A Composite-Model for E-Commerce Diffusion: Integrating Cultural and Socio-Economic Dimensions to the Dynamics of Diffusion

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ABSTRACT

Why are some countries successful with e-commerce while others flounder? The purpose of this article is to study the impact of technology, cultural, and socio-economic factors on the global diffusion of e-commerce. While past studies have focused on technology reasons alone, this research includes cultural and socio-economic factors as well. Having access to the Internet does not necessarily translate to e-commerce usage. Fundamentally, culture and socio-economic factors are pivotal in bridging the gap between Internet usage and e-commerce diffusion. The objective is to provide a model that quantifies the aggregated influences of all factors on global e-commerce diffusion. A cross-country regression model analyzes the determinants of e-commerce diffusion and the results used in a cluster analysis to provide further evidence that the propensity for e-commerce depends on the interplay among the different factors. The results can provide firms with an improved understanding of strategies to employ while implementing e-commerce.

Keywords: cultural influences; e-commerce diffusion; Internet; socio-economic

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 selling. Business to consumer selling (B2C) has 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/or services. Digital networks have connected individuals, businesses, and governments and have 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. This research will attempt to explain global e-commerce diffusion as critically depending 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. Firms should also be able to customize their implementation and strategy needs.

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, the study focuses 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 (Humphrey, Mansell, Pare, & Schmitz, 2003; Kraemer, Gibbs, & Jackson, 2002; UNCTAD, 2002).

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 (Dutta & Jain, 2003-2004; Kirkman, Osorio, & Sach, 2001-2002; Oxley & Yeung 2001; UNCTAD, 2002; Wolcott, Press, Henry, Goodman, & Foster, 2001). Petrazenni 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; Jusswalla & Taylor, 2003; Kling, 2000; Lim, Leung, Sia, & Lee, 2004; Tibben, 2003; Zhao, Suh, Kim, & Du, 2004). 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 Ferle, Edwards, and Mizuno (2002) concerning Internet diffusion explores the cultural reasons influencing the penetration rates of the Internet in Japan and the U.S., while excluding socio-economic and technological forces. Furthermore, empirical studies have included case based approaches focusing on e-commerce diffusion across individual countries such as Germany (Koenig, Wigand, & Beck, 2003), Brazil (Tigre, 2003) and Costa Rica (Travica, 2002).

Therefore, even though there are a number of studies addressing Internet or e-commerce diffusion, they have been limited in their scope. There has been no attempt to represent the determinants of global diffusion of e-commerce in a cross-country composite-model incorporating cultural as well as socio-economic factors along with technological considerations. Furthermore, some distinctions should be made regarding global internet diffusion vs. global e-commerce diffusion. Accessibility to the Internet does not automatically mean that consumers and businesses are willing to transact or buy online. Many people and business establishments surf the Internet to initiate a transaction without buying online. There are some reasons for this behavior. In some countries outside the United States, consumers and business establishments do not wantonly use credit, since debt is often viewed as an unfavorable socio-cultural stigma. In addition, citizens in many countries do not trust e-commerce transactions over the Internet. In the case of United States, the explosion in e-commerce growth is based on the ability to use credit and the willingness to trust online transactions.
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