

## Chapter 23

# Enterprise Resource Planning Acceptance Model (ERPAM): Extended TAM for ERP Systems in Operational Phase of ERP Lifecycle

**Simona Sternad**

*University of Maribor, Slovenia*

**Samo Bobek**

*University of Maribor, Slovenia*

### **ABSTRACT**

*Enterprise resource planning (ERP) systems have been implemented in most organizations for few years. But most of the organizations cannot really expose promised benefits of ERP systems. One of the reasons might be ERP users who do not accepted and use ERP system properly. In IT/IS literature organizational users have been exposed as important factor, which has influence on IT/IS acceptance and usage. Technology acceptance model (TAM) proposed by Davis (1989) has been most widely used model for researching user acceptance and usage of IT/IS. While this research is not the first attempt to apply TAM to ERP context, the authors of this chapter aim to make more contributions to the topic. First, they focus on the ERP system use in routine (mature) stage, and because of that, they use construct extended use instead of actual use. In the latest research of ERP system usage, the relationship between work compatibility and usefulness has been examined. New relationships between work compatibility and attitude toward using ERP system have been added. In all TAM studies regarding ERP context, a small number of external factors have been researched. The groups of external factors that have influence on ERP extended usage have been researched. The proposed model has been empirically tested using data collected from a survey of 293 ERP users in 44 organizations across country.*

DOI: 10.4018/978-1-4666-4153-2.ch023

## INTRODUCTION

Enterprise resource planning (ERP) systems are systems that typically consist of an enterprise-wide set of management tools that balance demand and supply; contain the ability to link customers and suppliers into a complete supply chain; employ proven business processes for decision-making; provide high degree of cross-functional integration; enable people to run their business with high levels of customer service and productivity, and simultaneously lower costs and inventories etc. (Wallace & Kremzar, 2001). Their characteristics place them as integrated, all-encompassing, complex mega packages designed to support the key functional areas of an organization (Adam & Sammon, 2004). They solve the critical problems of integrating information from various sources inside and outside of an organization's environment and make it available, in real-time, to all employees and partners of those organizations (Motiwalla & Thompson, 2009). The most important contributions of ERP systems are that they significantly reduce the time to complete business processes and help organizations to share information (Lee et al., 2010) and that organizations usually offer a better work environment for their employees as they are given more efficient system to work with. ERP implementations almost always require business process reengineering, because of the need to adopt the organizational processes to match the capabilities of the ERP system (Amonako-Guampah & Salam, 2004). They allow separate business processes to be put together into one compact system what the vendor consider "best practice" (Bradly & Lee, 2007). Organizations turn to ERP systems to improve efficiency and become more responsive to customer needs. Because of their characteristics they have huge impact on organizational workers especially on ERP users. Impact of ERP systems on their users and their acceptance and/or refusing has been recognized as one of key factors of ERP implementation success.

Most organizations have had implemented ERP solutions for some time. But competition, globalization and crises have compelled organizations to rethink about their information technologies (IT) especially ERP systems which maintenance and licensing is quite huge expense of organizations. ERP systems could be implemented successfully from a technical perspective, but success may depend on ERP users being willing to use the delivered system (Kwahk & Lee, 2008). Most technical issues can be fixed, but people resistance or poor use of ERP system is more difficult to fix. As Langenwalter et al. (2000) pointed out, organization can have customers, products, plants and equipment, but without skilled, dedicated, knowledgeable people, it cannot function well. We can say that ERP system only gives organizations real benefits if ERP users accept and use it extensively during daily tasks.

As every information system (IS) ERP solutions also go through three phases of lifecycle: selection, implementation and operation phase; which consists of stabilization stage and routine stage. Much of the success of ERP implementation lies in operation phase of ERP lifecycle (Motiwalla & Thomson, 2009; Bradford, 2008). Stabilization stage is the time from Go-live to about 30 to 90 days after, or until the number of issues and problems has been reduced to a small, manageable number. After that, companies enter to routine stage, in which they have to put more effort into people and process improvements (Bradford, 2008). In routine stage users accept the system and the usage becomes a regular day-to-day activity (Rajagopal, 2002). It often takes many months or even years for experienced users to get comfortable with the ERP system because, early in an ERP system's life, these users tend to resist using it for their work. They already have a set of processes and a comfort level in getting their work done, the complex ERP systems may appear threatening and intrusive (Musaji, 2002). Eventually the users' turn-on their ERP systems and they begin to work using ERP systems, instead of having to

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