

THE EFFECT OF HIGH PERFORMANCE SYSTEMS ON THE CREATIVE PERFORMANCE OF THE WORKERS (AN APPLIED STUDY ON THE GENERAL COMPANY FOR HEAVY ENGINEERING EQUIPMENTS)

HAMEED NAJM AL-SHAMMARI

Dijla University College, Department of Business Administration.

Corresponding Email: hameed.najem@duc.edu.iq

MOHAMMED FARHAT

Jinan University, Faculty of Business Administration. Email: prof.mohammad.farhat@gmail.com

Abstract

This study came to address one of the contemporary issues that have a major role in sustaining the performance of organizations in light of the challenges they face by adopting smart systems capable of sharing and exchanging information and then enhancing the creative performance of workers, and also by empowering workers through which workers are given powers and responsibilities, and encourage them to participate in decision-making, and grant them appropriate authorizations, and the necessary training and learning, in addition to the motivation and encouragement that allows them to work within a complete and integrated work team, without the intervention of senior management, mainly through the strengthening of the relationship between management and workers, and this is what makes attention to the principle of High performance and empowerment of employees is an essential element to achieve creative performance.

Keywords: High Performance, Contemporary, Iraq

A. INTRODUCTION

High performance is one of the contemporary management concepts, as various organizations, regardless of their size and type of ownership, seek to improve their internal operations so that the level of performance of their creative employees is high, in addition to attracting the attention of researchers as a scientific field that is still in its early stages, where organizations can increase and improve their performance to achieve superior performance by employing high performance work systems, and related to human resource management practices and policies, the efficient selection of human resources passing through comprehensive and integrated training to build, strengthen and empower workers and develop their self-monitoring.

B. METHODOLOGY

1. Research Problem:

Through the exploratory study, the researcher found a number of the following inquiries:

1. What is the impact of high performance on creative performance in the researched company?

2. Is there a statistically significant correlation between high performance X and creative performance Y?
3. Is there a statistically significant effect of high performance X and its interval of skill enhancement practices X1), motivational practices (X2), experience enhancing practices (X3), Combined in creative performance (Y)

2. Research Importance:

This study gains its value in showing how it gains a new understanding when applied compared to previous studies that are technically similar using the correlation coefficient and the impact coefficient.

3. Research Objectives:

The research seeks to achieve the following objectives:

- Presenting a concept of high performance, its dimensions and creative performance in line with the modern management thought of companies.
- View and analyze the reality of the use of high performance, creative performance and their role in achieving the outstanding overall performance of the researched company.
- Diagnosing the nature of the relationship and the impact between high performance and creative performance in the General Company for Heavy Engineering Equipment.
- Coming up with a number of conclusions and making recommendations to the company in a way that contributes to the development of its performance.

4. Research Hypothesis:

1. There is no statistically significant correlation between high performance and creative performance.
2. There is no statistically significant effect of high performance in creative performance.
3. There is no statistically significant multiple effect of high performance in creative performance

5. Research Limits:

Time boundaries: The process of collecting data and information on the subject of the research took place in a period of time not less than two months of a year 2022.

Spatial boundaries: The research was applied in the General Company for Heavy Engineering Equipment.

Human boundaries: The study was limited to the employees of the General Company for Heavy Engineering Equipment from the job positions (general manager, department manager, division manager, unit official) (as they are close to the subject of the study).

6. Research Method:

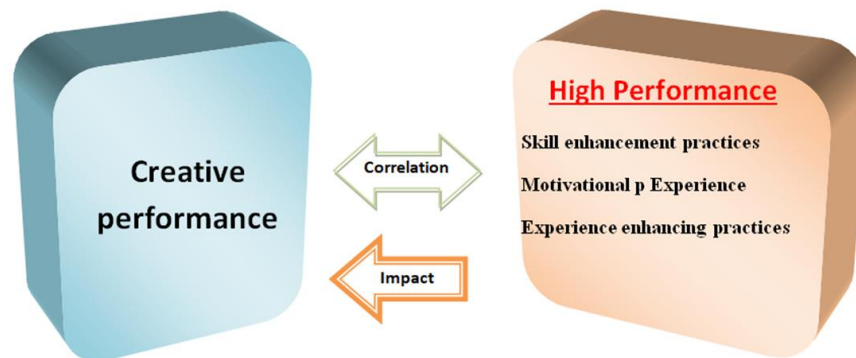
This research relied on the analytical descriptive approach, which is accused of studying and analyzing the phenomenon in order to reach accurate conclusions about the phenomenon and its interpretation. To achieve the objectives of the research, two main sources of information were relied upon:

- ❖ **Secondary sources:** Arabic and foreign books, magazines and periodicals, specialized scientific research, articles, bulletins, local, Arab and international reports, and various internet sites.
- ❖ **Primary Sources:** The researcher prepared an applied field side to address the analytical aspects and survey opinions on the subject of the research based on a questionnaire designed for this purpose, directed to a sample of job positions in the researched company.

7. Research Variables:

Based on the opinions of a number of researchers in previous studies that review the independent variable (high performance in its dimensions (skills enhancement practices - motivation enhancement practices - experience enhancement practices) and its impact on the dependent variable (creative performance), as shown in the figure 1.

Figure 1: The hypothetical outline of the research



(Source: Prepared by the researcher)

8. Measuring Honesty and Stability

Honesty Test: The researcher presented the questionnaire to a group of arbitrators with specialization in the field of research. The researcher responded to the opinions of the arbitrators and made the necessary changes in the light of the proposals submitted, and produced the final form of the questionnaire.

Stability test: Cronbach's alpha is used to calculate reliability coefficients for survey tools that use response groups of the type of Likert scale, whether it is three, five, or seven, where Cronbach's alpha is estimated the reliability of the five or seven (Cronbach's alpha) responses, as Cronbach's alpha estimates the tool (questionnaire) were assessed by subjects indicating the stability of the tools. The value of Cronbach's alpha ranges from

zero to one, with higher values indicating that the items measure the same dimension. In contrast, if the value of Cronbach's alpha is low (near to zero) It means that some or all of the items are not measured to the same dimension, there can also be negative numbers, where a negative number indicates that there is something wrong with the data, Cronbach's alpha values acceptable is 0.60 and above is good.

Table 1: The stability test of the research variables using Cronbach's coefficient A

No.	Variables	Cronbach's alpha coefficient
1.	High performance	0.933
2.	Creative performance	0.948
3.	Total	0.979

It is clear from the results shown in the above table that the value of the Cronbach alpha coefficient is high for research, and the total value of the search variables for the alpha coefficient was (0.979), which is greater than the accepted percentage (0.60), which is a high stability value. This result confirms the validity and reliability of the study questionnaire and its validity for applying to the main study sample, analyzing the results, answering the study questions and testing its hypotheses.

C. THEORETICAL REVIEW

1. High Performance

The concept of high performance, or as it is sometimes called (superior performance), is one of the contemporary management concepts that has received a high level of attention by many organizations as it is the basic and decisive element for the success and survival of organizations in light of a business environment characterized by rapid changes and intense competition. High performance is "a set of behaviors, abilities, and high intellectual and cognitive skills enjoyed by individuals working in the organization, so that they have the ability to employ these behaviors, skills, and knowledge in their field of work and specialization which makes them provide ideas, products and services characterized by modernity, originality, creativity and excellence, which enhances the achievement of high-level goals and the growing performance of the organization". (Al-Hassani, 2010: 175). (Evans, 2008: 229) believes that performance in its simple sense represents the ability of working individuals to contribute to the achievement of organizational goals and objectives. As for high performance, it has several characteristics: (Flexibility, creativity, knowledge sharing, skills, compatibility with organizational trends, customer focus, and rapid response to changes in business and market needs), therefore, the work teams represent the realistic proposal to shift towards high-performance work systems. (Armstrong, 2006:297) indicated that high performance teams invest a lot of time and effort to explore, form and agree on their own purpose, collectively and individually, as they are characterized by deep awareness and commitment to their growth and successes. (Bushman & Huczynsk, 2004: 401) add to the high-performance work systems, "As an organizational method that is adopted to influence the levels of excellence to the greatest extent, and this concept is often associated with teamwork."

2. Dimensions of high performance

The basic element of high-performance work systems in organizations is the same for any organization in the business environment, which is harmony and consistency, where individual practices must fit together, and affect everyone in the same way, and high-performance work systems are the best way to make many organizations competitive in the local and international arena in which some organizations have a competitive advantage through raw materials, and others through low work costs or by geographical center, and high-performance work systems are a competitive advantage available in organizations that have a work force that is consistent and oriented towards the achievement you want effectively, that supports its core values in decision-making, and that is able to contain workers and self-organize. (Al-Enezi, and Hussein, 2013: 13). The literature related to the subject of high-performance work systems mentions many practices that are involved under this topic, and they include practices that enhance skills, practices that enhance motivation, and practices that enhance experience, as follows:

1. **Skills-Enhancing Practices:** Refers to practices that provide workers with powers and tasks that allow them to apply the skills that have been developed, such as exchanging information and participating in decision-making, which results in generating motivation to search for challenges within work and learn new skills, which increases workers' sense of connection and responsibility towards the organization. (Gkorezis et al., 2018:465), as well as promotion procedures that provide opportunities for employees to contribute to organizational goals (Gardner et al. 2011:318).
2. **Practices that enhance motivation:** refer to practices that direct the efforts of employees to achieve organizational goals and objectives. These practices aim to stimulate behavior, creativity, and effort to perform better while doing work (Ahmed, 2019: 4), through salaries and benefits, performance appraisals, opportunities for advancement, job security and workload practices that enhance motivation (Mazzei et al., 2016: 5).
3. **Experience-Enhancing Practices:** A set of practices and processes that seek to formulate a strategy that focuses on planning the organization's current and future needs of talented and experienced people and working on attracting them on the one hand, and diagnosing the level and quality of expertise currently available in the organization (Al-Anzi and Al-Atawi 2011: 98)

3. Creative Performance

Creative performance is of great importance in the life of organizations and is a prerequisite in light of the rapid and continuous changes and the dynamic environment that imposes on organizations to present what is new, and creativity helps in strengthening the interaction relations between the organization and its environment and helps it find solutions to its problems and enables it to face challenges, the creative performance of the organization also enables the proper use of its human and material resources. Thus, creative performance contributes to strengthening the links between the

organization and its environment as a result of creative behavior that finds solutions to all problems and works to address them and avoid their occurrence in the future. As well as giving a positive image of the organization represented by its creative human resources working to provide the best and the best for the beneficiary of its products (Abdul-Jabbar and Dawood, 2021: 37). Creative performance takes time, effort, and the need for continuous diligence so that creativity can be formed. An individual with creative self-efficacy is one of the factors that contribute to the ease of creating thinking or creating creative products (Anggarwati & Eliyana 2015:93).

D. EMPIRICAL ANALYSIS AND TEST

1. Constructive Affirmative Honesty

1. The structural validity of the assertive variable (high performance systems X)

Analysis Factor Confirmatory: It is used to evaluate the ability of the factors model to express in the actual data set in comparison between the factors in this field, and a program was used AMOS V. 25 To test the extent to which the scale model matches the data to ensure the hexagonal structure of the factor scale of the independent variable (high performance systems X). The results of the program application AMOS V. 25 are shown in the table and figure below.

- The ratio between the chi-square and the degree of freedom ($\text{CHI-SQUARE} \leq 5.00$) its value was (3.263). It is significant, as its value is less than (5), and this indicates the quality of model conformity.
- The value of the approximate root mean square error index ($\text{RMSEA} < 0.080$) its value was (0.049) which is less than the ideal ratio (0.080), this confirms that the form was identical to the data of the sample in this paragraph.
- Root mean squares residual ($\text{RMR} < 1.00$) its value was (0.068) which is less than (1.00) which is highly compatible with the model.
- Tucker Lewis indicator ($\text{TLI} > 0.90$), its value was (0.975), which is higher than the ideal percent (0.90) which indicate the conformity of the model in this paragraph
- Comparative fit index ($\text{CFI} \Rightarrow 0.90$), its value was (0.913), this indicates that there is an appropriateness to compare the data of the variable because the ratio is greater than the ideal ratio (0.90) in this paragraph.
- Comparative quality index ($\Rightarrow 0.90$) its value was (0.968) this indicates a matching variable for high performance systems X being greater than the ideal ratio (0.90) in this paragraph.

Table 2: confirmatory factor analysis for the independent variable high performance systems (X)

Indicator	Acceptable values	Obtained values
Chi-square X^2	Its value is not a function of zero 0.000	283.847
Degree of freedom	DF	DF = 87
Root mean squares residual	RMR<0.1	RMR=0.068
Comparative quality index	GFI=>0.90	GFI=0.968
Comparative FIT index	CFI=>0.90	CFI=0.913
Chi-square and degrees of freedom	CHI-SQUARE<=5.00	CMIN/DF=CHI-SQUARE=3.263
Approximate mean squared error	RMSEA<0.080	RMSEA=0.049
Tucker Lewis indicator	TLI > 0.90	TLI =0.975

Since the ratio between the chi-square and the degree of freedom (CHI-SQUARE<=5.00): its value was (3.263), which is significant, as its value is less than (5), and this indicates the quality of the model's fit.

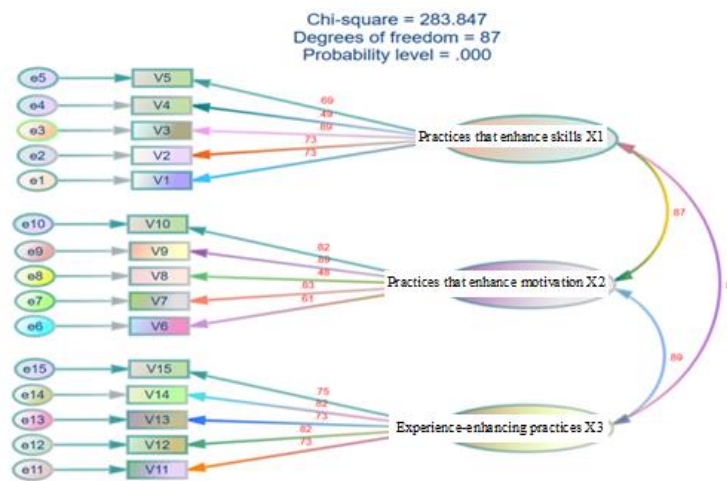


Figure 2: Confirmatory factor analysis of the high performance systems variable X

2. Confirmative Structural Validity of the Variable (Creative Performance Y)

Confirmatory factor analysis ((Analysis Factor Confirmatory): It is used to evaluate the ability of the factors model to express in the actual data set in the comparison between the factors in this field, and the AMOS V.25 program was used, to test the extent to which the scale model matches the data to ensure the six-fold structure of the variable factors scale affiliate (creative performance Y).

The results of applying the (AMOS V.25) program were as shown in the table and figure below.

- 1- The ratio between the chi-square and the degree of freedom (CHI-SQUARE<=5.00): its value was (4.141), which is significant, as its value is less than (5), and this indicates the quality of the model's fit.

- 2- The value of the approximate root mean square error RMSEA < 0.080): its value was (0.075), which is less than the ideal percentage of (0.080), and this confirms that the model was identical to the data of the sample in this paragraph.
- 3- Root mean squares residual (RMR<1.00): its value was (0.045), which is less than (1.00), and thus it is highly compatible with the model.
- 4- Tucker Lewis Index (TLI > 0.90): Its value was (0.952), which is greater than the ideal percentage (0.90), and it indicates the conformity of the model in this paragraph.
- 5- Comparison Fit Index (CFI => 0.90): Its value was (0.988), this indicates that there is an appropriateness for comparing the data of the variable because the ratio is greater than the ideal ratio (0.90).
- 6- Matching Quality Index (GFI => 0.90): Its value was (0.917), this indicates that there is a match for the creative performance variable Y being greater than the ideal ratio (0.90) in this paragraph.

Table 3: Analysis Factor Confirmatory of the Dependent Variable (Creative Performance Y)

Indicator	Acceptable values	Obtained values
Chi-square X ²	Its value is not a function of zero 0.000	140.782
Degree of freedom	DF	DF = 34
Root mean squares residual	RMR<0.1	RMR=0.045
Comparative quality index	GFI=>0.90	GFI=0.917
Comparative FIT index	CFI=>0.90	CFI=0.988
Chi-square and degrees of freedom	CHI-SQUARE<=5.00	CMIN/DF=CHI-SQUARE=4.141
Approximate mean squared error	RMSEA<0.080	RMSEA=0.075
Tucker Lewis indicator	TLI > 0.90	TLI =0.952

Since the ratio between the chi-square and the degree of freedom (CHI-SQUARE<=5.00): its value was (4.141), which is significant, as its value is less than (5), and this indicates the quality of the model's fit.

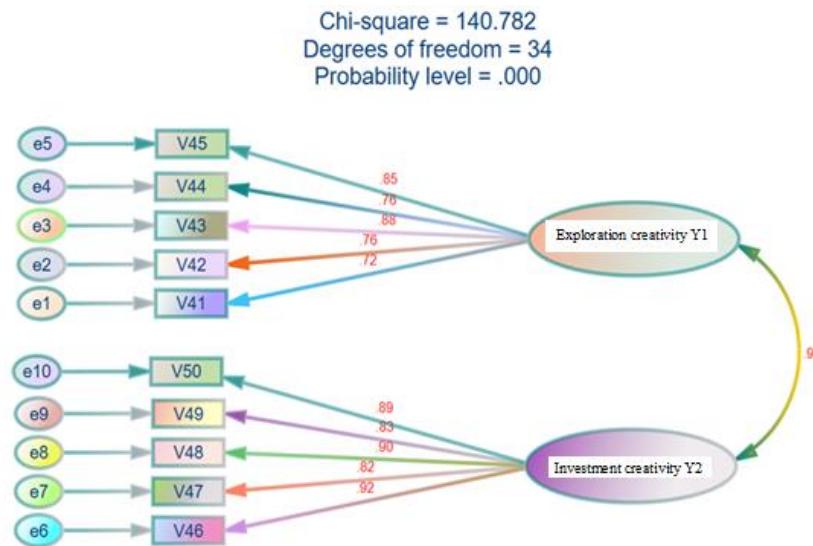


Figure 3: Confirmative factor analysis of the creative performance variable Y

2. Research hypothesis test

This topic focuses on testing the research hypotheses that were adopted in the current study for the purpose of determining the validity of those hypotheses or not for the study sample, and this topic consists of two main axes, the first axis included testing correlation hypotheses using the Pearson Correlation Coefficient as it is commensurate with the current study, while the second axis dealt with testing multiple effect hypotheses.

1 - Correlation Hypothesis: (There is no statistically significant correlation between high performance X with its dimensions and creative performance Y)

It is clear from Table (4) and Figure (4), that there is a statistically significant correlation between high performance X in its dimensions (skill enhancement practices X1 - motivation enhancement practices X2 - expertise enhancement practices X3), and creative performance Y, as the correlation coefficient recorded a significant, positive correlation between high performance X in its dimensions, and creative performance Y, as it amounted to (0.749 **, 0.813 **, 0.825 **, 0.874 **), respectively, as shown in Table No. (4), it is a significant correlation at a significant level (0.01), and accordingly, this result confirms the existence of a significant positive correlation between high performance X in its dimensions and creative performance Y. As for the type of relationship, it is a direct relationship, that is, the greater the interest in high performance by the researched company, this leads to improving the creative performance, and this means rejecting the first main correlation hypothesis and accepting the alternative hypothesis, which states (There is a statistically significant correlation between high performance X in its dimensions and creative performance Y).

Table 4: The link between the high performance X in its dimensions and creative performance Y

	Skills Enhancement Practices (X1)	Motivational practices (X2)	Experience enhancing practices (X3)	creative performance (X)
Creative performance Y	.749**	.813**	.825**	.874**
P-value	0.000	0.000	0.000	0.000
Significance level at ≤ 0.01	Significant	Significant	Significant	VSignificant

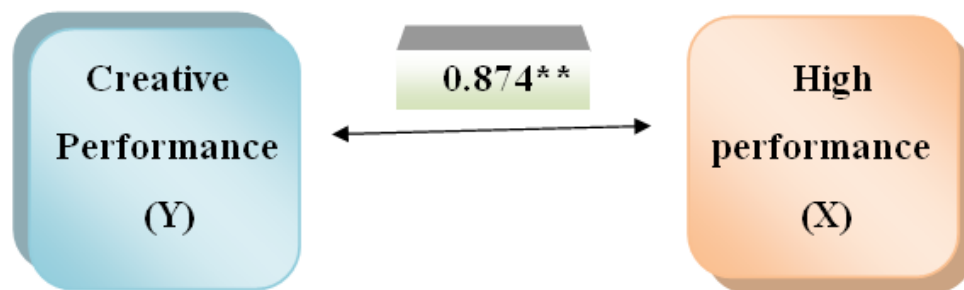


Figure 4: The results of the correlation between the variables of high performance and creative performance

2- The multiple effect hypothesis: There is no statistically significant effect of high performance systems X by excluding it (practices that enhance skills X1 - practices that enhance motivation X2 - practices that enhance experience X3), combined on creative performance Y.

It is clear from Table (5) and Figure (5), that the calculated value of (F) amounted to (108.008), with a significance of (0.000), and below the degrees of freedom (3) and (99), which is smaller than the level of significance (0.01), and this means that the effect of the variable (high performance systems with its dimensions) combined in the variable (creative performance) is statistically significant, the coefficient of determination (R²) explained (76.6%) of the contributions made to the creative performance, and (23.4%) was due to other factors that were not included in the regression model.

Through Table (5), we notice that the value of the constant limit ($a = 0.061$), which is statistically insignificant, as the t value calculated for it was (0.296), with a significance of (0.768), and with a degree of freedom (99), which is greater than the level of significance (0.01), this means that the fixed limit is statistically insignificant, and the value of the marginal slope (b) for (practices that enhance skills X1 - practices that enhance motivation X2 - practices that enhance experience X3) amounted to (0.269, 0.313, 0.408), respectively, it is statistically significant because the t value calculated for it amounting to

(3.167, 3.373, 4.858), significant (0.002, 0.001, 0.000), and with a degree of freedom (99), which is less than the level of significance (0.01).

This means that the marginal tendency (b) for **(practices that enhance skills X1 - practices that enhance motivation X2 - practices that enhance experience X3)** are statistically significant, accordingly, these results provide sufficient support to reject the first major multi-effect hypothesis and accept the alternative hypothesis which states that there is a statistically significant effect of high performance regimes X by excluding it (practices that enhance skills X1 - practices that enhance motivation X2 - practices that enhance experience X3), combined on creative performance “Y”

Table 5: The multiple effect of high performance systems X by dividing it (practices that enhance skills X1 - practices that enhance motivation X2 - practices that enhance experience X3), combined in creative performance Y

	Creative performance Y						
	Regression coefficients	Calculated T	Moral	Limit coefficient R ²	Calculated F	Moral	Decision
Fixed limit	.061	.296	.768	0.766	108.008	0.000	There is effect
Practices that enhance skills X1	.269	3.167	.002				
Practices that enhance motivation X2	.313	3.373	.001				
Experience-enhancing practices X3	.408	4.858	.000				

The value of (F) calculated at a significant level of 0.05 and two degrees of freedom (3.99)
 The value of (F) calculated at a significant level of 0.01 and two degrees of freedom (3.99)
 The value of (t) calculated at a significant level of 0.05 and a degree of freedom (99)
 The value of (t) calculated at a significant level of 0.01 and a degree of freedom (99)

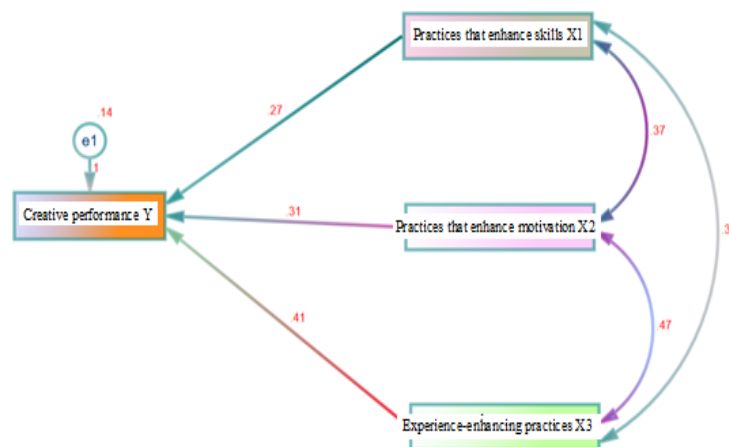


Figure 5: The multiple effect of high performance systems X by dividing it (practices that enhance skills X1 - practices that enhance motivation X2 - practices that enhance experience X3), combined in creative performance Y

E. CONCLUSIONS AND RECOMMENDATIONS

1. Conclusions

1. Statistical results show that there is a positive statistically significant correlation between high performance and creative performance, and it means the feeling of employees and how to perceive and perceive a good work environment, which results are reflected in the behavior of individuals at work and are related to the situations they are exposed to, and these situations refer to beliefs or strong feelings towards people, things, or a specific situation.
2. There is a statistically significant effect of high performance in the creative performance, that is, the researched company when it has a good high performance and has an effective impact on the creative work of the workers, this will help creativity in the performance of job tasks.
3. Through the results of the model, it was found that there is a statistically significant multiple effect of high performance and its dimensions (practices that enhance skills - practices that enhance motivation - practices that enhance experience) combined in creative performance. These results confirm that the dimensions of high performance have a good impact rate on the changes or developments that can occur in the variables of creative performance in the study sample company, and this indicates a good employment ability for high performance in the researched company and its ability to influence the attitudes and behaviors of job performance under circumstances and pressures. (Renewable work).
4. The results of the process showed that the organizational structure does not help positively to re-engineering and developing administrative operations in the company.
5. The statistical results showed that the company's performance appraisal system does not push employees to develop their skills and intellectual potential and enhance their creative abilities to reach a sound and objective assessment of the performance of their job duties.
6. The system results confirmed that the company does not actively encourage the company's culture to empower individuals and the freedom of action in decision-making.
7. The results showed that the company does not apply the job rotation program as required to increase the scientific and practical experience of the workers.

2. Recommendations

1. Work to make the performance appraisal system in the company motivates workers to develop their skills and intellectual potential and enhance their creative abilities to reach a sound and objective assessment of the performance of their job duties.
2. The company actively encourages the culture of empowering individuals and the freedom of action in making decisions.

3. Making the culture of transparency, openness, and trust prevail in the company's work environment.
4. Applying the job rotation program as required increasing the scientific and practical experience of workers.
5. Encouraging joint research projects with local and foreign organizations.
6. Continuously enhancing the structure of networks and communication systems in the company.
7. Delegate sufficient powers to employees to carry out their tasks at work.

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