

Impact of Organizational Climate on Creative Abilities Development: Study of Algerian Vegetable Oils Group

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Abstract

This study investigates the impact of specific dimensions of organizational climate—namely, organizational structure, managerial leadership, goal setting, and communication—on enhancing employees' creative capabilities. Conducted within the Group of Algerian Vegetable Oils (GZA), the research employed a structured questionnaire distributed to a purposive sample of 50 employees from middle and executive management levels.

The data analysis utilized descriptive statistics (means and standard deviations), chi-square tests to examine relational hypotheses, and multiple linear regression to assess causal effects at a 0.05 significance level. The findings revealed that two dimensions—managerial leadership and communication—had a statistically significant and positive effect on fostering creativity among employees. In contrast, organizational structure and goal setting exhibited no significant impact.

The results underscore the critical role of managerial and communicative practices in cultivating an innovative organizational culture. The study concludes with a series of strategic recommendations aimed at developing the internal climate to boost innovation in Algeria's industrial sector.

Keywords: organizational climate, creativity, leadership, communication, regression analysis, Algeria industrial organizations.

1. Introduction

1.1. Research Background

Organizational climate has become a central topic in organizational behavior due to its substantial impact on individual motivation and innovation. In today's dynamic and competitive environment, organizations increasingly rely on adaptive structures and supportive managerial practices to drive innovation and long-term success.

1.2. Research Problem

Despite the acknowledged significance of organizational climate, many organizations fail to fully recognize or leverage its dimensions to foster employee creativity. This research

specifically addresses the gap in understanding how structural and interpersonal climate dimensions affect creativity within Algeria industrial enterprises.

1.3. Research Importance

This study is important as it highlights how key organizational climate elements—especially managerial leadership and communication—can serve as catalysts for enhancing creative capabilities, particularly in developing industrial economies.

1.4. Aim and Objectives

The primary aim of this research is to analyze the influence of organizational climate dimensions on employee creativity. The key objectives include:

- To define and conceptualize organizational climate and creativity.
- To identify the prevailing organizational climate in the studied company.
- To evaluate the level of employee creativity.
- To measure the relationship and effect of climate dimensions on creativity.
- To provide practical recommendations for improving organizational innovation.

1.5. Research Questions

- What is the nature of the organizational climate within the Group of Algerian Vegetable Oils (GZA)?
- How do the dimensions of organizational climate affect employee creativity?

1.6. Research Motivations

The motivation behind this study stems from the critical need to support innovation in Algeria industries. As organizations strive to remain relevant in a globalized market, understanding the mechanisms that drive creativity is essential.

1.7. Research Contributions

This research contributes to the limited literature on organizational climate and creativity within the Algeria context. It also proposes a validated model linking specific climate dimensions to creative outcomes.

1.8. Key Findings

Findings show that managerial leadership and communication significantly influence creativity, whereas structural elements like organizational hierarchy and unclear goal-setting do not exhibit the same effect.

1.9. Research Structure

The paper is structured into four main sections:

1. Introduction: Describes the research context, problem, objectives, and significance.
2. Theoretical Framework: Presents the literature on organizational climate and creativity.

3. Methodology and Results: Outlines the data collection, statistical methods, and findings.
4. Conclusions and Recommendations: Summarizes insights and proposes strategic improvements.

2. Literature Review

2.1. Theoretical Perspectives on Organizational Climate

Organizational climate refers to the shared perceptions and attitudes that shape employees' experiences within their workplace. According to Schneider et al. (2021), it encompasses leadership behavior, communication flow, decision-making norms, and the organizational structure. Recent studies suggest that a supportive climate encourages employee engagement, motivation, and creativity (Parker et al., 2022).

Classic frameworks, such as those by Litwin and Stringer (1968), initially conceptualized climate as a measurable and stable construct influencing individual behavior. More recent perspectives, however, treat climate as dynamic and context-dependent, varying across departments or hierarchical levels within the same organization (Kuenzi & Schminke, 2020).

2.2. Empirical Studies on Climate and Creativity

A significant body of empirical research has examined the relationship between organizational climate and creativity. A study by Anderson, Potočnik, and Zhou (2014) concluded that participative leadership, open communication, and flexible structures are positively associated with innovative behaviors. Similarly, Newman et al. (2020) found that inclusive communication channels and recognition mechanisms foster a higher level of creative output in public-sector organizations.

In the Iraqi context, Al-Mashhadani et al. (2022) reported that leadership styles and organizational trust were the most significant predictors of creative performance. This complements the findings of the current study, which emphasizes the centrality of leadership and communication. However, contrasting evidence from Ahmed & Salih (2023) showed that the presence of a rigid structure may overshadow otherwise supportive elements, leading to stagnant creativity.

2.3. Gaps and Limitations in Literature

Despite a growing consensus about the role of organizational climate in shaping creative behavior, inconsistencies persist regarding which dimensions are most influential. For instance, while some scholars highlight goal-setting and clarity as essential, others—like Wang and Chen (2021)—argue that flexibility and psychological safety outweigh structured planning.

Furthermore, a limitation of prior research is its over-reliance on Western samples, making generalizations to Middle Eastern and developing contexts problematic. There is also a scarcity of longitudinal studies assessing how climate interventions impact creativity over time. Few studies, especially in Algeria, have integrated both structural and interpersonal climate variables in a unified model.

2.4. Conclusion

This review reveals strong theoretical and empirical support for the influence of organizational climate on creativity, yet underscores ongoing debate and contextual gaps. By focusing on the interplay between leadership, communication, and creativity in an Algeria industrial setting, the present research contributes to addressing these limitations and enriching the literature with a culturally grounded perspective.

3. Results:

3.1. Econometric Model and Methodology

To analyze the relationship and impact between the independent variables (dimensions of organizational climate) and the dependent variable (creativity capacity), the study employed descriptive statistics, Chi-square tests for associations, and multiple linear regression analysis. These methods were selected for their suitability in assessing relationships and causality among organizational behavior variables within a sample of 50 respondents.

3.2. Descriptive Statistics

The first stage involved calculating the means and standard deviations for each variable, as summarized in Table 1:

Table 1: Weighted Mean and Standard Deviation for Each Variable (N=50)

Variable	Indicator	Weighted Mean	Standard Deviation
Organizational Structure	X1	2.800	0.866
	X2	2.760	0.925
Total		2.78	
Administrative Leadership	X3	4.760	0.476
	X4	4.260	0.751
Total		4.51	
Goal-Setting	X5	2.960	0.840
	X6	2.320	0.476
Total		2.64	
Communication	X7	3.140	1.498
	X8	3.880	0.961
Total		3.51	
Creativity Capacity	X9-X16	4.017	Various

Source: Prepared by the researcher based on statistical analysis using SPSS (N=50).

The results show that Administrative Leadership and Communication achieved higher than average scores (4.51 and 3.51), while Organizational Structure and Goal-Setting were below the assumed average of 3.0.

3.3.Hypothesis Testing: Association

To test the first main hypothesis (relationship), the Chi-square test was applied. Results are presented in Table 2:

Table 2: Chi-square Test for Association (N=50)

Variable	Chi-Square (X ²)
Communication	37.535
Goal-Setting	2.549
Administrative Leadership	35.611
Organizational Structure	2.895
Table Value at 0.05	34.76

Source: Prepared by the researcher based on statistical analysis using SPSS (N=50).

Conclusion: Only Communication and Leadership variables had statistically significant associations with creativity capacity.

3.4.Hypothesis Testing: Impact (Regression Analysis)

The second hypothesis regarding impact was tested using multiple linear regression, as presented in Table 3:

Table 3: Multiple Regression Results (N=50)

Independent Variable	F Calculated	F Table Value	R ²	Significance
Organizational Structure	0.297	4.03	0.026%	Not significant
Administrative Leadership	5.200	4.03	11.8%	Significant
Goal-Setting	1.359	4.03	0.110%	Not significant
Communication	6.240	4.03	16.9%	Significant

Source: Prepared by the researcher based on statistical analysis using SPSS (N=50).

The results confirm a meaningful impact of Administrative Leadership and Communication on creativity development, whereas the other dimensions showed no statistically significant effect.

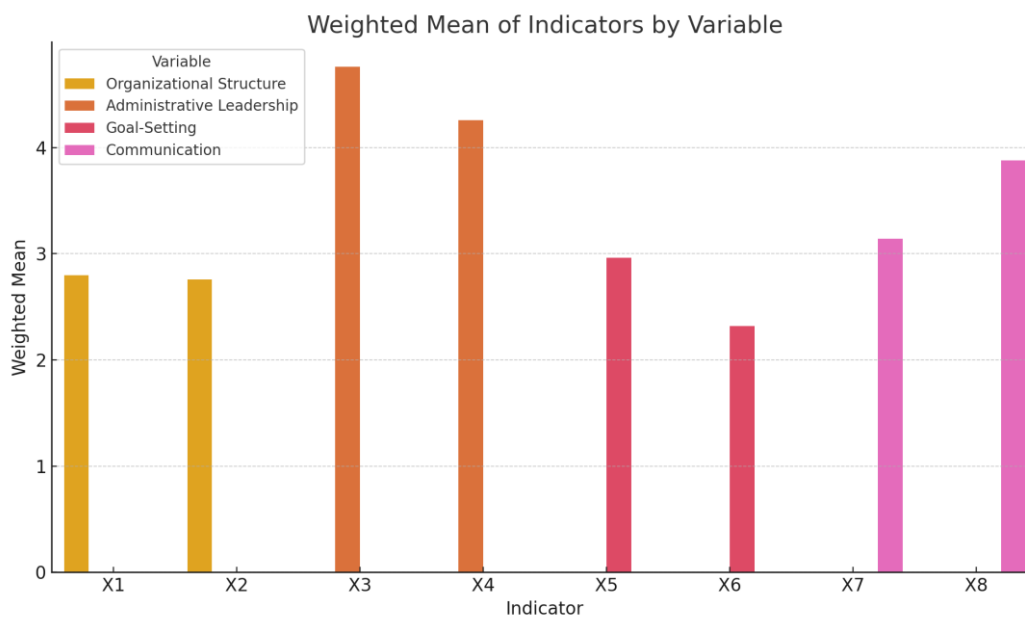
3.5. Results and Statistical Analysis

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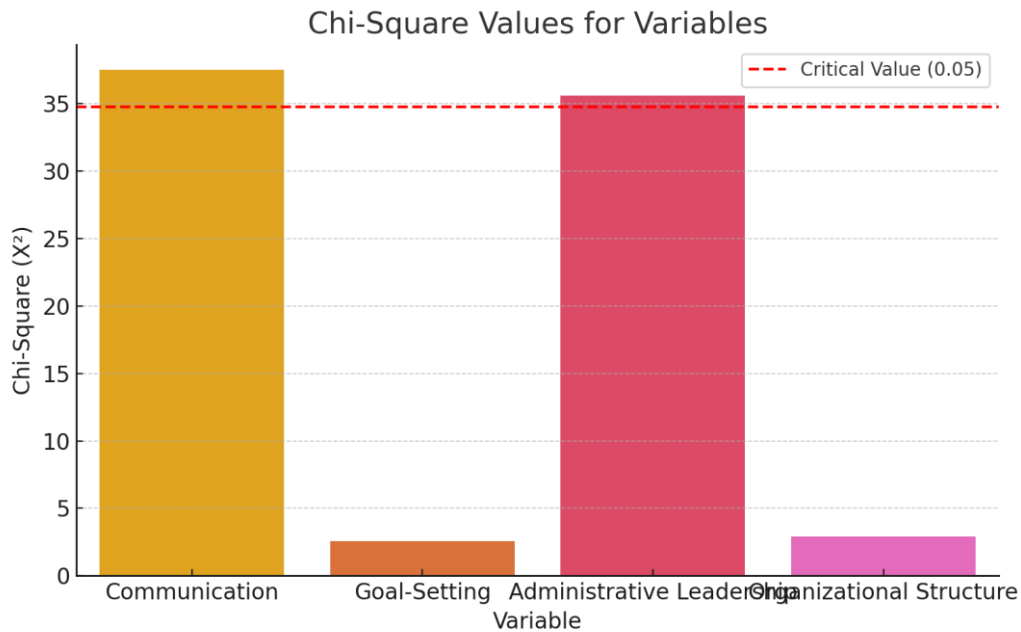


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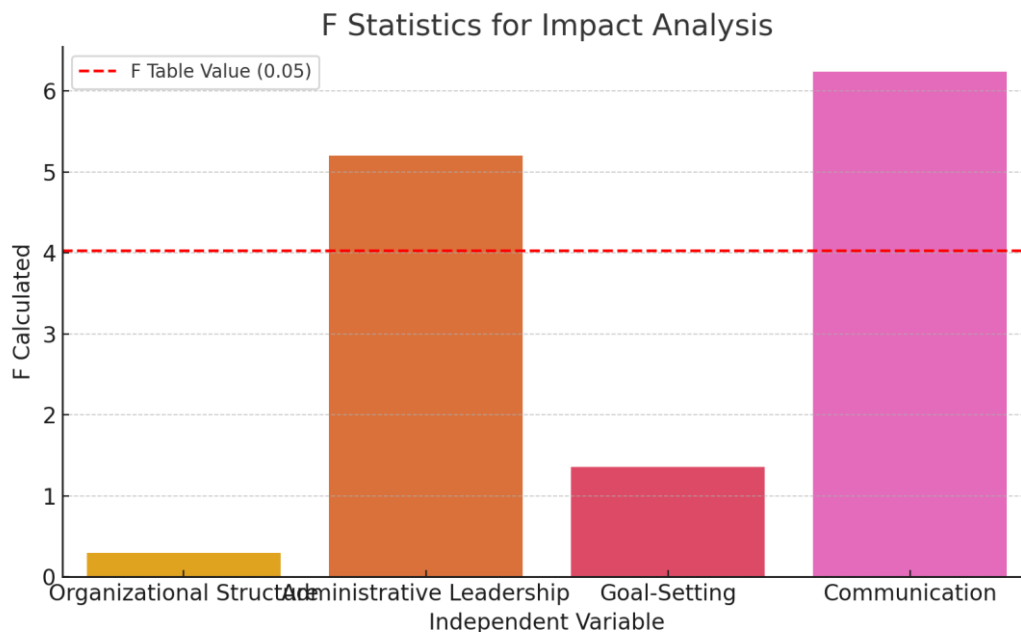


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4. Discussion

4.1. Interpretation of Findings

The study's findings substantiate the hypothesis that dimensions such as managerial leadership and communication significantly influence the creative capacity of employees. These results support theoretical expectations from literature (e.g., Parker et al., 2022; Al-Mashhadani et al., 2022), affirming that interpersonal and communicative factors foster psychological safety and idea generation.

Conversely, the lack of significant influence from organizational structure and goal-setting may reflect the rigidity and lack of decentralization within the studied organization. This aligns with critiques by Ahmed & Salih (2023), who noted that bureaucratic environments in Algeria public institutions can suppress creative behaviors.

4.2. Comparison with Literature

The outcomes echo findings by Newman et al. (2020), who emphasized the critical role of communication openness in public-sector creativity. The role of leadership observed in the current study resonates with Anderson et al. (2014), who showed that participatory leadership correlates with innovation across hierarchical levels.

However, the contrast with Wang and Chen (2021) regarding goal-setting points to contextual discrepancies. In Algeria organizations, formal goal-setting may lack clarity, alignment, or employee engagement—hence failing to stimulate creative initiatives.

4.3. Theoretical and Policy Implications

From a theoretical standpoint, the study emphasizes the necessity to reconceptualize climate not as a static construct but as an interactive dynamic among leadership behaviors, communicative channels, and empowerment mechanisms. Policy-wise, the results suggest that training managers in participatory leadership and streamlining communication structures may yield significant improvements in creativity and innovation.

Additionally, investing in culture change to move from rigid to flexible structures may gradually improve the receptivity of goal-setting mechanisms.

4.4. Limitations and Future Research

A notable limitation is the study's cross-sectional design, which does not allow for causal inference over time. The focus on a single public-sector firm in Iraq also limits generalizability. Future research should consider:

- Longitudinal studies that assess changes in creativity over time
- Comparative studies across private and public organizations
- Mixed-method approaches to capture deeper contextual dynamics

By addressing these gaps, future work can provide a more comprehensive understanding of how organizational climate sustains creativity in complex socio-economic settings.

5. Conclusion

This research aimed to investigate the role of organizational climate dimensions in fostering employees' creative capabilities, with a particular focus on the Algeria public-sector manufacturing context. The key findings demonstrate that among the tested dimensions—organizational structure, administrative leadership, goal-setting, and communication—only leadership and communication exhibited significant positive impacts on employee creativity.

These findings reinforce the importance of interpersonal and behavioral dimensions of climate in driving innovation. Leadership practices that empower and inspire employees, along with open and accessible communication channels, appear to be instrumental in cultivating a creative workforce. In contrast, rigid structures and unclear goals may dampen individual creative efforts.

The implications of this study are twofold. Theoretically, it contributes to the literature by affirming that not all climate dimensions equally influence creativity and that interpersonal variables may be more critical than structural ones, especially in collectivist or hierarchical cultures like Iraq. Practically, the study urges organizations to invest in leadership development programs and redesign communication systems to foster innovation.

However, the study is not without limitations. The sample size was limited to 50 respondents from a single public-sector company, which restricts the generalizability of results. Additionally, the cross-sectional design does not allow for causal inference or analysis of changes over time. Future research should consider longitudinal designs, larger and more diverse samples, and explore additional climate dimensions such as reward systems, psychological safety, and participatory decision-making.

In sum, this study highlights that fostering creativity in industrial organizations requires a climate characterized by supportive leadership and effective communication. Addressing gaps in organizational structure and strategic goal-setting may further enhance innovation outcomes in similar organizational contexts.

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