Arabian Workers’ Acceptance of Computer Technology: A Model Comparison Perspective

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ABSTRACT

Cultural considerations could affect individuals’ behaviors, including their technology acceptance. This study analyzes the acceptance of computer technology by 1,088 workers in 56 Arabian organizations to reexamine and compare the theory of planned behavior (TPB), technology acceptance model (TAM), and innovation diffusion theory (IDT). The explanatory power of each theory or model seems lower among Arabian workers, as compared with users in Western, developed countries. The IDT appears capable of explaining workers’ technology acceptance better than does TPB or TAM. Perceived behavioral control and subjective norms constitute more important acceptance determinants than does attitude. 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, which in turn offer several implications from a sociocultural perspective.

Keywords: Cultural Influences on Technology Acceptance, Innovation Diffusion Theory, Model Comparison, Technology Acceptance by Arabian Workers, Technology Acceptance Model, Theory of Planned Behavior

INTRODUCTION

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 et al., 2007). In this sense, the Arabian region is generally considered late in its technology adoption, despite some recent growth in technology deployments. This region continues to assume a growing role in the global economy, even as it maintains its unique socio-cultural
characteristics (Shirazi et al., 2009). Yet it continues to be largely ignored by information systems (IS) researchers, who tend to focus on technology-related issues and phenomena in developed countries. Increasing globalization demands instead that researchers and managers recognize and appreciate different culture contexts and their impacts on key issues surrounding the use or management of information technology (Clemmensen, 2011).

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 et al., 2003). 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. 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. Thus, we anticipate that the applicability of prevalent technology acceptance theories and models may vary with the unique cultural context of the Arabian region.

Introducing technology to a new context requires proper considerations of important cultural differences (Walsham et al., 2007). Therefore, technology introduction in a different culture context warrants investigations of the applicability of established theories and models. 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. In this study, we investigate and compare salient theories and models in a cultural context that has received limited research attention and thereby shed 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). Testing prevalent theories and models in this cultural setting allows us to determine 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 Arabian context and our theoretical premises, we advance understanding of salient technology acceptance theories and models. Furthermore, by reexamining prevalent theoretical models in a new socio-cultural context, we contribute to extant literature by specifying the plausible limitations and boundaries of their direct applications. Examining the impacts of cultural considerations on individual technology acceptance also is crucial for helping organizations fully realize the benefits of a technology implemented (Straub et al., 1997). For example, equipped with such understanding, managers can make informed technology investment and deployment decisions to maximize organizational performance.

We reconsider several salient, generic theories and models in the work contexts of ordinary Arabian workers. We focus on theory of planned behavior (TPB; Ajzen, 1985), technology acceptance model (TAM; Davis, 1989), and innovation diffusion theory (IDT; Rogers, 1983), all of which have common roots in social psychology and provide reasonable explanatory power across technology acceptance scenarios that involve different technologies, contexts, and users. Several studies already offer comparative analyses of these theoretical models among users in developed countries (e.g., Chau...
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