

Review Factors of Organizational Structures and Organization Size on the ERP Adoption System in Public Organization-Libya Context

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ABSTRACT: Enterprise Resource Planning (ERP) system considered one of the information technology systems that encourage the organization to better future and has gained widespread fame in computer systems over the past years where it became a significant phenomenon in practice. Many kinds of research on ERP in many areas has been done in developed countries, while ERP adoption is still not enough of studies in developing countries especially in public organizations. The current study is exploratory insight regarding of identifying the factors of organization structure, organization size. That may affect the introduce ERP, by giving a brief explanation about Libyan public bodies based on causal research design; to explore the proposed conceptual framework which indicated in the literature review of current study depends on the theory of complexity. The suggestions show that these factors may significantly enhance ERP adoption for public organizations; for more facts can be investigated in proper future studies directions.

Keywords: Organization Structure, Organization Size, Enterprise Resource Planning (ERP) system, Public Organization, Libya

I. INTRODUCTION

Enterprise resource planning (ERP) system is considered one of the most current business organization systems, providing assistances of actual experiences and whole communication for companies in large organizations Seo [1]. It requires an integrated approach to doing business in one organization Elbardan [2], especially in recent era selection for adoption or implementation of latest information technology systems. ERP received considerable attention most important information technology considered primary strategy in the logistics industry, as the adoption of technology in the age of new organizations [3]. It is become necessary to understand this system better, as a one of an information system to make a good solution, that supports primary activity to convert benefits into organizations [4, 5]. Many researchers have tried to identify the factors leading to the successful ERP introducing [6, 7]. Those factors including organizational, and technical or cultural factors, and to assist ERP selection and implementation process ERP system are to integrate, unify all business operations of different jobs, to provide a single view of the organization of data, and information as part of a unified technological structure [8, 9]. In otherwise, Huang and Palvia [10] ERP as a technology systems meet additional challenges in developing countries related to many factors, such as organizational factors. El Sayed, Hubbard and Tipi [11] pointed out; it is important to put into consideration the effect of the regulatory factors when developing enterprise plans.

II. OVERVIEW OF LIBYA ORGANIZATIONS

Libya is a member of the group of developing countries in North Africa, in the Mediterranean. The total population is relatively small not exceeding six million inhabitants and an area of colossal about 1,760,000 square kilometers, which is the fourth largest country regarding the part in Africa and the oil in Libya is the primary income as is one of the most significant oil exporters in Europe [12]. Libya depends on oil and gas income, which provides over 65% of GDP, around 96% of sales [13]. Which is what makes the Libyan economy likely to be controlled by the price of oil and it shows the weakness of the adopt new technology systems in public organizations that have been targeted to cover Libya revenue according to plans in this regard [14]. It is becoming increasingly difficult to ignore the ERP in Libyan organizations.

III. ENTERPRISE RESOURCE PLANNING (ERP SYSTEM) IN LIBYA

At present Libya still one of the richest countries in North Africa, but it did not reach the little use of technology in most public organizations in production or services [15]. Although it only recently was begun, little information is gradually becoming available about the ERP in Libya, especially information technology in general in the current literature in light of current severe in most organizations the competitive needing to develop traditional systems have emerged [16]. The present study is trying to identify organizations structure

factors that affect the ERP adoption. Libyan organizations beginning to adopt, implementation (IS/IT) systems on different periods in different areas of organizations. Especially in the several sectors of the state, including services and productive organizations that provide countries a significant proportion of income, the payment of a lot of these agencies that improve the areas of technology and the introducing of systems that allow it in the future [17]. It is becoming increasingly difficult to ignore the ERP in Libyan organizations, which provide countries a significant proportion of income, the payment of a lot of these agencies that improve the areas of technology and the improvement of systems that allow it in the future [18]. The current study aims to enrich the body of several kinds of the literature of the ERP system, and organization structure and size in the Libyan groups.

IV. MOTIVATION OF STUDY

The Libyan organizations are rapidly falling behind the rest of the world development, particularly in the field of adopting the new IT approaches. Because some reasons for this include: an absence of performance measures, legacy standards systems usages. Which are often incomplete or are incompatible with new technology, a shortage of revising quality outcome of the organization structure or other quality techniques, also a lack of expertise about ERP system and a lack of government initiatives to promote the important of new technology within Libyan society. Furthermore, a study such as organization structure and size this will hopefully assist in explore of ERP system, to minimize factors that may inhibit optimal achievement ERP adoption. If Libyan organizations well accept ERP, and with constant improvements should be made in the design of the structure of Libyan organizations, it may become an obtainable mode of better assessment. Libya, as a country in Libyan public organizations specifically, is facing severe international competition. If it is not done soon to improve systems standards in Libya organizations will inevitably suffer from technology gap [13]. The researchers believe that such a strategy changes would help Libyan organization to make significant changes in their organization structure, attitudes, will assist to adopt ERP system.

V. SIGNIFICANCE AND NEED THE STUDY

The current study intentions to contribute to the debate in replacing existing systems with new systems, and providing larger sample quantitative evidence on the organizational factors in public sector organizations [19]. Moreover, ERP faces a challenge in most organizations that are trying to introduce and adopt the system May, Dhillon and Caldeira [20]. The present study looks for exploring some of the variables that may have an impact on ERP process of adoption, how to success in adoption ERP is important for most researchers in this field.

Vi. Literature Review

This section explores some basic perceptions connected to ERP system and organization structure and size, it also expressions at some of the background theory Complexity theory. This section also will enable an understanding of the part organization structure and organization size regarding the ERP adoption.

1. ERP adoption

ERP system is one of the information technology tools that aim to improve and develop the performance of public and private organizations [21, 22]. ERP is a "system uses software that enables any efficient organization use of resources and efficient "material and human resources, marketing, finance, accounting, costs, etc." and therefore affords integrated solutions to organizations regarding information processing. It can consider that useful ERP in converting substantial returns for organizations such as improving communication between departments in various business operations [23]. It takes ERP implementation between one to three years, and the budget may be significant to the successful implementation [24]. The inadequacy of current management systems in Libyan organizations are connecting to the introduction of new regimes; the existing methods may not be enough or acceptable for current organization's processes [25]. There might be a shortage in the traditional systems as the role of the traditional activities failures. According to Dumitru, Albu, Albu and Dumitru [26], ERP adoption should parallel to changes necessary, and post a strong structure. However, over 57% -70% of large organizations around the world have adopted ERP [27]. ERP system adoption is critical, also explained there may be unsatisfactory results associated with adoption of ERP System [28, 29].

The major theoretical issue that has dominated the field for many years concerns of finding that organization in Libya need several studies to examine difficulties facing adopt ERP system.

According to Saeed and Bampton [30] resulted that, low level of use of information technology in some of the Libyan organizations, also poor infrastructure.

To summaries, ERP is a system that combines all business processes and unifies data in a single copy to form a single holistic view of the organization, which depends on technology and information systems in various parts of the organization and can deliver to the customer in different ways services or products [31].

For the suggested model ERP is established on the following dimensions found the most attention of the researchers in particular [32-36] which are as follows:

- 1.1 System quality is to determine the degree of the information processing system itself. Measuring quality system focused mostly on the performance characteristics of the system under study (ERP adoption), regarding best investment of resources, the timing and response time, reliability and accuracy, the ability to adapt, the possibility of maintenance Udo, Bagchi and Kirs [37].
- 1.2 Information quality: is to determine the degree of ERP output Jenatabadi, Huang, Ismail and Satar [36], it is a major factor in the adoption of the ERP system regarding providing high-quality information in real-time information for asylum.
- 1.3 System use: system features is the full construction of the information provided by molecules because they correspond to the tasks and functions that are submitted and strengthened system aims to complete the tasks and allow employees to review and people how to get and use the information from the system [38].

2. Organization Structure Factor

It usually identifies the organizational structure is different views, but agree on that repeated a set of relationships between members of the same organization. Also, it is one of the most important aspects everywhere in the organization of mutual relations [39]. According to Zhang and Baden-Fuller [40], the organizational structure that includes relationships, such as specified in the official charts and behaviors required in one organization. Characterized reports rules and patterns of decisions, such as centralized and decentralized communication between members of the same organization, formal and informal relationships in the same organization as well. Tiller [41] organization structure can reflect the way in which information and knowledge distribution within the organization which affects the effectiveness and efficiency of use, and this would affect the distribution of the organization's resources and operations of full contact and interaction for all employees. Begoña Lloria [42] structure dynamically and critical factor, and can be changed according to the new organizational conditions, which may modify even help employees overcome their problems due to environmental fluctuations, or the development of new practices, such as the introduction of modern systems [43]. It is recalled that administrative literature abounds characteristics that could be used to measure how to be organizational structure, where select formalized, centralized of the most important features that give organizational structure significant characteristics Dalton, Todor, Spendolini, Fielding and Porter [44], will mention as follow;

2.1 Centralisation

Centralisation defines the concept of concentration of power and the degree of focus on the decision-making authority in organizations, is it at top management or with the participation of other departments on the horizontal and vertical levels of the organization [45].

2.2 Formalization

Can determine the formalization through organizing channels of communication and mutual information, which may be written to the procedures and rules [46, 47].

Formalization, reflect the degree of the official rules, and procedures that are working relationships and making control regarding providing a way to describe the appropriate behaviors and address the routine aspects of the problem Ruekert, Walker Jr and Roering [48].

2.3 Specialization

Specialization defined as, the diversity of specialists, technicians, and professionals within the same organization, here it must be pointed to the availability of resources Jin [45]. Also for specialization that combines functions, products or areas and how to fill the jobs, according to the preconditions to be followed or away from specialization under different circumstances that make organizations succeed in adopting ERP.

ERP more integrated, as are linking all units per organization and design a unified mechanism of action of monitors and facilitates the work of all the information for the joint action for all departments [49]. Can notice that the central, formalize character, specialization in most large organizations there are significant if they were comparable organizations medium and small size, this is what the study calls these factors for further clarification in the large public sector organizations [50].

3. Organization size

Organization size is a fundamental element in the adoption of technological innovations in various fields [51]. In the present study, organization size is considered a control variable to explore the possible relations through the model proposed in the current study. It calculates the number of months and years, which began organizations under study to interested to adopt ERP, on the other hand, the organization size is some employees [52]. The size of the organization, whether small, medium or large mutual relations between the size and the adoption of technology refer to the need to apply the different ways in a case study of technology adoption.

Most studies confirm that organization size supported adoption of technology and affected businesses and modern systems[53, 54]. Organization size receives increasing attention in the adoption, and implementation of information technology, small organizations are different from large organizations in the adoption and implementation of new technology, and organization size found to be antecedents of ERP adoption [55, 56].

VI. COMPLEXITY THEORY

Several studies in the introduction of information systems confirm that the organization environment-active complex, and compounding complexity of the on-going changes. Organizational needs in the changing internal and external environments, the results of some studies show if organizations failed to deal directly with organization environments, and changes fail to adopt modern information systems[57, 58]. Complexity theory suggests a reference analyze its impact on computer systems and dealing with organizational nature [59]. The present study attempts to enrich the theoretical framework of the study, where there is a need of complex thinking in the ERP adoption.

Complexity theory and ERPs only exist at the level of the system, and not in the parts modules. The complex results from the interaction between the various elements that comprise the system. The benefit of the complexity theory is the methodology, because of the complex nature of problems and solutions [60].

Question of This Study

To what extent the organization structure and organization size factors have an impact on the ERP adoption in the public organization?

Objective of This Study

To investigate the organization structure and organization size factors have a bearing on the ERP adoption in the Libyan organization.

VII. METHOD OF THIS STUDY

The technique of this study bases on causal research design, to explore the proposed conceptual framework. Which is shown in the literature review of the current study, and providing clear insight for next future empirical studies can depend on the explanation has been discussed, it is clear that quantitative approach using investigation survey is the most appropriate procedure of exploratory public organization perception about organization structure and ERP adoption.



Figure1: proposed framework

VIII. DISCUSSION

The Relationship between ERP Adoption and Organization Structure

Previous studies have mentioned that an ERP implementation is expensive and risky for all companies, but it is still more attractive for small enterprises. Which have specific features, and an introduction of new technologies attitude new challenges to all businesses especially for small and medium enterprises [61, 62].

It can be said in this case that the central, formalize character, specialization in most large organizations there are significant if they were comparable organizations medium and small size, this is what the study calls these factors for further clarification in the large public sector organizations [50]. On the contrary, it became apparent in the study conducted by Hameed, Counsell, and Swift (2012) studied the relationship between the adoption of information technology and the factors that hinder innovation. Through the environment, personnel, organization, found that the regulatory preparing for it more relevant, formalization, centralization related to weak of technology information adoption and factors proposed.

The Relationship between the Organization Size and the Adoption of ERP

In a study of Laukkanen, Sarpola and Hallikainen [63] to find out the relationship between the size of the organization and the adoption of ERP. They examined the constraints and objectives of ERP based on survey data on 44 organizations, found there are significant differences between small and medium-sized organizations and large size in the ERP adoption Dwivedi, Papazafeiropoulo and Metaxiotis [64], where the results indicated that small-sized organizations face more restrictions than large-sized organizations [65]. The use of ERP today is considered one of the most important ways, which enable organizations of various small and medium-sized and large levels of survival lot of contemporary research have shown interest in ERP systems on information, and modern technology in different fields [66]. On the point of view of Al-Jabri and Roztocky [67], ERP system is a unified information system that provides a total integrated support for all units in the organizations. Were either

commercial or service, because ERP is seen to the organization a single integrated unit. Which increases the chances of getting any information and become a movement smooth between the various departments Ng [68], and can be realized clearly improvements in organizations which have adopted the system and implemented correctly regarding the observed reducing in time wasted and the development of services and products [69].

IX. IMPLICATIONS

Even though the opportunity to achievement the ERP adoption in Libyan organizations, and reorganize necessary procedures should be taken into consideration of the concerning organizations, such as the structures, and size of the organization, etc. practically these changes are for success and survival the project which will provide excellent performance. The reason behind that is many organizations fail to a better understanding of the critical success factors of ERP as many previous kinds of literature mentioned that theoretically. On the practical side, the structure factors (structures, size) could be contributing to assist in adopting ERP system, by investigating proposed factors to seek which is the assumption are supported or no, can be clearly found in the actual survey.

Expected Contribution

Current paper interested in providing the conceptual framework, based on answering the main question and relationships that presented between variables associated with organization structure and organization size and its relationship to the ERP in the context of Libya organizations. It is likely to construction this study in the integrated process methodology scientific research paper that will improve the work.

X. CONCLUSION

ERP adoption is gaining strong attention in business research nowadays exactly in public organization it still needs more investigation to fill the gap which identified in this study. It explains that organization structure (Centralization, formalization, specialization), and organization size particular factor which factors influencing organization looking to introduce ERP system. Every organization is different from others due to various factors which include organization factors, environmental factors or technology factors. From the manykinds of literature, it is found that there is no single variable or factor which influences the ERP adoption of the organization; it differs from one to others, etc. This paper concludes that the ERP adoption system depends on how the available complete information about organizations and how much they are ready to consider ERP; thus each variable of the factors playing a significant role in determining the adoption or implementation such systems.

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