



Overcoming the Challenges of Enterprise Resource Planning (ERP): A Systematic Review Approach

Godwin Banafo Akrong, University of Electronic Science and Technology of China, China*

 <https://orcid.org/0000-0002-2822-2284>

Yunfei Shao, University of Electronic Science and Technology of China, China

Ebenezer Owusu, University of Ghana, Ghana

 <https://orcid.org/0000-0002-4670-1342>

ABSTRACT

The study presents the results of a comprehensive review conducted between 2005-2020 to identify enterprise resource planning (ERP) challenges, discover the divisions in which these challenges can be clustered, and provide general strategies to resolve these challenges. The study also found 25 categories that can be classified into ERP challenges. Sixty-five ERP challenges were identified based on the reviewed literature, of which 18 were not provided with adequate solutions as to how to resolve them, and the related solutions as mentioned in the reviewed literature are presented in-depth. The result will help both academics and practitioners involved with how to resolve ERP system challenges.

KEYWORDS

Enterprise Resource Planning, ERP Challenges, Implementation of ERP, Project Management

INTRODUCTION

Due to the extreme difficulty of certain organizational activities, firms have embraced the usage of enterprise resource planning systems (ERP) for decades. According to Beheshti and Beheshti (2010), an ERP is an information system (IS) that combines business functions to generate value and lower costs by providing the right information to the right people at the right time, allowing them to make the best decisions to manage an organization's capital constructively and efficiently (Costa et al., 2016; Shaul & Tauber, 2013; Catherine & Abdurachman, 2018). The factors obstructing ERP deployment are more prevalent in developing countries, as ERP systems are implemented and planned using more advanced technologies. ERP, according to several scholars, improves asset tracking, advocates resource adaptability, provides information to aid decision-making, and improves accountability and uniformity (Bramantoro, 2018; Fadelelmoula, 2018; Sriram et al., 2018; Trinoverly et al., 2018; Wel, 2019). It also helps departments integrate tasks, reduces financial reporting times, boosts output

DOI: 10.4018/IJEIS.306242

*Corresponding Author

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

and productivity, streamlines operations, and reorganizes the workforce (AboAbdo et al., 2019; Bramantoro, 2018; Kulikov et al., 2020; Wel, 2019).

However, over time, companies' expenditures on implementing ERPs have proven to be costly, complicated, and time-consuming for most businesses, resulting in a lack of value for the deployed ERP system (Chofreh et al., 2020; Lozano & BayonaOré, 2017; Mahraz et al., 2020). According to Lozano and BayonaOré (2017), the aspects that tend to overcome the aforementioned issues include effective project management, well-defined priorities from the outset, and proper preparation of work teams. Surprisingly, due to the significant maintenance costs associated with ERP packages, only large-scale organizations are always able to manage them after decades (AlBar & Hoque, 2019; Mahraz et al., 2018; Mayeh et al., 2016). In addition to the popularity of ERP use, Prasetyo et al. (2019) report that the failure rate is exceptionally high. They contended that ERP implementation failure rates varied from 67% to 90% and that current research focuses on Critical Success Factors (CSF) rather than challenges/failure factors. According to their findings, about 6% of actively authored articles cover CSF, with less than 1% addressing the challenges. This implies that, while there is a large and nuanced literature on ERP, a deeper understanding of its shortcomings in the application and the need for a single source of information is required. As practitioners and researchers, they will utilize it as a starting point to get a deeper understanding of the existence and potential causes of ERP implementation failures, as well as how to reduce them to increase the likelihood of effective future implementation.

Wijaya et al. (2018) conducted a study to identify problems and make recommendations for factors impacting ERP implementation progress to avoid recurrence of the same problem in the future. They discovered that change management factors are extremely important in the successful implementation of ERP, with project leadership (87%), rollout (83%), end-user training (70%), end-user communications (53%), and end-user engagement (50%) being the most important, and only about 20% indicating that the cultural factor influences implementation progress. Few studies have focused on offering a general plan that can direct practitioners to combine resource planning systems for a profitable firm (Chofreh et al., 2020). Their study addressed this gap by developing comprehensive guidance outlining ERP management best practices and events. The guidelines were created utilizing a conceptual research process that focuses on conducting a literature review to identify and incorporate several principles, such as aspects of development, project management, corporate judgment, and strategic management. According to their findings, ERP implementation failure is caused by a lack of preparation, a lack of capital, and a lack of engagement.

Manufacturing organizations are investing a lot of money and time to deploy ERP, according to Sar and Garg (2019), in the hopes of increasing job productivity after implementation. In most cases, however, ERP implementation results in a high failure rate. Their findings also confirmed the assumption that the majority of ERP implementation studies focused on critical success factors (CSF), with only a few addressing issues like performance indicators, ERP benefits, reasons for successful adoption, and failures. As a result, they suggest a conceptual structural model for ERP adoption in the automobile industry that is both efficient and effective. In defining the most common challenges associated with the execution of an information system, Figueroa-Flores et al. (2020) confirmed that some of the most important factors were inadequate management, weak project definition, and inadequate consultation. According to Phaphoom et al. (2018a), poorly structured organizational procedures, lack of transparency on change, change management, communications issues, and inadequate project management are all factors that contribute to implementation failures.

When ERP challenges are measured, it is evident that firms pay insufficient attention to the ERP's preparedness and rush to implementation (Kirmizi & Kocaoglu, 2020). This indicates that the ERP literature falls short in describing how and by what tool a company's ERP preparation evaluation is conducted, as well as how to address the implementation challenges. The current study utilized a structured literature review technique similar to that of Esteves and Bohorquez (2007) to present a

39 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/article/overcoming-the-challenges-of-enterprise-resource-planning-erp/306242

Related Content

The Integration of Information and Communication Technology in Schools: Online Safety

Elisabete Pires and Fernando Moreira (2015). *Improving Organizational Effectiveness with Enterprise Information Systems* (pp. 1-12).

www.irma-international.org/chapter/the-integration-of-information-and-communication-technology-in-schools/133082

An Exploratory Study of the Key Skills for Entry-Level ERP Employees

Alan R. Peslak and Todd A. Boyle (2012). *Enterprise Information Systems and Advancing Business Solutions: Emerging Models* (pp. 40-53).

www.irma-international.org/chapter/exploratory-study-key-skills-entry/66568

Testing Guidelines for Developing Quality EAI Projects

S.R. Balasundaram and B. Ramadoss (2011). *Enterprise Information Systems: Concepts, Methodologies, Tools and Applications* (pp. 279-291).

www.irma-international.org/chapter/testing-guidelines-developing-quality-eai/48549

Factors Influencing the Adoption of Mobile Application Development Platforms: A Qualitative Content Analysis of Developers' Online Reviews

Mohammad Kamel Daradkeh and Haneen Ahmad Saleh Sabbah (2019). *International Journal of Enterprise Information Systems* (pp. 43-59).

www.irma-international.org/article/factors-influencing-the-adoption-of-mobile-application-development-platforms/238835

The Portuguese School of Macao, China: A Traditional/Web 2.0 Assessment Facing Different Learning Styles

Zelia Baptista and João Negreiros (2014). *Handbook of Research on Enterprise 2.0: Technological, Social, and Organizational Dimensions* (pp. 428-449).

www.irma-international.org/chapter/the-portuguese-school-of-macao-china/81120