

# Chapter 13

## Barriers to Electronic Commerce Adoption Among Small Businesses in Iran

**Morteza Ghobakhloo**

*Universiti Putra Malaysia, Malaysia*

**Tang S.H.**

*Universiti Putra Malaysia, Malaysia*

### ABSTRACT

*This research examines potential barriers within the Technology-Organization-Environment (TOE) framework that affect the decision to adopt Electronic Commerce (EC) and extent of EC adoption within Small Businesses (SBs) in the context of developing countries. This research also signifies the discriminators of adoption and non-adoption of different EC applications. Through a questionnaire-based survey of 268 owners or managers of Iranian manufacturing SBs, initial and post EC adoption by these businesses were found to be hindered by some of barriers existing within technological, organizational, and environmental context including cost of EC, lack of EC compatibility, perceived risk of EC, lack of EC awareness, lack of knowledge, family intervention, lack of external support, lack of government support, and lack of business partners' EC readiness. Similarly, this study provides discussions on determinants of adoption and non-adoption of different EC applications. Theoretical contribution and managerial implications of this research are discussed which is believed to offer valuable insights to managers, EC experts, and policy makers regarding institutionalization of EC within SBs of developing countries.*

### INTRODUCTION

Electronic-commerce (EC) has emerged as one of the most active research areas in the field of Information Systems (IS) in recent years. Small Businesses (SBs) are incrementally using IS-

based EC to gain competitive advantages and to have access to global markets (Al-Qirim, 2007). However, it has been found that in spite of exponential growth of EC within SBs/Small and Medium-Sized Enterprises (SMEs), the rate of EC adoption by these businesses has remained

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relatively low (MacGregor & Vrazalic, 2005) and large organizations have benefited considerably more than SBs/SMEs in both their improved sale and costs savings (Riquelme, 2002). In looking for reasons for such differences in EC adoption in SBs, unique characteristics of these businesses can be highlighted. SBs generally have limited access to the market information and suffer from globalization constraints (Madrid-Guijarro, Garcia, & Van Auken, 2009). Moreover, management techniques such as financial analysis, forecasting, and project management are used rarely by SBs (Blili & Raymond, 1993). Tendency to employ generalists rather than specialists, reliance on short term planning, informal and dynamic strategies and decision making processes, and lack of standardization of operating procedures are other distinctive characteristics of these businesses (Dibrell, Davis, & Craig, 2008; Thong, Yap, & Raman, 1996). However, restricted resources controlled by SBs, which is commonly referred to as resource poverty (Thong, Yap, & Raman, 1997; Welsh & White, 1981), is the major differentiator between SBs and large organizations.

It is believed that EC contributes to the advancement of businesses, particularly small ones in developing countries which is driven by the perceived potential of the Internet and communication technologies in reducing transaction costs by bypassing some, if not all, of the intermediaries and facilitating linkages to the global supply chains (Hempel & Kwong, 2001; Molla & Licker, 2005a). It is believed that EC promises many benefits, ranging from modest advantages such as reduced communication and administration costs, and improved accuracy to transformative advantages which include enabling business process reengineering or supporting industry value chain integration initiatives such as just-in-time inventory, continuous replenishment, and quick response retailing (Chwelos, Benbasat, & Dexter, 2001). Moreover, prior literature has provided consolidate evidence of significant link between firm's EC resources and business value/perfor-

mance gain, in particular in developed countries (Ordanini & Rubera, 2010; Zue & Kraemer, 2002). The e-business value of IS-enabled EC was found to lead to improved firm performance in sale, internal processes and customer/supplier relationships through market expansion, improved information sharing efficiency, and improved transactional efficiencies (Melville, Kraemer, & Gurbaxani, 2004; Zue & Kraemer, 2002; Zue, 2004).

However, businesses in developing countries particularly SBs face challenges different from businesses in developed countries. It is reported that SBs of developing countries are slower to adopt EC applications and differ greatly in adopting and benefiting from these technologies (Kartiwi & MacGregor, 2007; Tan, Tyler, & Manica, 2007). EC adoption in SBs of developing countries has only recently gained attention in the academic press. This calls for studies that are robust enough to capture most, if not all, of the idiosyncrasies associated with EC adoption by SBs within developing countries.

The literature suggests that in most of the developing countries, EC adoption has been hindered by the quality, availability, and cost of accessing necessary infrastructure while developed countries have employed a relatively well-developed, accessible and affordable infrastructure for EC (Ghobakhloo, Arias-Aranda, & Benitez-Amado, 2011; Kartiwi & MacGregor, 2007). Likewise, the readiness of businesses to govern and regulate EC is an essential element, but one lacking in developing countries, for the trust necessary to conduct e-business (Molla & Licker, 2005b). It is sometimes reported that EC does not offer greater returns to firms in developing countries as it cannot reduce transportation and logistics costs effectively (Humphrey et al., 2003). Likewise, businesses in developing countries usually suffer from absence of culture of sharing data which results in low data quality and lack of reliable and consolidated marketing (Jennex, Amoroso, & Adelakun, 2004). Since web and communications technologies are complex and offer a variety of

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