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Challenges of Enterprise Resource Planning implementation in Iran large organizations

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ABSTRACT

An Enterprise Resource Planning (ERP) system is a fully integrated business management system covering functional areas of an enterprise like Logistics, Production, Finance, Accounting and Human Resources. The implementation of this system is a difficult and high cost proposition that places tremendous demands on corporate time and resources. Most of the ERP implementations have been classified as failures because they did not achieve predetermined corporate goals. The main goal of this research is determining the most important challenges of ERP implementation in Iran large organizations and our case study was the Isfahan Telecommunication. The population of this study consists of the 1500 employees of this organization from which 40 experts and employees were selected randomly and uniformly as a sample. We used questionnaire and interviews to collect data and analyzed them by SPSS using one sample *t*-test. The result of the study shows that the most important challenges of ERP implementation are organizational barriers, especially lack of human resources with the weighted average of 267.33. The next important issues of ERP implementation are technological factors such as unbalanced combination in team projects and then individual factors like lack of senior executives' involvement with the weighted average of 48.8 are the least important challenges in ERP implementation.

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1. Introduction

In today's competitive business environment, companies try to provide customers with goods and services faster and less expensively than their competition. How do they do that? Often, the key is an efficient, integrated information system. An Enterprise Resource Planning (ERP) system can help a company integrate its operations by serving as a company-wide computing environment that includes a shared database—delivering consistent data across all business functions in real time [1]. As Hitt, Wu, and Zhou (2002) stated, "the standardized and integrated ERP software environment provides a degree of interoperability that was difficult and expensive to achieve with stand-alone, custom-built systems" [2].

Implementing of the ERP, as other information systems, faces several issues and challenges [3]. It is interesting that only 63-percent of organizations consider their ERP project as a "success" around the world in 2014 [4], and this rate is much lower for Iranian organizations, which ERP is new to them and have failed in most of the cases. According to Helo et al. (2008), "Unlike other information systems, the major problems of ERP implementation are not technologically related issues such as technological

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complexity, compatibility, standardization, etc. but mostly [about] organization and human related issues like resistance to change, organizational culture, incompatible business processes, project mismanagement, top management commitment, etc." [5]. Top ten issues of ERP implementation are [6]:

1. Lack of senior manager commitment.
2. Ineffective communications with users.
3. Insufficient training of end-users.
4. Failure to get user support.
5. Lack of effective project management methodology.
6. Conflicts between user departments.
7. Attempts to build bridges to legacy applications.
8. Composition of project team members.
9. Failure to redesign business process.
10. Misunderstanding of change requirements.

In this paper, after describing ERP concepts and literature, we introduce the most important issues and challenges of implementing of an ERP system, specifically in large organizations and then through an exploratory research by using a Likert scaled questionnaire which its respondents were 40 employees and experts in one of the large organizations in Iran, Isfahan Telecommunication, we determine the most challenging issues and problems of implementing an ERP system that results in failure of implementation and after that we suggest some solutions to overcome the issues of implementing an ERP system.

2. Theoretical concepts

2.1. ERP system

Enterprise Resource Planning was born from its predecessor, Manufacturing Resource Planning (MRP). During its formative years in the 1960s, MRP was referred to as Manufacturing Requirements Planning. MRP and the first ERP systems were designed as an organizational and scheduling tool for manufacturing firms. The function of the next generation of ERP software systems stretched beyond the confines of what it could do for an individual manufacturing firm's internal use, and began including customers and suppliers [7].

ERP provides two major benefits that do not exist in non-integrated departmental systems: (1) a unified enterprise view of the business that encompasses all functions and departments; and (2) an enterprise database where all business transactions are entered, recorded, processed, monitored, and reported. This unified view increases the requirement for, and the extent of, interdepartmental cooperation and coordination. But it enables companies to achieve their objectives of increased communication and responsiveness to all stakeholders [8]. ERP allows different departments with diverse needs to communicate with each other by sharing the same information in a single system. ERP thus increases cooperation and interaction between all business units in an organization on this basis [9]. Its goals include high levels of customer service, productivity, cost reduction, and inventory turnover, and it provides the foundation for effective supply chain management and e-commerce. It does this by developing plans and schedules so that the right resources—manpower, materials, machinery, and money—are available in the right amount when needed. Fig. 1 shows the ERP extension. As it is shown in Fig. 1, ERP incorporates other business extensions such as supply chain management and customer relationship management [10].

2.2. Challenges of ERP implementation

Implementing an ERP system is not an inexpensive or risk-free venture. In fact, 65% of executives believe that ERP systems have at least a moderate chance of hurting their businesses because of the potential for implementation problems [11]. According to the Panorama Consulting's 2014 ERP report, only 63-percent of respondents consider their ERP project a "success." Nearly one quarter of respondents (21-percent) are "neutral" or "don't know" if their project was a success, indicating that organizations might not have created a business case, conducted a post-implementation audit or communicated about project results. Nearly one in five respondents (16-percent) indicates that their organization's ERP project was a failure [4].

Despite ERP's promises to benefit companies and a substantial capital investment, not all ERP implementations have successful outcomes. ERP implementations commonly have delayed an estimated schedule and overrun an initial budget [5].

Furthermore, the literature indicates that ERP implementations have sometimes failed to achieve the organization's targets and desired outcomes. Most of the researches reported that the failure of ERP implementations was not caused by the ERP software itself, but rather by a high degree of complexity from the massive changes ERP causes in organizations [12].

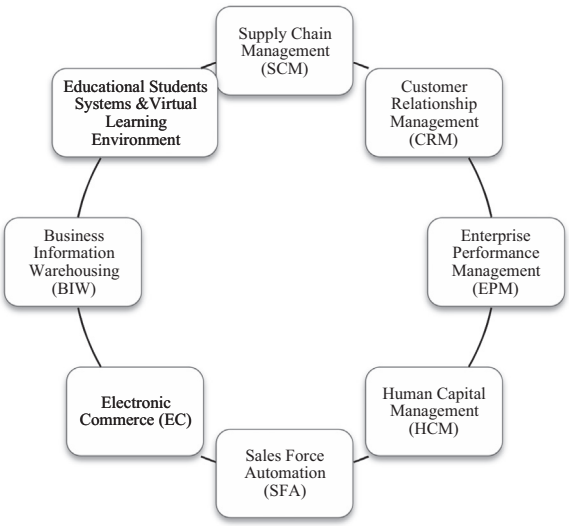

Fig. 1. ERP extension [10].

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