Understanding Electronic Commerce Adoption in Bruneian SMEs: A Replication of the Application of TAM and Perceived Strategic Value Models

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ABSTRACT

This paper investigates 84 small and medium business organizations in Brunei Darussalam to identify specific relationships between managers’ perceptions of the strategic value of e-commerce and the variables that may influence e-commerce. Two out of three perceived strategic value factors are significant, whereas four out of five adoption factors are a significant determinant of e-commerce. Factor analysis was applied to test the measurement model and the structured model was tested through canonical correlation. Based on the results, conclusions have been made.

Keywords: Adoption, Brunei Darussalam, Electronic Commerce, Medium Enterprises, Small Enterprises

INTRODUCTION

Traditionally, small and medium sized enterprises (SMEs) play a significant role for the economic development of a nation (Palvia & Palvia, 1998; Chau & Jim, 2002). This is particularly true for developing nations in which SMEs tend to employ a greater proportion of workforce than their large counterparts. Despite such contributions, a major problem of SMEs operating in developing countries is the lack of their ability to compete with large corporate bodies not only within their countries but also with other global business entities. This landscape is however beginning to change as a result of the emergence of innovative web-based e-commerce technologies. According to IT gurus and vendors, e-commerce technologies have the potential to deliver strategic values to business. For instance, Dans (2004) highlights the strategic importance of e-commerce and advocates for its powerful influence on market and industry structure. Likewise, Currie (2004) perceives e-commerce as a panacea which can produce strategic value including large benefits and giving business an opportunity to reach

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clients more effectively than before. According to Amit and Zott (2001), strategic impact from e-business can arise from value creation in locking-in business partners and transaction efficiencies. On the other hand, Hong and Zhu (2005) argue that business value of e-commerce occurs as these technologies help them with better position themselves for revenue generation. In particular, from SME viewpoint, e-commerce technologies can be used as a strategic weapon. It is reported that e-commerce technologies can help SMEs and develop a capability to operate their businesses 24hrs/day without adding additional workforce and thus reducing their operating costs and increasing competitive position. This is because adoption of e-commerce technologies can ‘level the plying field’ for small companies providing them with location and time independence (Bologna, 2000).

For this study, E-commerce can be defined as a “general term for the conduct of business with the assistance of telecommunications and of telecommunication based tools” (Clark, 2001). E-commerce is differentiated into three types: business-to-business (B2B), business-to-customer (B2C) and customer-to-customer (C2C). This paper, however, discusses the second aspect of e-commerce that is business-to-customer (B2C). This is due to their richness of literature and also noticed as first stage to be undertaken at the business level (ibid).

Despite the potential benefits that e-commerce initiatives can offer, it is reported that the uptake of e-commerce technologies is slow among SMEs in the developing nations. In response, several studies (e.g., Poon, 1999; Gefen & Straub, 2000; Mirchandani & Motwani, 2001; Molla & Licker, 2005) were conducted to address the adoption factors contributing to the adoption/lack of adoption decisions of SMEs. However, most studies took place in the context of North American and other developed countries businesses. To the best of our knowledge, regrettably no study on SME managers’ perceptions towards the strategic value of e-commerce has yet been reported in the contemporary literature for the context of the Asia-Pacific region.

To address this gap in the literature, we report on the findings of a survey of 84 senior managers of SMEs selected from Brunei Darussalam (a tiny oil-rich country located in the South East Asia) by drawing on a theoretical framework initially proposed by Subramanian and Nosek (2001) which was later adapted and revised by Grandon and Pearson (2003, 2004) for SME context. We found the existence of a significant relationship between SME managers’ perceptions towards the strategic value of e-commerce and the factors that influence e-commerce adoption decisions. These findings are compared with those reported in the existing literature and their implications are discussed.

The rest of the paper is structured as follow. In the next section, a brief and critical analysis of the relevant literature sources is provided and a research model is introduced. This is followed by a brief description of the economy of Brunei Darussalam. After that the research approach is described. Next, the findings are presented and discussed. Finally, the contributions of our work are highlighted and future directions of research are indicated.

**Review of Prior Studies**

In the following sub-sections, we report a critical analysis of two streams of literature relevant to our research: strategic value of information technologies and adoption of information technologies.

**Perceived Strategic Value of Information Technologies**

There exists a rich body of literature on strategic value of IT in organizations. We have made three general observations about this stream of literature. First, the primary focus of this stream is on large organizations. Second, a strategic value of IT has been examined in term of senior managers’ perception towards the relationship between IT investment and business performance. However, the findings are inconclusive. For example, Hitt and Brynjolfson (1996) studied the relationship between
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