

# Levels of Business to Business E-Commerce Adoption and Competitive Advantage in Small and Medium-Sized Enterprises: A Comparison Study Between Egypt and the United States

Ibrahim Elbeltagi<sup>a,†</sup>, Haseba Hamad<sup>b</sup>, Jonathan Moizer<sup>a</sup>, and Mohamed A. Abou-Shouk<sup>c</sup>

<sup>a</sup>Plymouth Graduate School of Management, Plymouth University, Plymouth, UK; <sup>b</sup>Salahaddin University, Erbil, Iraq; <sup>c</sup>Faculty of Tourism and Hotels, Fayoum University, Fayoum, Egypt

## ABSTRACT

Business-to-business e-commerce adoption has become increasingly important for small and medium-sized enterprises, allowing them to gain and sustain competitive advantage. Business-to-business adopted at different levels based on different resource endowments leads to competitive advantage being gained and sustained in proportion to that level of adoption. This study uses structural equation modeling to investigate how levels of business-to-business e-commerce adoption affects and contributes to gaining and sustaining competitive advantage in both U.S. and Egyptian manufacturing small and medium-sized enterprises. The key finding is that small and medium-sized enterprises can achieve growth in market share and sales that helps them to improve their position in the global market through higher levels of business-to-business e-commerce adoption. Implications of the study, its limitations and directions for future research, are also discussed.

## KEYWORDS

B2B e-commerce adoption; competitive advantage; SMEs; Structural Equation Modeling; U.S.; Egypt

## Introduction

Business to business (B2B) e-commerce is one of the fastest-growing segments of e-commerce application. It provides many growth opportunities and benefits for firms, such as cost reductions, efficiency improvements, better supplier relationships, access to global markets, new customers and suppliers, productivity improvements, increased profits, and gains in competitive advantage (Fauska, Kryvinska, & Strauss, 2013).

B2B e-commerce adoption has increasingly become a requirement for effectively servicing the business needs of small and medium-sized enterprises (SMEs; Al-Bakri, Cater-Steel, & Soar, 2010). B2B e-commerce can help SMEs to gain a variety of competitive advantages over other firms and enhance their ability to compete with large organizations in global markets (Scupola, 2003). B2B e-commerce shows much promise for SMEs wishing to expand their markets (Mullane, Peters, & Bullington, 2001).

However, the advantages available from e-commerce rely on its level of adoption by SMEs (Lefebvre, Lefebvre, Elia, & Boeck, 2005). The extent to which SMEs are ready to adopt B2B e-commerce is proportionate to the adoption benefits they gain (Lin, Huang, & Burn, 2007). Many extant studies have identified different levels of e-commerce implementation and adoption (see for instance Abou-Shouk, Megicks, & Lim, 2013; Elia, 2009). However, they have not

**CONTACT** Dr. Jonathan Moizer  [jonathan.moizer@plymouth.ac.uk](mailto:jonathan.moizer@plymouth.ac.uk)  School of Management, Plymouth University, Drake Circus, Plymouth, PL4 8AA Q6, United Kingdom.

<sup>†</sup>Deceased