

The Impact of enterprise resources planning (ERP) on knowledge sharing case study on the national insurance corporation Saa-Ouargla

Redjem Khaled¹ / Louati khatima² / Mankouri Menel Ibtissem³

¹University of setif 1 redjemkhaled@gmail.com

²University of Ain Temouchent khatima.louati@gmail.com

³University of Ain Temouchent, mankouri.menel@hotmail.com

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Abstract:

The aim of the study was to determine the extent to which ERP on the level of knowledge sharing . Where this study dealt with the role of system ERP in sharing knowledge level through a field study at the national insurance corporation - Ouargla. And in order to achieve this goal, we relied on the descriptive approach corresponding to the theoretical side of the study and used the questionnaire as a tool for collecting information, it was distributed to a random of 65 A worker from employees at all administrative levels in the National Insurance corporation, and the analysis was done by relying on the statistical program Spss using a set of tools and statistical methods.

The study obtained a set of results, the most important of which is that ERP moderately helps to raise the level of information sharing and coordination between services, however, this system has been very successful due to its good use and this has made the institution competitive and sustainable.

Keywords: ERP system, knowledge sharing, National insurance corporation.

Jel ClassificationCodes: :O3,M12.

Corresponding author:Redjem Khaled,email: redjemkhaled@gamil.com

1. INTRODUCTION

Among the integrated information systems, we find Enterprise resource planning system (ERP), which is one of the most widely used software in recent years. It is considered one of the most significant developments in the use of information technology in enterprises, as the latter is an integrated software package that helps decision-makers optimize resources by providing an integrated software package for processing information in the enterprise .Some Algerian enterprises have experienced an orientation towards the implementation of this system, but they have faced several obstacles and difficulties in order to optimize the use of the system.

There has also been an increasing interest in the concept of knowledge management as it is the main cornerstone of institutions at various levels for the purpose of generating and spreading knowledge. It is thus the process through which institutions find value from their intellectual elements in order to achieve the best practices .Many of the features offered by knowledge management applications to these organizations have been noted, such as improved communication between individuals, as well as communication with senior administration, and the promotion of a sharing culture.

Problem:

The success of an institution, on the one hand, depends on encouraging its members to share knowledge in order to raise the level of knowledge of others, as well as to re-use knowledge

to maximize it, and on the other hand, to provide the right environment for work .Based on the foregoing, this study is an attempt to highlight the following problem:

To what extent will the use of ERP affect the level of knowledge sharing at the National insurance corporation Saa in Ouargla ?

To answer the main problem, we ask a set of the following sub-questions:

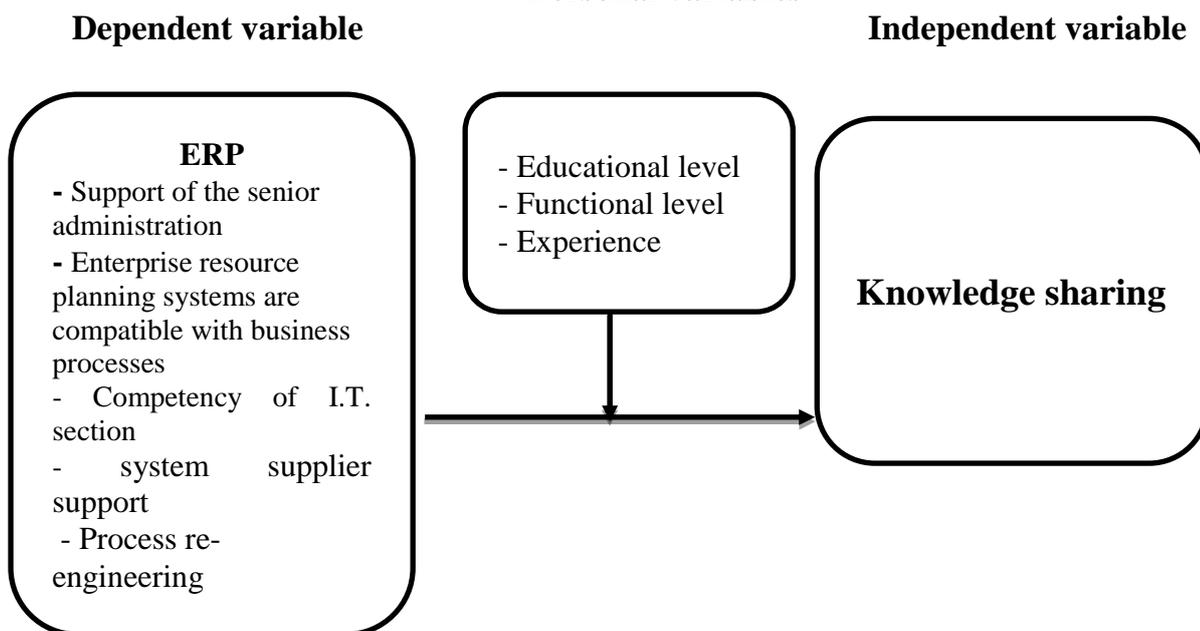
- What is the reality of using the ERP system in the national insurance corporation?
- Does the ERP system affect the level of information sharing and coordination between interests?
- Are there statistically significant differences between ERP and knowledge sharing attributable to personal variables?

To answer the sub-questions, we propose the following hypotheses:

- The ERP system in the national insurance company is used effectively;
- The ERP system has a positive role in terms of information sharing and coordination between interests;
- There are statistically significant differences between ERP and knowledge sharing attributable to personal variables.

Study model:

Fig. 1: Study Model
Personal variables



Source: made by the researchers

2. Theoretical framework of the study:

2.1 Definition of ERP and its characteristics:

First: Definition of ERP:

ERP Systems are integrated systems that use a software package to apply a variety of models designed to support a variety of functions in the organization (Taher, Asmahan Magda, & Al-Khafaf, , 2011, p. 250). ERP originated from what was initially known as MRP (Material requirements planning), which was only concerned with running production. ERP is a manufacturing resource planning mainstreaming to include the integrated

management of all enterprise functions, with ERP software covering business management, production management, financial and accounting management, as well as human resources management. ERP is arguably a standard software, covering most enterprise activities with the purpose of creating some kind of coordination and integration within the enterprise (Malki, 2015). The naming ERP means “Enterprise Resources Planning” and it is translated into French as “Progiciel de gestion intégré” or (PGI); hence the term “ERP” is the most commonly used (Blain, 2006, p. 03). Moreover, ERP is defined as a computer-based system designed to handle the transactions of the organization and facilitate integration, planning, production and customer response (O’Leary, 2000, p. 27). According to Deloitte, ERP is a business software package system, that allows the organization to jointly share data and practices throughout the organization and allows immediate production and access of information (Odhiambo & Otieno Jim, 2010, p. 13). ERP is also a management information system that integrates and operates many business practices that accompany the Organization’s production processes (Mendoza, & Oscar Alfonso, 2005, p. 09).

It could also be defined as an information system designed to coordinate all resources, information and activities required to complete business processes, such as accounting, production, procurement and others. The ERP system relies primarily on a common database and a special software design. The common database allows work sections to store and retrieve information during the activity period, and the software design allows work management to select, arrange and link the necessary models to supplier models and add special new models to improve performance (Al-Hiltah, 2016, pp. 7-9).

According to the foregoing, it is clear that ERP is a computer-based information system designed to manage and support multiple business functions in such a way that allows for the integration of these functions and the flow of information across the whole business in the Organization clearly and appropriately so that it can perform its functions efficiently and effectively.

Second: The need to adopt ERP:

The adoption of ERP is one of the successful solutions to the realities of today’s organizations because many of the workflow tasks and procedures adopted are both manual and automated, which may or may not be formally documented, as well as a variety of applications of inherited sections and databases that may be fragmented and not integrated. This approach does not meet the needs of the organization at present as the market is characterized by high dynamism and competitiveness, so that it is a major obstacle to productivity, profitability and growth (Chaveesuk, 2010, pp. 13-17). One of the main reasons for the adoption of ERP is the efficiency of the system and its ability to enhance the competitiveness of the Organization by providing the basis for business efficiency and increased market share (Hasibuan, 2011, p. 03). Moreover, another reason why organizations are moving towards adopting the system is that business processes and activities are becoming increasingly complex, regardless of whether the organization is small or large and regardless of industry. The ERP system thus creates a type of department or section in which coordination of work takes place, thereby increasing the ability of organizations to align and accurate information in all departments and sections, especially functional ones (Hall, 2008, p. 529).

Hasan & Arunthari also noted that there are three main reasons for adopting the ERP system: (Arunthari, 2005, p. 1408)

- **One integrated system:** All organizations have high expectations that the new information technology will provide integrated software solutions to improve the performance of internal business processes. Thus, ERP includes multi-application modules designed to integrate all departments and functions across the organization.
- **Unwanted inherited systems:** One of the driving forces for the adoption of ERP is the need for replacement. Many IT managers have agreed that the growing size of their organizations has made information management very difficult manually or even through older systems.
- **Business practices:** Most organizations needed to adopt ERP to achieve best business practices or reference models for their organizations.

Organizations that needed best practices recognized that practices in other successful organizations in the world or even their competitors were an integral part of the ERP system to help them consolidate their work, particularly in jobs that add no value and thus reducing useless functions.

Third: The requirements of ERP success:

The implementation of ERP is a very complex process, requiring systematic planning and consultation to coordinate between the various departments of the organization .In addition, linking the available data or information on all administrative units of all the functions of the organization into a single database is a very complex process, bearing in mind that the implementation of the system requires a significant change in labor practices and relationships from employees to the organization administration. The change process requires trainers who are able to train and qualify staff to adapt to the use of the new system , because the willingness of employees to use the new system and their conviction that its use will lead to the success of the organization is one of the qualities required in the organization to qualify for the ERP system. The changes to be made are widespread and affect everyone in the enterprise (Chiar, 2013, p. 675).

Optimal success refers to optimal results that can be achieved in the organization by relying on the ERP system concerning its business situation that is measured by the profitability of the project. The ideal success could be dynamic (Fang, 2005, p. 15). Yingjie also asserts that IT capabilities play a significant role in the success of ERP (Yingjie, 2005, p. 12) . In this context, six steps have been identified as requirements for the success of the ERP system (Hawksworth, 2007, pp. 4-9):

- **Prioritization:** Modern applications enable the organization to implement certain functions in a timely manner to meet the most pressing needs and then expand the application to meet additional requirements. In this case, there will be more time to master the ERP implementation process.
- **Avoid modifications:** After the organization has selected and applied the appropriate ERP system, there will be no need to modify it in order to operate the core elements because the modifications require changing the original code. The modifications also increase the overall cost of the system.
- **Prepare for change:** Beneficiaries need to understand that those changes add greater value to the organization as a whole. The open debate on how changes and improvements work can increase the acceptance of ERP project while allowing users to see that their site will become safer.
- **Gain the support of the CEO:** Engaging executive support in the selection and implementation of ERP is vital. The executives are responsible for creating the vision of success of the system, stimulating the project team, purchasing the necessary

resources and making high-level decisions based on the recommendations of the action team. The ERP system can therefore fail quickly without the intervention and support of executives and there will be resistance to new systems and processes that will confront its beneficiaries.

- **Balancing and end-users:** Licensing, execution and maintenance fees are involved in the ERP project and are part of the real cost of the project, thus fixed costs must be balanced. However, it is difficult for most organizations to balance individuals and expertise to ensure the success of the ERP system, so users must be involved in each area of the organization.
- **Simply success:** Success in implementing the ERP system is the result of selecting the correct application with the best users and making decisions with their involvement.

2.2 Knowledge sharing:

First: concept of knowledge sharing:

Knowledge sharing has been defined as the social interaction and the culture that involves exchanging, transferring and conveying knowledge, expertise and skills through each section or organization as a whole. (Nya Ling Tan, 2010, p. 188) It was also defined as the process by which individuals exchange implicit and explicit knowledge and create new knowledge with each other.

Second: importance of knowledge sharing:

Knowledge sharing is one of the key processes in knowledge management. Its importance lies in:

- ✓ Timely delivery of knowledge to individuals;
- ✓ The knowledge sharing process enables workers to contribute to the competitiveness of the enterprise through sharing and applying knowledge that has the potential to offer innovations;
- ✓ Makes jobs easier and save time for other tasks (Abbas, 2015, p. 362) (Abbas, 2015);
- ✓ Contributes to enhance cooperation among individuals, facilitate knowledge-sharing within the team and increase the flow of information, which provides modern means of communication that help to share knowledge among individuals;
- ✓ Knowledge sharing has an important impact in different sections and units of the enterprise because the knowledge in each section is different from the other. When there are interactions between them, new knowledge may emerge as a result of these interactions, whether vertical or horizontal; (Khalaf, 2017, pp. 41-42)
- ✓ The process of knowledge sharing provides enterprises with an opportunity to discuss **what you know** and **how you know**. Knowledge sharing brings and maintains the competitive advantage of an enterprise to move towards future growth and expansion by adding value to regulatory activities;
- ✓ Engaging individuals in relevant expertise and information reduces the lost time of wrong attempts and experience, and significantly increases the resources of the institution (Al-Amidi, 2018, p. 138).

2.3 The role of I.T. in the transfer of knowledge and the relationship between them:

First: Role of IT in the transfer of knowledge:

The role of information technology with all its dimensions and capabilities is an important key to knowledge transfer and sharing. However, there are a number of considerations that should be taken into account when resorting to information technology in the transfer of knowledge, which we can identify as follows:

- 1- **Responsiveness of IT and its appropriateness to the needs of the user:** There should be sustained efforts to ensure that the information technology used is commensurate and responsive to the various immediate and future needs of the beneficiaries, taking into account that such needs change and it is necessary to keep pace with these changes.
- 2- **Content structure and accessibility:** In large systems, indexing and classification procedures are necessary and important in order to ensure quick and easy access to materials, information and knowledge held in documents.
- 3- **Qualitative requirements and standards of contents:** There should be standards and specifications in adding and entering new contents into the system, ensuring speed and ease in retrieving the required materials.
- 4- **Integration of knowledge technology with available systems:** It is necessary to move towards integrating relevant knowledge technology with existing and available technology options.
- 5- **Scalability and Evolution:** Solutions that can work with small aggregates, such as web sites for HTML, may not necessarily be suitable for large organizations, which operate broadly and globally.
- 6- **Hardware and software compatibility:** That is to ensure that available options are compatible with the bandwidth in communications on the one hand, as well as the computer capabilities available to users on the other, in addition to the synchronization between technology and user capabilities with the aim of optimizing the potential of available technology. Knowledge sharing programs that focus on the synchronized development and improvement of the whole system, in terms of technology, applications and human practices, will certainly be more successful than a system that focuses only on one aspect of them.

Second: Relationship between knowledge management and IT

Information technology plays an important role in knowledge management programs through its ability to accelerate the production and transfer of knowledge. Knowledge management tools help to collect and organize group knowledge by making it available for sharing. It is concerned with critical thinking, innovation, relationships, patterns, skills, cooperation and sharing, and uses technology to increase communication, encourage conversation, share content and negotiate meaning. IT is a set of tools that help to work with information, perform undone tasks, prepare and process information. It contains the following:

- 1- Input and output devices;
- 2- Software;
- 3- Communication tools and devices;
- 4- The processing unit, consisting of the CPU and internal memory;
- 5- Information with which it deals;
- 6- Storage tools and devices;

7- Human element, which is most important.

3 Filed study:

3.1 Population and sample:

3.1.1 Population: The National insurance corporation (SAA) was selected as the study community. The Regional Directorate of Ouargla was selected among 15 directorates in Algeria. This choice was made based on the fact that the company adopted ERP system since 2004 under the name ORASS as an integrated insurance management system. This system operates with the Oracle database, and the study community has included a group of eads of services, interests, commercial agencies and users of the ERP system.

3.1.2 Sample: The study community consists of 85 employees from several different administrative levels at the regional directorate level in Ouargla and each of its commercial agencies, namely agencies A, B and C, as well as the agency of Touggourt , El Hadjira, Tamanrasset, and El Guerrara. The questionnaire was distributed to a random sample of 65 employees out of 85 employees because the remaining 20 were mostly on holiday or administrative assignment, and could not be contacted. The number of forms distributed was 65, of which 25 were at the level of commercial agencies and 40 at the level of Ouargla Regional Directorate.

3.2 Study tool: The field study was based on both the questionnaire and the interview, as well as the case study in order to diagnose the reality of the ERP system in the enterprise under study.

- The questionnaire was divided into:

First part: includes the questionnaire paragraphs and contains two axes:

- ❖ **First axis:** is centered on the ERP axis, contains 21 phrases distributed from 01 to 21 and consists of five dimensions.
- ❖ **Second axis:** is about knowledge sharing and contains 09 phrases distributed from 22 to 30.

Second part: is dedicated to the demographic features of each factor: gender, age, educational level, job, and years of experience.

3.3 Statistical methods used in the study:

In order to analyze the data collected through the questionnaire, the data was unloaded in Excel and the SPSS version 24 program was relied upon, where a set of statistical methods were relied on, as follows:

- Use frequencies and percentages to describe the demographic characteristics of the study sample;
- use arithmetic averages;
- use standard deviations;
- Regression and correlation analysis methods to demonstrate a relationship between the ERP system and knowledge sharing;
- Stability coefficient Cronbach's alpha criterion.

3.3 Results and discussion:

3.3.1 Consistency of study tool:

Consistency measures the stability and non-contradiction of the study tool, showing whether the survey list will give the same results with an equal probability of the calculated coefficient if it is redistributed to the same sample participants. Alpha Cronbach stability

coefficient was adopted in this study, which is one of the most important methods of measuring internal consistency. The table below shows the consistency coefficient for the study dimensions and variables.

Through Table (1), we note that the value of the Alpha Cronbach consistency factor is 0.925, i.e. 92.5%, which is a good ration and reflects a high degree of credibility of the answers and the internal consistency of the questionnaire phrases.

3.3.2 Distribution of participants according to their educational level:

Table (2) shows that the members of the sample studied are divided into different educational levels in varying ratios. The largest percentage is the third category, i.e. the level of a certificate of studies, a bachelor's degree or a state engineer, with a very significant percentage estimated at 52.8%, which is an important factor and a great strength for the enterprise. The second category followed, with 26.4%, is for participants who have a senior technician certificate or a technician certificate, followed by a 20.8% of participants who have a level higher than master's level.

3.3.3 Distribution of participants according to their professional experience:

Through table (3), it is clear that the participants studied are distributed in different ratios concerning years of professional experience. The largest percentage is the third category, which has experience between 11 and 20 years with a very significant percentage estimated at 64.2%. Then, it is followed by the second category which has experience between 05 and 10 years with 20.8%. Later, there is the fourth category with more than 20 years of experience with 13.2%, followed finally by those with less than 5 years of experience with 1.9%.

3.3.4 Distribution of participants according to their professional rank:

Through table (4), it is clear that the participants studied are distributed in different ratios concerning their professional rank. We find that the largest percentage is the second category, i.e. the head of a branch or deputy head of service with a very significant percentage estimated at 52.8%. Then, the third category came in second, i.e. the head of service by 20.8%, followed by the first category, which is concerned with an office employee with 18.9%. Finally, we have the category of director, head of agency or head of department estimated at 7.5%.

3.3.5 Axes results:

- Regarding the reality of the study variables:
As we mentioned before, ERP is the independent variable and knowledge sharing is the dependent variable.
- The arithmetic mean for the dimension of senior administration support was 2.45, as shown in table 5, indicating that the sample agrees that the company provides material means, including IT devices, accessories and servers. The participants also agree that the company did not fail the training and supported the system's use and application. This demonstrates that there is support from senior administration through allocating various resources. The highest mean was for the first phrase, with an arithmetic mean of 2.64, which states that the company provides modern computers and servers suitable for all its branches to use ERP. This is because the size of the enterprise is so large, it needs large, new servers. Then comes the phrase: Administration provides IT accessories, networks and high-efficiency

communication technologies that meet the needs. The latter means that the senior administration is doing a lot of support in providing devices, and this is reflected in the size of the large budget allocated to the ERP project. After that, there are two phrases with equal percentages of 2.40: "... providing adequate support by providing the necessary financial, material and human resources necessary to implement and optimize the use of the ERP system" and "senior administration is interested in adequate training for end-users, technicians and engineers in charge of the ERP project". The latter is achieved through training missions established by the enterprise for workers. Finally, senior administration motivates all staff and tries to make ERP work, as well as follows up and monitors it at all stages of implementation by 2.30. These ratios are very acceptable and reflect the importance and support that the company attaches to this dimension. (See table 5)

- For the second dimension related to ERP compatibility with business processes, table (6) shows that the general arithmetic mean was 2.28, indicating that the sample was moderately consenting to most of the dimension expressions and agreed that the system meets all processes, as well as integrates interests and information flow between levels. The system also reduced the number of mistakes, mitigated the burden of work routine, and facilitated work, but by an average percentage. Phrase six obtained the greatest arithmetic mean of 2.38: "Programs that form the system or ERP applications are appropriate and meet all work requirements. «This explains that all programs and applications are in line with the system and help to transmit information between the Directorate and the agencies.
- Through Table (7) which shows the sample's direction towards third dimension phrases (the efficiency of the Information Section), the arithmetic mean of the dimension was estimated at 2.30, indicating that the sample is moderately agreeable with certain phrases. The latter means that IT Section maintains and updates the system, as well as provides databases available to all users at all administrative levels. Phrase 12 has the highest average of 2.36, with new information structures created in each of the Directorate-General that did not exist before, as well as an IT department including two services was established in the regional directorates; one for program follow-up and the other for the maintenance of equipment and network follow-up that did not exist before either. The Information Section also has the capacity to communicate between branches, the Directorate-General and the Regional Directorate, as well as the system's suppliers.
- Through table (8) concerned with the fourth dimension of the system's suppliers support, the arithmetic mean of the dimension reached 2.23, i.e. the sample is moderately consistent with the outstanding support carried out by the system's suppliers, a Moroccan enterprise that follows and sells the Orass insurance system of the French company Orsys. The largest average was in favor of phrase 16, which says that system suppliers are following all implementation and usage steps as well as updates processes with an arithmetic mean of 2.26. This demonstrates that the system's suppliers provide adequate support and awareness training to members of the IT Department, which explains the significant development of programs and system outputs that took place from the beginning of use to 2020. All that has been said made the system meet all the requirements of work in all areas of insurance, including drafting contracts and compensation, accounting all operations in an automated manner, transferring information from commercial agencies to the

regional directorate to assemble it and then send it to the Directorate General of Algeria without causing any disruption in activity. It was all followed by the system's suppliers and their qualitative interventions.

- Table (9) shows that participants' opinions agree moderately on most fifth-dimension phrases regarding the process reengineering, with an arithmetic mean of 2.19. We noted that the participants agree moderately that the company manages process reengineering efficiently, the employees are satisfied with the change in operations, and the changes contribute to the success of the project. The latter was due to the significant percentage of young workers employed during the beginning of employment, most of whom are university graduates looking for a high level of performance with modern technology that will make them acquire technical in a short time. All of these contributed significantly to the application of the system without resistance, in which phrase 19, stating that the company is strategically redirecting the implementation of the project and using it well, got an arithmetic mean of 2.34. This means that the participants are fully aware of the need for reorientation in order to optimize the application of the system and achieve the company's strategic objectives.
- Regarding studying the participants' opinions towards the second axis phrases, which include paragraphs on knowledge sharing as shown in table (10), the largest mean of the main axes estimated at 2.44. All participants agree with some phrases to a large extent and other phrases to an average degree. The highest arithmetic mean of the second phrase of this axis was 2.75, i.e. all sample members agree to cooperate with their colleagues and share the knowledge available to them in order to solve problems, and they are keen to transfer the knowledge they possess to their colleagues with an average of 2.68. Participants are fully in agreement to follow up and disseminate best practices for other interests and benefit from the experiences of others. The system also contributes to increase capacity, willingness to work and cooperate with colleagues. Most of the sample members noted that the system significantly developed their performance and increased their technical and cognitive skills. All this was the result of the impact of ERP implementation. These above-mentioned goals have been among the company's strategic objectives to improve knowledge sharing among individuals, the most important resources in the enterprise in order to be able to improve its services towards its customers, thereby improving its overall performance, which is positively and directly reflected on improving its competitive advantage in the insurance market.

3.3.6 Analysis of the correlation coefficient between ERP and knowledge sharing

Table (11) shows the value of the correlation coefficient between ERP systems and knowledge sharing where we note that the value of sig = 00, which is below the level of significance sig = 0.01. The correlation coefficient value reached $r = 0.53$, indicating a statistically positive relationship, i.e. there is a valid linear correlation between ERP systems and knowledge sharing of 53.1%, which is an average percentage.

4. Conclusion:

Through this research, we have tried to diagnose the role of ERP use at the level of knowledge sharing by answering the problem centered on the extent to which the use of ERP has an impact on the level of knowledge sharing in the National insurance corporation–Ouargla. To answer it, we have divided our research into two main sections: the theoretical

aspect in which we have looked at the theoretical literature of ERP and knowledge sharing, and some of the previous studies that fall under the context of this topic. The second section was devoted to applied study. We wanted to support this research and go deeper into the problem by addressing the various aspects through the field study in the National insurance corporation. In conducting the study, we came up with a set of conclusions and recommendations:

- The National Insurance Corporation – Ouargla achieved a great success in its use of the ERP system;
- National Insurance Corporation–Ouargla has high competencies with university degrees in system management;
- Senior administration of the National Insurance Corporation provides support and gives importance to the exploitation of the ERP system;
- System suppliers do training, but to an average degree, for members of the IT department;
- Using the Pearson correlation coefficient, we found that there was a statistically significant relationship of 53.1% between ERP and knowledge sharing. It is considered an average impact ratio, given that the correlation of each dimension of ERP and knowledge sharing is average;
- The system helps to store at several times and on several computers other than the server without the employee’s knowledge;
- Shortening a range of processes and tasks, and reducing the use of hard documents;
- The system reduces the possibility of tampering with existing data and information in the system;
- If necessary, the transfer of knowledge between workers will take place. They are keen to transfer their knowledge and experience among them on a voluntary basis;
- There is a low impact of ERP and knowledge sharing.

Suggestions

From our theoretical and field study, we can draw on some recommendations and suggestions, of which we mention:

- The organization should intensify awareness among its staff of the importance of implementing ERP as a strategic goal that leads the enterprise towards excellence;
- Paying more attention to attracting specialized IT competencies to manage modern and efficient technologies;
- Optimizing the data provided by the system so that the organization has clearer outputs;
- Work to speed up the extranet project to increase the performance of the company’s work;
- Expanding the internet network to facilitate the transfer of data between agencies.

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6. Appendices

Table (1): Tool consistency coefficients according to Alpha Cronbach and the size of the sample (N=)

Number of phrases	Alpha Cronbach
30	0.925

Source: made by the researchers based on SPSS outputs.

Table (2): Frequency distribution of participants according to the educational level

Educational level	Absolute frequency	Relative frequency
Senior technician or technician	14	26.4%
Certificate of studies or bachelor, or engineer	18	52.8%
Master, Magister, PhD	11	20.8%
Total	53	100%

Source: made by the researchers based on SPSS outputs

Table (3): Frequency distribution of participants according the professional experience

Professional experience	Absolute frequency	Relative frequency
Less than 5 years	1	1.9%
From 5 years to 10 years	11	20.8%

From 11 years to 20 years	34	64.2%
More than 20 years	7	13.2%
Total	53	100%

Source: made by the researchers based on SPSS outputs

Table (4): Frequency distribution of participants according the professional rank

Profession	Absolute frequency	Relative frequency
Employee	10	18.9%
Head of branch or deputy head of service	28	52.8%
Head of service	11	20.8%
Director or head of agency of department	4	7.5%
Total	53	100%

Source: made by the researchers based on SPSS outputs

Table (5): arithmetic mean and standard deviation of the first independent variable or the dimension of senior administration support

Phrases	order	weighted average	Standard deviation	direction
1. The company provides modern computers and servers that are suitable in all its branches for the use of ERP.	1	2.64	0.653	Agree
2. The administration provides IT accessories, networks and communication techniques that are highly efficient to meet the needs.	2	2.53	0.668	Agree
3. Adequate support through the necessary financial, material and human resources to implement and optimize the use of the system.	3	2.40	0.689	Agree
4. Senior administration motivates all staff to make ERP work, and follows up and monitors the system at all stages of implementation.	4	2.30	0.723	Neutral
5. Senior administration is interested in adequate training for the end-users, technicians and engineers in charge of the ERP project.	3	2.40	0.716	Agrees
First dimension: Senior administration support		2.4528	0.55629	Agree

Source: made by the researchers based on SPSS outputs

Table (6): arithmetic mean and standard deviation of the independent variable concerning the compatibility of ERP with works processes

Phrases	Order	weighted average	Standard deviation	Direction
1. System component programs or ERP applications are appropriate and meet all work requirements.	1	2.38	0.740	Agree
2. Operations built into the system meet the needs of all functions, sections and levels.	3	2.28	0.662	Neutral
3. Built-up operations meet complementary needs between services and flow appropriately.	4	2.11	0.610	Neutral
4. Programs and processes meet the control needs of the company.	2	2.34	0.706	Agree
Second dimension: compatibility of ERP with works processes		2.2783	0.53408	Neutral

Source: made by the researchers based on SPSS outputs

Table (7): arithmetic mean and standard deviation of the independent variable of IT efficiency dimension

Phrases	Order	weighted average	Standard deviation	Direction
1. The company has a significant interest in the IT Department and the recruitment of competencies to follow the ERP system.	2	2.34	0.618	Agree
2. IT Department manages executions and use processes efficiently.	4	2.21	0.567	Neutral
3. The IT department maintains and updates the system and provides databases available to all users at all administrative levels.	1	2.36	0.762	Agree
4. The IT Department has the ability to communicate and coordinate fully between end users and senior administration, as well as with ERP system suppliers.	3	2.30	0.575	Neutral
Third dimension: efficiency of the IT department		2.3019	0.50801	Neutral

Source: made by the researchers based on SPSS outputs

Table (8): arithmetic mean and standard deviation of the independent variable of the dimension of system suppliers support

Phrases	Order	Weighted average	Standard deviation	Direction
1. ERP system suppliers respond to the requirements of the company.	2	2.25	0.705	Neutral
2. System suppliers has the technical experience and competency that makes them more committed in fast necessary support.	3	2.17	0.778	Neutral
3. System suppliers follow every step of implementation, use and update processes.	1	2.26	0.655	Neutral
4. System suppliers provide sufficient and qualitative training for the IT department individuals in charge of implementing the system and updating it if necessary.	2	2.25	0.648	Neutral
Fourth dimension: system suppliers support		2.2311	0.54783	Neutral

Source: made by the researchers based on SPSS outputs

Table (9): arithmetic mean and standard deviation of the independent variable of reengineering processes dimension

Phrases	Order	Weighted average	Standard deviation	Direction
1. The company manages process reengineering efficiently and regularly without resistance after clarifying the procedures.	3	2.13	0.556	Neutral
2. The company is strategically reorienting the implementation of the project.	1	2.34	0.706	Agree
3. Most members of the organization are prepared and satisfied with the change in process engineering and change of procedures.	4	2.04	0.479	Neutral
4. Changes in process engineering contribute to the success of the project and is significantly in line with the application of the ERP system.	2	2.26	0.560	Neutral
Fifth dimension: reengineering processes		2.1934	0.40324	Neutral

Source: made by the researchers based on SPSS outputs

Table (10): arithmetic mean and standard deviation of the dependent variable of knowledge sharing

Phrases	Order	Weighted average	Standard deviation	Direction
1. Be sure to pass on the knowledge I have to my colleagues.	2	2.68	0.547	Agree
2. Cooperate with my colleagues and share with them the knowledge I have in solving problems.	1	2.45	0.515	Agree
3. Transferring implicit and explicit knowledge to my colleagues is a motivation that has earned me excellence and self-realization.	6	2.26	0.788	Neutral
4. The enterprise provides us with modern means of communication that allow us to share knowledge between us.	7	.28	0.794	Neutral
5. I have free access to information, documents and publications provided by the Foundation.	5	2.43	0.747	Agree
6. I voluntarily share the individual experience and knowledge I get from my colleagues in dialogue and regular meetings.	4	2.47	0.723	Agree
7. Make sure to participate in seminars, meetings and training courses to acquire new knowledge.	9	2.15	0.864	Neutral
8. Make sure that the knowledge I gained from seminars, meetings and training courses is transformed into knowledge that is available to all.	8	2.42	0.819	Agree
9. Be sure to follow and disseminate the best practices of other services and benefit from the experiences of others.	3	2.58	0.633	Agree
Second axis: knowledge sharing		2.4486	0.45026	Agree

Source: made by the researchers based on SPSS outputs

Table (11): correlation coefficient between ERP system and knowledge sharing

Second axis	First axis		
0.531	1	Pearson Correlation Coefficient	ERP
0.000		Sig. (2-tailed)	
53	53	N	
1	<u>0.531</u>	Pearson Correlation Coefficient	Knowledge sharing
	0.000	Sig. (2-tailed)	
53	53	N	

0.01 Correlation is significant at the 0.01 level (2-tailed)**

Source: made by the researchers based on SPSS outputs