Chapter XII
An Economic Framework for the Assessment of E-Commerce in Developing Countries

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ABSTRACT

This study presents a theoretically-based model for economic analysis of electronic commerce in developing countries. The Porter diamond model is adopted for proper economic examination of the factors that affect e-commerce. The model not only captures the factors as the driving forces of e-commerce, but also facilitates the assessment of e-commerce and identification of the global competitive advantages of the firms. The new model can be used as a framework for better policymaking by the public and private sectors and to predict changes in the rapidly expanding e-commerce in the global environment, especially in developing countries.

INTRODUCTION

Globalization in the latter half of the twentieth century has been driven primarily by the advancements in information and communication technologies (ICTs) and electronic commerce. The enormous surge in e-commerce in the recent past has significantly altered the ways in which business is conducted around the world. The e-commerce as a new phenomenon is in fact a reference to all markets in which exchanges are facilitated by digital networks. The new market opportunities brought about by e-commerce have forced firms to find digital solutions for becoming more competitive in the global marketplace.

Due to the rapid expansion of the digital marketplace and diffusion of information, e-commerce has been growing in scale and scope faster than the pace of research devoted to the study of the organizational development, regulatory, and institutional aspects of this new phenomenon. Today, the scope of e-commerce comprises the electronic labor market, electronic procurement, electronic money, and electronic entertainment, among other enterprises. As such, e-commerce means different things to different people, rendering a clear-cut definition somewhat problematic. VanHoose (2003) makes a distinction between e-commerce and e-business. E-commerce is defined to capture any process that entails exchanging ownership of or rights to use goods and services via electronically linked devices that communicate interactively within networks. On the other hand, e-business includes a firm's internal coordination, decision-making, and implementation processes in its production, marketing, and management functions by using electronic networks. Kauffman and Walden (2001) suggest a broader definition of e-commerce, in which digital goods play a focal role. Digital goods, also known as information goods, exhibit some characteristics that are substantially different from those of traditional goods sold on the Internet. In particular, when a physical product is searched for and bought on the Internet, it becomes a digital-physical bundle (1).

Kauffman and Walden (2001) maintain that the research on e-commerce is the "business" of business schools and suggest a multi disciplinary approach to e-commerce. In this study, however, we identify three major benefits from recasting the principles of e-commerce as a new medium of exchange within the wider context of the traditional theory of trade:

First, e-commerce marks the beginning of a new era in the history of international trade where production, marketing, sales, and distribution occur in the digital marketplace. By the end of 2005, according to Sherif (2006), more than 25 percent of the global trade had been carried out through the digital economy. In fact, e-commerce and cross-border e-commerce, in particular, is radically changing the landscape of international business. In the context of international trade literature, such a substantial change requires a fresh interpretation of such concepts as tariffs, quotas, and intellectual property rights.

Secondly, the Internet and other ICT- related media, called digital opportunities, have the potential to reduce barriers of the free trade and create a somewhat frictionless, but not perfect, business environment. Although some potent impediments to the free flow of trade remain today, the Internet through wired or wireless networks has virtually wiped out national boundaries and eliminated the distance between trading partners in different nations in the global economy. According to Mann et al. (2000) the Internet has reduced friction in the marketplace in three dimensions: time, distance, and information, resulting in lower costs for new firms to enter and exit from an industry.

Thirdly, the new medium of exchange appears to have implications for developing countries that are expectedly different from those in developed countries. Although developed countries have pioneered e-commerce and, in general, enjoy a higher volume of trade than developing countries, there are significant variations in the rate and pattern of usage and the expected benefits within each group. Despite all trading nations can potentially gain from these opportunities, developing countries are expected to gain, in the long run, more than developed countries since they are deeply inside the current technological circle (Panagariya, 2000).

The rest of this chapter is organized as follows: Section 2 reviews the e-commerce literature with particular attention to its foundation in economics. Section 3 adopts the Porter theory of firms' global competitiveness to provide a suitable framework for the economic analysis of e-commerce. Section 4 presents the conclusions and explains contributions of the study.

LITERATURE REVIEW

E-commerce literature has been growing rapidly in a number of interrelated dimensions by cover-

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