

Chapter X

Cultural Differences, Information Technology Infrastructure, and E-Commerce Behavior: Implications for Developing Countries

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ABSTRACT

E-commerce has been a widely used mean to purchase goods and services all over the world. This study investigates the role of cultural differences and information technology infrastructure on usage of e-commerce in developed and developing countries. As shown in Genis-Gruber and Tas (2007) cultural differences are expected to play a major role on e-commerce behavior especially in developing economies. In order to identify cultural differences, we use Hofstede's classification. We classify the countries according to these indices and their technological and economic development. We make several cultural comparisons among various countries and we empirically investigate whether these cultural differences play a significant role on e-commerce behavior. We implement OLS and fixed effect regression methods. Using dummy variables and interaction variables, we estimate the effect of cultural differences on e-commerce purchases and other e-commerce variables. Besides the effects of cultural factors, we also investigate the effects of information infrastructure and education level of the countries. We conclude that cultural dimensions play an incremental role on e-commerce and relationship between infrastructure and e-commerce. We control for several other factors like information infrastructure and education level, and use different econometric techniques to achieve our results.

INTRODUCTION

In the latest era, the constant acceleration in the usage of high-speed Internet has led to a significant surge in various ways of getting goods in a limited period of time. In this sense, e-commerce, which is defined as all business activities that use Internet technologies,¹ has been a widely used mean to purchase goods and services all over the world. The major increase in e-commerce usage enables people to reach the products that they want in a global environment and compare the goods and products not only in local but in global dimensions. On the companies' sides, once a company is connected to Internet retailing, the company becomes an international company. The key factors that conduct the route of their activities are trust to sellers, cultural perception of buyers, language and infrastructure.

In the literature, trust in e-commerce activities is a challenging concept. There are several studies in the literature that show the importance of trust trait as a part of culture on e-commerce activities. Gefen (2000) stated trust as a critical factor influencing the successful rise of e-commerce. Strategy implementation in various cultures has distinctive differences. The study by Lynch and Beck (2001) present the implications and traits for successful strategies and that geographical and cultural difference should be taken into account. They show that Internet buying behavior shows differences depending on user experience, home country and region. Trust is a fundamental part of culture that influences the usage of e-commerce. Grabner-Kraeuter (2002) presents that trust is the long-term barrier for realizing the potential of e-commerce to customers. Teo and Liu (2005) indicate the importance of trust for online purchases. Gefen and Heart (2006) empirically investigate whether the effects of predictability and familiarity on trust beliefs differ across national cultures and conclude that trust beliefs differ across national culture. In this study, trust

and trust beliefs, trustworthiness, in U.S. and Israel and conclude that trust beliefs differ across national culture are further analyzed. Trust, by Alm and Melnik (2006) is stated as a dependent on the personal reputation and image of the party, which is one of the critical and vital factors for e-commerce success. Efendioglu (2005) states in his paper that in e-commerce transactions, trust extends beyond the buyer and seller to institutions including online payment firms, banks, credit card companies and the Internet provider. Whereas Cheng (2006) shows that, parties lose trust when the exchange relationship by collecting irrelevant information of the other party without informing them, exploits. Knezevic et al. (2006) mentions in their paper that the restrictions for e-commerce improvement are basically the perceptions about e-commerce in the culture. Wu and Chang (2006) state the importance of transaction trust on e-commerce. Genis-Gruber and Onur (2006) show that trust, as a proxy for culture, affects Internet retailing. Schneider (2007) mentions the importance of trust generation in order to compete with traditional retail sales. Goldstein and O'Connor (2001) mention the importance of virtual trust for online transactions.

Many studies in the literature focus on the effects of trust beliefs on e-commerce. Since different cultures have different levels of trust perceptions, countries with different cultural properties should have different levels of e-commerce. Trust affects the intensity of going online and willing to give personal information. Lack of trust results less online transactions, as retail shopping is expected to replace it. As giving personal financial data is not essential during a retail sales, cultures with less trust to unknown are expected to divert their consumption to traditional shopping. This study provides the empirical evidence for this hypothesis by directly analyzing the effects of cultural properties on usage levels of e-commerce and interaction of e-commerce and information technology infrastructure.

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