

Chapter 40

An Investigation into the Adoption and Implementation of Electronic Commerce in Saudi Arabian Small and Medium Enterprises

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ABSTRACT

Saudi Arabian Small and Medium Enterprises (SMEs) will face fierce competition from new entrants to local markets as a result of their accession to the World Trade Organisation (WTO), and electronic commerce (e-commerce) technologies can reinforce SME's competitive edge. This study investigates the state of e-commerce adoption and analyses the factors that determine the extent to which SMEs in Saudi Arabia are inclined towards deploying e-commerce technologies. This could assist future firms in designing effective implementation projects. Seven SMEs' e-commerce adoption levels are studied as a case. The Technology-Organization-Environment (TOE) framework was used as the major source of inspiration in our analysis of e-commerce adoption amongst Saudi SMEs. In addition to advancing research on e-commerce in Saudi Arabia, this chapter also highlights several directions for future inquiry and implications for managers and policymakers.

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INTRODUCTION

The rapid increase in the number of Internet users has fueled a phenomenal growth in electronic commerce (e-commerce). The Internet provides an excellent opportunity to increase sales while resulting in lower operating costs. Indeed, firms that pass up this tremendous opportunity will possibly not survive in the 21st century (Saunders, 2007). E-commerce involves the use of Internet technologies such as Electronic Data Interchange (EDI), electronic e-mail and Electronic Fund Transfer (EFT) to support financial transactions and purchases online.

E-commerce enables consumers and companies to gain access to worldwide markets, to expand access from regional to national or national to international markets (Iacovou *et al.* 1995; Rama Rao, 2001; Andam, 2003). Because of its potential, enterprises throughout the globe have either created or are in the process of creating e-commerce 'front-ends' (i.e., online shops) to complement their traditional business channels.

A leading market analysis firm, Forrester Research (Mulpuru *et al.*, 2008) has indicated that online retail sales alone in the United States (US) reached \$175 billion in 2007 (an increase of 19% from 2006) and this is projected to grow to \$335 billion by 2012. Moreover, business-to-consumer (B2C) e-commerce sales totaled 106 billion Euros (\$133 billion) in 2006 and this is set to triple over the next 5 years to reach nearly 323 billion Euros (\$407 billion) by 2011 (eMarketer, 2007). It would nevertheless seem that there is a sizable gap between the developed and developing countries in which e-commerce successes occur more in the former than the latter (Licker and Motts, 2000; Johnston and Acquah-Gaisie, 2001).

Recently, many studies have been conducted to explore the factors that influence the use of e-commerce in different countries and unfortunately, the majority of these studies were conducted in the United States (e.g. Grandon and Pearson, 2004), United Kingdom (e.g. Matlay and Addis, 2003),

Canada (e.g. Sparling *et al.*, 2007) and few have focused on countries in developing countries such as Brazil (i.e., Tigre, 2003), South Africa (i.e., Molla and Licker, 2005) and India (i.e., Tarafdar and Vaidya, 2004). Yet, there is a shortage of data coming from countries in the Middle East and Arab World (Parker and Castleman, 2006) and in general this region has not yet received enough attention from social scientists and organizational analysts (Al-Yahya, 2009).

It is believed that using the findings of innovation studies in advanced countries to explain the innovative behaviour in less developed countries is likely to be inappropriate (Hofstede, 1991). Indeed, Western management theories and practices might not apply abroad and this same thought applies to the transferability of innovation theories and practices from the West to the Arabs (Hofstede, 1980).

Thus, the present study attempts to address this gap in the extant literature and sheds some light on e-commerce adoption by Small and Medium Enterprises (SMEs) in Saudi Arabia. Saudi Arabia is a unique place in which to conduct the study to test the findings derived from innovation adoption literature in SMEs. First, Saudi Arabia covers a very large area of the Arabian peninsula with a diverse immigrant population and a developing economy. Moreover, the region has been frequently cited for the lack of real involvement in ICT and e-business progress in achieving good work environment and organizational performance (UNCTAD, 2004; Nour, 2002).

This remainder of this chapter consists of seven sections. *Section 2* will briefly discuss the research national context and gives a picture about Saudi Arabia including its economy, the state of Internet usage and some cultural background. *Section 3* discusses the different definitions and characteristics concerning SMEs. *Section 4* then discusses the theoretical foundation for studying e-commerce adoption in organisations. The main method employed in our research will be briefly described in *Sections 5*. Research find-

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