Chapter 71

User Acceptance of Computer Technology at Work in Arabian Culture:
A Model Comparison Approach

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ABSTRACT

User acceptance of computer technology in work environments could differ from that of general consumer contexts. Toward that end, cultural considerations could affect individuals' behaviors, including their technology acceptance. This study analyzes the acceptance of computer technology by 1,088 workers in an Arabian country to reexamine and compare established models and theories to prior studies in the Western, developed countries. The explanatory power of each theory or model seems lower among Arabian workers. The innovation diffusion theory (IDT) appears capable of explaining workers' technology acceptance better than the theory of planned behavior (TPB) or technology acceptance model (TAM) does. Perceived behavioral control and subjective norms constitute more important acceptance determinants than attitude does. Both perceived usefulness and perceived ease of use remain significant determinants of attitude and intention; however, considering findings reported by previous research, their total effects are comparable in magnitude and statistical significance. The findings are incongruent with the results of several representative prior studies that examine the same theories and models. The results can be partially explained by the unique socio-cultural characteristics and overall technology development status of the country. In turn, these results offer several implications for studying worker's technology acceptance in developing countries with a unique cultural context.

INTRODUCTION

While the Arabian region continues to play a growing role in the global economy, its overall technology development and utilization is generally considered as behind the Western developed countries, despite some recent growth in technology deployments. User acceptance of computer technology in this region warrants research attention for several reasons. First, the Arabian region maintains unique socio-cultural characteristics (Shirazi, Gholami, & Higón, 2009), which may impact key issues surrounding the use or management of information technology (Clemmensen, 2011; Tarhini, Hassouna, Abbasi, & Orozco, 2015). Second, current literature tends to focus on technology-related issues and phenomena in developed countries; however, increasing globalization demands researchers and managers recognize and appreciate different culture settings as well as the generalizability of theories and models across different culture contexts. Third, information technology (IT) has drastically changed the global landscape of modern business, yet a noticeable digital divide seems to persist (Datta, 2011), partly due to the varying modernization and living standards in developed versus developing countries (Walsham, Robey, & Sahay, 2007). Understanding the essential factors contributing to or fostering acceptance of computer technology can help resolve the digital divide in different regions. Fourth, the complex societal beliefs and values of the Arab world provide a rich setting to examine the influence of culturally oriented considerations on technology acceptance (Straub, Loch, & Hill, 2003). In addition, examining the impacts of cultural considerations on individual technology acceptance also helps organizations fully realize the benefits of a technology implemented (Straub, Keil, & Brenner, 1997). For example, equipped with such understanding, managers can make informed technology investment and deployment decisions to maximize organizational performance.

Several generic theories and models have prevailed in technology acceptance research, though their generalizability and applicability across different cultural contexts have not been reexamined sufficiently. Introducing technology to a new context requires proper considerations of important cultural differences (Walsham, Robey, & Sahay, 2007). Therefore, technology introduction in a different culture context warrants investigations of the applicability of established theories and models. Overall, Arabian culture values group relationships and displays a close-knit social structure that often creates and fosters conformance pressures on its members (Sidani & Thornberry, 2009). Such cultural characteristics may affect the direct applicability of prevalent theoretical models that are immersed in Western cultures (Tarhini et al., 2015). The authors anticipate that the applicability of prevalent technology acceptance theories and models may vary with the unique cultural context of the Arabian region. Specifically, this study investigates and compares salient theories and models in a cultural context that has received limited research attention and thereby sheds light on the level of their generalizability across different cultural contexts.

Overall, Arabian culture has been recognized as one of the more complex cultural and social systems in the world (Straub et al., 2003). Arabian users' perceptions, attitudes, and intentions likely are influenced by important others in their family and organization, such that they may exhibit considerable intentions to comply with group norms, societal benefits, or other religious values. Although Arabian workers' acceptance decisions may still largely depend on their judgments of the technology's benefits and costs, such analyses could proceed in conjunction with other factors fostered by this group-oriented culture. An individual worker's cost–benefit evaluation of a technology also might be influenced by his or her cultural values. Testing prevalent theories and models in this cultural setting allows examining the extent to which a prevalent theory or model can be used to explain people's technology acceptance in this unique, underresearched cultural context. By exploring the underlying relationships between the

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