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#### ABSTRACT

This study examines how organizational workers improve their perceived job performance through the use of Mobile Enterprise Systems (MES), while also investigating the impact of perceived organizational agility and location independence on technology acceptance of MES. This study also tests the moderating role of task characteristics (task significance and feedback) on the relationship between MES usage and perceived job performance. Based on the extant technology acceptance model (TAM), we proposed an extended TAM and conducted a large-scale survey among organizational workers who use MES in their workplace across industries. Our findings suggest that both positive attitude toward MES and a high level of habitual MES usage are positively associated with perceived job performance, and that task characteristics positively moderate the relationship between habitual usage (attitude toward MES) and perceived job performance. More importantly, we also found that organizational agility is positively associated with both perceived ease of use and perceived usefulness, while location independence is positively associated with perceived ease of use. The present findings provide us with a deeper understanding of how organizational workers utilize MES and how they improve their perceived job performance through the use of MES. Based on these findings, we discuss further implications and limitations.

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#### 1. Introduction

The explosive growth of mobile technologies over the last few years has created over one billion smartphone owners, many of whom are professionals using their device during work [5]. The ubiquitous accessibility of information through mobile devices has led to an increased mobility of workers from their fixed workplaces. Market researchers estimate that by 2016, 350 million workers will be using their smartphones for business purposes, and the use of smartphones will offer new business benefits [24]. For these reasons, various organizational aspects concerning

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http://dx.doi.org/10.1016/j.im.2014.05.007 0378-7206/© 2014 Published by Elsevier B.V. "mobile work" have received a great deal of recent attention. Moreover, many CIOs plan to allocate a considerable amount of their budgets in mobile enterprise systems (MES) [42].

Enterprises are now adopting mobile technologies for mobile enterprise systems (MES), which are designed for employees of a specific company to access their internal IT systems, so as to increase their efficiency and improve their competitiveness [58]. While business productivity and agility have long been recognized as important IT management concerns [40], recent research has pointed out the necessity to shift attention to the impact of mobile computing on employees' workplace performance [62,68].

Most importantly, MES have played a significant role in the explosive growth of mobile computing in the workplace [1,2]. MES can be defined as business enterprise systems, including critical business functions that enable users to access enterprise systems via wireless mobile devices, such as smartphones or tablets [9,55]. Specifically, MES enable users to access the Intranet and internal email, manage projects and documents, provide customer relationship management (CRM), and conduct enterprise resource planning, with simple features and functionalities that help users

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complete specific tasks via their mobile devices. Thus, by using MES, organizational workers can remotely access and update enterprise databases from any location and at any time, and can even improve firm sales [2,47]. These characteristics of MES can stimulate users' efficiency and effectiveness with regard to task-related issues under various circumstances [1]. Further, MES foster collaboration among users across various functional units in a firm, and also facilitate collaboration with other firms and business partners of interest [58].

While the impact of MES on organizational workers' productivity has been given considerable attention in various literatures [12,20], relatively little research effort has been made to examine how MES actually lead to users' job performance. In particular, we have a limited understanding of *what* the key antecedents are of such an MES usage outcome. In this paper, we focus on users' perceived job performance as the outcome of MES use, which indicates the successful role of MES with regard to employees' tasks.

The objectives of this study are to address the following research questions: (1) How can users successfully manage MES in order to enhance their perceived job performance gain from MES? (2) What internal and/or external factors are important antecedents in increasing MES users' acceptance of MES and their perceived job performance gain from MES? (3) Which task-related circumstances amplify users' perceived job performance gain from MES?

To answer these questions and provide a better understanding of the relationships among MES, organizational environment, and perceived job performance gain from MES, we develop a theoretical model that extends the technology acceptance model [TAM, see 11, 60, 61] by including specific variables, such as the task characteristics of MES users, habitual MES use, users' location independence, and the characteristics of organizations (i.e., organizational agility). Specifically, we examine the relationships among habitual MES use [35,44], attitude toward MES [3,66], and perceived job performance [16,39,43], while considering the moderating effects of task feedback and task significance [18,25]. Of special importance, we examine the key antecedents of core constructs regarding beliefs about MES (i.e., perceived ease of use and usefulness), such as perceived organizational agility as a user's perceived external factor [37,52] and a user's location independence as an internal factor [41].

From a large-scale survey among organizational workers who use MES in their workplace across multiple industries, we found that both a higher *positive attitude toward MES* and a high level of *habitual MES usage* lead to greater *perceived job performance*. Interestingly, we found a positive moderating effect of both *task feedback* and *task significance* on the relationship between perceived job performance and its antecedents. We identified *individual users' perceived organizational agility* and *location independence* as the key antecedents that are positively associated with both *perceived ease of use* and *usefulness of MES*.

#### 2. Theoretical background

#### 2.1. Mobile enterprise systems (MES) as an agility enhancing system

Since there have been vast improvements in enterprise systems during the last decade, MES have created an any time/anywhere workplace that has changed the traditional office work environment by stimulating flexibility [20]. Also, due to the nature of strong mobility, MES facilitate the internal operational aspects of business, e-transactions and large-scales information broadcasts to mobile gadgets, providing users with various sorts of information, such as schedules and meeting agendas [12,58].

From a survey among approximately 200 CIOs, a recent study identified the situations in which competitive advantages of MES could be realized [55]. According to the study, MES enable specific information to be ubiquitously available. Thus, MES users can access and receive ad-hoc information (e.g., a user of Mobile CRM (a salesperson) can obtain information about a specific customer's location). Moreover, MES improve business processes by enabling users to participate ubiquitously in workflow processes and by capturing higher transparency regarding current workflow states. Finally, MES unify communication channels so that users can reduce efforts to obtain information, thereby experiencing less work disruption caused by information defects. In general, along with benefits at the individual level, MES benefits can be observed at the enterprise level. By adopting MES, firms can lower information management costs, reduce processing time, provide job processes ubiquitously, and encourage mobile collaboration among their employees.

These benefits from implementing MES actually improve organizational agility [52], since prompt information availability, shorter projected time and any time/anywhere work collaboration should help organizations cope with market and demand changes quickly, efficiently, and effectively. For these reasons, in this paper we consider MES as a type of *agility enhancing enterprise system* that improves the competitive advantage of a firm. In addition, we admit that MES adoption is crucial for organizations to enhance their organizational performance.

#### 2.2. Extended technology acceptance model (TAM) for MES

The technology acceptance model (TAM) [11] posits that people's beliefs about a technology, namely its perceived ease of use (PEU) and perceived usefulness (PU), positively influence their attitude toward using the technology (ATU) and behavioral intentions to use it (BI), which in turn, influence actual use. Since mobile data communication devices and services were introduced in the early 2000s, many IS scholars have attempted to develop, extend, and empirically validate TAM for various mobile systems. For this study, in order to determine the gap in the current literature on TAM for mobile systems and identify the antecedents and consequences of TAM that are relevant to MES usage, we reviewed 22 empirical studies published in peer-reviewed journals during the last 10 years (since 2003). Table 1 summarizes (1) the antecedents of two key beliefs about mobile systems (PEU and PU); (2) other factors that are found to influence user acceptance of mobile systems; (3) the consequences of mobile systems use; and (4) the moderating impacts identified in TAM for mobile systems. The literature review provided us with a number of interesting insights. Based on these insights, we suggest an extended TAM for MES by proposing supplemental variables, such as individuals' internal and external antecedents regarding beliefs about MES, moderating factors, and a consequence (individual performance) of one's attitude toward and usage of MES.

## 2.2.1. Extending TAM for MES with perceived performance as a consequence of system use

To the best of our knowledge, little effort has been made so far to further extend "TAM for mobile services" to identify and test the consequence of system usage. A majority of the articles in our literature review contained only behavioral intentions to use and did not extend their research models further to actual usage; in addition, none of the empirical papers in our literature review (on TAM for mobile contexts) investigated the performance impact of system usage. We argue that the main reason for not having performance measures in the extant studies is that the majority of focal mobile services in these studies were consumer-oriented services (e.g., mobile Internet or mobile commerce services) rather Download English Version:

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