

ASSESSING THE IMPACT OF E-COMMERCE BUSINESS VALUE –AN EMPIRICAL INVESTIGATION

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ABSTRACT

Assessing the impact of precursor variables on e-commerce business value has been challenging. Past research studies on the e-commerce business value has been mixed and inconclusive. The present research attempts to demonstrate the impact of antecedent variables such as top management involvement, organizational strategic plan, and e-commerce business plan on e-commerce business value. The manuscript first delineates an e-commerce business value model. It then generates and ground a set of hypothesis based on the model and past research studies.

Keywords: E-commerce success, e-commerce business value, Top Management Involvement, and Organizational Strategic Plan

INTRODUCTION

Assessing the business value of Information Technology (IT) investment has long been a topic of interest to scholars (Barua, Kriebel, & Mukhopadhyay, 1995; Melville, Kraemer, & Gurbaxani, 2004). Assessing the impact of e-commerce investment on firm performance has, however, not been explored sufficiently enough to decide whether this type of investment can also generate business value. E-commerce has become a crucial practice for many organizations because of its ability to increase an organization's financial outlook. Even though some examples of success obtained through e-commerce investments are available (Martinsons, 2002; Singh, 2002), not all firms have been uniformly successful in generating e-commerce business value (Chatterjee, Grewal, & Sambamurthy, 2002; Thornton & Marche, 2003).

The fundamental objective of the present research is to assess the e-commerce technology enabled business value. More specifically, the present research investigates whether firms using e-commerce technology are successful in generating business value and, if so, what e-commerce drivers determine this success and how to best use these drivers. Drawing upon resource-based view (RBV) theory, we developed a conceptual model for assessing e-commerce business value incorporating four drivers unique to e-commerce: Top Management Involvement (TMI), Organizational Strategic Planning (OSP), and E-commerce Business Plan (ECBP), and E-commerce Business Value (ECBV). We then investigate the relationships among these investment drivers and their impact on deriving e-commerce business value.

The rest of the manuscript is organized as follows. The next section reviews previous research studies in the e-commerce business value area. The third section proposes a research model

grounded by the RBV theory. The fourth section provides a set of hypotheses supported by prior works on information technology business value and e-commerce business value literature. The manuscript concludes by providing some of the final thoughts that may be derived from the present research.

LITERATURE REVIEW

Top Management Involvement

Chatterjee et al. (2002), and Grandon and Pearson (2004) demonstrated the need of support from top management in e-commerce. Successful e-commerce practices require innovation (Kickul & Gundry, 2001; Grandon & Pearson, 2004). Innovation requires support from top management. Kickul and Gundry (2001) posited that CEOs that are able to transcend from traditional management roles to practices that will pioneer and harness creative processes will enable their firms to take full advantage of the opportunities offered by e-commerce. Grandon and Pearson (2004) investigated the effect of managerial productivity on the perceived strategic value of e-commerce within 100 small and medium size businesses from a variety of industries. E-commerce value was determined by three factors: organizational support, strategic decision aids, and managerial productivity. The authors found that managerial productivity is the most influential. Top management involvement leads to organizational strategic, this is discussed next.

Organizational Strategic Plan

An OSP is defined as a plan that governs the trends, development, and dilemmas that affect the entire organization and its environment (Thomas & McDaniel, 1990). E-commerce can be a resource used to create competitive advantage, because of that, we believe that a comprehensive OSP is essential for designing and implementing an effective e-commerce business plan. Thomas & McDaniel (1990), using 151 chief executives, determine what factors influence executive's strategic decisions. The interpretation of the OSP was found to significantly affect how its use aids in the development of an e-commerce business plan. An e-commerce business plan is essential for generating e-commerce business value. A focused representation of a company's intentions to use resources and processes can lead to ECBP. We, therefore, discuss ECBP next.

E-commerce Business Plan

An ECBP addresses a company's desired intention and capability to design and implement an e-business. Dubosson-Torbay, Osterwalder, and Pigneur (2002) put forward a theoretical e-business model for conducting business on the Internet defining critical success factors for enhancing the performance of e-businesses. Lee (2001) proposed an analytical framework for organizations to use in assessing the critical success factors for e-commerce business plans. The authors postulate that e-commerce business plans and strategies are complex and need to be captured in the form of a unified set of critical success factors. This, therefore, justifies the need for a proposed analytical framework.

E-Commerce Business Value

Zhu and Kraemer (2005) put forward an integrated model of e-business use and generated value. This model is grounded in the diffusion of innovations and the resource based view of the firm theory. The authors found that technology competence, firm size, financial commitment,

competitive pressure, and regulatory support are important enablers of e-business value. The authors also found that while both, front-end and back-end capabilities of e-commerce contribute to business value, back-end integration has found to have a greater impact.

THEORETICAL PERSPECTIVE

RBV is used to ground the present research. RBV posits that a firm’s competitive advantage is based on the firm’s ability to manage its resources. A firm’s resource can be an item or a business process that provides a non-sustainable competitive advantage or a sustainable improved performance (Barney, 1991; Wade & Hulland, 2004). Examples of items that can be considered a resource include machinery, skilled and unskilled personnel, technology, and processes.

IT infrastructure cannot be used to gain competitive advantage because this infrastructure can easily be duplicated (Zhu, 2004) but RBV suggest that it can be used to maintain a competitive superiority because it is an integrated system, and as such it provides means for building innovations and generating continuous improvements. Bharadwaj (2000) suggested that an integrated system can be used to maintain a competitive edge.

In the management literature, the RBV theory describes resources as assets, knowledge, and/or organizational processes. IS literature has utilized RBV as a tool for measuring how firms create value from IT assets. We consider TMI, OSP, ECBS, and ECBV as business resources. Using the RBV theory, we theorize that these constructs are all resources that are either available or generated. We posit, that, RBV, TMI, OSP, ECBP directly and indirectly influence ECBV (see Figure 1 below). We discuss the hypotheses generated using these resources next.



Figure1. E- Commerce Business Value Model

HYPOTHESIS DEVELOPMENT

We first consider the effect of TMI in formulating OSP. Thomas and McDaniel (1990) suggested a relationship between TMI and OSP. Zviran (1990) also found that TMI leads to a successful OSP. These studies validated that TMI is instrumental in the development of OSP. We postulate,

based on the aforementioned research findings, the following hypothesis:

H1: Top management involvement leads to an organizational strategic plan

Using RBV, Barua, Konana, Whinston, and Yin (2004) examined the business value of the Internet enabled value chain activities. Barua et al. (2004) found that TMI makes a significant difference in fostering a better relationship between a firm and its customers which in turn leads to greater business value for the value chain activities. Delone and McLean (2004) put forward that e-commerce is still a branch of IT and can prosper from the use of traditional management involvement. The aforementioned discussion leads to the following hypothesis:

H2: Top management involvement leads to e-commerce business value

Voss (2000) suggested that top management leads the development of an e-commerce business plan by proposing a procedure for organizing an e-commerce strategy. Voss (2000) posited that TMI in business plan is imperative because they need to be convinced of the e-commerce business value. Consistent with the aforementioned discussion, we hypothesize:

H3: Top management involvement leads to e-commerce business plan

An OSP governs the trends, development, and caveats effecting the entire organization and the environment in which it evolves (Thomas & McDaniel, 1990). The OSP also describes the business process that is identified as crucial in unlocking business value. Ndede-Amadi (2004) found that when designing and implementing an e-commerce initiative, its success is determined on its alignment with business plan. Zviran (1990) also suggested that information systems strategic planning should be aligned with OSPs in order to gain organizational success. We believe that, following this line of reasoning, e-commerce business plan should also be aligned with organizational strategic plan. These led us to put forth the following hypothesis:

H4: Organizational strategic plan facilitates e-commerce business plan

Ndede-Amadi (2004) found that the alignment of OSP and e-commerce business plan initiatives results in a positive influence on the bottom line. Organizations have, therefore, the need to implement an OSP that effectively support e-commerce endeavors and utilize this resource strategically (Raghunathan & Madey, 1999). We propose, based on the aforementioned research findings, the following hypotheses:

H5: Organizational strategic plan leads to e-commerce business value

The advantage provided by the use of e-commerce is believed to sustain competitive advantage, and hence, provide business value to the organization. Zhu and Kraemer (2005) found that both, front-end and back-end capabilities of e-commerce contribute to business value. The aforementioned sources of business value from a well-defined business plan is also aligned with RBV theory, which in its original form posits that a competitive advantage is achieved when a firm implements a unique resource that competitors cannot imitate with ease. The aforementioned discussion leads to the following hypothesis:

H6: E-commerce business plan leads to e-commerce business value

CONCLUSION

The present research proposed to utilize a conceptual model to investigate the factors that lead to e-commerce business value. We expect that the planned empirical analysis of the model will demonstrate that TMI directly influence OSP plan and e-commerce business plan. We also envisage that TMI will also generate e-commerce business value.

References are available upon request.