Chapter 9
E-Commerce Adoption in Nigerian Businesses:
An Analysis Using the Technology-Organization-Environmental Framework

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ABSTRACT

Business organizations around the world engage in e-commerce (EC) and e-business to support business operations and enhance revenue generation from non-traditional sources. Studies focusing on EC adoption in Sub Saharan Africa (SSA) are just beginning to emerge in the extant information systems (IS) literature. The objective of this current study is to investigate factors impacting the acceptance of EC in small businesses in SSA with Nigeria as an example. A research model based on the Diffusion of Innovation (DIT) and the Technology–Organization–Environment (TOE) frameworks were used to guide this discourse. Such factors as relative advantage, compatibility, complexity, management support, organizational readiness, external pressure, and IS vendor support were used to develop relevant hypotheses. Questionnaires were administered to respondents in Nigeria and data analysis was performed using the Partial Least Squares (PLS) technique. Predictions related to relative advantage, management support, and IS vendor support were confirmed; the other hypotheses were unsupported by the data. The study's implications for research and practice are discussed in the chapter.

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INTRODUCTION

The emergence of Electronic Commerce (EC) has significantly changed the business environment for both individuals and businesses around the world (Turban et. al., 2010). EC arrangements allow sellers to access global markets and buyers have a greater choice to procure goods and services from a variety of sellers around the world at reduced costs (Turban et. al., 2010; Ifinedo, 2011). In fact, Turban et. al., (2010) and Grandon & Pearson, (2004) note that EC enhances productivity for the adopting organization in the following ways: a) it improves efficiencies through automation of transactions, b) it reduces intermediaries in the value chain to foster greater economic advantages, c) it consolidates demand and supply through organized exchanges, d) it facilitates product improvement as well as engenders innovative ways of selling existing products and services. It is safe to suggest that the benefits accruing from EC continue to fuel its acceptance around the globe (Turban et. al., 2010; Ifinedo, 2011; Grandon & Pearson, 2004; Leadpile, 2010). A recent report by Leadpile (2010) predicted that e-commerce sales around the world will likely surpass the $1 trillion mark by 2012.

It is implied that the level of commercial activities and transactions generated through EC and other online initiatives in a country has a positive correlation with the nation's overall economic growth and well-being (EIU, 2011; WEF, 2011). As such, parts of the world especially the developing countries where the expansion of EC and related activities have been slow to develop, run the risk of being marginalized in the emerging digital or network economy (EIU, 2011; WEF, 2011; Ifinedo, 2005). Widely reported reasons as to why countries in the developing world have failed to use information communication and technologies (ICT) products to integrate into the digital economy include factors such as poor infrastructure, legal, institutional, cultural, and socio-economical constraints (Hadidi, 2003; ECA, 2000; UNCTAD, 2008; Ho et. al., 2007; Ifinedo, 2008). It is easy to notice that all the aforementioned constraints are at the macro level. While emphasis on such factors may be relevant in comparative analyses that seek to highlight key facilitating and inhibiting factors across countries/regions of the world, (Kaufmann & Liang, 2007; Farhoomand, et. al., 2000; Tan et. al., 2007) the impacts arising from micro level issues tend to be downplayed and underemphasized in such approaches.

Furthermore, the literature suggests that the extent of EC adoption in the developed world where favorable macro level environments exist does not necessarily indicate that such environmental or external factors alone serve as sole determinants of EC acceptance in those contexts (Ho et. al., 2007; Gibbs & Kraemer, 2004; Scupola, 2003). For example, a lack of financial resources is often identified as an inhibiting factor to the spread of EC in the developing countries; (WEF, 2011; Ifinedo, 2005; Ifinedo, 2008) however, studies (Ifinedo, 2011; Cragg & King, 1993) in the developed world found that this particular item was not a sufficient factor to set back EC adoption in firms with interests in such platforms. With respect to the influence of culture on EC adoption, Okoli (2003) study in a Sub-Saharan African (SSA) country did not uphold the view suggesting that national cultural values inhibit EC adoption (Countries in the SSA region include Ghana, Nigeria, and Botswana; these countries are located south of the Sahara). The pertinence of legal and other institutional factors in the adoption process of EC has been reported to be problematic across contexts (Shih & Kraemer, 2005; Oxley & Yeung, 2001). Importantly, the ongoing gains regarding ICT infrastructure expansion in the developing world especially in SSA suggests that the issue of poor infrastructure that has been putatively noted as a significant inhibitor of technology acceptance in the region is fast losing its relevance. Reports from ITU International Telecommunication Union (2011) and Internetworldstats (2011) indicate that growth in Africa's Internet and broadband sector

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