

The Impact of Employee Empowerment on Their Creativity at the Sonelgaz Directorate in Laghouat: An Exploratory Study

تأثير تمكين العاملين على ابداعهم في مديرية سونلغاز الأغواط دراسة استطلاعية

L'impact de l'autonomisation des employés sur leur créativité à la direction de Sonelgaz Laghouat : Une étude exploratoire

khadra, KHEMLOUL^{*1}

Date of submission 15/11/2024 - Date of acceptance 03/03/2025 - Date of edition: 11/06 /2025

ملخص:

تهدف هذه الدراسة إلى استكشاف العلاقة بين تمكين العاملين والإبداع الإداري في مديرية "سونلغاز" بالأغواط، من خلال قياس مستويات تمكين العاملين والإبداع الإداري، وتحليل تأثير تمكين العاملين على الإبداع. استخدم المنهج الوصفي التحليلي، وتم اختيار عينة عشوائية من 30 موظفًا من إجمالي 618 موظفًا. تم استخدام مقياس ليكرت لقياس تمكين العاملين والإبداع. أظهرت النتائج أن مستوى تمكين العاملين كان متوسطًا عمومًا، مع أعلى مستوى في بُعد تفويض السلطة وأدنى مستوى في بُعد التحفيز. كما بينت نتائج تحليل الانحدار المتعدد وجود علاقة إيجابية ذات دلالة إحصائية بين أبعاد تمكين العاملين والإبداع الإداري، حيث فسر تمكين العاملين 22% من التباين في الإبداع. تشير الدراسة إلى ضرورة تحسين الحوافز المالية والترقيات لتحقيق التحفيز والإبداع داخل المنظمة.

الكلمات المفتاحية: تمكين ؛ ابداع؛ سونلغاز

Abstract :

This study aims to explore the relationship between employee empowerment and managerial creativity at the "Sonelgaz" Directorate in Laghouat. It assesses the levels of employee empowerment and managerial creativity, and analyzes the impact of empowerment on creativity. A descriptive-analytical approach was used, with a random sample of 30 employees selected from a total of 618. A Likert scale was employed to measure both empowerment and creativity. The results showed an overall moderate level of employee empowerment, with the highest score in the delegation of authority dimension and the lowest in motivation. Multiple regression analysis revealed a statistically significant positive relationship between the dimensions of empowerment and managerial creativity, with empowerment explaining 22% of the variation in creativity. The study suggests the need to improve financial incentives and promotions to enhance motivation and creativity within the organization.

Keywords : Empowerment; Creativity; Sonelgaz

Résumé:

Cette étude vise à explorer la relation entre l'autonomisation des employés et la créativité managériale à la direction de "Sonelgaz" à Laghouat, en mesurant les niveaux d'autonomisation et de créativité, et en analysant l'impact de l'autonomisation sur la créativité. Une méthode descriptive et analytique a été utilisée, avec un échantillon aléatoire de 30 employés sur un total de 618. Un questionnaire de type Likert a été utilisé pour mesurer l'autonomisation et la créativité. Les résultats montrent un niveau moyen d'autonomisation des employés, avec un score élevé dans la délégation de pouvoir et un score faible dans la motivation. L'analyse de régression multiple a révélé une relation positive statistiquement significative entre les dimensions de l'autonomisation et la créativité managériale, expliquant 22% de la variation de la créativité. L'étude suggère la nécessité d'améliorer les incitations financières et les promotions pour stimuler la motivation et la créativité dans l'organisation.

Mots clés : Autonomisation; Créativité; Sonelgaz

* Corresponding author.

¹ خضرة خملول, University of Amar Telidji Laghouat, Laboratory of Social Empowerment and Sustainable

Development in the Desert Environment: laghouat, kh.khemloul@lagh-univ.dz

Introduction :

Many Arab organizations face significant challenges stemming from their prolonged adherence to a rigid, centralized framework over several decades. These organizations are characterized by multi-layered hierarchical structures, reliance on lengthy formal communication channels, and restricted information flow to employees. Such factors pose obstacles to achieving developmental and reformative objectives and impose economic burdens that are difficult to sustain.

Employee empowerment has become a cornerstone of managerial innovation in any organization, including the electricity and gas sector. Management experts agree that modern organizations operate in rapidly changing and complex environments, making innovation a pressing necessity. Therefore, managers in administrative institutions must focus on enhancing employees' skills and capabilities to engage in problem-solving, decision-making, and generating new ideas. This can be achieved by fostering teamwork and promoting a serious work ethic to drive creativity.

Based on this context, **the research problem can be formulated as follows:**

To what extent does employee empowerment impact the achievement of managerial innovation among employees at "Sonelgaz" Directorate in Laghouat?

This main question gives rise to several sub-questions as follows

- What is the level of employee empowerment at the "Sonelgaz" Directorate in Laghouat from the employees' perspective?
- How do employees evaluate the level of managerial innovation at the "Sonelgaz" Directorate in Laghouat?
- To what extent do the dimensions of employee empowerment affect the level of managerial innovation among employees at the "Sonelgaz" Directorate in Laghouat?
- Are there statistically significant differences in the dimensions of employee empowerment at the "Sonelgaz" Directorate in Laghouat based on functional variables such as job level and years of experience?

Study Objectives

- To review the theoretical concepts related to employee empowerment and managerial innovation.
- To measure the level of employee empowerment at the "Sonelgaz" Directorate in Laghouat.
- To evaluate the level of managerial innovation at the "Sonelgaz" Directorate in Laghouat.
- To analyze the impact of employee empowerment policies on the level of innovation among employees at the "Sonelgaz" Directorate in Laghouat.

Significance of the Study

In today's rapidly changing business world, the skills needed to meet future demands are evolving, with creativity emerging as a key factor for success and competitive advantage. In this context, the importance of having a workforce with high creative capabilities, capable of adapting flexibly to constantly changing work environments, is increasing. Although researchers assert that empowerment is crucial for the health and prosperity of organizations in a learning and changing environment (MAVRIANCE, 2005, p. 391), there remains a degree of ambiguity and lack of complete clarity surrounding the concepts of employee empowerment and managerial innovation among many researchers and practitioners in the administrative field. Thus, the significance of this study lies in its attempt to bridge the knowledge gap by exploring the impact of employee empowerment- a fundamental organizational concept-on the level of managerial innovation within institutions.

This study aims to provide a comprehensive analysis that goes beyond focusing on a single party; it examines the combined influence of both authorities (senior management) and empowered

The Impact of Employee Empowerment on Their Creativity at the Sonelgaz Directorate in Laghouat: An Exploratory Study

employees. Such a holistic approach seeks to understand the dynamics of the relationship between management and empowered employees, and how their mutual influence contributes to fostering managerial innovation. This analytical framework is applied in the context of the "Sonelgaz" Directorate in Laghouat, with the aim of assessing the extent to which empowerment policies can enhance performance and creativity in the workplace, as well as identifying the challenges and opportunities that can be leveraged to promote innovation and achieve organizational goals.

Through this integrated approach, the study aims to offer a more comprehensive perspective on how organizational and human factors interact to support an innovative work environment. This, in turn, contributes to the development of more effective strategies for improving institutional performance in both public and private sector contexts.

Research Hypotheses

First Hypothesis

(H0): There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of employee empowerment elements (such as delegation of authority, employee training, effective communication, and employee motivation) on the level of managerial innovation perceived by employees at the "Sonelgaz" Directorate in Laghouat.

Second Hypothesis

(H0): There are no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the level of employee empowerment at the "Sonelgaz" Directorate in Laghouat attributable to job-related variables (years of experience and job level).

This hypothesis can be divided into two sub-hypotheses:

- There are no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the level of employee empowerment at the "Sonelgaz" Directorate in Laghouat based on the number of years of experience.
- There are no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the level of employee empowerment at the "Sonelgaz" Directorate in Laghouat based on the job level.

1-Theoretical Framework

1-1 Employee Empowerment

Before delving into the definition of "empowerment," it is essential to acknowledge the diversity of perspectives regarding this concept. However, most views converge on the idea that empowerment revolves around granting employees broader authority and greater autonomy in performing their designated tasks according to their job descriptions. Moreover, empowerment involves allowing employees the opportunity to participate and express their opinions on issues beyond their direct job responsibilities.

Some view empowerment as a process of liberating individuals from constraints, encouraging, motivating, and rewarding them for exercising initiative and creativity (ZEMEKE, 1989, pp. 65-66). From this perspective, empowerment means moving away from rigid adherence to inflexible regulations, where rules are instead seen as adaptable tools to achieve the organization's objectives. Conversely, the traditional, bureaucratic manager views rules as both an end and a means, a mindset that suppresses creativity and limits independent thought. Empowerment, however, seeks to free individuals from strict regulations and rigid policies, giving them greater freedom to take responsibility for their actions and decisions.

In this way, empowerment enables individuals to tap into their potential and latent talents, which often remain dormant under rigid bureaucracy and authoritarian management. (As Carlzon

1987) suggests, without empowerment, an individual's talents and abilities risk being neglected, ultimately leading to the loss and "death" of these capabilities for both the organization and the individual.

1-2 Dimensions of Employee Empowerment

Researchers have addressed the concept of empowerment from different perspectives. Despite this diversity in approaches, it has not led to fundamental contradictions in understanding empowerment; rather, it has contributed to providing various philosophical insights into its dimensions. This diversity has resulted in the formation of a set of different dimensions identified by researchers and pioneers in the field of empowerment, as illustrated in the following table:

Table (01): Dimensions of Employee Empowerment from Different Perspectives.

Year	Researcher	Dimensions
1992	Dowen	Sharing of information, knowledge, and power
1993	Eccles	Power, resources, freedom
1995	Horine	Freedom, responsibility for outcomes
1996	Gregorey	Teamwork, delegation
1997	Ivancevich	Teamwork, information sharing, structure
1998	Argyris	Organizational support, autonomy
1999	Griffin	Employee training, control
2000	U gboro	Organizational support, rewards
2001	Blanchard et. al.	Information sharing, freedom, teamwork

Source: (Al-Saaidi, 2006, p. 65)

1-3 Managerial Creativity

The concept of creativity has been defined in various ways by researchers, each offering a different perspective aimed at clarifying the meaning and dimensions of creativity. Below are the most notable definitions of this concept:

(Myers et Marquis) defined it as not a singular independent event, a new concept, or the occurrence of innovation with something new. Rather, it is a comprehensive and integrated process involving a set of interconnected systems and sub-processes within the organization. (Akrosh, 2004, p. 10)

(Schumpeter) defined creativity as the result of creating a new method or style of production, as well as changes in all components of the product or how it is designed. He identified five forms of creativity, which are:

- Production of a new product;
- Integration of a new method in production or marketing;
- Use of a new source of raw materials;
- Opening and conquering new markets;
- Achieving a new organization for the industry. (LACHMANN, 1993, p. 22)

(Druker) defined it as a change in the output of resources; in economic terms, it is a change in value and satisfaction derived from the resources used by the consumer. (Drucker, 1988, p. 18).

Based on the previous definitions, creativity can be considered as the ability to apply new ideas aimed at achieving tangible improvements in products, production methods, organization, and marketing within the organization. This innovative application aims to have a positive and successful impact on the organization's performance and outcomes, thus enhancing its competitiveness and sustainability in the market.

1-4- Characteristics of Creativity

The key characteristics of creativity can be summarized in the following points:

The Impact of Employee Empowerment on Their Creativity at the Sonelgaz Directorate in Laghouat: An Exploratory Study

- Creativity is a tangible product, process, or procedure within the organization.
- Creativity must represent something new for the community in which it is applied (workgroup, the organization as a whole), even if it is not new to the individuals who carry it out.
- Creativity must be intentional, not incidental.
- Creativity must aim to provide a benefit to the organization.
- Creativity should be characterized by the generality of its effects and benefits. (Anderson, 2004, p. 23).

2- The Field Study

2-1- Study Methodology

The descriptive-analytical approach was adopted in this study to describe the phenomenon and analyze the relationships between its variables. The study population consists of employees at the "Sonelgaz" Directorate in Laghouat, totaling 618 employees from various job levels. A sample of 30 employees was randomly selected during the period from November 1 to 8, 2024.

A measurement tool based on a three-point Likert scale was used, which included three main sections: the first to collect personal data, the second to measure the employee empowerment variable, and the third to measure the creativity variable.

Regarding statistical analysis methods, a range of advanced tools were employed to analyze the data and answer the study questions. Initially, frequencies and percentages were used to describe the characteristics of the study population and the sample responses. To measure the reliability of the tool, Cronbach's alpha coefficient was calculated to determine the level of consistency. Additionally, means and standard deviations were used to evaluate participant responses. To examine the impact of independent variables on the dependent variable, multiple regression analysis was conducted. One-way analysis of variance (ANOVA) and the F-test were also used to analyze the differences between means. All analyses were performed using the Statistical Package for Social Sciences (SPSS) to ensure the accuracy and reliability of the results.

2-2 Characteristics of the Study Sample

The results of the sample indicate that most of the individuals are male, with a percentage of (73.2%), indicating that the majority of those holding managerial positions in the directorate are male. It was also observed that most of the sample members belong to the age groups of 30 years and above, with a percentage of (89%), highlighting the directorate's focus on young individuals with experience. Regarding the educational level, the results showed that the majority of the sample members hold a university degree, with a percentage of (65%), indicating the directorate's emphasis on hiring individuals with high academic qualifications. As for years of experience, it was found that most of the sample members have medium experience (10 years or more), with a percentage of (79.2%), which indicates the directorate's focus on appointing individuals with significant experience in various positions.

2-3 Validity and Reliability of the Study Tool

The validity and reliability of the study tool were verified by ensuring the credibility of the modified items and the overall accuracy of the tool. To measure the internal consistency of the scale, Cronbach's alpha test was used, and the results showed that the internal consistency score was (72.8%), which is considered good and suitable for the purposes of this study, thus enhancing the tool's reliability in measuring the studied concepts.

3- Presentation and Analysis of Study Results

To answer the first question regarding the level of employee empowerment in the Sonelgaz Directorate in Laghouat from the respondents' perspective, the arithmetic means and standard deviations of the study population's responses to the items related to the employee empowerment dimension were calculated. These values were calculated according to the dimensions constituting this axis, in order to determine the level of empowerment available to employees in the directorate and to accurately assess the respondents' answers.

Table (02): Arithmetic Means and Standard Deviations for the Dimensions of Employee Empowerment.

Statement	Standard Deviation	Arithmetic Mean	Response Level
The administration delegates to me the necessary authority to perform my job tasks efficiently.	1.05	3.61	High
The administration places its trust in my ability to perform the tasks assigned to me efficiently.	0.90	4.02	High
My superiors exercise the delegated authorities only during the specified delegation period.	0.99	3.28	Average
provides me with the necessary flexibility to act effectively in performing my duties.	1.00	3.45	High
My job gives me the opportunity to make decisions independently.	1.07	3.18	Average
The overall mean for the dimension of delegation of authority.		3.50	High
The organization relies on a clear and systematic training plan.	1.06	3.03	Average
The organization provides me with opportunities for training courses to develop my skills.	1.09	3.09	Average
The organization encourages employees to exchange experiences and knowledge with each other.	1.02	3.29	Average
The organization provides employees with opportunities to learn and acquire new skills in their field of work.	0.99	3.24	Average
The organization seeks to enhance and develop the skills of its employees.	1.03	3.15	Average
The overall mean for the training dimension.		3.16	Average
The instructions and procedures in the organization are clear and precise.	1.13	3.15	Average
Employees are able to easily reach decision-makers and explain their positions without obstacles.	0.95	3.21	Average
The management places great emphasis on establishing effective and advanced communication methods.	0.88	3.23	Average
There is an information system that allows for the rapid and accurate delivery of information to decision-makers.	1.12	3.03	Average
The overall mean for the dimension of effective communication.		3.15	Average
The organization appreciates my efforts and values my contribution to the work.	0.97	3.27	Average

The Impact of Employee Empowerment on Their Creativity at the Sonelgaz Directorate in Laghouat: An Exploratory Study

The work system in the organization allows me to actively participate in decision-making.	1.01	2.93	Average
The salary I receive is commensurate with the effort I put into performing my work.	1.09	2.63	Average
I feel that the promotion system in the organization is fair and objective.	1.39	2.58	Low
The efficiency of employees is one of the essential and important criteria in the organization's promotion system.	1.33	2.60	. Low
The overall mean for the dimension of employee motivation.		2.80	Average
The overall mean for the dimensions of employee empowerment.		3.15	Average

Source: Prepared by the researcher based on SPSS outputs.

The table presents an analysis of the dimensions of employee empowerment within the organization through the arithmetic means and standard deviations for each statement, providing a comprehensive picture of the level of empowerment across different aspects of their work. The results show that the overall mean for the dimensions of employee empowerment is 3.15, which falls within the average level. This suggests that there is a need to improve certain aspects of employee empowerment in the organization in order to enhance their participation and effectiveness in the workplace.

Regarding the dimension of delegation of authority, the arithmetic mean was 3.50, reflecting a high level of employee empowerment in this area. The results indicate that the administration grants employees the necessary authority to perform their tasks efficiently, and the majority feel trusted in their ability to accomplish their assigned duties. However, a slight variation in opinions was observed concerning the exercise of authority within the specified delegation period, as the statement "My superiors exercise the delegated authorities only during the specified delegation period" recorded a mean of 3.28 with a standard deviation of 0.99, suggesting some variability in employee responses on this matter.

As for the training dimension, its overall mean was 3.16, indicating an average level of employee empowerment in this area. Although there are some training programs available, the results suggest that the training opportunities provided are not sufficient to adequately develop employees' skills. Opinions regarding the availability of training opportunities varied, with some statements, such as "The organization relies on a clear and systematic training plan," recording a mean of 3.03 with a standard deviation of 1.06. This indicates that there is a need to improve these aspects to ensure the effectiveness of training and professional development.

Regarding the dimension of effective communication, the overall mean was 3.15, reflecting an average level of availability of effective communication channels between employees and management. Although there are some efforts to improve communication, the results indicated that accessing decision-makers and exchanging information may face some challenges. For instance, the statement "Employees are able to easily reach decision-makers and explain their positions without obstacles" recorded a mean of 3.21 with a standard deviation of 0.95, suggesting the presence of some barriers or difficulties employees may encounter when communicating with management.

Concerning employee motivation, this dimension recorded the lowest averages, with an overall mean of 2.80, indicating a low level of motivation within the organization. The results suggest a significant gap in financial incentives and promotions, as many employees feel that their salaries and promotions are not aligned with their efforts. Additionally, the statement "I feel that the promotion system in the organization is fair and objective" had a mean of 2.58 with a high standard deviation of

1.39, reflecting a general sense of unfairness in the promotion system and an imbalance between effort and rewards.

Based on these results, it is clear that most of the dimensions of employee empowerment range from average to high levels, except for the employee motivation dimension, which recorded low levels. This highlights the need to focus on improving employee incentives and promotions to ensure an increase in motivation and overall satisfaction within the organization. Additionally, the high standard deviations in some dimensions, such as employee motivation and delegation of authority, suggest a disparity in employees' experiences and opinions regarding the implementation of these policies. This may reflect inconsistency in the application of employee empowerment strategies across various departments or teams within the organization.

Therefore, efforts must be intensified to improve the dimensions related to training, motivation, and effective communication, with a focus on ensuring fairness in financial systems and promotions, in order to enhance employee empowerment and overall job satisfaction.

Table (03): Arithmetic Means and Standard Deviations for the Dimensions of Managerial Creativity.

Statement	Standard Deviation	Arithmetic Mean	Response Level
The organization strives to apply innovative methods in the work to find effective solutions to any challenges we face	0.82	3.61	High
We execute the tasks assigned to us using advanced methods	0.91	3.42	High
We are keen on presenting innovative ideas that contribute to the development of work within the organization	0.96	3.41	High
The overall mean for the dimension of originality		3.48	High
We possess the necessary skills that enable us to effectively persuade those we interact with	0.86	3.72	High
The management of the organization possesses the ability to conduct work-related discussions effectively	0.77	3.79	High
We make sure to express our opinions freely, even if they differ from the perspectives of our superiors at work	0.74	3.74	High
The overall mean for the dimension of fluency		3.75	High
We make sure to listen to opinions that differ from our own in order to benefit from the perspectives of others	0.82	3.59	High
We strive to obtain ideas that contribute to finding effective solutions to work-related problems	0.74	3.77	High
We make sure to benefit from the feedback and criticism of others to improve our performance and develop our skills	0.82	3.75	High
The overall mean for the dimension of flexibility		3.70	High

The Impact of Employee Empowerment on Their Creativity at the Sonelgaz Directorate in Laghouat: An Exploratory Study

We make sure to propose new methods for performing tasks, despite being aware of the potential risks associated with them	0.96	3.46	High
We pay attention to presenting innovative ideas at work, even if they are not implemented	0.89	3.56	High
We hesitate to apply new methods to perform our tasks for fear of potential failure	1.25	2.95	Average
The overall mean for the dimension of risk-taking		3.33	Average
Decisions are made based on thorough analysis, not randomly	0.76	3.71	High
We simplify our ideas when facing challenges at work	0.80	3.57	High
We make sure to gather detailed information before starting a new task	0.76	3.72	High
The overall mean for the dimension of analytical ability		3.66	High
We feel enthusiasm and challenge when dealing with work-related problems	0.76	3.70	High
We have a clear and accurate vision of work-related problems	0.80	3.66	High
We have the ability to anticipate work-related problems before they occur	0.94	3.58	High
The overall mean for the dimension of problem sensitivity		3.64	High
The overall mean for the dimensions of managerial creativity		3.60	High

Source: Prepared by the researcher based on SPSS outputs.

The table presents an analysis of the dimensions of administrative creativity within the organization through the means and standard deviations for each statement, offering a comprehensive view of the level of managerial innovation across various aspects of work. The results indicate that the overall average for the dimensions of administrative creativity is 3.60, which is classified as high. This suggests that the organization generally exhibits a good level of managerial creativity, although certain areas may require enhancement to increase innovation effectiveness and achieve further progress.

Regarding the dimension of originality, which recorded an average of 3.48, it appears that the organization encourages adopting innovative methods to find effective solutions to various challenges. The standard deviation of 0.82 reflects some variation in employees' responses, indicating that while some individuals feel they have ample space for creative thinking, others perceive that innovative opportunities are not sufficiently available.

As for fluency, this dimension achieved an average of 3.75, suggesting that employees demonstrate a strong willingness to engage and express their opinions and ideas freely, even when these opinions differ from those of their supervisors. The standard deviation of 0.74 indicates a slight variation in how employees evaluate their opportunities to express their opinions. While some feel fully free to present their ideas, others may face challenges in doing so.

Regarding flexibility, which scored an average of 3.70, it shows that employees exhibit a high degree of openness to opposing ideas and opinions, and they are keen to use feedback from others to improve their performance. Nevertheless, the standard deviation of 0.82 indicates some disparity in individual responses. Some employees may feel adequately supported in their flexible thinking, while others may struggle to adapt to new ideas or changes.

As for the risk-taking dimension, it recorded an average of 3.33, reflecting a hesitation to adopt new methods at work due to concerns about failure. This result indicates a significant level of conservatism among employees when it comes to taking risks with new ideas, suggesting a work environment that may not be sufficiently supportive of encouraging employees to take risks. The high standard deviation of 1.25 reflects considerable variation in opinions about individuals' willingness to take risks, showing that while some employees are more cautious, others believe that risk-taking may be necessary to achieve progress.

Regarding analytical ability, the average score was 3.66, indicating a high level of competence. This suggests that employees possess a good capability to analyze problems and make well-informed decisions. The standard deviation of 0.76 shows a general consensus among individuals regarding the careful analysis of issues and decision-making based on reliable information, reflecting a work environment that promotes critical thinking and well-considered decision-making.

In terms of problem sensitivity, the average score was 3.64, which indicates that employees in the organization have a strong ability to identify problems and work on solving them before they escalate. The standard deviation of 0.94 suggests some variability in responses; some employees feel confident in predicting issues and taking preventive measures, while others may find this task more challenging.

Based on the analysis, the dimensions of administrative creativity within the organization generally exhibit a good level, with the averages ranging from medium to high levels. The risk-taking dimension is the lowest among the other dimensions, indicating a need for greater encouragement to adopt innovative methods and experiment with new ideas despite potential risks. Conversely, the organization demonstrates a high level of analytical ability and problem sensitivity, reflecting employees' competence in handling challenges and making well-thought-out decisions.

Additionally, the higher standard deviations in some dimensions, such as risk-taking and problem sensitivity, indicate variability in employees' experiences and perspectives. This may reflect differences in the implementation of administrative creativity strategies across various teams and departments. Therefore, more efforts are needed to foster a more supportive environment for creativity and innovation, particularly in encouraging risk-taking and creating greater opportunities for innovation across all areas of work.

3-1 Testing Study Hypotheses

Main Hypothesis 1

H0: There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of employee empowerment elements (authority delegation, employee training, effective communication, and employee motivation) on the level of creativity perceived by employees in the Sonelgaz Laghouat Directorate.

Table No. (04): Results of the multiple regression test for the dimensions of employee empowerment on the level of employee creativity.

Correlation Coefficient (R)	Coefficient of Determination (R ²)	Significance Level (F)	Critical F value	Calculated F value	Mean Square	Degrees of Freedom	Sum of Squares	Source
-----------------------------	--	------------------------	------------------	--------------------	-------------	--------------------	----------------	--------

The Impact of Employee Empowerment on Their Creativity at the Sonelgaz Directorate in Laghouat: An Exploratory Study

0.32	0.22	0.001	2.49	5.66	1.87	4	7.39	Regression
------	------	-------	------	------	------	---	------	------------

Significant at the 0.05 level

Source: Prepared by the researcher based on SPSS outputs

To test this hypothesis, a multiple regression analysis was conducted. The results of the multiple regression analysis for the dimensions of employee empowerment on the level of employee creativity indicated that the application of employee empowerment dimensions positively affects their creativity within the organization. The results showed that the calculated F-value was 5.66, which is greater than the table F-value of 2.49, meaning that the model significantly explains the variance in employee creativity. In other words, there is a statistically significant relationship between the dimensions of employee empowerment (such as delegation, training, communication, and motivation) and their creativity levels. Moreover, the p-value was 0.001, further confirming the strength of the relationship between the variables at a significance level of 0.05.

On the other hand, the R^2 value was 0.22, indicating that only 22% of the variance in employee creativity can be explained by the dimensions of employee empowerment, while 78% of the variance remains unexplained by this model. This suggests that there are other factors influencing employee creativity that were not included in this analysis, which may warrant further investigation of additional variables that could contribute to a better explanation of this variance.

Additionally, the correlation coefficient (R) was 0.32, indicating a weak to moderate positive relationship between the dimensions of employee empowerment and their creativity level. Although this relationship is statistically significant, it is not strong enough to reflect a substantial effect, implying that employee empowerment contributes modestly to enhancing creativity within the organization.

Based on these results, it can be concluded that employee empowerment has a positive effect on creativity, but it only explains a small portion of the variance in this area. Therefore, further research into other factors that may influence creativity, such as organizational culture or innovation-related policies, is recommended. Organizations should also continue to strengthen employee empowerment dimensions such as effective delegation, continuous training, improving communication channels, and offering appropriate incentives to further enhance employee creativity.

Table (5): Results of the Strength of the Employee Empowerment Dimensions on Employee Creativity Levels at Sonelgaz Directorate, Laghouat

Variable	B	Beta	T-value	Significance Level (p-value)
Delegation of Authority	0.19	0.28	4.58	*0.035
Employee Training	0.16	0.27	3.82	*0.001
Effective Communication	0.15	0.22	4.43	*0.041
Employee Motivation	0.14	0.21	4.39	0.231
Overall Employee Empowerment	0.22		4.51	*0.001

Significant at the 0.05 level

Source: Prepared by the researcher based on SPSS outputs

The results of the analysis of the strength of the employee empowerment dimensions on employee creativity levels at the Sonelgaz Directorate in Laghouat revealed significant findings that vary according to the different dimensions.

Initially, the results for delegation of authority (B = 0.19, Beta = 0.28) showed a significant positive impact on employee creativity, with a T-value of 4.58 and a significance level of 0.035, which is less than 0.05. This indicates that delegation of authority has a strong effect on improving employee creativity within the organization.

As foreemployee training, the results ($B = 0.16$, $Beta = 0.27$) also indicated a significant effect, with a T-value of 3.82 and a significance level of 0.001. This demonstrates that continuous training has a substantial impact on enhancing employee creativity, which is crucial for motivating employees and developing their skills.

Regarding effective communication, the results ($B = 0.15$, $Beta = 0.22$) showed a T-value of 4.43 and a significance level of 0.041, indicating that improving communication channels between employees and management significantly contributes to fostering creativity within the organization.

Foreemployee motivation, the results ($B = 0.14$, $Beta = 0.21$) indicated a positive effect on creativity, but with a T-value of 4.39 and a significance level of 0.231, which is greater than 0.05. This suggests that the effect is not statistically significant when compared to the other dimensions, although motivation still has a positive influence on creativity.

Finally, the results for overall employee empowerment ($B = 0.22$, T-value = 4.51, significance level = 0.001) showed a very strong effect on employee creativity, with a highly significant impact. This emphasizes that overall employee empowerment is one of the key factors contributing to the enhancement of creativity within the organization.

Based on these results, it can be concluded that dimensions of employee empowerment such as delegation of authority, effective training, and communication significantly contribute to enhancing employee creativity. However, employee motivation, while still positively impacting creativity, shows a weaker and less significant effect. This highlights the need for further strengthening of incentives and developmental opportunities to improve their influence on creativity.

Second Main Hypothesis:

H_0 : There are no statistically significant differences at the significance level ($\leq 0.05 \alpha$) in the level of employee empowerment at the Sonelgaz Directorate in Laghouat, attributable to the occupational variables (years of experience, job level).

Table 5: Results of the Analysis of Variance (ANOVA) for Testing Differences in Employee Empowerment Levels According to Occupational Variables (Years of Experience, Job Level).

Variable	Sum of Squares	Mean Square	Calculated F-value	Significance Level p-value
Years of Experience	1.30	0.65	2.66	0.07
	229	0.24		
Job Level	1.33	0.66	2.53	0.06
	341	0.26		

Significant at the 0.05 level

Source: Prepared by the researcher based on SPSS outputs

The results of the Analysis of Variance (ANOVA) for testing differences in employee empowerment levels based on occupational variables (years of experience, job level) indicate that there are no statistically significant differences between the groups for either variable.

Firstly, when analyzing differences based on years of experience, the results showed that the calculated F-value was 2.66, while the significance level (p-value) was 0.07, which is higher than the conventional significance level of 0.05. This suggests that the null hypothesis, stating that there are no significant differences in employee empowerment levels between employees with different years of experience, cannot be rejected. In other words, there is no strong evidence to suggest that years of experience significantly affect the level of employee empowerment in this study.

Regarding the second variable, job level, the calculated F-value was 2.53, with a p-value of 0.06, which is also higher than 0.05. These results indicate that there are no statistically significant differences in employee empowerment levels between the different job level categories. Therefore, job level does not seem to have a significant impact on the level of employee empowerment in this sample.

Based on these results, it can be concluded that neither years of experience nor job level are significantly associated with employee empowerment levels at the Sonelgaz Directorate in Laghouat. While there is some variation between groups, the differences between these groups are not

The Impact of Employee Empowerment on Their Creativity at the Sonelgaz Directorate in Laghouat: An Exploratory Study

statistically significant at the 95% confidence level ($p\text{-value} \leq 0.05$). Therefore, it can be said that factors related to years of experience and job level do not contribute significantly to employee empowerment according to these findings.

In light of this, it may be necessary to broaden the scope of the research to include other variables that could contribute to explaining employee empowerment levels, such as organizational culture, leadership styles, or the work environment, in order to reach more comprehensive conclusions about the factors influencing employee empowerment.

3- 3. Discussion of Results

The results of the study indicate that the dimensions of employee empowerment at the Sonelgaz Directorate in Laghouat exhibit an overall moderate level, with a general average of 3.15. This suggests the need for improvements in certain areas to enhance the effectiveness of employee empowerment.

Delegation of Authority: This dimension recorded a relatively high average of 3.50, reflecting a strong level of employee empowerment in this area. It indicates that the management provides employees with adequate authority to perform their tasks efficiently. However, there is some variation in opinions regarding the exercise of delegated authority during the specified period, suggesting that while empowerment is present, its application might not be entirely consistent or fully perceived by all employees.

Employee Training: The average score for training was 3.16, which indicates a moderate level of employee empowerment in terms of training opportunities. This suggests that employees feel they have access to training, but there is a clear need for better and more frequent training opportunities to further develop their skills. This result emphasizes the importance of enhancing training programs to help employees reach their full potential.

Effective Communication: The average for effective communication was also 3.15, which reflects a moderate level of communication between employees and management. While there are effective communication channels in place, challenges remain in terms of access to decision-makers and the exchange of information. This indicates that improving communication flows and ensuring timely and transparent information sharing could contribute to more effective employee empowerment.

Employee Motivation: This dimension recorded the lowest average score, with a general average of 2.80. This suggests a significant gap in terms of financial incentives, promotions, and recognition. Many employees perceive the promotion system as unjust and feel that there is a mismatch between the effort they put in and the rewards they receive. This gap in motivation highlights the need for a more effective reward system, better incentives, and a fairer promotion policy to enhance overall employee empowerment and morale.

Conclusion

In conclusion, the study revealed that the level of employee empowerment at the Sonelgaz Directorate in Laghouat requires improvement, as moderate levels were recorded across various dimensions, with the exception of delegation of authority, which showed positive results. However, weaknesses in training, effective communication, and especially motivation highlight the urgent need to develop supportive policies to enhance employee performance and creativity. The findings also indicated a positive effect of empowerment on creativity, but this effect is limited by other factors that were not accounted for in the analysis.

Suggestions and Perspectives

- **Enhancing Professional Training and Development:** Provide specialized training programs to improve employees' skills and enhance their ability to innovate.
- **Motivating Employees through Fair Incentives:** Develop a performance-based incentive system to increase employee satisfaction and encourage them to generate innovative ideas.
- **Improving Communication Channels between Management and Employees:** Facilitate regular meetings and utilize technological tools to ease communication and idea exchange.

-
- Fostering a Culture of Creativity and Innovation: Encourage employees to present new ideas through platforms for idea exchange and reward innovation.
 - Conducting Regular Evaluations to Measure the Impact of Employee Empowerment: Regularly assess the impact of employee empowerment strategies to ensure performance improvement.
 - Reviewing Recognition-Based Incentive Systems: Periodically recognize employees' creativity and achievements through awards and honors that stimulate innovation.
 - Enhancing Team Spirit and Collaborative Work: Promote teamwork by organizing workshops and joint training days to strengthen collaboration and collective creativity.

Bibliographie

1. Akrosh, M. N. (2004). *Developing New Products*. Amman: House., Wael Publishing.
2. Al-Saaidi, M. (2006). Measuring the Readiness of Business Organizations to Adopt Empowerment Strategies. *Iraqi Journal of Administrative Sciences*, 3(11), 65.
3. Anderson, t. b. (2004). *Managing Innovation and Change Activities: A Critical Guide for Organizations*. Riyadh: Al-Merikh Publishing House.
4. Drucker, t. b.-F. (1988). *Innovation and Entrepreneurship: Practices and Principles*. Amman: Jordanian Book Center.
5. LACHMANN, J. (1993). *le financement des stratégies de l'innovation*. Paris: Economica.
6. MAVRIANCE, M. (2005). transformational leadership. *libraries and the academy*, 5(3), 391.
7. ZEMEKE, R. a. (1989). The Service Edge: 101 Companies That Profit from Customer Care. *New American Library*, 65-66.