the overall level and at the dimensional level.**

#### 4. Discussion

##### Sixth: Testing the Variance Hypothesis According to Demographic Information

This section included one hypothesis, as follows:

**C. Fifth Main Hypothesis (H5):** The opinions of the study sample regarding proactive leadership and organizational immunity vary according to demographic information.

This hypothesis included seven sub-hypotheses, as follows:

**First Sub-Hypothesis (H5.1):** The opinions of the study sample regarding proactive leadership and organizational immunity vary according to gender.

To test this hypothesis, the Independent Samples T-Test was used to determine the significance of differences between two groups, namely the means of males and the means of females, regarding the level of agreement on the availability of the study variables (proactive leadership and organizational immunity). Table (9) presents the test results.

**Table 9.** Variance in Availability of Proactive Leadership and Organizational Immunity According to Gender

| Variables               | Code | Assumption                  | F     | Sig. | t      | df     | Sig. (2-tailed) |
|-------------------------|------|-----------------------------|-------|------|--------|--------|-----------------|
| Proactive Leadership    | X    | Equal variances assumed     | 2.818 | .096 | -1.226 | 101    | .223            |
|                         |      | Equal variances not assumed |       |      | -1.327 | 92.536 | .188            |
| Organizational Immunity | Y    | Equal variances assumed     | 3.050 | .084 | -1.472 | 101    | .144            |
|                         |      | Equal variances not assumed |       |      | -1.626 | 96.214 | .107            |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (9) that there is relative homogeneity in the opinions of males and females regarding the availability of the proactive leadership and organizational immunity variables at the College of Agriculture/University of Tikrit under study, as indicated by the value of (F) in the Levene's Test, which was not statistically significant, as it was greater than (5%) for both variables. It is also observed in the row corresponding to the statement "Equal Variances" in the (T) test for both variables, which was not statistically significant as it was greater than 5%, that there are no statistically significant differences between the male group and the female group in their opinions regarding the availability of the two variables. Therefore, the first sub-hypothesis is rejected.

**Second Sub-Hypothesis (H5.2):** The opinions of the study sample regarding proactive leadership and organizational immunity vary according to age.

To test this hypothesis, One-Way ANOVA was adopted to determine the significance of differences among more than two groups (three or more groups). Table (10) presents the test results.

**Table 10.** Variance in Availability of Proactive Leadership and Organizational Immunity According to Age

| Variables and Dimensions | Code | F     | Sig. |
|--------------------------|------|-------|------|
| Proactive Leadership     | X    | 2.680 | .051 |
| Organizational Immunity  | Y    | 1.873 | .139 |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (10) that the value of (F) was not statistically significant at a significance level greater than (5%) for both variables. Therefore, the opinions of the sample regarding the availability of proactive leadership and organizational immunity in the college under study do not differ according to age. Accordingly, the second sub-hypothesis is rejected.

**Third Sub-Hypothesis (H5.3):** The opinions of the study sample regarding proactive leadership and organizational immunity vary according to educational attainment.

To test this hypothesis, the Independent Samples T-Test was used to determine the significance of differences between two groups, namely the means of Master's degree

holders and the means of PhD holders, regarding the level of agreement on the availability of the study variables (proactive leadership and organizational immunity). Table (11) presents the test results.

**Table 11.** Variance in Availability of Proactive Leadership and Organizational Immunity According to Academic Qualification

| Variables               | Code | Assumption                  | F     | Sig. | t      | df     | Sig. (2-tailed) |
|-------------------------|------|-----------------------------|-------|------|--------|--------|-----------------|
| Proactive Leadership    | X    | Equal variances assumed     | .499  | .482 | -.365  | 101    | .716            |
|                         |      | Equal variances not assumed |       |      | -.360  | 42.083 | .720            |
| Organizational Immunity | Y    | Equal variances assumed     | 2.218 | .140 | -1.000 | 101    | .320            |
|                         |      | Equal variances not assumed |       |      | -.880  | 35.562 | .385            |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (11) that there is relative homogeneity in the opinions of Master's and PhD degree holders regarding the availability of the proactive leadership and organizational immunity variables in the college under study, as indicated by the value of (F) in the Levene's Test, which was not statistically significant, as it was greater than (5%) for both variables. It is also observed in the row corresponding to the statement "Equal Variances" in the (T) test for both variables, which was not statistically significant as it was greater than 5%, that there are no statistically significant differences between the Master's degree group and the PhD group in their opinions regarding the availability of the two variables. Therefore, the third sub-hypothesis is rejected.

**Fourth Sub-Hypothesis (H5.4):** The opinions of the study sample regarding proactive leadership and organizational immunity vary according to academic rank.

To test this hypothesis, One-Way ANOVA was adopted to determine the significance of differences among more than two groups (three or more groups). Table (12) presents the test results.

**Table 12.** Variance in Availability of Proactive Leadership and Organizational Immunity According to Academic Rank

| Variables and Dimensions | Code | F    | Sig. |
|--------------------------|------|------|------|
| Proactive Leadership     | X    | .456 | .714 |
| Organizational Immunity  | Y    | .284 | .837 |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (12) that the value of (F) was not statistically significant at a significance level greater than (5%) for both variables. Therefore, the opinions of the sample regarding the availability of proactive leadership and organizational immunity in the college under study do not differ according to academic rank. Accordingly, the fourth sub-hypothesis is rejected.

**Fifth Sub-Hypothesis (H5.5):** The opinions of the study sample regarding proactive leadership and organizational immunity vary according to years of service.

To test this hypothesis, One-Way ANOVA was adopted to determine the significance of differences among more than two groups (three or more groups). Table (13) presents the test results.

**Table 13.** Variance in Availability of Proactive Leadership and Organizational Immunity According to Years of Service

| Variables and Dimensions | Code | F     | Sig. |
|--------------------------|------|-------|------|
| Proactive Leadership     | X    | 2.356 | .076 |
| Organizational Immunity  | Y    | 2.331 | .079 |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (13) that the value of (F) was not statistically significant at a significance level greater than (5%) for both variables. Therefore, the opinions of the sample regarding the availability of proactive leadership and organizational immunity in the college under study do not differ according to years of service. Accordingly, the fifth sub-hypothesis is rejected.

**Sixth Sub-Hypothesis (H5.6):** The opinions of the study sample regarding proactive leadership and organizational immunity vary according to job position.

To test this hypothesis, One-Way ANOVA was adopted to determine the significance of differences among more than two groups (three or more groups). Table (14) presents the test results.

**Table 14.** Variance in Availability of Proactive Leadership and Organizational Immunity According to Job Position

| Variables and Dimensions | Code | F     | Sig. |
|--------------------------|------|-------|------|
| Proactive Leadership     | X    | 1.079 | .380 |
| Organizational Immunity  | Y    | .732  | .625 |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (14) that the value of (F) was not statistically significant at a significance level greater than (5%) for both variables. Therefore, the opinions of the sample regarding the availability of proactive leadership and organizational immunity in the college under study do not differ according to job position. Accordingly, the sixth sub-hypothesis is rejected.

**Seventh Sub-Hypothesis (H5.7):** The opinions of the study sample regarding proactive leadership and organizational immunity vary according to academic department.

To test this hypothesis, One-Way ANOVA was adopted to determine the significance of differences among more than two groups (three or more groups). Table (15) presents the test results.

**Table 15.** Variance in Availability of Proactive Leadership and Organizational Immunity According to Academic Department

| Variables and Dimensions | Code | F     | Sig. |
|--------------------------|------|-------|------|
| Proactive Leadership     | X    | 4.122 | .001 |
| Organizational Immunity  | Y    | 4.162 | .000 |

**Source:** Prepared by the Researcher According to the Outputs of SPSS V.24

It is observed from Table (15) that the value of (F) was statistically significant at a significance level of less than (5%) for both variables. Accordingly, the opinions of the sample regarding the availability of proactive leadership and organizational immunity in the college under study differ according to the academic department. Therefore, the seventh sub-hypothesis is accepted.

Based on the results of the sub-hypotheses, it can be stated that the **fifth research hypothesis is accepted**, as one of the demographic characteristics, namely the **academic department**, resulted in differences in the sample members' opinions regarding the availability of the study variables.

## 5. Conclusion

1. The results of the sample description revealed that the teaching staff at the College of Agriculture possess a high academic and cognitive level, as the majority hold doctoral degrees and possess expertise that enables them to determine work priorities and understand leadership processes and its orientations toward anticipating potential changes in the work environment.
2. The leaders of the College of Agriculture possess a proactive personality, as agreed upon by the teaching staff (the study sample), with arithmetic means exceeding the hypothetical mean of (3) for all items of this dimension. This indicates that the leaders of this college anticipate potential changes that may occur in the college due to their alert and proactive mindset, which enables them to quickly monitor changes and identify the associated opportunities and risks.
3. The leaders of the college under study are characterized by proactive behavior, according to the agreement percentages obtained from the study sample. This indicates that the leaders of these colleges work to sustain the academic performance of their college by improving the work methods adopted and innovating new methods to capitalize on current and future opportunities.
4. The College of Agriculture adopts organizational learning methods according to the results obtained regarding the items of this dimension, which confirms that the College of Agriculture adopts an organizational culture that motivates employees toward organizational learning and benefiting from its past experiences, as well as from the experiences of similar colleges. It also implements academic and agricultural training programs that enhance the organizational performance of the college in general.
5. The College of Agriculture possesses organizational memory in which data resulting from organizational processes are stored, according to the results and the agreement of the sample members' opinions. This indicates that raw data and acquired knowledge are stored, and the college has benefited from them by distributing them to all departments of the college, with this memory being continuously updated.
6. The organization enjoys firmly established values due to the organizational genes it possesses, the existence of which was agreed upon by the members of the study sample. The results for this dimension confirm that the organization is capable of recovering from the environmental risks to which it is exposed, due to the teaching staff's deep belief in the resilience and strength of their college. Their confidence in its leadership makes them certain of achieving the declared objectives through their determination to implement them according to the principle of organizational embeddedness acquired from its organizational genes.
7. The dimensions of proactive leadership and organizational immunity are available at the College of Agriculture, indicating its ability to deal with future changes, capitalize on opportunities, and overcome risks through a proactive leadership approach and strong organizational immunity.
8. There is a strong positive correlation between proactive leadership and organizational immunity at the overall level and at the dimensional level, according to the results of testing the relationship between the two variables and their dimensions. This means that the proactive procedures and methods adopted by the leadership of the college under study contribute to enhancing its organizational immunity and its ability to adapt to changes and address

challenges. Conversely, this immunity provides the college leadership with greater flexibility when developing proactive plans due to the core capabilities possessed by the organization.

9. There is a strong effect of proactive leadership on organizational immunity at the overall level and at the dimensional level at the College of Agriculture, according to the results of the effect test. This confirms the importance of the proactive leadership style practiced at the College of Agriculture in influencing its organizational immunity through the flexible plans and organizational procedures possessed by this leadership, which go beyond current work requirements toward future work requirements.
10. The results showed that there is variation in the opinions of the study sample regarding the study variables according to the demographic information of the sample. The results showed that all demographic characteristics did not result in differences in their opinions regarding the availability of the variables; however, the academic department resulted in differences in opinions, leading to the acceptance of the fifth main hypothesis.

### Recommendations

1. Enhance the academic and cognitive level of staff members who require higher academic qualifications by providing them with opportunities to complete their higher degrees and acquire additional experience in their field of work.

**Implementation Mechanism:** Increase the admission quota for teaching staff within doctoral programs and ensure that their graduation projects are linked to field realities to address existing problems or develop new products.

2. The leaders of the College of Agriculture should adopt programs and algorithms related to artificial intelligence, given their proactive personality, as they require a minimum level of predictive information analysis to make proactive decisions.

**Implementation Mechanism:** Provide the specialized departments of the college with the necessary human resources, computing resources, laboratories, and facilities equipped with these programs, enhance the electronic infrastructure, and connect them through a unified network with the college leadership to provide brief status updates and reports that assist the college leadership in strategic decision-making.

3. The leadership of the college under study should develop proactive plans in coordination and participation with all departments to ensure the proper identification of gaps and opportunities.

**Implementation Mechanism:** Adopt the outputs of department meetings as inputs for the College Council meeting, which is based on consultation regarding the mechanism for developing future plans and procedures for addressing current and future changes.

4. Enhance organizational learning methods by developing mechanisms and approaches that are consistent with the nature of the changes occurring in the surrounding environment and their potential future developments.

**Implementation Mechanism:** Provide continuous training for teaching staff on emerging topics in the work environment and conduct laboratory and field experiments that enhance their level of knowledge and validate the results realistically through field application.

5. Strengthen and continuously update organizational memory to expand the database and store the largest possible amount of knowledge regarding academic performance, operations, and agricultural and field experiments, while ensuring knowledge sharing at all levels of the college.

**Implementation Mechanism:** Update the technological infrastructure, increase storage capacity, and allow teaching staff access to this data to benefit from it in developing their knowledge.

6. Increase the college's immunity by enhancing adaptability, resource diversity, and creativity in a manner that provides it with a competitive advantage.

**Implementation Mechanism:** Allocate sufficient resources of various types to achieve flexibility and diversity in production processes, with emphasis on technological resources that enhance the organization's efficiency and effectiveness and its ability to respond to environmental challenges and changes.

7. Ensure continuous monitoring by the college leadership of developments occurring in the work environment in order to determine the college's current position and future direction, given the availability of the elements of exploration and resilience represented by proactive leadership and organizational immunity in this college.

**Implementation Mechanism:** Establish a monitoring unit with expertise in the academic field and equip it with advanced technological devices and equipment to assist in identifying changes in the surrounding environment and in agricultural, field, and production processes, thereby providing detailed reports on the organization's internal and external conditions and continuously forwarding them to the organization's leadership.

8. Enhance the proactive procedures and methods adopted by the leadership of the College of Agriculture to strengthen its ability to adapt to continuous changes in the work environment in a manner that increases its organizational immunity.

**Implementation Mechanism:** Involve all organizational levels in the process of developing current and future plans, as these parties are close to field problems and possess sufficient understanding of the nature of dealing with them.

9. Enhance the organizational flexibility of the College of Agriculture to respond to continuous changes in the work environment in a manner that enables it to align with the proactive orientations of its leadership, given the demonstrated ability of these orientations to contribute to strengthening its immunity.

**Implementation Mechanism:** Prepare and train teaching staff to increase their ability to perform various academic tasks and strengthen the infrastructure with appropriate buildings and specialized devices and equipment that enhance flexible responsiveness to organizational processes.

10. Develop effective plans to improve the performance level of the academic departments and their ability to respond to changes and developments arising from internal and external requirements, as these departments demonstrated a lack of availability of proactive leadership and organizational immunity.

**Implementation Mechanism:** Increase financial and moral support and allocations for these departments in a manner that enables them to perform their tasks properly and in accordance with the standards and requirements of total quality.

## References

- [1] C.-H. Wu and Y. Wang, "Understanding proactive leadership," in *Advances in Global Leadership*, vol. 6. Bingley, U.K.: Emerald Group Publishing, 2011, pp. 297–312.
- [2] H. H. Kazem, "The role of proactive leadership in enhancing organizational culture and employee commitment: A study in Al-Ahli Iraqi Bank," *Journal of Accounting and Financial Studies*, vol. 19, no. 69, 2024.
- [3] F. Murniasih, "The role of proactive personality on transformational leadership and innovative work behavior," *Psychocentrum Review*, vol. 5, no. 1, pp. 29–41, 2023.
- [4] X. Zhang, D. Li, and X. Guo, "Antecedents of responsible leadership: Proactive and passive responsible leadership behavior," *Sustainability*, vol. 14, 2022.
- [5] S. I. Faraj and I. A. Al-Harthi, "Proactive leadership among female leaders of intermediate schools in Taif City in light of Vision 2030 from their perspective," *Journal of Educational and Psychological Sciences*, vol. 6, no. 59, 2022.
- [6] K. S. Al-Fahmi, "Proactive leadership of academic leaders at the colleges of King Abdulaziz University," *Arab Journal for Scientific Publishing*, vol. 7, no. 73, 2024.

- [7] H. A. Z. Ali, "Proactive leadership and its impact on achieving organizational pride through the application of the interlocking waves strategy: An analytical study in the State Company for Oil Marketing," *Tikrit Journal of Administrative and Economic Sciences*, vol. 20, no. 66, pt. 2, 2024.
- [8] H. A. Shaker, M. A. A. Abdel-Wahab, and M. F. Al-Messiri, "The role of proactive leadership in crisis management practices: An applied study of employees in government hospitals in Kafr El-Sheikh Governorate," *Journal of Contemporary Commercial Studies*, vol. 9, no. 16, pt. 2, 2023.
- [9] M. T. Al-Karawi, "Adopting the foundations of proactive leadership according to the theory of planned behavior among employees: An applied study of a sample of department managers at Asiacell Mobile Telecommunications Company," *Journal of the College of Education for Women for Human Sciences*, no. 23, 2012.
- [10] H. S. A. Al-Dimyati, "The impact of proactive work behaviors on strategic dominance: A field study of the Egyptian Telecommunications Company," *Arab Journal of Management*, vol. 46, no. 3, 2026, forthcoming.
- [11] H. Q. Saeed, "Organizational immunity and its role in institutional excellence: An exploratory study from employees' perspectives at the Oil Products Distribution Company," *Journal of Economics and Administrative Sciences*, vol. 31, no. 145, 2025.
- [12] A. D. Al-Jader, S. M. Al-Allaf, and K. A. Sadiq, "Characteristics of creative behavior and its reflection on organizational organization: An exploratory study of employees in Al-Hadbaa Food Industries Company," *Nottingham University Journal for Administrative and Human Sciences*, vol. 4, no. 4, 2024.
- [13] O. R. Majeed and B. S. Lafta, "The effect of organizational immunity in enhancing the strategic capabilities of the company: An applied study on the Iraqi General Insurance Company," *International Journal of Health Sciences*, vol. 6, no. S6, pp. 7016–7035, 2022.
- [14] M. Benkihoul and B. Nouredine, "Organizational immunity and its relationship to organizational culture: A field study," *Journal of Human and Society Sciences*, vol. 14, no. 1, 2025.
- [15] I. A. S. Diab, "Organizational DNA as an approach to enhancing organizational immunity systems in Egyptian universities in light of the experience of Peking University and Moscow University," *Journal of the Faculty of Education, Ain Shams University*, no. 47, pt. 4, 2023.
- [16] A. M. M. Al-Naqira, "The impact of organizational immunity on organizational innovation: An applied study on industrial companies in Sadat City," *Scientific Journal of Financial and Commercial Studies and Research*, vol. 2, no. 2, pt. 3, 2021.
- [17] B. M. Alwan and A. F. Talib, "Measuring the effectiveness of organizational immune system functions: An analytical exploratory study in Iraqi Airways Company," *Iraqi Journal of Administrative Sciences*, vol. 12, no. 47, 2015.
- [18] J. S. Ahmed, "Organizational capabilities and their role in enhancing the organizational immune system: An analytical study in the Iraqi Insurance Company," *Muthanna Journal of Administrative and Economic Sciences*, vol. 12, no. 1, 2022.
- [19] A. M. Alsiah, "Organizational immunity and its effect on strategic technological change options: A field study at Jordanian industrial companies listed in Amman Stock Exchange," *Academy of Strategic Management Journal*, vol. 19, no. 5, 2020.
- [20] A. Al-Sheikh and Z. Boudrissa, "Knowledge sharing and its role in enhancing organizational immunity systems in light of the new transformations of Algerian institutions," *Journal of Human Research and Studies*, vol. 17, no. 1, 2023.