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An Innovation Adoption Study of Online E-Payment in Chinese Companies

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EXECUTIVE SUMMARY

Adoption of IT innovations is attracting increasing attention. Researchers are particularly interested in factors that affect the adoption of IS and IT innovations. Innovation diffusion theory is used frequently to evaluate the effect of perceived innovation attributes and the adoption of innovations. Nevertheless, explanatory power of perceived innovation attributes varies across different innovations. Given the importance of online e-payment to the further development of e-commerce and its importance as a payment innovation, this research examines the adoption of online e-payment by business enterprises using Rogers' relational model of perceived innovation attributes and rate of adoption. The findings indicate that only perceived compatibility has significant influence on online e-payment adoption of Chinese companies. It is hoped that this research can help other researchers with related statistical procedures and analytical steps in their study of IS/IT adoption using innovation diffusion theory.

Keywords: adoption of innovation; e-commerce; online electronic payment systems; innovation attributes; innovation diffusion; P.R. China

INTRODUCTION

Adoption of information technology innovations is attracting more and more attention from researchers in recent years (Venkatesh, Morris, Davis & Davis, 2003). Scholars are particularly interested in the factors that affect the adoption decision of potential adaptors (Adams, Nelson, & Todd, 1992; Chau & Tam, 1997; Harrison, Mykytyn, & Riemenschneider, 1997; Teo, Wei, & Benbasat, 2003; Venkatesh & Brown, 2001). A major focus of previous studies on technology adoption has been how potential users' perceptions of the technology innovation influence their adoption or usage (Agarwal & Prasad, 1997; Lewis,

Agarwal, & Sambamurthy, 2003; Moore & Benbasat, 1991; Tornatzky & Klein, 1982). The innovation diffusion theory of Rogers (1983, 1995) is cited frequently by those researches which studied acceptance and diffusion of information systems and information technologies (Adams et al., 1992; Agarwal & Prasad, 1997; Chau & Tam, 1997; Davis, 1989; Premkumar, Ramamurthy, & Nilakanta, 1994).

Rogers (1983, 1995) proposed the theoretical framework that reveals the relationship between perceived innovation attributes and the rate of adoption. It is regarded as an important theory to understand the adoption behavior of potential adopters and to predict the adoption of technological innovations. Based on this theoretical framework, researchers typically considered perceived innovation characteristics of potential adopters as independent variables so that the explanatory power of those characteristics on the innovation adoption was examined empirically (Adams et al., 1992; Agarwal & Prasad, 1997; Chau & Tam, 1997; Davis, 1989). Nevertheless, prior research reveals that the predictive power of perceived innovation characteristics tends to be varied with different innovations.

As an emerging technology, online e-payment is playing an important role in the development of e-commerce in that the lack of online e-payment could hinder the successful implementation of e-commerce (Goldfinger & Perrin, 2001). Research so far has been carried out mainly on the acceptance of online e-payment from consumers' points of view (Abrazhevich, 2001b, 2001c; Buck, 1996; Pilioura, 1998). However, given the importance of companies as e-payment users as well as providers and their role in the overall diffusion of online e-payment, limited research has been conducted to examine the factors affecting companies' decisions to adopt online payment method. Because companies are organizations, which is different from individual consumers, the process of adopting new technologies would be more complex than that of consumers. It appears that no empirical research has been conducted so far to analyze systematically business organizations' adoption behaviors. Therefore, this research aims to focus on companies' adoptions of online e-payment systems and to provide some in-depth understanding of why companies adopt or refuse to use online e-payment methods.

This research attempts to use Rogers' (1983, 1995) theoretical framework to explore the effect of management's perceptions of the company's adoption of e-payments in order to shed light for future researchers on how to utilize the innovation diffusion theory and to examine the adoption and acceptance of particular technological innovations from the perspective of potential adopters. An online questionnaire survey was conducted with a sample of Chinese companies. The data were used to refine the survey instrument and gain some initial understanding of how companies' perceptions of e-payment affect their adoption decision. It is assumed that this study will provide some statistical procedures and analytical steps in order for future researchers to use innovation diffusion theories to examine the adoption of information systems and information technology innovations.

The following section discusses the reason why e-payment is viewed as innovation for companies. This is followed by the demonstration of Rogers' (1983, 1995) relational model. This model is served as

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