

# Chapter 15

## Within–Culture Variation and Information Technology: An Empirical Assessment

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### ABSTRACT

*This study examines within-culture variance in the influence of values on perceptions and use of information technology (IT). Based on cross-cultural research, the authors suggest cultural values influence technology acceptance and use. Specifically, this chapter argues masculinity/femininity and individualism/collectivism directly influence personal innovativeness with IT, computer anxiety, and computer self-efficacy and have a mediated effect on perceived usefulness, perceived ease of use, and use of IT. Overall, analysis provides support for the research model. Results suggest masculinity/femininity influences computer self-efficacy, computer anxiety, and personal innovativeness with IT. The authors also offer implications for research and practice.*

### INTRODUCTION

Because migration has resulted in increasingly diverse nation states, information technology (IT) managers have had to develop IT implementation strategies that accommodate diverse cultural values

in organizations. Within the existing cross-cultural MIS literature, researchers have examined national culture's influence on IT use in organizations. In general, culture has been synonymous with national boundaries, but a nation could be composed of people of various cultures, and these cultures could also be present in more than one country (Straub et al., 2002).

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Despite challenges posed by globalization for IT managers, limited management information systems (MIS) research has examined the cultural implications of values for IT in organizations (Galupe & Tan, 1999) (notable exceptions including Cyr et al.'s (2005), Segev et al.'s (2007), and Cyr's (2008) studies of the impact of within and between culture preferences on web design elements and Zahedi, et al.'s (2006) study of cultural signifiers of masculinity/femininity in websites). Within-culture differences refers to examining the relationship between cultural values and beliefs, attitudes, or behaviors of individuals within a single nation-state (Berry, 1979). Examining within-culture differences is important because cultural psychologists generally agree that indicators such as citizenship or location are weak proxies for individuals' value systems (Fiske, 2002). Research has found that variations in cultural values within nation-states influence individuals' situation specific behavior and beliefs (Oysterman et al., 2002). When extended to the domain of IT, this suggests cultural values may predispose individuals to respond differently to information technologies (Karahanna et al., 2005). Hence, this study examines the following question: does within-culture variation influence information technology acceptance and use?

The paper unfolds as follows; first, cultural values and their relationship to situation-specific traits are reviewed. The research model is then developed. The next section empirically examines the hypothesized relationships. The paper concludes with a discussion of findings, limitations, implications for research and practice, and future directions.

## **LITERATURE REVIEW**

Culture refers to values, traits, beliefs, and behavioral patterns that may characterize a group of people. Hofstede (1991) suggests that culture reflects a composite of human nature (i.e., inherited

predispositions shared by all human beings) and personality (i.e., values and more malleable traits inherited or learned by individuals). Although human nature is intransigent, values and traits are shaped by individuals' life experiences (Hofstede, 1991). Values are acquired early in life, mainly through the family, the neighborhood, and later through school (while traits are learned later).

Within countries, individuals' values vary with their participation in groups based on, for example, nationality, religion, and ethnicity. As a result, Straub et al. (2002) suggest that an individual's cultural values "represents that amalgamation of cultures across boundaries (national, organizational, professional, etc.) which fuse together to create one's overall culture. This combination is unique to each individual" (p. 4). Because values are enduring and relatively stable, they may influence the development of more malleable traits that influence individuals' behavior. Traits (also termed practices) are learned later, through socialization at the workplace, after an individual's values are firmly in place. In this study we look at two particular measures of cultural values (masculinity/femininity and individualism/collectivism) and how these values influence three traits (personal innovativeness with IT, computer anxiety, and computer self-efficacy). In turn we examine how these traits affect beliefs of usefulness and ease of use and, ultimately, IT usage.

Traits refer to predispositions to respond to stimuli. Individual traits can be viewed on a continuum from stable to malleable (Ghiselli et al., 1981). Not unlike values, stable traits influence individual behavior across situations. However, some traits are considered to be more malleable, such as computer anxiety and computer self-efficacy (as examined in this study) (Chen et al., 2000). Unlike stable traits, malleable, situation-specific traits may vary with the stimuli and may be changed through interventions, such as training. For example, where the general trait of anxiety exerts an influence across multiple stimuli, computer anxiety is a response linked to a specific

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