



# The role of readiness for change in ERP implementation: Theoretical bases and empirical validation

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## ABSTRACT

Implementation of ERP systems continues to drive change in organizations. However, the effort is often considered a failure, partially because potential users resist the change. Readiness plays an active role in reducing resistance to such efforts. Therefore, we examined the formation of readiness for change and its effect on the perceived technological value of an ERP system leading to its use. We developed a model of readiness for change incorporating TAM and TPB. The model was then empirically tested using data collected from users of ERP systems in Korea. Structural equation analysis using LISREL provided significant support for all proposed relationships. Specifically, we found that readiness for change had an indirect effect on behavioral intention to use an ERP system. At the same time, readiness for change was found to be enhanced by two factors: organizational commitment and perceived personal competence.

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## 1. Introduction

Organizations are continually faced with the need to change their structures, objectives, processes, and technologies. Thus, they must be able to make changes to sustain their competitive advantage. Many have adopted ERP systems to help do this. Studies have reported that ERP adoption is about 80% in Fortune 500 companies [23].

However, despite its popularity, ERP implementations have been plagued with high failure rates and inability to realize promised benefits. The failure rate has been estimated as 60–90%. Some prior studies indicated that a major reason for failure was the resistance of the user to change [21]. ERP systems are often associated with fundamental change to organizational processes that involve different stakeholders [24]. Therefore, though ERP systems could be implemented successfully from a technical perspective, success may depend on employees being willing to use the delivered system.

Creating *readiness for change* has been proposed as a major prescription for reducing resistance [26]. We therefore examined

how readiness for change could affect the perceived value of the system and thus increase the intention to use ERP.

We explored the role of readiness for change in ERP implementation and its impact on usage intention. To do so, we defined a model of readiness by incorporating TAM and TPB. We included two antecedents of readiness for change (*perceived personal competence* and *organizational commitment*) and two process outcome variables (*perceived usefulness (PU)* and *perceived ease of use (PEU)*) leading to ERP usage intention. The model was then tested using a sample of 283 responses from 72 Korean organizations that had already implemented enterprise-wide ERP systems.

## 2. Theoretical background

### 2.1. Underlying theories

The IS literature has become a stage for social psychology-based and attitude-based models predicting usage and acceptance. But although both PU and PEU are important predictors of use, they do not explain individual attitude and behavior. Prior research has indicated the need for a better understanding of key determinants and suggested that TAM should be integrated into a broader model with variables related to human and organizational dimensions.

On the other hand, it has been argued that TPB is difficult to apply across diverse user contexts [22]. TPB accounts for conditions where individuals do not have complete control over

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their behavior. Thus, behavioral intention depends on attitude, subjective norm, and perceived behavioral control [1]. The role of a subjective norm as a determinant of IS usage is unclear; some research has not found a significant relationship between it and usage intention. In contrast, perceived behavioral control apparently does play a critical role in understanding people's PEU in performing a behavior of interest. Therefore, the stronger the individual feels about his or her ability to execute the behavior, the more he or she will utilize available resources and opportunities to execute the behavior. Subsequently, individuals will thus gain confidence from perceived higher behavioral control [6].

To overcome the problems and enhance the understandability of IS usage and IS acceptance behaviors, we proposed a model that would be relevant to enterprise-wide initiatives, by identifying not only the PU and the PEU but also the perceived behavioral control (i.e., *perceived personal competence*) and attitude toward behavior (i.e., *readiness for change*) as major factors of a successful ERP project.

## 2.2. Organizational factors for successful ERP implementation

In our study, we decide to focus mainly on positive attitudes toward behavior – *readiness for change* – the extent to which organizational members hold positive views about the need for organizational change, as well as their belief that changes are likely to have positive implications for them and the organization. This attitude can determine whether an individual supports or resists a change. Of course, a change may give satisfaction to some and not to others.

*Organizational commitment* (the relative strength of an individual's identification with, and involvement in, a particular organization) and *perceived personal competence* (the degree of the individual's feelings of competence in the work role) play key roles in employees' acceptance of change.

## 3. Research model and hypotheses

To explore how readiness for change affected an individual's reaction to implementation of an ERP system, we developed a model that considered its psychological consequences and antecedents. This is shown in Fig. 1.

### 3.1. The importance of readiness for change

Readiness for change plays a crucial role in mitigating resistance to change and thus in reducing the failure rate [14]. Effective ERP system implementation requires enterprise-wide

initiatives, bringing large-scale change generally requiring large investment of resources; a failure results in significant loss.

Organizational change should be a continuous process [9]. Change initiatives can be characterized as push systems where senior managers and experts cause change. However, a pull system may be needed for a successful effort; in this, transitioning to new technologies is forced by the people who will manage them. The pull system can be achieved by focusing on user readiness for change and identifying the circumstance under which users are receptive to it.

### 3.2. The effects of readiness for change

Creating the belief that organizational change is needed requires agreement that there is a gap between the current and desired end states. In general, an ERP system is introduced into a company to improve its organizational effectiveness and fill any performance gap. Organizational members who have favorable perceptions of organizational transformation and are ready for it will be more likely to participate positively in the change and expect enhanced performance after its implementation. A prior study of ERP implementation [3] suggested that a push for change from top management was likely to produce positive perception. When employees are positive about and ready for organizational change, they appear to be more willing to try out a system. They think that they might miss benefits if they do not try out the system [30]. Also, when informed about the ERP system and its impact they have less uncertainty about the technical changes [12]. Thus, when employees are ready for change, they will find the systems more useful. Therefore, we proposed the hypothesis:

**H<sub>1</sub>.** Readiness for change has a positive effect on the perceived usefulness of an ERP system.

Previous studies have paid attention to individual traits, such as innovativeness or technology readiness, to describe the individual's attitude toward change [8]. Parasuraman [25] has defined technology readiness as a state of mind that affected "people's propensity to embrace and use new technologies for accomplishing goals..." He argued that this related to the degree of readiness that the individual felt in using a technology. The technologically ready individual was more likely to see it as easy to use. Similarly, Walczuch et al. showed that more innovative individuals were perceived to have a smoother transition into a new technology without much cognitive effort. Therefore, we expected that individuals ready for change believed they could easily learn how to use the system with little effort. This is particularly true for

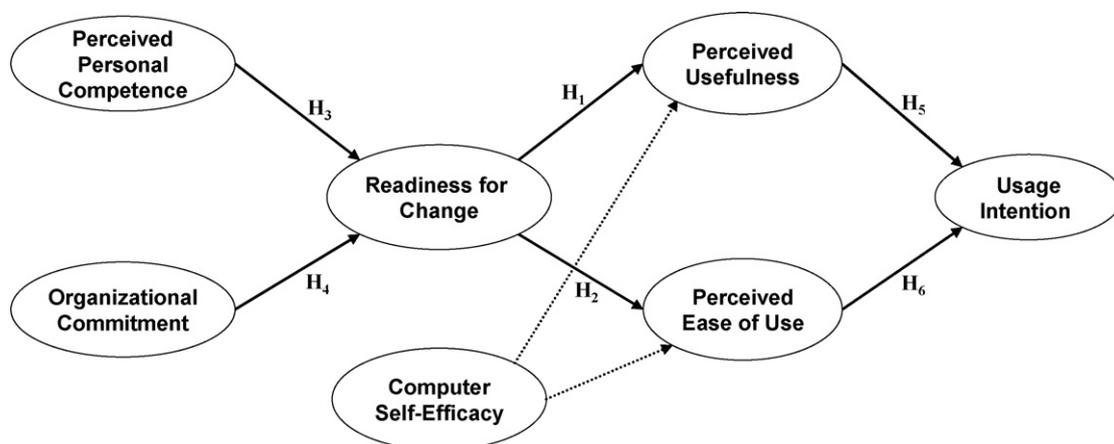


Fig. 1. Research model.

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