Interorganisational Networks of Pressure and Influence: A Study of B2B in the Thai Tourism Industry

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ABSTRACT

The old paradigm in technology adoption focuses on the technical implementation and uptake of innovation. A new paradigm has emerged that considers the social, cultural, and political context in which innovation is implemented and addresses the enablers and constraints to its effective diffusion and utilisation. To that end, we apply the institutional theory as a social lens to examine the diffusion of B2B technology in Thailand. This study posits that mimetic, coercive and normative pressures may influence B2B technology utilisation and performance. Data were collected from firms that have adopted B2B technology in the tourism industry. The Partial Least Squares method was used for data analysis. Results show that normative and coercive pressures had a significant influence on firms’ utilisation of B2B technology, while normative pressure had a significant influence on performance. We conclude by hypothesising that only through addressing the social factors can innovation achieve ‘real’ diffusion and effectiveness.

Keywords: Business-to-Business (B2B), Information Technology Adoption, Institutional Theory, Interorganisational Network, Thailand, Tourism

INTRODUCTION

The adoption of innovation has been a prime topic in Information Systems (IS) research for several decades. This has been however dominated by a technical focus, where the primary determinants of success and failure gravitated significantly towards the implementation of technological infrastructure and artifacts. Over the past few years, several factors have colluded to shift the focus of interest to a sociological perspective. These factors include: the decline in technology cost—hence the increase in its availability; the expansion in technical knowledge and literacy; and the common occurrence of technically sound systems with inferior performance post-implementation. This shift has most prominently emerged in interorganisational systems, where socio-political and socio-cultural factors gain much influence and effect.
Particularly, the past decade was marked by steady advances in the ubiquity of Internet and e-commerce throughout the industrialized world. Despite the fact that the ability to access the Internet in developing countries is a prerequisite for the development of e-commerce, the number of Internet users does not necessarily indicate the volume of Internet-based Business to Business (B2B) activity expansion and their productivities (Humphery, 2002; Humphery et al.; 2003; Moodley, 2003; Vatanasakdakul & D’Ambra, 2006, 2007). In a survey of 12 developing countries conducted by the United Nations (2005), which to our knowledge is the most recent comprehensive survey to date, e-mail was the only Internet activity in which more than 50% of the respondents engaged in the last six months. The other forms of B2B technology such as internet based Electronic Data Interchange (EDI), are rarely mentioned.

To serve the purpose of this study, B2B is classified into two levels: B2B transaction and B2B communication. The theoretical foundation of B2B transaction is based on automated computer-to-computer communication systems (e.g. EDI), while B2B communication (e.g. e-mails and e-marketplaces) is more focused on the use of computer-mediated communication in interorganisational contexts. Due to the limited B2B transaction adoption in developing countries (Humphery, 2002; UNCTAD, 2005), the scope of B2B technology herein refers to the use of internet-based B2B communication including e-marketplace and e-mail and excludes EDI.

This research aims to investigate factors effecting the utilisation and performance of B2B technology in Thailand. Thailand is a developing country, which is located in South East Asia. Although the number of Internet users has increased and the Thai government has established the national Information and Communication Technology (ICT) plan to encourage Internet based B2B technology adoption in the Thai business sectors, particularly in small and medium enterprise (NECTC, 2005), Thailand faces a slow uptake of B2B technology among businesses. Research on e-commerce adoption in Thailand (Intrapairot & Srivihok, 2003, Rotchnakitumnuai & Speece, 2003) found that Thailand is still struggling to maximise the diffusion of B2B technology and that net benefits such as cost reduction and improved competitiveness have not been realized. However, very few studies have attempted to further explain the low level of B2B diffusion in Thailand. It is worthwhile to note here that B2B technologies such as email and e-marketplace have already been available to many firms in the Thai tourism industry; however, empirical findings from our previous research (Vatanasakdakul & D’Ambra, 2006, 2007) have pointed to a very low level of utilisation and performance benefits.

This research posits that, in an interorganisational network, the nature of business relationships can influence the B2B technology utilisation and performance. This research therefore aims to investigate the types of isomorphic pressures—mimetic, coercive and normative—that may influence B2B technology utilisation and performance in Thai firms. To our knowledge, The Institutional Theory has not been applied in the context of internet based B2B technology, particularly in developing countries. The next section presents a review of relevant literature on B2B technology diffusion.

**B2B TECHNOLOGY DIFFUSION**

One of the prime benefits claimed for B2B technology is that information will be freely shared among trading partners, a question arises as to what extent can information be shared (Premkumar, 2000). This is a critical issue in the business world as information is the key factor to operate and to gain competitive advantage. Even though technology provides the ability to share information, firms may not want to share their information for several reasons. It will be difficult to convince trading partners to adopt an information system for inter-firm communication and collaboration, unless there is a clear benefit for all partners (Premkumar, 2000).
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