# The conceptual relationship between e-government and ERP systems on organizational performance in government organizations

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**ABSTRACT:** Enterprise resource planning (ERP) systems and e-government organizations have become the main topics in government organizations in developed and developing countries, due to increased productivity and value from implementing ERP systems and e-government. As such, government organizations have attempted to implement new technologies to enhance performance and achieve the values that the private sector has the ERP system is one of these e-business models. The purpose of this research is to look at how ERP and e-government may be of interest to government organizations to provide accurate information and quality while minimizing service time for citizens.

By developing a theoretical explanation of how ERP systems and e-government are affected by organizational performance values, the study model provides new, necessary insights to develop implementation strategies that take the ERP system and e-government context into account.

KEYWORDS:ERP system, E-government, organizational performance, developing countries

Date of Submission: 07-06-2024 Date of acceptance: 21-06-2024

# I. INTRODUCTION

In a rapidly environment changing, the government organizations continuously shouldevolution their performance by minimizing the procedures and time consumption and improving quality work and provide services, information quality availability, to continue in the environment. Improving the organizational performance (OP) in the public sector has become a significant stream of research in public organizations[1]. The enhancement is essential and critical to the successful organizational performance of the public sector, to protect the performance of these organizations, and strengthen the role of the government in providing essential services and development leading to increased effectiveness and efficiency, the electronice government (E-government) and ERP system are one of the most assistant tool to eas providing quality perfromance [2].

In the recent era, the modern organizations are dependent on the introduce the technology to emphasize their existingtoget benefits andmore values. The e-governoment technology plays a vital role in the capability of organizations to enhance performance[3]. It has become necessary to better understand this assumptions with organizational performance by ERP system, as one of the information systems to provide a good solution, which supports primary activity to convert benefits into organizations [4]

ERP system and e-govenment are represents a significant activity to improve efficiency, and affecting significant impact on future performance of the organization. the ERP system was developed to meet these needs. The ERP software is to integrate and 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 in e-government[5].

The organizations in developing countries still face significant challenges regarding the deployment of e-government to improve the performance[6]. The current study sought to explore these assumptions in development countries to fill the gap in previous studies had mention[2], [7]

Also, the lack of resources in developing countries, such as implementing ERP systems to assist in e-government, may impact proper organizational performance[8]. That can lead to the question of what the role of ERP is in improving the performance of public organizations in developing countries.

The public organizations are making significant investments in complex technology systems such as ERP systems, and E-government despite their complex detailed. Public organizations need to develop systems to improve the performance and services offered by the various relevant authorities to stay successful and retain high-performance benefits[9].

In addition, ERP systems and E-government promise to improve the different processes and facilitate communication between the various administrative activities and reduce the cost of access to information[2]. The public organization sector has actual goals that are different in nature and objectives compared to organizations in the private sector, most organizations supposed provide quality performance. Several reasons should be considered, e-government and ERP system are one of them[10], [11].

# II. PURPOSE OF THIS RESEARCH

The exploration of research on e-government at the government level has been interesting in many studies recently. The evidence collected by those studies constitutes a relevant opportunity to explore the effect of the integration of ERP systems and e-government on organizational performance. However, several synthesis efforts are needed before such a study can be addressed. The purpose of this article is to contribute to that endeavor by proposing an exploration model of the determinants of ERP systems and e-government implementation by government organizations.

The research question is, what are the effects of implementing an ERP system and e-government on organizational performance in government organizations?

# III. LITERATURE REVIEW

As has been addressed above the relevance of this study is to explore the relations of ERP system and organizational performance, the next section will explore the literature related to this study.

## 3.1 ENTERPRISE RESOURCE PLANNING (ERP)

A brief overview of the attention given to most organizations in developed countries to increase their competitiveness has adopted modern technology and e-governance since the early stages. At the same time, a lot of money has been spent on traditional systems in developing countries that have not reached the goal of providing the best services yet, improving the development of infrastructure to provide services more widely, and developing a reliable and advantageous system most efficiently[2].

Moreover, the implementation of the ERP system in organizations' development countries are not adequate although these organizationshaveunable to provide, and a spread their performance especially in government sectors. Some of these countries did not attain enough use of technology in most public organization's services [12]. There were some tentative attempts with some information databases, which are not at the level to say they are adequate. Furthermore, the ERP systems database can effectively provide more and more relevant and reliable services to public and private organizations, or users, at anytime and anywhere in general. [13].

On the other hand, there are some government organizations, interested in selecting an ERP system database whose goal is to develop their services. It is becoming increasingly difficult to overlook the ERP system in government organizations. The gap in information technology systems is also quite great [14].

In addition, ERP system database implementation in government sector organizations has huge potential to provide the best way for organizations to deliver their services to their citizens. It is also more valuable for citizens and government organizations' employees to get accurate information and quality services[15], [16], [17].

The first step to implementing ERP in e-government is to establish a comprehensive restructuring plan comprising specific areas and goals. The next step is to find ERP implementation providers with deep expertise in ERP to assist organizations in e-government and wide experience working with government organizations[18]. The ERP enables the provision of information that was dealt with and processed manually in previous methods in one database, which was difficult and expensive to bring together in a timely way.

ERP systems contribute to improved e-government efficiency and effectiveness, an increase in quality service delivery process optimization, and information availability in government organizations. The ERP system becomes a valuable source of strategic and operational knowledge for management because can be used to correlate, track, and collect all information in a quick and easy way with cost-saving and performance management potential in electronic transactions[2].

# 3.2 ORGANIZATIONAL PERFORMANCE

The organizational performance in the public, government, or private sector it has become necessary to know and assess its performance in specific fixed intervals to determine the extent to which the organization has achieved their objectives[19].

Although organizational performance has been the subject of several different debates on previous studies discussed on different occasions, there is still a need to enrich this aspect, to considerably improve the organizations' services by ERP system and other aspects[17].

Organizational performance is arguably the most critical topic in the research of organizational studies, The globally competitive environment in the current era is forcing organizations at all service levels to enhance performance with the implementation of advanced strategies [16], [17], [19]

Many organizations are looking to improve their performance by using the available resources and they try to search for the best essential alternatives. From the literature review, it is found that government organizations aim for quality service delivery, process optimization, information availability to the citizens, achieving customer satisfaction, transparency, enhancing integrity, fighting against corruption, and being accountable[20], [21].

The implementation of ERP systems as a tool to establish E-government is an essential factor in enhancing and protecting the government organization's performance to provide full services [2]. Organizational performance has become an integral part of the evaluation process management to see if they are achieving the strategic objectives or not and try to find a solution for public organizations to measure performance quality, the provision of service, and the value of performance [22].

In addition, the government sector seeks to achieve quality, customer satisfaction, and excellent performance in providing for the needs of the communities. It has to be within the available budget, as public organizations have more intangible goals and objectives than the private sector [23].

### 3.3 E-GOVERNMENT

The government organizations have moved from the traditional way of providing services to a new digital one based on the information technology to reach the public objectives and to meet the consumer needs, this new way is called E-government[6].

E-government can thus be defined as the use of information systems to more effectively and efficiently deliver government services to citizens and their needs. The application of ERP systems and new systems in government operations can ease achieving public ends by digital means. "The underlying principle of egovernment, supported by an effective e-governance institutional framework, is to improve the internal workings of the public sector by reducing financial costs and transaction times to better integrate workflows and processes and enable effective resource utilization across the various public sector agencies aiming for sustainable solutions[24].

The use of new information systems in such ERP systems by governments as applied to the full range of government functions has become more subjective to all government organizations in developed and developing countries. In instance, the networking facilities provided by the cloud internet and related technologies have the potential to transform the structures and operations of government into fast and reliable services [25], [26].

ERP systems are to provide better public services to citizens and facilitate businesses. e-Government can provide a wide variety of effective benefits including more efficiency and saving time and quality performance governments and businesses. Government bodies already widely use ERPs in developed countries and other governments have adopted e-governments[27].

As it happens in private organizations to compete with public organizations, e-government can involve much more than just the tools such as ERPs database. Implemented well, e-government enables citizens, enterprises, and organizations to carry out their business with government more easily, more quickly and at lower cost[28].

The challenges associated with it include the infrastructure organizational culture and structures, also types of leadership, and its willingness to accept these changes. It also involves a lack of financial resources and support, and labor unskilled. resistance to change and moving from traditional methods to more progressive methods that reduce human interaction, resistance towards collaboration and integration within teams [2].

For an effective introduction and successful implementation of ERP systems for establishing e-governance, it is necessary to address these challenges beforehand, so that a seamless transition towards e-governance can take place[29].

The success of the implementation of the e-government project differs between developed and developing countries. More than one-third of e-government initiatives are overall unsuccessful in some areas (e.g., the failure of decision support systems in East Africa); an additional, half can be viewed as limited failures (e.g. the limited or partial failure of management information systems in Eastern Europe); and approximately one-seventh are successes[30], [31].

The introduction of e-government projects goes through many steps. Most of the steps start with the web presence and then move to the enhancement of web presence, interaction with citizens and lastly, transactions with citizens[32], [33].

The success rate of adoption of e-government is variable across the world. In developed regions, around 25% of e-government projects never touched the growing phase of their life cycle, and 33% failed to mature as per the scope designed at the beginning of the projectMoreover, in the case of developing countries,

the successful implementation and acceptance rate is not more than 15% [34]. Using the technology will enhance the overall performance of stakeholders and improve the service provided to all citizens [35].

Even though Libya is a country that produces oil and is considered among the middle-income nations, the development of e-government is still low compared with other countries. Mousa (2020) investigated the e-government project in Libya and found that technological factors, such as ERP system failure or other technology systems not fully adopted, are the most influential on the development of e-government.

### IV. DISCUSSION

# 1- The relation of ERP system e-government and organizational performance

The ERP system is widely recognized by most organizations in developed and developing countries as popular systems are used for information management in the professional environment worldwide [36]. For the different management areas and activities, the system highlights the advantages it offers significantly. ERP system is becoming widespread in the various public and governmental and private organizations in the e-business world. It has become a powerful tool to support the operation of organizations working to reduce operating costs and increase the sharing of information about resources activities [37].

However, the ERP system is complex system due to its need for the integration of all units and adequate support necessary for the successful continuation of that work. The successful system of ERP seems to improve the overall organizational performance such as the efficiency and effectiveness [38]. Recent studies have examined and addressed the concept of underlying systems, suggesting that organizations depend mostly on ERP applications. It can be utilized to maximize the benefits. ERP supports all business and internal activities of the organization. Through the integration of the functions of various business units of the organization, in one or more areas the organization provides complete information and this leads to effective decision- making [39], [40], [41]

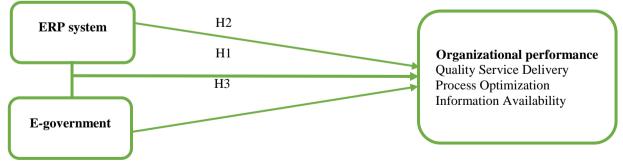
The ERP system can consolidate all sections and departments to enable organizations to address all commercial activities, such as logistics, supply and administration to resources, production planning, etc. It is found that ERP can improve the performance of the deployment of a single unit in organizations[4].

ERP system is found to leave a positive impact on organization performance. It is a significant positive relationship on the proposed variables ERP and organizational performance[20], [40].

E-government projects can help public organizations in developing countries to improve service delivery, increase transparency, and enhance citizen involvement. According to a report by the International Telecommunication Union (ITU), e-government plans can be underlying elements of efficient development and public sector improvements to address human development issues [42].

However, the success of e-government projects depends on various factors, including stakeholder engagement, and the availability of infrastructure and resources [43]. Based on the assumption of the current search, ERP systems and e-government are causes of organizational performance in government organizations. As can be noticed ERP system implementation has a pointed positive effect on organizational performance [13]. E-government can also improve organizational performance by enhancing information quality, e-service functionalities, quality service delivery process optimization, and information availability. The implementation of e-government in public organizations can also impact organizational performance [44]. The hypothesis can be formulated as followe;

Figure 1: The conceptual framework



H1: The relationship between ERP system and e-government are positive affect the organizational performance in government organizations.

H2: ERP system is positive affect the organizational performance in government organizations.

H3:E-government is positive affect the organizational performance in government organizations.

### V. DESIGN AND METHODOLOGY

The hypothesized model had resulted of methodical represent of the studies published in scientific journals regarding these issues in government organizations in developments countries, a conceptual framework was formulated relating of concepts such as ERP system, and e-government implementation and institutionalization is presented. The theoretical assumption of this study is to highlight the issues that directly proposed affect relationship and suggest practical and methodological issues of the development of e-government in government organizations in developing countries benefits on the development of government organizations need to investigate in further research.

### VI. EXPECTED CONTRIBUTION

The current paper attempts to provide a conceptual positive relationship between the ERP system and e-government and an assumption of their effect on organisational performance by trying to answer the study question: What are the effects of implementing an ERP system and e-government on organizational performance in government organizations?

so that significant contributions to the body of knowledge with the proposed factors are submitted.

### VII. CONCLUSION AND FUTURE DIRECTIONS

ERP systems and e-government can improve organizational performance in public organizations of developing countries. The successful implementation of ERP systems requires careful planning, adequate resources, and effective change management, stakeholder engagement, and the availability of infrastructure and resources.

Since it was explored that the main variables ERP system and E-government are associated with effect on organizational performance, future empirical studies should investigate the proposed relation between those variables, thus originality value of this research it is a study attempting to a synthesis effort on the determinants of ERP system and e-government implementation by governments organizations to improve organizational performance.

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