E–Commerce Use by Chinese Consumers

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INTRODUCTION

The number of Internet users around the world has steadily grown, and this growth has provided the impetus and the opportunities for global and regional e-commerce. However with the Internet, different characteristics of the local environment, both infrastructural and socioeconomic, have created a significant level of variation in the acceptance and growth of e-commerce in different regions of the world. Over time, various studies have been conducted and models have been developed to identify diffusion of e-commerce in different environments (Hasan & Ditsa, 1999; Travica, 2002; Wolcott, Press, McHenry, Goodman, & Foster, 2001; Zwass, 1999). These models have looked at "infrastructure" (e.g., connectivity hardware and software, telecommunications, product delivery and transportation systems) and "services" (e.g., e-payment systems, secure messaging, electronic markets) as the primary diffusion factors. Furthermore, Travica's (2002) study focused on Costa Rica and its culture, and Hasan and Ditsa (1999) tried to identify and present possible cultural factors that may impact broad-based adoption of information technology.

Industry-based organizations have also been interested in diffusion of e-commerce in different countries and have also identified similar factors, and have rated these countries on their readiness for e-commerce using those factors. Most widely cited of these ratings are presented by IBM and the intelligence unit of *The Economist,* which define e-readiness by measurement in six distinct categories: (a) connectivity and technology infrastructure, (b) business environment, (c) consumer and business adoption, (d) social and cultural environment, (e) legal and policy environment, and (f) supporting e-services. Based on these characteristics, *The Economist* rated China (the country that is the focus of our research) as number 51 for year 2000, number 52 (a tie with Sri Lanka) for year 2004, and number 12 out of 16 nations included in the Asia-Pacific Region. (Economist Intelligence Unit, 2004).

BACKGROUND

In addition to infrastructural and business system issues, trust (termed *transactional trust* in this article) has been identified as one of the critical issues that confront new businesses or businesses that utilize new business models like e-commerce. One of the most widely studied cultural classifications was originally proposed by Hofstede (1980). His cultural framework consists of four dimensions identified as individualism-collectivism, uncertainty avoidance, power distance, and masculinity-femininity. Even though Hofstede's framework was originally developed for national-level analyses, Oyserman, Coon, and Kemmelmeir (2002) have shown that it can also

Figure 1. Influences on diffusion of e-commerce
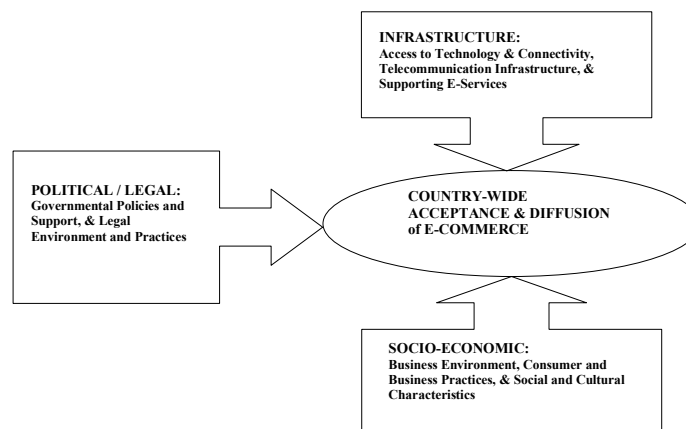
be applied at individual levels. Further research by Doney, Cannon, and Mullen (1998) and Jarvenpaa, Tractinsky, Saarinen, and Vitale (1999) have suggested that individualism-collectivism effects the ways people form trust and may affect the users' willingness to trust online vendors. Other studies have also tried to find correlations between trust and experience with a new system, concept, or relationships, including a correlation to frequency of e-commerce activity, and other researchers have noted that trust may be significantly influenced by culture of a given society (Lee & Turban, 2001; McKnight & Chervany, 2001; McKnight, Cummings, & Chervany, 1998). Grabner-Kraeuter (2002) observed and stated that trust is "the most significant long-term barrier for realizing the potential of e-commerce to consumers" (p. 49), and others state that trust will be a "key differentiator that will determine the success of failure of many Web companies" (Urban, Sultan, & Qualls, 2000). Other studies by Park (1993) and Keil, Tan, Wei, and Saarinen (2000) focused on the impact of uncertainty avoidance on people's willingness to accept uncertainty, which is an unavoidable foundation of e-commerce.

As my colleagues and I planned our research study, we knew from first-hand experience (I have traveled in China for extended time periods and have experienced local life, customs, culture, and have used the infrastructure) that, in spite of recently increased governmental efforts and investments, the telecommunication and e-commerce infrastructure was not as developed in China as they were in United States or Europe, and we accepted technical and infrastructural limitations to be significant current impediments for broad diffusion of e-commerce in China. We also accepted that, given the accelerated changes that are taking place in China and the continuous investments in e-commerce-related infrastructure, most of the current technical problems and issues will cease to be major impediments. Therefore, we focused on the societal issues and specifically wanted to identify and explore the influence of culture on acceptance and use e-commerce in this developing country (Bond, 1986; Chen, 1993; Moore, 1967). In the following sections, the research and its findings are presented and discussed, the changes that will be required for broader acceptance and diffusion and use of e-commerce by Chinese consumers are identified, and approaches that businesses may use to enhance this development are proposed

RESEARCH STUDY

Our objectives were to find answers to a primary research question and present some possible solutions. Furthermore, by identifying consumers with technological and financial capabilities, we wanted to minimize the impact of

technological impediments on usage patterns and frequency and focus primarily on cultural and societal issues and impediments.

1. If the negative impact of technological and transactional impediments can be minimized, what are some of the prevailing attitudes and cultural issues associated with individuals' use of e-commerce in China (identify and test the influence and impact of prominent Chinese cultural characteristics on e-commerce)?
2. What can domestic and foreign businesses do to facilitate e-commerce in China (present some short- and long-run recommendations and approaches to e-commerce development in China)?

To address our research objectives, a 20-item questionnaire was created, developed in English and translated to and administered in Chinese. It contained questions designed to collect information on demographics, Internet usage, and e-commerce activities (frequency of commerce and type of purchase, means used for purchase, transaction experience, and perceptions of e-commerce in China). The questionnaire was administered on site and in groups, and the results were tabulated using the frequency of responses. The results, presented below, are based on the responses received from the study group (some comparative data, from other studies, is also provided and included in the discussion). Some of these responses were provided through the questionnaire and others through follow-up discussions with some members of the study group.

The study group consisted of selected 252 individuals that would be considered to be a close match to e-commerce users in developed countries and were considered to be "early adopters." Because the primary focus was on the "impact of culture." we wanted to get the opinions of actual participants and users of e-commerce and wanted to eliminate the infrastructure problems as much as possible. The study participants resided and worked in different regions and for different types of organizations and had different educational levels, professions, and genders. They held professional supervisory positions in their organizations and had much higher economic means than the average income levels for the local population.

The study participants were asked about their Internet usage to identify their familiarity with technology and their access to Internet, and their e-commerce participation to determine their ability (access to type of medium used for payment) to pay (possession of credit cards) for e-commerce and whether they purchased any goods or services using e-commerce within the previous 12-month period. The respondents (166 out of 252) who indicated

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