701 E. Chocolate Avenue, Suite 200, Hershey PA 17033-1240, USA Tel: 717/533-8845; Fax 717/533-8661; URL-http://www.igi-global.com

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# Factors Affecting E-Commerce Stages of Growth in Small Chinese Firms in New Zealand: An Analysis of Adoption

Jihong Chen, University of Waikato, New Zealand Robert J. McQueen, University of Waikato, New Zealand

Motivators and Inhibitors

#### **ABSTRACT**

We investigate an e-commerce stages of growth model in a cross-cultural business context for small Chinese firms in New Zealand. Research findings from 14 case studies show that the Chinese owners/managers of these small firms have a high power distance, and their attitude toward e-commerce technology directly influences their firms' e-commerce growth process. It was found that the higher the stage of e-commerce adoption, the greater the need for owners having a more positive attitude toward e-commerce, more innovativeness and enthusiasm, and more technology literacy. The higher the tolerance for ambiguity and the higher the risk-taking propensity, the higher the stage of e-commerce adoption achieved. In addition, firms at lower growth stages of e-commerce adoption are highly rated on individualism, while those firms at higher growth stages of commerce adoption are highly rated on collectivism. The research has implications for small business managers operating in a cross-cultural business context as they move through the different stage of e-commerce adoption.

Keywords: cross-cultural issues; electronic commerce; growth process; innovation adoption; small firms

#### INTRODUCTION

Electronic commerce (e-commerce) refers to the use of the Internet for buying and selling activities (Rodgers, Yen, & Chou, 2002). It covers processes that touch customers, suppliers, and external partners, including sales, marketing, order taking, delivery, customer service, purchasing of raw materials, and supplies for production and procurement of indirect operating-expense items such as office supplies (Bartels, 2000). Driven by the Internet and economic globalization, e-commerce is becoming important in many organizations, both large and small. There is a growing body of literature dedicated to the analysis of factors affecting e-commerce adoption (Mirchandani & Motwani, 2001; Riemenschneider & McKinney, 2001-2002; WITSA, 2001).

In recent years, Asian immigration has increased dramatically in New Zealand. Statistics New Zealand (2003) forecasts that New Zealand's Asian population will reach 667,000 in 2021, more than double the estimated resident population of 272,000 as of June 30, 2001. Within the Asian migrant group, the Chinese ethnic group has grown quickly. Statistics New Zealand (2001) indicates that the overseas-born Chinese ethnic group experienced the largest increase in population between 1991 and 2001. In 1991, 28,401 Chinese people moved to New Zealand, but this number increased dramatically to 78,519 in 2001 with 5,508 of these new immigrants working in the retail trade industry. For the 2003/2004 year the top four groups of migrants were Britain(20.8%), China (12.3%), India (7.8%), and South Africa (6.7%) (NZIS, 2004). Many of the Asian immigrants have invested and established their business in New Zealand. Walters (2002) states migrants have been a major source of investment of personal capital from overseas in recent years. Asian investment in New Zealand through resident companies as well as individuals has been estimated at around \$7 billion (Walters, 2002). According to Statistics New Zealand reports, from 2001 to 2003 there has been a great increase in the number of small Chinese firms being founded in New Zealand (Statistics New Zealand, 2003) and adopting e-commerce in their businesses. Large Asian investors in Auckland have been estimated to each have between \$20-30 million invested in the region (McMillan, 2002). The increase in Chinese companies will play an important role in the New Zealand economy.

However, there has been little research published on the influence factors of e-commerce adoption in small firms in a cross-cultural business context. This research will explore the adoption of Internet-based e-commerce technology in small Chinese firms with a cross-cultural business context, ranging from the use of e-mail to the development of advanced online transaction Web sites. At each stage of the evolution, this study will investigate what adoption motivators and inhibitors influence the

evolution. This study will analyze what factors affect the decisions that small business executives make as they move through the different stages or levels of Web-based e-commerce adoption. Mirchandani and Motwani (2001) argue that some inhibitors could be present at all levels and some could only be present at certain levels and disappear at other levels. This study will identify inhibitors and motivators linked to adoption stages. In addition, this study will investigate whether the Chinese cultural profile still applies when these owners consider adoption of e-commerce in the New Zealand business context.

The Australian Bureau of Statistics defines a small firm as any business employing less than 20 people, which is closely controlled by the owner/managers who contribute most of the operating capital. The principal decision making rests with the owner/managers (Australian Bureau of Statistics, 2004). In this study, small Chinese firms in New Zealand are defined here as the small firms with fewer than 20 employees established by Chinese immigrants in New Zealand.

The remainder of the article is structured as follows. The next section briefly examines the literature on e-commerce growth models, influence factors on e-commerce adoption, and business culture differences between New Zealand and China. We then describe the research methodology and present the research findings with discussion. The last section draws conclusions from the research, points out limitations, and provides managerial implications of this work.

#### LITERATURE REVIEW

### Small Firms' E-Commerce Growth Model

Areview of the literature relating to e-commerce adoption in small firms reveals that the adoption of e-commerce typically proceeds in a set of sequential stages (Allcock, Webber & Yeates, 1999; Daniel, Wilson, & Myers, 2002; Department of Trade and Industry, 2000; Nolan, 1979;

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