Journal of Financial, Accounting and Managerial Studies
ISSN 2352-9962/E-ISSN 2572-0147
Vol 08, Number 03 – December 2021

OEB Univ. Publish.

Organizational determinants of the success of the Enterprise Resource Planning (ERP) System
-The Case of the Algerian Electricity and Gas Distribution Company-

المحددات التنظيمية لنجاح نظام تخطيط موارد المنظمة (ERP)

– حالة الشركة الجزائرية لتوزيع الكهرباء والغاز بورقلة –

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Date of receipt: 25/08/2021 Date of revision: 07/09/2021 Date of acceptation: 19/12/2021

Abstract

The aim of this paper is to study the impact of organizational elements on the success of the implementation of the Enterprise Resource Planning (ERP) system in the Algerian Company for Electricity and Gas Distribution in Ouargla, as this system links all separate information systems into one integrated system.

The study highlighted the contribution of various organizational elements to the success of the ERP system by providing the required information and facilitating its sharing and exchange among users, in addition to supporting the decision-making process, and promoting ideas and experiences exchanged between users.

Keywords: Information system, enterprise resource system, top management, organizational function, organizational culture.

ملخص

هدفت هذه الدراسة إلى معرفة تأثير العناصر التنظيمية على نجاح تنفيذ نظام تخطيط موارد المؤسسة (ERP) في الشركة الجزائرية لتوزيع الكهرباء والغاز بورقلة، كون هذا النظام يربط جميع أنظمة المعلومات المنفصلة في نظام واحد متكامل.

أبرزت الدراسة مساهمة مختلف العناصر التنظيمية في نجاح نظام (ERP)، بتقديمها للمعلومات المطلوبة وتسهيل مشاركتها وتبادلها بين المستخدمين، إلى جانب دعم عملية اتخاذ القرارات، وتعزيز الأفكار والخبرات المتبادلة بين المستخدمين.

الكلمات المفتاحية : نظام معلومات، نظام موارد المؤسسة، إدارة عليا، وظيفة تنظيمية، ثقافة تنظيمية.

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1. Introduction:

Successful implementation of ERP systems has revolutionized the way organizations operate as it has helped them to have a clear and strategic understanding of their competitive capabilities. Given that these systems serve as the backbone of institutions, and that the d

ecision to adopt an enterprise resource planning system is a strategic decision, the high rate of failure and the risks of failure have raised many questions among administrators and researchers about the causes of this failure. Accordingly, we try through this research paper to study the impact of the support of top management and the organizational culture and function as the most important organizational determinants of the success of the application of the enterprise resource planning system in the Algerian Company for Electricity and Gas Distribution in Ouargla.

Study hypotheses: To address the stated problem, the following hypotheses are adopted:

- Top management support affects the successful implementation of the ERP system in the company under study;
- Organizational culture affects the success of the implementation of the ERP system in the company under study;
- Function influences the successful implementation of the ERP system in the company under study.

Objectives of the study: The main objective of this study is to know the extent of the impact of organizational determinants represented in the support of top management and the organizational and function on the implementation of the enterprise resource planning (ERP) system in the Algerian company for the distribution of electricity and gas in Ouargla. As well as expose the extent to which it has an impact on the performance of the company.

Study Methodology: To achieve the objectives of the study, we use the descriptive and analytical approach. First, we review previous studies and theoretical concepts then we analyze the various determinants of the ERP system in the Algerian Company for Electricity and Gas Distribution in Ouargla. As for the study sample, it includes a number of senior officials and employees related to the use of the ERP system.

Literature review:

1. Mohamed Rasmy et al., 2005 : **« Enterprise Resource Planning (ERP) implementation in the Egyptian organizational context »**

This study aimed at determining the factors affecting the success of the implementation of the ERP system in the Egyptian regulatory context, through a survey of 45 Egyptian companies that use this system. The collected data were analyzed using the partial least squares (PLS) technique to model and test the hypothesized relationships. The results of the study showed that organizational adequacy is the most important determinant of the success of the implementation of the system, and indirectly the support of top management positively affects the implementation of the system, while the external support, including the support of sellers and consultants, does not show any effect on the success of the implementation of the ERP system in Egypt.

2. André Tchokogué et al, 2008 : **« Mécanismes et Niveau d'Intégration Organisationnelle de l'Entreprise : Une Évaluation Empirique Avant et Après la Mise en place d'un Système ERP »** The aim of the study was to research the integration mechanisms used by managers in institutions before and after the implementation of the ERP system. The study was applied in Canadian and American companies working in the pharmaceutical sector, where one third of the sample represents Canadian companies that use the SAP system, and two thirds of the sample represents American companies that apply the JD Edwards software by ORACLE. The study used a questionnaire tool to collect the data of the study focusing on the following eight main mechanisms: Physical planning, cross-functional training, informal social systems, the rewards and bonuses system, cross-functional teams, information and communication technology, centralization, and formalization. The study concluded that the integration mechanisms used before and after the implementation of the system are represented in the information and communication technology, the rewards and bonuses system, and the adoption of the multi-functional teams policy, and that the use of these mechanisms would improve the implementation of the ERP system, which in turn improves management practices and continuous and strict monitoring.

3. Shahin Dezdar and Sulaiman Ainin, 2011 : **« The influence of organizational factors on successful ERP implementation »**

The study aimed to explore the critical success factors (CSFs) for implementing ERP system in developing countries, specifically in Iranian companies, using a questionnaire tool distributed to the 288 managers of operational and functional units using ERP systems. There were seventeen (17) factors that were studied: top management support, project management, project champion, process re-engineering, project team formation, careful selection of ERP software, change management, user engagement, supplier support, business plan and vision, enterprise level communication, organizational culture, user training and education, quality System, IT competence, use of consultants, and software testing. The study concluded by recognizing five critical factors which are: top management support, project management, project champion, process re-engineering, and project team composition. These factors were critical to the successful implementation of ERP, while 11 factors were ranked as important.

4. A study by Faeq Mishaal Al-Obaidi and Rowa Ahmed Ibrahim, 2017 entitled: **«The role of organizational and behavioral requirements in the success of the implementation of the organization's resource planning (ERP) system, an exploratory study on a sample of oil companies»**

The study aimed to find out the extent to which the requirements for the application of the organization's resource planning system are available and the extent to which there could be a successful implementation in the companies of the oil sector. This was applied in the North Gas Company, North Refineries and North Oil in Salah al-Din Governorate and Kirkuk in Iraq. The study included the organizational requirements represented in the support from top management, the proficiency in information and communication technology, the clarity of the application objectives, and behavioral requirements represented in organizational culture, resistance to change, and training and education. As for the areas of success of ERP application requirements, they were represented in the organizational, technical and technological fields. The study found that the organizational requirements to implement the ERP system in the study sample companies are available to a medium degree, while the technical capabilities of the system application are available to an acceptable degree, and the management of the companies is interested in developing plans to train

workers in the field of ERP system to a medium degree. The study recommended the importance of taking into consideration the good preparation of the requirements for the application of the ERP system before its implementation. This is achieved through obtaining material and moral support from the top management and the good selection of the systems, in addition to preparing qualified staff responsible for the implementation of the projects.

2 Theoretical frameworks of the organizational determinants of the success of the resource planning (ERP) system in a company: The core of the Enterprise Resource Planning (ERP) systems is the need for a system that provides companies with better solutions to run their businesses in an appropriate, fast and accurate manner which is responsive to modern computer applications. It was defined as a program that integrates all activities between the functional departments, and may include modules for application, finance, human resources, commercial aspects and accounting (Zhang, et al, 2002). The implementation of ERP systems is known to be a complex issue that takes a long time to be achieved, and leads to valuable changes once implemented as it is an integrated method of business operations (Krantz, Marcus, 2005).

Based on our previous discussion it is clear that ERP systems are integrated software programs used in business companies. ERP systems are based on linking all separate systems into one system, so that the activities of the organization are better integrated in the various functional departments. ERP systems also facilitate the functionality of the business and offers flexibility at work. Importantly, they help saving time and effort for all the employees and managers who work in the organization.

2.1 Reasons for adopting an Enterprise Resource Planning (ERP) system: ERP system software falls within the group of information systems that works to achieve greater automation based on achieving greater monitoring on the one hand, and updating and real time display of information related to the activities and functions of business institutions on the other hand. The motives behind the shift towards the automation of work systems and the expansion of their applications can be summarized in the followings (Tariq Amer, 2007, pg. 46)

- ✓ The rapid development in business management methods and techniques;

- ✓ Increasing competition between companies and the need for mechanisms for excellence within the company;
- ✓ Continuous contact between employees in a large-scale working environment;
- ✓ Improving employee engagement as well as ongoing provided services;
- ✓ Redefining the social environment.

2.2 Success factors for the implementation of the ERP system: The application of the ERP system requires cooperation and coordination between all parties as it is an integrative process. Scholars of ERP systems differ on the success of its application. Some of them study two factors, whereas others add other factors, and there are some who have listed as many as twenty factors or more (Seddon, et al, 2003). With regard to the study we are dealing with, three determinants were adopted, which are organizational factors as the most effective elements, especially for institutions operating in the environment of developing countries, namely, support for top management, organizational culture and organizational function.

2.2.1. Support from Top management: According to several studies conducted in developing countries, top management plays a major role in making almost all administrative decisions, especially strategic ones. Since the implementation of the enterprise resource planning system is a strategic decision, the top management has the possibility to support any organizational change if there is desire and conviction. Also, support from top management has effects on employees as it enhances their commitment in the organization to the ERP project (Binji et al, 1999, pp.7-14). Thus, it is considered a strong and positive indicator of the success of this system and a key factor in building a common language among employees that helps them solve work problems as a team. Somers and Nelson mentioned that top management is a critical factor affecting the implementation of ERP (Somers and Nelson, 2003).

2.2.2. Organizational culture: Organizational culture reflects values, which refer to the prevailing trends, beliefs and ideas in a particular organization. These values reach individuals through social relations and continuous interaction and coordination between them. Coordination refers to blending efforts to ensure successful achievement of goals, which means that all individuals who work in the organization must participate in the

implementation and application of the enterprise resource planning system. Teamwork is one way through which this could be achieved (Khan et al, 2012, p7). Therefore, the organizational culture is a very important factor that requires the company to adopt certain values such as compliance with regulations and laws, caring for customers, and improving effectiveness and efficiency.

2.2.3. The organizational function: Every company has its own functions that make it perform its duty to the fullest. The functions of the company must be fully integrated in a way that makes it impossible to dispense any of them. In this sense, the production process cannot take place without relying on marketing data, and the monitoring function cannot be accomplished without knowing the goals that have been set in the planning function. The organizational function was adopted as an important success factor in the enterprise resource planning system in our study, because the ERP system connects all the functions of the enterprise such as human resources, accounting and finance, production, marketing, warehousing, etc., in one unique system that enables us to conduct business transactions in all departments of the enterprise and monitor them from one stage to another (Ghassan, Amira, 2019, p. 355).

3. The application framework for the organizational determinants for the success of the enterprise resource planning (ERP) system: Based on the theoretical framework that we have previously discussed, we seek now to empirically study the impact of organizational determinants on the success of the enterprise resource planning system in the Algerian Company for Electricity and Gas Distribution in Ouargla which is one of the pillars of the Algerian economic companies as it is the case with the rest of the companies composing the Sonelgaz Group. In fact, its activity is so much important that the company invests billions of dinars in order to grow, expand and attract the more customers. We expose in what follows the most important procedures for the filed study.

3.1 Study population and sample: The Algerian Company for Electricity and Gas Distribution in Ouargla represents the population of the study, and the targeted respondents are employees of different ranks and departments who use the ERP system, so an intentional sample of employees using the system was adopted in the period between 2019-2020.

3.2 Tools used in data collection: We have used a questionnaire in order to collect information related to this study. We have also used interviews which we have conducted with the employees who use the approved ERP system in the company. The total number of those interviewed is 21 employees. The questionnaire included a sample of 55 employees from this company; 53 forms were retrieved and two forms were excluded. Thus, the number of valid questionnaires for statistical analysis is 53, or 96 percent of the number of questionnaires distributed.

3.3 Methods and procedures used in the research: In order to assess the impact of organizational elements on the success of the ERP system in the company under study, a questionnaire was prepared comprising 40 questions, which was designed on the basis of questionnaires from previous controlled studies, and was adapted to suit our current study, and to answer the study questions and test the validity of the hypotheses. The use of descriptive statistics methods, where the data were encoded and entered into the computer using the statistical program for the social sciences SPSS version 26.

- **Validity and reliability of the tool:** The internal consistency coefficient of the study tool was extracted, based on Pearson's coefficient and Cronbach's alpha coefficient to measure stability, and the following results were reached:

Table (1): Measuring the validity of the internal consistency of the questionnaire as a whole

Study Axes (Variables)	Number of paragraphs	Pearson coefficient	Indication level
Regulatory Determinants	21	0.917	0.000
ERP system success	19	0.938	0.000

Source: Prepared by researchers based on the outputs of the SPSS version 26

Table (1) shows that the values of the Pearson correlation coefficient are strong, as it ranged between 0.917 and 0.938, and it is statistically significant at the significance level of 0.05. Therefore, the questionnaire phrases are characterized by a large degree of internal consistency, which gives them a high degree of validity in order to complete the study.

Table (2): Cronbach's Alpha Scale stability coefficient

Study Axes (Variables)	Number of paragraphs	Cronbach's Alpha coefficient
Regulatory Determinants	21	0.889
ERP system success	19	0.913
All the axes of the variables of the study	**40**	**0.940**

Source: Prepared by researchers based on the outputs of the SPSS version 26

Table (2) shows that the coefficients of stability and confidence of the questionnaire axes amounted to (0.940), which is a high degree of stability as it is greater than (70.6) the acceptable minimum for Cronbach's alpha coefficient. The scale is good for the study, and the results will not change if the questionnaire is redistributed to the population of the sample several times.

4. Analysis and discussion of the results: In this part, we present the results of the study and we discuss them. We also test the hypotheses of the study using the appropriate statistical tools as follows:

4.1 The reality of the enterprise resource planning system in the Algerian Company for Electricity and Gas Distribution of Ouargla: The Algerian Company for the Distribution of Electricity and Gas in Ouargla exercises its economic activity to achieve efficiency and effectiveness and uses resources rationally in order to provide its high-quality services. It also effectively distributes its returns to the various means of production, where the distribution of both electric and gas energy and the provision of services to customers is the source of its profits and this is thanks to its reliance on its ERP system, which has gone through several stages and updates, the last of which was in 2020. The company's ERP system consists of several software packages or a group of sub-systems, the most important of which are:

- **HISSAB** Financial and Accounting Management System: It is a management system that helps to maintain accounts while saving time. It also allows the company to manage accounts according to the standards present in the accounting and financial system "SCF". It has several advantages, including general accounting, analytical accounting, investment management, supplier regulations, fixed asset management, billing processing, reconciliation, accounting and reporting.
- **MALIYA** Cash Management System: Cash management is an essential function in preparing and making important management decisions. This system allows for regular monitoring of cash flows; that is, from expressing the need in the form of a temporary cash flow plan, to daily monitoring through receipts and payments. It has several advantages, including cash flow plan management (forecasting, review and implementation); preparation of cash flow situations (unified, centralized and decentralized); cash settlement; balancing accounts and raising funds.

- **NOVA** Human Resource and Payroll Management System: Human capital management is at the heart of the company's strategy. NOVA is a management system designed to provide effective management of the HR function and payroll, principally the effective management of personnel files, career management, etc. It has several advantages, including administrative organization (agents' files); time and activity management; payroll processing; production of subsequent payment statements; preparation of the statements of accounts relating to payroll; managing training; management of absences and holidays; managing evaluations and promotions and issuing administrative documents.
- **ATTAD** Supply and Inventory Management System: It is a company's proprietary inventory management system, designed to meet the needs of the commercial businesses. It combines organization, time and cost savings. This system is designed in accordance with International Accounting Standards IAS/IFRS. It is characterized by several advantages, including supply management to assess the entry into inventory according to the cost price; managing different types of inventory movements; advance accounting for inventory management business; Reporting, alerts, privileged access, etc.

In addition to other packages such as Customer Relationship Management called CRMS, monitoring for Low-Voltage Customers (RELEVE), and Remote Monitoring for Medium-Voltage Customers (SATURNE), and other packages formed for the ERP system combined into a single database at the Department of the Information System of the company.

4.2 Organizational Determinants in the Algerian Electricity and Gas Distribution Company of Ouargla:

First - Top management support: To identify the extent to which there is a support from top management, and its impact on the success of the ERP system, three questions were directed to of the head of the information systems department and the director of the company. We found out that the top management of the company pays great attention to the supervision of the ERP system by providing specialized managers in the field from one of the company's branches called "ELIT" (El Djazaïr Information Technology), a company specialized in information and communication technology. The company also provided support and confidence to the heads of

information systems departments in all its branches across the national territory, through the application of the proposals provided by the heads of heads of functional departments and managers of commercial agencies, in accordance with the needs of customers, such as installment payments. The top management provided support for the development and modernization of the system during recent years, the last of which was at the beginning of 2020. This fact indicates the great interest shown by the top management of the company to the success of the enterprise resource planning system and to facilitate service provision at the lowest cost and providing information in a timely manner for rational decision-making.

Second - Organizational culture: To assess the reality of organizational culture and its impact on the success of the enterprise resource planning system, six questions have been adopted and directed to the company's employees and heads of departments. We found out that the system contributes to the promotion of teamwork through the interdependence and sequence of all the activities of the departments with each other, which creates permanent communication between employees in order to accomplish activities and achieve goals in time.

The enterprise resource planning system also contributes to motivating and fostering the spirit of responsibility among the company's employees and heads of departments through respecting the deadline for activities and providing real-time reports on each employee. This would motivate them to focus on their tasks and complete them and avoid putting blame on others, especially since the motivational points are recorded according to the task force and the achievement of the objectives set for each operation. In fact, when a request is registered for a study of a connection to the electrical or gas network or an intervention for repair, a message appears to the person in charge of customer service, who in turn works on programming the work and allocating task forces according to importance and nature of the tasks, taking into account the estimated time period in the message from the system which is referred to as "Completion time". The task force then has the entire responsibility to complete the task and close the message referred to in the company's system as "Case closed".

The enterprise resource planning system also contributes to enhancing the exchange of knowledge among employees by reviewing problems and solutions that contributed to the achievement of the business results through

monthly, quarterly, semestrial and annual reports. This is due to the nature of the business of the company, which shows the results in the form of statistical ratios that show the employees the position of the company vis-a-vis the established goals and compare it with other distribution companies of the other Algerian Wilayas, which reflects the company's interest in sharing business among workers and the practice of teamwork among individuals.

The system also contributes to the promotion of the exchange of ideas and experiences among employees by recording the problems faced by the users of the system and proposing appropriate solutions to them in a package integrated into the company's enterprise resource planning system called MONTIS. It is the place where users find solutions to the problems they face in the system and these solutions are usually provided by experienced users of the previous system. The system also enables them to suggest new mechanisms that facilitate their work and give positive results, and this is what was shown by the completely new package modified in the system, which began to be exploited in 2020, called CRMS "Customer Relationship Management System" for customer relationship management, which is related to the department of commercial relations and the agencies affiliated to the company. This system has replaced the SGC (Clients Management System) that was separate from the company's resource planning system, which made it difficult to match the reports and results such as the number of linkages (to the electrical and gas network) completed in the commercial relations department with the income registered at the Department of Finance and Accounting and at the Department of Transactions.

The ERP system also contributes to enhancing employee innovation by collecting ideas and suggestions that help employees to do their work as quickly as possible. In addition, the suggestions are applied in the new package and with each update as the system refers to every addition made through user suggestions. All of this indicates the company's interest with teams, the exchange of ideas and with innovation by embodying them in their ERP system.

Third - Organizational function: To assess this element, three questions were addressed to all employees of the company who use the enterprise resource planning system. We found out that the system contributes to reducing the time and effort spent in carrying out

operations, especially in the quarterly inventory operations carried out by the company. Habitually, the process took days of manual work in counting and collecting the amounts of unpaid bills. With the ERP system, this operation has become instantaneous and does not require a group of employees to complete, which means that it does not require effort as in the past.

According to the results of the interview, the consistent and continuous use of the enterprise resource planning system also contributes to enabling employees to control their jobs in an excellent manner. Good control of the system helps in analyzing the main justifications that lead to the failure to achieve the goals and correcting them. Taking the company's sales reports as an example, it is not possible to analyze them and find out their flaws except after filtering them according to the semester, the energy quality, the pricing, the category of customers, as well as the consumption period compared to the same semester in previous years, in addition to the type of services required by each customer during the studied consumption period. This whole process requires skill in using the system and it also enhances control of the functions and thus the achievement of goals.

The new ERP system also provided the company with the function of monitoring or meter reading for Medium-Voltage Customers, through the remote monitoring system SATURNE, which saves time and effort with a low error rate to zero. According to the officer in charge of the Medium-Voltage Customers, the job of the agents is now limited to the distribution of invoices only instead of monitoring and distribution. It is also worth noting that the current system in the company sends SMS text messages automatically to customers after the billing process, which made it easier for customers to pay bills on time, thus saving time and effort for the company's debt collection team.

4.3 Testing the hypotheses of the study: The tests of the study are done by comparing the average of each axis with a hypothetical value of 03, and at the significance level $\alpha = 0.05$, and the rule for judging the hypotheses is as follows:

- $\mathbf{H_0}$ rejects the null hypothesis and $\mathbf{H_1}$ accepts the alternative hypothesis if $\alpha \leq 0.05$;
- $\mathbf{H_0}$ accepted the null hypothesis and $\mathbf{H_1}$ rejected the alternative hypothesis if $\alpha \geq 0.05$.

First hypothesis: There is a statistically significant effect of the support of top management on the success of the enterprise resource planning (ERP) system.

Table (3): Demonstrates multiple linear regression between top management support and ERP system success.

Standards for tests / Study variables		Correlation coefficient value	The coefficient of determination	value F-test	indication F-test	regression coefficient β	value T-test	indication T-test	Contrast inflation factor VIF
ERP system success	**Support from Top management**	0.577	0.333	25.41	0.000	0.550	5.042	0.000	1.000

Source: Prepared by researchers based on the outputs of PSS version 26

In order to know the relationship between the success of the ERP system and the explanatory variable after the support of top management, a multiple linear regression model was used (Table 3), which was considered after the support of top management as an explanatory variable and as a dependent variable of the success of the ERP system. The results showed that there is a direct average correlation between the scope of the support from top management and the success of the enterprise resource planning system amounted to 0.577. The regression results showed that the regression is significant through the quality of the F model of 25,417 with a significance of 0.000, which is smaller than the approved significance level of 0.05. The results also show that the top management support variable explains 33.3 percent of the variance in the success of the enterprise resource planning system, given the coefficient of determination of 0.333, and the value of β = (0.550), which shows that the relationship between the scope of top management support and the success of the enterprise resource planning system is statistically significant, and this means that the more the management support improves by one unit the ERP system improves by 0.550 units. Therefore, we accept the alternative hypothesis $\mathbf{H_1}$ and reject the null hypothesis $\mathbf{H_0}$.

We also note from Table (3) that the result of the variance inflation factor of the model is 1.000, which is l

ERP Success = 1.015 + 0.550 (Top Management Support)

ess than (3.0), which indicates that there is no linear multiplicity problem between the model variables. Thus, we can write the regression line equation as follows:

The second hypothesis: There is a statistically significant effect of the organizational culture on the success of the enterprise resource planning system.

Table (4): Demonstrates multiple linear regression between organizational culture and the success of ERP

Test Standards / Study variables		Correlation coefficient value	The coefficient of determination	value F-test	indication F-test	regression coefficient β	value T-test	indication T-test	Contrast inflation factor VIF
ERP system success	organizational culture	0.512	0.267	18.56	0.000	0.439	1.308	0.000	1.000

Source: Prepared by researchers based on the outputs of PSS version 26

In order to know the relationship between the success of the ERP system and the explanatory variable of organizational culture, a multiple linear regression model was used, in which the dimension of organizational culture was considered as an explanatory variable and the success variable of the ERP system was dependent. The organizational culture and the success of the enterprise resource planning system amounted to 0.517, and the regression results showed that the regression is significant through the quality of the F model of 18,561 with a significance of 0.000 which is less than the approved significance level of 0.05, and the results explain that the organizational culture variable explains 26.7 percent of the variance in the success of the enterprise resource planning system. The value of the regression coefficient is equal to 0.439, which shows that the relationship between the dimension of organizational culture and the success of the enterprise resource planning system is statistically significant, and this means that whenever the organizational culture is improved by one unit, the enterprise resource planning system improves by 0.439 units. Therefore, we accept the alternative hypothesis $\mathbf{H_1}$ and reject the null hypothesis $\mathbf{H_0}$. We also note from Table (4) that the result of the variance inflation factor of the model is 1.000, which is also less than (3.0), which indicates that there is no

ERP Success = 1.199 + 0.439 (Organizational Culture)

linear multiplicity problem between the model variables. Thus, we can write the regression line equation as follows:

The third hypothesis: There is a statistically significant effect of the organizational function dimension on the success of the enterprise resource planning system.

Table (5): Demonstrates multiple linear regression between organizational function and ERP system success

Test Standards / Study variables		Correlation coefficient value	The coefficient of determination	value F-test	Designation F-test	regression coefficient β	value T-test	indication T-test	Contrast inflation factor VIF
ERP system success	**organizational function**	0.645	0.416	36.27	0.000	0.615	6.023	0.000	1.000

Source: Prepared by researchers based on the outputs of the SPSS version 26

In order to know the relationship between the success of the ERP system and the explanatory variable of the organizational function, a multiple linear regression model was used, in which the dimension of the organizational function was considered as an explanatory variable and the success variable of the ERP system was dependent. The results showed that there is a direct correlation between the dimension of the organizational function and the success of the ERP system. The ERP system reached 0.645, and the regression results showed through the quality of the F model of 36,272 with a significance of 0.000 which is less than the approved significance level of 0.05, and the results of the change rate for the dimension of the organizational function explain 41.6% of the variance in the success of the ERP system (ERP). The value of β came to 0.615, which shows that the relationship between the dimension of the organizational function and the success of the ERP system is statistically significant, and this means that whenever the organizational function is improved by one unit, the ERP system improves by 0.615 units. Therefore, we accept the alternative hypothesis $\mathbf{H_1}$ and reject the null hypothesis $\mathbf{H_0}$. We also note from Table (5) that the result of the variance inflation factor of the model is 1.000, which is also less than (3.0), which indicates that there is no linear

multiplicity problem between the model variables. Thus, we can write the regression line equation as follows:

ERP Success = 0.849 + 0.615 (Organizational Function)

4.4. Discussion of the results: By diagnosing the reality of the Algerian Company for the Distribution of Electricity and Gas in Ouargla using the ERP system, the results showed that there is an impact of the support of top management on the success of the implementation of the system, which rejects the first negative hypothesis that there is no effect of support for top management on the success of the implementation of the ERP system and accepts the hypothesis alternative, and because the application of these systems is a high-level administrative decision, Sonelgaz has established a special Subsidiary company called ELIT, which ensures the development and implementation of information systems directed to manage the various activities of the companies of the group. The results show the importance and role of top management's support for new technology, a result consistent with the study conducted by (Rasmy, 2005) as the environments of the studies are similar. It should also be noted that Sonelgaz or the parent company is the one which controls the ERP system in the group and it also imposes these systems on the affiliate companies of the group.

In order to assess the concept of organizational culture as well as the impact of this factor on the success of the enterprise resource planning system in the company, the results showed that the system used contributes to strengthening teamwork as well as stimulating and enhancing the spirit of responsibility among the company's employees, which rejects the second negative hypothesis that there is no impact of organizational culture on the success of the implementation of the ERP system and the acceptance of the alternative hypothesis. The system also contributes to promoting the exchange of knowledge as well as mutual ideas and experiences among employees through the integrated package in the system called MONTIS. The results also showed the contribution of the system in enhancing employee innovation by collecting ideas and suggestions that help them do their work as quickly as possible, which was implemented in the new package and with each update of the system, where the system refers each time to the additions that are made through user suggestions, which indicates the company's interest in teams, exchange of ideas and innovation through its integration in the enterprise resource planning system. However,

the company has reservations about some of the employees' suggestions, which it deems inappropriate, and it deliberately ignored them. It should be noted that these suggestions were originally present in the previous SGC system, considering that they are not in line with the organization's regulations, and as a kind of resistance to the change in the new CRM system and the resulting changes in the activities of the institution.

As for the organizational function, the results showed that there is an important impact of the function on the success of ERP implementation in the company, and this rejects the third negative hypothesis and accepts the alternative hypothesis that states that there is an impact of the function on the success of ERP implementation, as the system contributes to reducing the time of the tasks, as well as the effort made by the employees, which we noticed in the remote monitoring system SATURNE for Medium-Voltage Customers, which leads to it reducing the time for paying bills, and thus saving effort for the monitoring and collection team. The continuous use of the system also contributes to enabling employees to control their tasks in an excellent way, this result reflects the proficiency of the operators in using the system. It is normal that the continuous use of system would result in the control of the tasks, but it is also necessary to train employees especially since the new CRM system is considered up-to-date compared to the previous supporting system SGC, which the company did not do as it considered that the new system is only an updated and integrated version of the enterprise resource planning system, and does not consequently require training. The company has therefore only provided a user manual for employees, which has made some operations difficult, especially for new users in the company.

5. Conclusion: The study clearly shows that the enterprise resource planning system used in the Algerian Company for Electricity and Gas Distribution in Ouargla contributes to facilitating the process of participation, and the exchange of information among all users working in the company, which enhances teamwork between employees, facilitates their work and limits time and effort in carrying out tasks. The ERP system also has a positive impact on the company through the support and success of the decision-making process in all departments of the company and the provision of the required needs in information. The use of the system supports the process of planning the resources of the company by displaying

and providing the required information. This ensures that all system operations involved in direct and indirect interactions between employees contribute to the promotion of ideas and mutual experiences between employees, and are subject to analysis and evaluation as noted in the study sample. In addition, the use of the ERP system ensures the sharing of information between the company and its customers, as it (the ERP system) plays an important role in achieving a kind of balance between the company, its employees and customers, thus achieving a competitive advantage and maintaining its continuity by developing new methods of doing quality work, and instilling organizational culture that reflects teamwork and responsibility of each individual in the company.

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