

# Chapter 73

## Using the Technology Acceptance Model for Factors Influencing Acceptance of Enterprise Resource Planning Solutions

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### ABSTRACT

*The technology acceptance of enterprise resource planning (ERP) solutions has become more and more important in the digital transformation of organizations. In contrast, ERP solutions used at an advanced level are necessary for other disruptive innovations. The chapter explains the technology acceptance of ERP solutions, starting with a description of frameworks/theories and a bibliometric analysis of publishing in this area. Technology acceptance of ERP solutions through the technology acceptance model (TAM) is analyzed in more detail, and findings regarding external factors influencing the acceptance of ERP solutions are discussed. Organizations of different sizes, from different sectors and with different ERP solutions may require custom-tailored research on ERP acceptance. Tailoring the approach based on the specific needs and characteristics of the organization can lead to better results.*

### INTRODUCTION

The global business environment dictates that organizations operate as an integrated business system to compete globally. Therefore, organizations need to be supported by comprehensive business IT solutions that enable and support such integration, typically addressed by implementing and using Enterprise Resource Planning (ERP) solutions. Organization Gartner (2023) defined ERP solutions in 1990 as IT solutions that enable the delivery of an integrated set of business applications with a common process and data model, covering broad and deep end-to-end operational processes through modules such as finance, distribution, human resources, manufacturing, supply chain processes, and services. ERP solutions automate and support most operational and administrative business processes across various industries,

DOI: 10.4018/978-1-6684-7366-5.ch073

including line of business, consumer, asset and administrative management. ERP solutions are crucial for managing all organizations regardless of size and industry. Organizations use ERP solutions to manage day-to-day business activities such as procurement, production, sales, accounting, project management, risk management and compliance, etc.; they connect a multitude of business processes and enable the flow of data between them, and by collecting common transactional data of organizations in the way to ensure data integrity. In short, ERP solutions are key business information solutions that help organizations manage business performance by assisting them in planning, budgeting, forecasting and reporting on their financial performance. So, it makes sense that in 2022 the ERP software market will increase by 8% to reach a total software revenue of USD 44 billion (Pang et al., 2023). In addition, the ERP market continues to grow rapidly and is expected to exceed USD 49.5 billion by 2025 and USD 78.4 billion by 2026 (Biel, 2022). The author also pointed out that in a survey of IT decision-makers, 53% said that ERP solution was an investment priority, in addition to CRM and that 50% of organizations are soon purchasing, upgrading or planning to modernize ERP solutions.

ERP implementation is complex and costly, and some organizations find it difficult to identify the business benefits (Jo & Bang, 2023). Based on a systematic literature review of 55 relevant articles published between 2000 and 2022, Rajapakse and Thushara (2023) pointed out that after more than two decades of experience with adopting and implementing ERP solutions, the success of the implementation and use of these solutions remains controversial, as the error rate of ERP solutions is relatively high. Literature reports many failures of ERP solutions implementation projects (Beardwood, 2023; Rajapakse & Thushara, 2023; Armand & Atsa Etoundi, 2023), and research shows that ERP solutions are often used only on a basic level, so functionalities of their advanced use seldom happen (Carlton, 2019). Even if the ERP implementation has been successful and organizational efficiency is improved, it is possible that the end users are not satisfied with such an implementation – this often results in low adoption and unavoidable failure of the ERP solution (Mahmud et al., 2017). All mentioned issues are connected with the ERP solutions acceptance by its end users – by employees in organizations.

The acceptance of ERP solutions becomes even more pronounced in the context of organizations undergoing digital transformation. Advanced utilization of ERP solutions becomes crucial for fostering other disruptive innovations. The effectiveness of ERP solutions is intricately tied to their acceptance by end users (Jo & Bang, 2023). Hence, organizations need a profound understanding of the dynamics surrounding using ERP solutions and managing key factors. Consequently, the adoption of these solutions by employees and their advanced utilization emerge as pivotal elements for ensuring the successful operation of companies.

With the increasingly rapid development of technology and its integration into users' professional and private lives, the decision to accept or reject technology remains an important area for research (Marangunić & Granić, 2015). The technology acceptance model (TAM), proposed years ago by Davis (1989) and Davis et al. (1989), has evolved into a key model in understanding the predictors of human behaviour toward eventual acceptance or rejection of technology. TAM is used to study the adoption of various technologies and has become arguably the most influential theory in the field of technology adoption among researchers. In particular, it is popular among researchers because the basic TAM model is simple to use (Marangunić & Granić, 2015; Semenoff, 2020). Still, on the other hand, it allows for extensions by including new factors and variables with significant influence.

Many researchers have investigated the adoption of ERP solutions by ERP users (in last five years e.g. Al-hadi & Al-Shaibany, 2017; Sternad Zabukovšek et al. 2019a, 2019b; Klaus & Changchit, 2020; Semenoff, 2020; Koksalmis & Danar 2021; Sternad Zabukovšek et al., 2021; Grandón et al., 2021;

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