Chapter I
A Composite Model for E-Commerce Diffusion: Revisited

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ABSTRACT

Why are some countries successful with e-commerce while others flounder? This chapter is an update of an earlier research study that the authors conducted to analyze the impact of technology, cultural, and socio-economic factors on the global diffusion of e-commerce. The general thesis of this chapter is that cultural and socio-economic factors in addition to technology were the reasons for the growth of e-commerce within countries. There had been no prior studies that combined the aggregate effects of cultural, socio-economic, and technology factors on e-commerce diffusion. While technology could solely contribute to Internet surfing, culture and socio-economic factors can be pivotal in bridging the gap between Internet usage and e-commerce diffusion. The objective of this research is to provide a model that quantified the aggregated influences of technology, culture, and socio-economic factors on global e-commerce diffusion. In terms of methodology, a cross-country regression model was used to analyze the determinants of e-commerce diffusion and the results provide evidence that the propensity for e-commerce growth can be explained by these factors. The results were aimed at providing firms with a greater understanding of strategies to employ while implementing e-commerce across the world. This paper revisits that publication to see if any changes in the factors have occurred.

INTRODUCTION

During the past decade, global e-commerce has experienced explosive but somewhat uneven growth throughout the world. The Internet has facilitated rapid growth by simplifying traditional business-to-business (B2B) and business-to-government (B2G) transactions while allowing firms to deal directly with consumers using online or Web based transactions. Such transactions (B2C) have now become a major component in the marketing strategy of retail firms. The Internet has also been a major factor in globalization since it allows firms, large and small, to extend their reach in selling products and services. Digital networks have connected individuals, businesses and governments and removed traditional barriers to trade such as transportation and distance.

Given this backdrop, firms throughout the world should expect to see significant success using the Internet as a marketing and selling tool. However, high expectations regarding the global diffusion of B2C e-commerce have not always materialized on a universal basis. While the potential of e-commerce in the developed world is high given the existence of a technology infrastructure, such potential has not always been realized. Thus, it appears that having a desirable technology infrastructure is not the sole reason for successful e-commerce diffusion. In a prior research paper by Yap, Das, Cort, and Burbridge (2006), global e-commerce diffusion was found to depend on socio-economic and cultural variables along with the necessary technology infrastructure. By understanding these factors, it is expected that firms will be able to make informed decisions in penetrating global markets via e-commerce. This paper revisits the former paper but also updates that work based on new findings in the past few years.

BACKGROUND AND RESEARCH INTEREST

The Internet provides a platform for e-commerce diffusion in a global setting. In order to understand global diffusion of e-commerce, this research focused on determining what dictates this process across countries. E-commerce has helped countries, and commercial sectors within developed and developing countries to reduce transaction costs and improve access to global markets (Kramer et. al, 2002; UNCTAD, 2002; Humphery et al., 2003).

Much of the research in e-commerce diffusion concludes that the main barriers to global e-commerce adoption are the lack of technological infrastructure and the citizen's access to the Internet at reasonable prices. (UNCTAD, 2002; Oxley and Yeung 2001; Dutta and Jain, 2003; Kirkland, Osorio, Sach, 2001; Wolcott, Press, Henry, Goodman, Foster, 2001). Studies by Zhao et. al. (2002) and Petrazzini and Kibati (1999) have focused on the government's role in the acceptance and deployment of new technology such as the Internet. However, some studies have concluded that it is more than just technology and infrastructure but also cultural factors that add to the problem of digital divide (Gurstein, 2003; Jussawalla and Taylor 2003, Kling 2000; Tibben 2003). According to these papers, 'technological' as well as 'social' infrastructures must be considered. Empirical studies incorporating these factors have been limited. Gibbs, Kraemer, and Dedrick (2003) examine global, environmental and policy factors that act as determinants for e-commerce diffusion, but their study is limited to a comparison of only 10 countries. A study by La Ferle et. al. (2002) concerning Internet diffusion explores the cultural reasons influencing the penetration rates of the Internet in Japan and the US, while excluding socio-economic and technological forces. Furthermore, empirical studies have included case based approaches focusing on e-commerce diffusion across individual countries