

# Chapter 1.11

## Information Technology Acceptance across Cultures

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### ABSTRACT

This chapter introduces national culture as a possible factor accounting for the differences in information technology adoption and use between countries. Based upon culture theory and the technology acceptance model (TAM), the author offers a conceptual model aiming at better understanding IT acceptance across countries of different cultures. It has been argued that six value dimensions—individualism/collectivism, power distance, uncertainty avoidance, masculinity/femininity, high/low context, and polychronism/monochronism—act as moderators of the TAM relationships. Furthermore, the author aims at helping IT designers and IT managers all over the world to understand why certain national cultural values may be congruent or not with the IT to be designed or implemented.

### INTRODUCTION

With the globalization context, companies all over the world (developed and less developed ones) are using information technologies (IT) that have become more and more sophisticated and complex. These technologies provide huge opportunities to gain a competitive advantage since information could be obtained, processed and transmitted at very low costs (Porter & Millar, 1985). Nevertheless, in order for companies to take full advantage of IT, they have to understand the new challenge provided by these IT (Tapscott & Caston, 1994). Actually, even though organizations adopt IT that best fit their business activities, they cannot guarantee performance leveraging unless the organization members appropriately use it. According to Agarwal (1999), “Acquiring appropriate IT is necessary but not sufficient condition for utilizing it effectively” (p. 85). With the globalization incurring unlimited interconnection possibilities and an increasing number of partnerships, firms belonging to less-developed countries are investing massively in new infor-

mation technologies that are expected to improve their competitiveness. Nevertheless, we notice that although these technologies are voluntarily purchased by organizations, they are not fully used or accepted in the work context at the individual level. Differences in IT usage and adoption are reported in many descriptive studies pertaining to IT implementation in different countries and contexts (Danowitz, Nassef, & Goodman, 1995; Goodman & Green, 1992). The main causes of these differences that have been identified are technical, economic, or managerial.

Our main concern in this chapter is to shed light on an issue that deserves a closer study which is the cultural factor. Indeed, the latter is expected to be an interesting explanation for the differences in IT adoption and use between countries. Furthermore, culture has been used as an explanatory factor of several managerial and organizational issues (Fisher & Smith, 2003; Thomas & Pekerti, 2003; Laurent, 1983; Hofstede, 1985; Silvester, 1990; Hernandez, 2000). The literature in the information systems (IS) field provides few studies attempting to explore the nature of the relationship between culture and IT implementation. Furthermore, most of the prior cross-cultural studies on IS hardly have focused on the individual behavior toward IT; they generally have focused on IT transfer (Hill, Loch, Straub, & El-Sheshai, 1998), on organizational characteristics related to IT implementation (Robey & Rodriguez-Diaz, 1989), or on end-user computing characteristics (Igbaria & Zviran, 1996). Moreover, these studies have focused on the concept of culture at the macro level of analysis (i.e., they attempted to compare IS-related behaviors in different countries, supposing that each country is characterized by a different set of cultural values). For example, when studying IT diffusion in Japan and the USA, Straub (1994), using Hofstede's cultural classification of 51 countries and three regions, supposed that the Japanese are high in uncertainty avoidance (ranked 7<sup>th</sup>) and the Americans are low in this

dimension (ranked 43<sup>rd</sup>). Even though there is accumulated evidence pointing to national culture as a factor influencing IT adoption and acceptance, few studies have handled this issue at the individual level. Therefore, the main objective of this chapter is to provide a conceptual framework that examines the influence of national culture, though a macro-level construct, on IT adoption by integrating specific cultural value dimensions to technology acceptance model (TAM) (Davis, Bagozzi, & Warshaw, 1989). This framework is aimed at being used at the individual level since cultural dimensions characterizing national culture (i.e., individualism/collectivism, power distance, masculinity/femininity, uncertainty avoidance, high/low context of communication and polychronism/monochronism) are value dimensions considered as individual psychological dispositions and TAM is designed to capture acceptance at the individual level.

We have divided the chapter into four parts. The first part is devoted to a review of comparative and international studies in the IS field. The second part presents an overview on culture theory, which is found in the literature of various disciplines such as anthropology or cross-cultural psychology. The third part focuses on the presentation of TAM (Davis et al., 1989), judged to be the most parsimonious model of information technology usage, as well as TAM-relevant extensions. The fourth part is aimed at presenting the rationale sustaining the conceptual framework developed to explain how national culture could influence IT usage.

## **STUDIES INVOLVING NATIONAL CULTURE AND INFORMATION SYSTEMS**

Prior researches focusing on cultural issues in the IS field were conducted mainly through two main and different perspectives. According to Ronen and Shenkar (1988), the *emic* perspective “studies

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