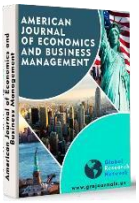

American Journal of Economics and Business Management

Vol. 8 Issue 3 | **pp.** 990-999 | **ISSN:** 2576-5973

Available online @ https://www.globalresearchnetwork.us/index.php/ajebm

Article

The Impact of Organizational Learning on The Performance in Public Sector - Case Study: Iraqi General Company for Electronic Systems (2024-2025)

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Abstract: Organizational learning is widely recognized as a key factor in enhancing performance within organizations. In public sector institutions, the ability to adapt and integrate new knowledge is crucial for improving service quality and operational efficiency. The Iraqi General Company for Electronic Systems operates within a bureaucratic structure where the impact of organizational learning on employee performance remains underexplored. While previous studies have examined the role of organizational learning in banking institutions, limited research has focused on its influence on employee performance in public sector organizations. This study investigates the extent of organizational learning within the company and evaluates its impact on employee performance, alongside analyzing gender-based differences in responses. Data analysis using SPSS revealed a significant positive correlation between organizational learning and employee performance. However, no statistically significant gender-based differences in responses were identified. Unlike prior research, this study applies a refined measurement tool adapted from banking-sector studies to evaluate the impact of organizational learning on service quality, technology adoption, and managerial support in a public-sector entity. The findings suggest that fostering an environment conducive to organizational learning can enhance employee performance and service delivery in public-sector companies. Future research should explore additional moderating factors, such as demographic influences, on this relationship.

Keywords: Organizational Learning, Employee Performance, Public Sector, Service Quality, Gender Differences, Knowledge Adaptation, Iraq

Citation: Aliwy, H. S. The Impact of Organizational Learning on The Performance in Public Sector - Case Study: Iraqi General Company for Electronic Systems (2024-2025). American Journal of Economics and Business Management 2025, 8(3), 990-999.

Received: 20th Feb 2025
Revised: 24th Feb 2025
Accepted: 28th Feb 2025
Published: 07th Mar 2025

1. Introduction

It is noted that there is a lack of researches interested in exploring the importance of organizational learning as a basic factor that motivates success in organizations. From the point of view of the current research, there have not been enough studies to study the extent of the effect of organizational learning on raising the level and efficiency of performance in terms of the quality of services and products provided to customers. It is worth noting that in a previous study, we measured the level of organizational learning and its impact on quality in the public sector, but in banks at that time. As for this study, we are interested in proving that organizational learning improves employee performance from their point of view through a questionnaire of their opinions. We used the scale that we used in the field of banking with some modifications and additions [1].

Literature review

Management concepts like "learning capacity," "organizational learning," "the learning organization," etc., have undoubtedly become popular among scholars and organizational practitioners. The fact that organizational learning is typically viewed as the answer to issues brought on by bureaucratic and hierarchical organizations is one tenable explanation for this focus [2].

Organizational learning was most learning in organizations occurs at the level of individuals [3], and the connection between individual and organizational learning also depends in part on that individual's place within the hierarchy [4], Hence, we have confirmed in previous research the importance of organizational learning as the main influencer in producing better responses to customer needs at the individual level of employees with the presence of some kind of encouragement and support from senior management or in other words with the presence of positive involvement by senior management in spreading organizational learning considering that individuals at this administrative level are ultimately employees, While we know that the manager is held accountable for the employees' performance, neither he nor the employees have direct access to the programs that generate the performance [5], there are also instances when leaders try to establish or preserve a positive culture in an effort to boost teamwork, information sharing, and employee morale [6].

Furthermore, organizational learning is crucial, particularly in settings that are changing quickly. It unlocks innovative potential by pursuing new information and making efficient use of already acquired knowledge. Finding the factors that boost employee participation in these organizational learning exercises is crucial. Since the theory about the advantages of team learning for organizational learning is still in its infancy, more research is warranted [7].

Organizational learning and Performance

According to [8] the learning organization is one in which individuals continuously develop their capacity, and it is a place where the desires and aspirations of the group are realized. Such an organization fundamentally and continuously has performance, and as [9] concluded that managers can use formal mechanisms to ensure that employees and departments share best practices, encouraging employees to communicate with one another through multi-functional work teams. Additionally, Khandekar and Sharma (2006) confirmed that organizational learning will be a key factor in determining the growth and success of small and medium-sized businesses, and Mohammed Suleiman (2011) highlighted the importance of a positive learning climate for businesses looking to outperform their rivals through various innovation processes [10].

Therefore, managers should foster and encourage their staff members' desire to learn in order for them to share their existing knowledge and acquire new abilities. Performance, according to Lopez et al. [11], gives valuable insight on how well a learning process is working and ultimately influences how an organization learns in the future.

Therefore, the current study attempts to measure the team learning by studying the level of Organizational Learning they are daily practicing which contained the team spirit, the new ideas accepting and adopting, the higher management support and the Technological interactive, this was followed by measuring the degree of impact of organizational learning on the performance of individuals which in turn was scaled by taking the quality of providing services, technology, and commitment to the policies in addition to manager’s support. We relied on the Arab research [12] to develop the measurement. Hence, we have taken into account the opinions of employees regardless of the administrative level at which they work.

Research problem:

This study tried too answer two questions which are:

1. What is the impact of organizational learning on the performance in the company studied?
2. Are there any significant differences between males and females in responding to the questionnaire?

Research Methodology:

According to the problem of this study hypothesis are:

H01: There is no significant relationship between the Organizational Learning and Performance in in the studied company.

H02: there are no significant differences between respondent's answers of the independent variable related to the Gender.

Search Variables:

First: The independent variable, whose symbol is X: Organizational Learning in the studied company.

Second: The dependent variable, whose symbol is Y: Performance.

Study Tool:

We measured the aforementioned study variables through a questionnaire in which the respondents' answers are graded on a five-point Likert scale as follows Table 1:

Table 1. Gradation of answers on a five-point Likert scale

Terribly Agree	Agree	Neutral	disagree	Terribly disagree
5	4	3	2	1

Population and sample:

The study community represents the staff working in the studied company in its main location in Baghdad, which numbers 60 employees, whose tasks vary between office tasks such as secretarial, consultants, customer services, managers, and field tasks. The researcher distributed the survey by himself on October 2024 to a random sample consisted of 35 individuals during there working time. It took about 5 months to get the responds which were 25 valid questionnaires to be analyzed using SPSS software on the 20th of February 2025 [13].

2. Materials and Methods

The research relies on the descriptive and analytical approach in describing the studied phenomenon through data collection and analysis. We followed the statistical survey method, where we distributed a questionnaire to measure the studied variables. Then the questionnaires were transcribed and the data were processed for analysis and the necessary statistical tests were conducted using the SPSS program. Statistical methods were adopted to measure correlations between the variables of the study and the hypothesis testing [14].

Measuring Organizational learning in General Company for Electronic Systems in Iraq:

General Company for Electronic Systems is an Iraqi governmental organization, established in Baghdad. The General Company for Electronic Systems is one of the formations of the Ministry of Industry and Minerals, which is a merger of two companies (the General Company for Systems and the General Company for Information Systems), which began its work as centers since 1983, and the company is a pioneer in providing integrated engineering solutions and implementing projects and contracts in the fields of processing, installing and rehabilitating control systems DCS, PLC, communications, surveillance cameras, uninterruptible power supplies UPS, bridge scales, processing, installation, operation and supervision of electrical power stations of all types and capacities, as well as fire systems In addition to the modern software industry for all

software, through the possibility of the company derived from its experience of more than 30 years, as well as cooperation with sober international companies MICROSOFT, ORACLE, IBM, ELECTRONIC ARCHIVING, RENEWABLE ENERGY, DATA AUTOMATION, DESIGN AND MANUFACTURE OF CARDS. Therefore To ensure the greatest possible understanding of the role of organizational learning in raising the level of performance of individuals in the mentioned company, we have included the concepts of service and product quality within the performance measurement in our survey [15].

Honesty and consistency:

The results of the questionnaire were entered after being recoded into the SPSS program and analyzed according to the Alfa Cronbach coefficient to find out if the coefficient value is acceptable to the interlocutor (which means that the questionnaire performs what is required of it), the paragraphs of the questionnaire must be with internal consistency with values equal to or greater than 0.6 [16], and Table (2) shows:

Table 2. The value of the stability coefficient of the questionnaire variables.

Reliability Statistics Alpha Cronbach for Performance		**Reliability Statistics Alpha Cronbach for Organizational Learning**	
Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
.998	43	.998	39

Source: Prepared by the researcher based on the results of the statistical study using spss.

It is noted from Table (2) that the stability coefficients for the axes of the questionnaire were acceptable, Alpha Cronbach is high and acceptable as its value is 0.998 for each variable. This means the tool of this research has high level of reliability and valid for research [17].

3. Results and Discussion

A questionnaire has been developed and built that measures the Organizational Learning variable by measuring its dimensions represented by Organizational Learning (the independent variable) in the company, and also measures Performance in the studied company (dependent variable), where the construction of the questionnaire paragraphs was guided by previous studies. Section 1which contained five Demographic Factors that included a set of Items related to personal information like Gender, years of job experience, Education status, age, and Job Level. Whereas section 2 consisted of 82 statements measure the X and Y.

Table 3. Frequencies and Percentages of Personal Information.

Item	**Cases and coding and the Number of Cases for 25 respondents**				
	1	**2**	**3**	**4**	**5**
Gender	Male (9)	Female (16)	-	-	-
years of job experience	less than 2 years (2)	two years to four years (4)	four years to six years (16)	six years to eight years (1)	more than eight (2)
Educational status	1institute (1)	University (16)	Masters (7)	Ph.D. (1)	-
Age	Less than twenty-five years (1)	twenty-five to thirty years (3)	thirty to thirty-five years (12)	thirty-five to fourty years (8)	more than fourty years (1)
Job Level	Entry (1)	Junior (20)	Senior (4)	-	-

Source: Prepared by the researcher based on the results of the statistical study

From Table (3), we can see:

1. Gender: The percentage of males is 64%, which is higher than the percentage of females is 36%.
2. Age: The highest percentage of ages 30-35 was 47%, see pie chart figure 1.
3. Educational level: The highest percentage was for university degree at 64%.

4. Job Level: The highest percentage of the job level was Junior with 50%
5. Experience: Highest percentage of it was two years to four years 40.0%, followed by (four years to six years) 64%.

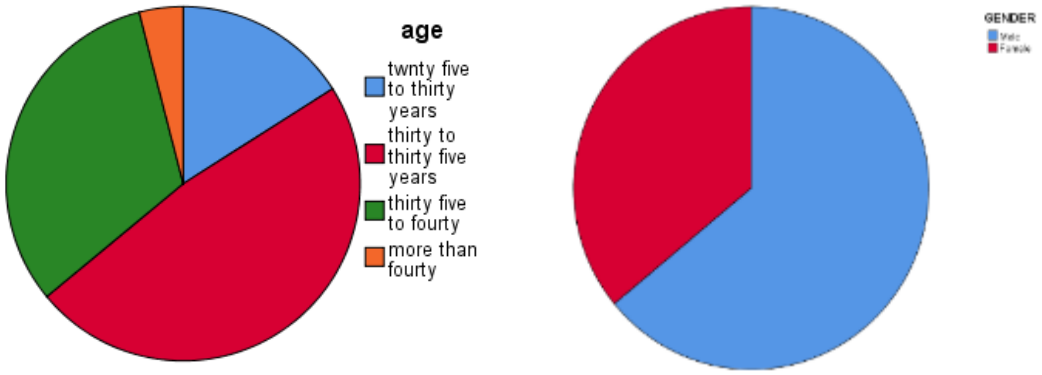

Figure 1. Pie Chart of Age Comparison.

We can summarize this by saying: The staff in the studied company has good experience in working, and most of them were university graduates.

The shape of the relationship between X and Y:

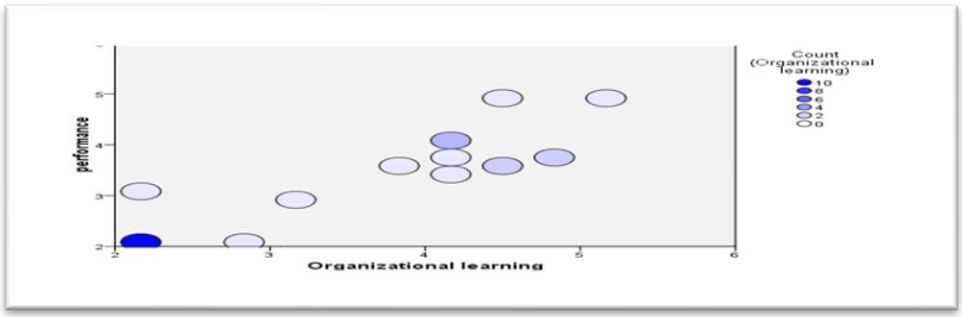

Figure 2. Relation chart.

From figure (2) it can be confirmed that the relationship between the independent variable (Organizational learning) and the Dependent one (Performance) is likely to be linear. But the researcher needed to test the best model that perfectly represented this relation to study the regression, is it linear or Logarithmic or power regression model? So, the curve estimate was done as follows:

Figure 3. Curve Fit.

From SPSS

As we can see from the figure (3) the most accurate model that best represents the relation between X and Y variables and will be used in the first hypothesis testing and can be used to study this relation is absolutely the Power regression model, thus can be implied in testing this research's hypotheses:

Hypothesis testing:

To test the hypotheses, we used the Power regression analysis test. But before this the researcher distributed the statements of the questionnaire as follows in the table (4):

Table 4. statements of the questionnaire.

Variables and Description	Number of statements in the questionnaire	Statements order in the questionnaire
X (Organizational Learning)	39	1-39
Y (Performance)	43	40-82

Source: Prepared by the researcher based on the results of the statistical study

The statements number was 82 distributed into variables which are: Organizational Learning as the independent variable, and the Performance as the dependent variable.

Testing the first hypothesis:

The first main hypothesis states: H01: Organizational learning and performance in the organization under study do not significantly correlate. This hypothesis testes the strength and direction of the relationship between the independent variable X (Organizational Learning) and the dependent variable Y (performance). To test this hypothesis, we used the simple Pearson correlation test, and the following table (5) shows the Pearson correlation coefficient between X and Y.

Table 5. Descriptive Statistics for X and Y.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Organizational,learning	25	2	5	3.20	1.170
Performance	25	2	5	3.03	1.029
Valid N (listwise)	25				

The ninety respondents' orientation is toward agreeing as we can see from this table (5), as the means of each dependent and independent variables are close to the grade 4 in Likert scale. That means the studied company staffs believe in Organizational Learning as a main factor to maintain and boost the quality of the products and services they are providing.

Table 6. Descriptive Statistics for X and Y.

Correlations				
			Organizational learning	performance
Spearman's rho	Organizational,learning	Correlation,Coefficient	1.000	.910**
		Sig. (1-tailed)	.	.000
		N	25	25
	performance	Correlation,Coefficient	.910**	1.000
		Sig. (1-tailed)	.000	.
		N	25	25

**. Correlation is significant at the 0.01 level (1-tailed).

As it can be noticed from the table (6) the link between the Organizational Learning and the Performance is very strong and Positive as spearman's value is about 90%, and it is significant as the value sig<0.05.

Power Regression Model for the relationship between x and Y:

Table 7. Model Description and Variable Processing Summary.

Model Description		
Model Name		MOD_4
Dependent Variable	1	performance
Equation	1	Power[a]
Independent Variable		Organizational learning
Constant		Included
Variable Whose Values Label Observations in Plots		Unspecified

a. The model requires all non-missing values to be positive.

Variable Processing Summary		Variables	
		Dependent	Independent
		performance	Organizational learning
Number of Positive Values		25	25
Number of Zeros		0	0
Number of Negative Values		0	0
Number of Missing Values	User-Missing	0	0
	System-Missing	0	0

From SPSS

Table 8. Descriptive Statistics.

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.935	.875	.870	.124

The independent variable is Organizational learning.

From SPSS

As it can be showed from the table (8) the R value is 0.935 so high and means that the relation between the Organizational Learning and the performance is very strong and significant as the value of sig. equals 0.000 which is less than 0.05, and as it can be seen the value of the coefficient of determination amounted to 0.870, so approximately 87% of the changes in the Performance practices in the studied company are due to changes in organizational Learning. That is, the more the staff is Learning, the more the Performance increases by 87% [18].

Table 9. Analysis of the variance of the regression line of the relationship between Organizational Learning and the Performance.

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Regression	2.475	1	2.475	161.076	.000
Residual	.353	23	.015		
Total	2.829	24			

The independent variable is Organizational learning.

From SPSS

We note from Table (9) that sig=.000, which is less than the level of morality 0.05, which confirms the rejection of the imposition of nothingness and the acceptance of the alternative hypothesis, and therefore there is a important connection between the Organizational Learning in THE studied company and the performance practices in which the dependent variable. to measure the degree of the impact of the Organizational Learning in general on the Performance in the studied company we studied the equation

of the multiple regression line, which shows the significant differences in the following table (10).

Table 10. Results of multiple regression analysis of the relationship between Organizational Learning and the Performance.

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
ln (Organizational learning)	.845	.067	.935	12.692	.000
(Constant)	1.134	.087		12.972	.000
The dependent variable is ln(performance).					

From SPSS

From Table (10), we find a value of sig.=0.000, which is smaller than the significance level of 0.05, which confirms that the impact of Organizational Learning on Performance practices in the studied company is significant. the value of the test index t is positive and significant at the level of significance 0.05, which confirms the impact as the Performance is greater when the level of Organizational learning of the studied company is high, while the relationship can be illustrated by the equation: Y = .845+.935X.

Testing the Second Main hypothesis:

H02: there are no significant differences between respondent's answers of the independent variable related to the Gender.

Table 11. Independent Sample Test

Group Statistics					
	GENDER	N	Mean	Std. Deviation	Std. Error Mean
Organizational learning	1 Male	16	3.28	1.245	.311
	2 Female	9	3.06	1.080	.360

From spss

The sample was 25 individuals and as the table (11) shows they are 16 men tend to agree with all statements they read from the questionnaire as the Mean of their responses was 3.28 which is bigger than the degree 3 of Likert scale, in addition to 9 women were likely to agree with the same statements as the Mean of their responses was 3.06 smaller than that in men case. Therefore, a sample test was needed to explore the significance of the differences among respondents' answers.

Table 12. Independent sample Test.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Organizational learning	Equal variances assumed	1.887	.183	.445	23	.661	.221	.496	-.805	1.247
	Equal variances not assumed			.463	18.822	.648	.221	.476	-.776	1.218

From spss

If we take a look to this table (12) we find out that Sig.=0,183 which is bigger than the 0.05, hence this lead to use the first choice of the table which is (Equal variances assumed)

and we notice that sig(2-tailed) value is bigger than the significance level 0.05, and the value of (t) indicator is positive so we should reject the H02 hypothesis and admit the significance the existence of the significant differences among the respondents' answers. Thus, we have obtained a set of important final research results and recommendations in addition to few suggestions based on testing the previous hypotheses:

4. Conclusion

Based on the statistical analysis of the data from the study tool (questionnaire), and based on testing the hypotheses that we have built, it was clear that the studied company applies positive strong Organizational Learning to a great degree which contributes to increase the performance. Moreover, the application of Organizational Learning in the studied company affects the practices and the of the Performance positively, so that the more the staff's level of the organizational learning is high, the more the Performance becomes higher.

Suggestions:

Measuring the modified impact of all the demographic factors on the aforementioned relationship.

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