2011 3rd International Conference on Advanced Management Science
IPEDR vol.19 (2011) © (2011) IACSIT Press, Singapore

The relevance cultural dimensions on the success Adoption and Use of IT

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Abstract. The academic discipline of information systems (IS) or computer-based information systems is a new discipline compared with more traditional fields such as psychology or sociology. The emerging aspect of IS and its direct relationship to other reference disciplines did not allow early IS researchers and practitioners to view IS as a socio-technical system. Many Information Systems researcher argue that global organizations need to understand cultural differences if they are to successfully deploy information technology. The adoption and use of information technology, culture is probably the most difficult to isolate, define and measure. Consequently, the influence of local culture on the adoption of computer-based information systems in organizations has not featured prominently in the research literature. As cultural factors may be important to the success of IS adoption and use, this research paper aims at conducting a focused study the relevance cultural dimensions (national, organizational, and individual)on the success of adoption and use of IS.

Keywords: information systems, Organizational culture, National culture.

1. Introduction

Technology is believed to be culturally neutral and that the process of development, adoption and use of technology is uniform across countries, once basic economic and political conditions are satisfied [1]. The literature suggests that the fit between the information Technology and organizational culture is critical for firms to obtain potential benefits promised by the technology [2]. The review observed that many technology projects, including IT, in developing countries fail because the designs were not sufficiently tailored to those countries' history and industrial traditions. The IS conflicts with an organization's culture, resistance behavior will result the rejection, damage or modification to match the existing culture [3]. There are problems that cannot be attributed to the technology process, but rather the cultural differences between designers of the technology and the recipients. It is true culture may not be the only factor which influences the adoption and use of IS. Other such as economy, politics, social factors, education and skill levels may be deciding factors.

The globalization of business has emphasized on the need to understand the effectiveness of IS that bridge different cultures. Multinational and trans-cultural organizations use IT to achieve economies of scale, coordinate operations, and facilitate collaborative work across locations and cultures. Cultural differences have become an important issue in the evaluation of computer applications.

2. Literature Review

Organizations need Information Technology to improve information flow across the entire organization, reduce costs, streamline business processes, offer product variety, establish linkages with suppliers, and reduce response time to customer needs and expectations in order to remain successful and retain their competitiveness [4]. There are many issue to consider when adopting IS, it was argued that IS adoption is

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fundamentally an agent for organizational change, and this change requires effective leadership practice and technical skills [5]. Although governments, organizations, and individuals are generally enthusiastic about ICT adoption, (since these also facilitate digital inclusion in the wider global economy) the phenomenon of globalization means that globally used technologies have not only to be accepted but also modified into local cultures and to their prevailing norms.

Culture can be thought of as the beliefs, philosophy, shared values, attitudes, customs, norms, rituals, common practices, and traditions which govern the ways of living of a group of people. The Macquarie Dictionary defines the culture of a society as: "The sum total of ways of living built up by a group of human beings, which is transmitted from one generation to another." Culture has also defined as: "the collective programming of the mind which distinguishes the members of one group or category of people from another" [6]. More simply, culture is shared values of a particular group of people [7] and culture reflects the core values and beliefs of individuals, which are formed during childhood and reinforced throughout life [8]. This implies that culture is all pervasive and has a strong influence on all our undertakings. It is not however easy to measure and hence is a difficult variable to use in a rigorous research. To this extent culture is observable and empirical descriptions can be provided by the ways in which the meanings, values, ideas and beliefs of a social group are articulated through various cultural artifacts, including IT.

2.1. Culture and Information Technology

Over the past decade there has been increasing interest in the IS research literature in the impact of cultural differences on the development and use of information and communications technologies. Today, with the accelerating forces of globalization, and the increasing deployment of IS in developing countries, there exist compelling incentives to better understand the unique drivers of IS adoption in non-Western countries [9] [10].

The literature in the field of Information Technology clearly indicates that culture is an important moderating variable for the success or failure of IT adoption. It also points to several key research studies, which support the notion that societal culture has an influence on IT adoption. In a survey of global IT research, Gallupe et al [11] found that a wide variety of IT issues have been studied from a societal culture perspective. However, it is clear that an IT adopted successfully in one culture, nation, or region, may be a disastrous failure in another [12].Thus, adopting an IT that has been invented and developed in one culture, country, or region to another diverse culture involves more than simply providing information on the technical features of adopting the software. ERP implementation in China was unsuccessful due to national cultural factors [13], other researchers [14] [15] have noted similar issues of culture and business environment affecting implementation success. Across various developing countries, many factors of national and organizational culture affecting ERP implementation including economic status and growth, infrastructure, government regulation, low IT maturity, small firm size, and lack of process management and BPR experience [16]. Numerous studies report the most frequent reason given for the failure of planned adoption of IS and organizational change was due to a neglect of culture. Up to 75% of the reengineering, total quality management, strategic planning, adoption of technology, and downsizing efforts has failed or created problems affecting the survival of the organization [17]. Culture is a key to the success of IS adoption and effective leadership is the means by which the culture is created and managed. Understanding culture is a vital activity for top management executives because it affects strategic development, productivity, and learning at all levels of management [18].

Several studies have identified critical success factors relevant to ERPs, however cultural fit is a particularly neglected factor in assessing ERP implementation success [19]. What appears to be missing from mainstream research into the success of ERP implementations from the cultural aspect is the understanding of how ready organizations are for ERP implementations.

2.2. National Culture

In studies of culture, national culture has an important role in forming the characteristics of society's members from an early age. Furthermore, the existence and stability of national cultural values over long periods is due to them being transmitted from one generation to another [20], so we cannot get rid of them

easily. In addition, these values are considered as a type of belief concerned with what is good or desirable. They also motivate behavior and guide evaluations and decisions (Hyde and Williamson, 2000). Thus, individuals are expected to act according to these values.

Within any given national culture, there will be variations in individual needs as well as in individual, team, and organizational behavior. Nevertheless, all individuals live and work within a cultural environment in which certain values, norms, attitudes, and practices are more or less dominant and serve as shared sources of socialization and social control. Hofstede (1984, 2001) and Trompenaars (1993) have shown that differences in values and attitudes influence the way people interact and make use of their environment. Since national culture is presumed to influence the inhabitants of a country in a similar way, since national culture differs across countries, it is useful to derive a framework of how the differences in national cultures are transformed into the differences observed in technology adoption across countries, at the macro level.

National culture has been defined as a set of core values that shapes the behavior of individuals as well as the whole society (Adler, 1997). Once set in place, culture has its own independent effect. Scholars often overlook the importance of culture. There is a strong relationship between culture and economic development as well as culture and social and political systems (Inglehart and Baker, 2000; Granato et al., 1996). Inglehart (2000) pointed out the difficulty of proving the direction of causality. However, his empirical cross-sectional study provides evidence that a strong positive relationship exists between culture and national economy.

2.3. Organizational Culture

Organizational culture is defined typically in terms of the way people think, which has a direct influence on the ways in which they behave. It is also described as a "set of shared assumptions and understanding about organization functioning." [21]. Organizational culture reveals a continuing debate on the distinction between the meanings associated with the concepts of "organizational culture" and "organizational climate". One definition of organizational climate portrays it as ":…a relatively enduring quality of the internal environment of an organization that (a) is experienced by its members, (b) influences their behavior, and (c) can be described in terms of the values of a particular set of characteristics (or attitudes) or the organization" [22]. Tagiuri qualifies the use of the term "relatively enduring" in defining organizational climate by noting that continuity of climate is not as lasting as that of organizational culture. Tagiuri's definition of organizational climate parallels that of [23] artifacts level of the conceptual levels of organizational culture.

Organizational culture can be characterized as the kinds of behavior that are valued and promoted in the organization. Following Hurley and Hult [24], we characterize organizational culture along five dimensions— learning and development, participative decision making, support and collaboration, power sharing, and tolerance for conflicts and risk. Learning and development refers to an emphasis on individual learning and development; participative decision-making culture encourages employees to participate in the firm's decision-making process; a culture of collegial support and collaboration helps employees cooperate with each other and makes them ready to offer needed help; power sharing reduces focus on turf, politics, and status; communication refers to the organization's internal and external information exchange and interaction; tolerance for conflicts and risk taking measures the degree to which the organization accepts conflicts and risk.

In contrast to Schein's assertion, there is ample evidence in the management literature that many other researchers in organizational culture have contended that is possible to reliably measure its indicators in an organizational context [25], while noting that the culture researchers have typically employed qualitative research and that climate researchers have generally used quantitative means, argues for an agreement that the two concepts share underlying similarities. According to [25], these similarities are evidenced in three basic points: (1) both concepts focus on organizational behavior characteristic, (2) both concepts include a wide range of phenomena, and (3) both concepts address a similar problem. Organizational Culture Profile instrument was designed to assess a specific dimension of organizational culture that they referred to as "person-organization fit" [26]. It has been identified that both qualitative and quantitative strategies for measuring organizational culture [27]. They argue that a quantitative approach is valid if it measures the underlying beliefs and assumptions that represent culture rather than surface attributes reflecting

organizational climate. Based on this premise, they have developed an instrument, the Organizational Culture Assessment Instrument (OCAI), which they assert can be used to reliably measure the prevailing organizational culture.

2.4. Individual Culture

Desphandé and Webster [28] reviewed several studies and defined organizational (or corporate) culture as "the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them with the norms for behavior in the organization". Task oriented culture places the highest priority on task achievement whereas Person (self) oriented culture serves the needs of employees through organizational learning as a result of individual influence on one another. Organizational culture could be viewed as a property of the group or the organization itself, or as something that resides within each individual as a function of the cognitive and learning process [29]. The individual's perception of:

- How easy the innovation is to learn and use, which include support, complexity and change is an important factor influencing user acceptance and usage behavior of information technologies [30].
- Usefulness as "the degree to which a person believes that using a particular system would enhance his or her performance". [31]
- Effectiveness of IT adoption is the extent to which individuals believe that the adoption of the IT has been successful. Griffith et al. [32] believe that technology implementation success could be improved with active top management support, clear implementation goals and user participation and training

A central finding is that intercultural competence can be regarded as a key skill in order to overcome culturally related difficulties. However, intercultural competence seems to be important when the individuals' cultures in a team differ so extremely that extra skills are needed to unleash the positive potential of multiculturalism. But does nowadays, almost 40 years after Hofstede's IBM study, individual culture among members of a young well educated elite really differ that much that it leads to problems because of the individuals cultural background?

3. CONCLUSION

This tentative reflexion suggests that cultural impact on IT adoption and use cannot be ignored and it will be important to research perspectives of both users and managers of IT within organizations. Culture is an important ingredient in the identity of the IT products themselves and influences its adoption and use. As the use of IT expands globally, there is need for further research into cultural aspects and implications of IT. A greater understanding of the various dimensions of culture, as applied to IT and the people who use it, will lead to more globally acceptable IT products and better choices for IT. The succesful adoption and use of IT need to consider the three doimensions of culture as shown in figure 1

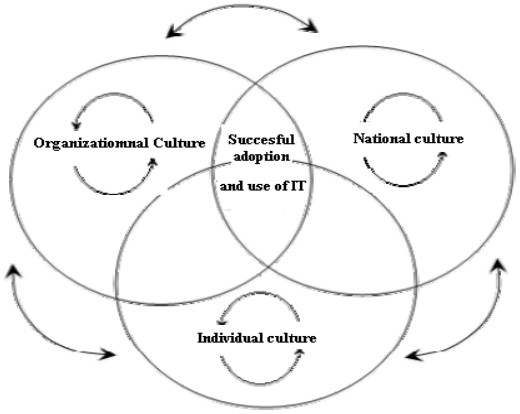

Figure 1 the relevance cultural dimensions on the success IT adoption and use

4. Acknowledgements

This paper is part of research project SB0100022. The authors are grateful to King Fahd university of Petroleum & Minerals for its constant support.

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