

Faculty Research in Practice

“WHY B2B?” – FACTORS AFFECTING THE ADOPTION OF B2B

by

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Introduction

According to some estimates, the size of Business to Business (B2B) market in terms of value is estimated to be three times bigger than the size of Business to Consumer (B2C) market, touching around USD 6 trillion by 2017. While much of the mainstream news focuses on B2C, the huge size of the B2B market makes it virtually impossible to be ignored. However, there is little understanding amongst decision makers about the business factors impacting this market. This is especially true in the UAE and Middle East where B2B exchanges are few. Therefore, this study examines the different factors affecting the adoption of B2B, making it useful to managers trying to understand B2B.

Background

B2B is different from B2C in many aspects including number and volume of transactions. While firms are sellers and individuals are buyers in a B2C e-commerce (EC), both sellers and buyers are supply chain partner organizations in a B2B EC model. Studies have indicated that employment of B2B EC by firms results in increased operational efficiency, reduced inventories, increased sales and improved financial returns (5). Such efficiencies and other advantages related to agility are possible because B2B EC enables firms to perform electronic transactions along the value chain activities. Furthermore, the drivers of adoption for B2B EC are different from those of B2C EC. Compared to B2C EC context, the buyers and sellers in B2B EC context are sophisticated business partners with specific demands and thus the decision to continue with B2B EC does not depend on individual perceptions as in B2C EC (3).

In general, studies have focused more on the consumer aspects rather than on the business aspects. Very few studies have examined the issues relating to the adoption of B2B e-commerce (for example, see 12) and specifically, the role of business factors affecting B2B e-commerce

(The term “*business factors*” refers to a comprehensive set of factors related to industry, organization, and decision maker, which include items such as business environment, organizational characteristics, technological context and decision maker’s characteristics). The few studies that examined B2B adoption focused on business issues relating to adoption of e-marketplaces (7; 8), trading exchanges (10) and in different countries (1, 4, 13, 14). Thus, there have been few quantitative studies encompassing all the “business factors” affecting the adoption of B2B e-commerce. Most of the B2B adoption studies examined organizational and technological factors with very few studies considering the characteristics or attitude of the adoption decision maker or the factors associated with business environment. These factors are important as the decision maker’s perception about the consequences of B2B adoption will impact the adoption decision. Similarly the industry’s competitive environment will impact the organizational decision to adopt B2B EC. Ignoring the impact of these factors in determining the B2B adoption decision could lead to inaccurate results and thus could impact the organizational performance as a consequence. Therefore, there is a need to examine different factors that influence the nature of firm participation through a more comprehensive study. Therefore, the objective of the present study was to determine the business factors that included those related to business environment, organization, and the decision maker that affect the adoption of B2B EC. Our research model included all these variables in terms of external environment, organizational factors (context and organizational learning), technology and decision maker factors

Major Findings of Study

Results confirmed most of our hypotheses. Findings indicated

1. A strong negative association between the price intensity in the industry and adoption of B2B EC by the firm.
2. A strong negative relationship between perceived barriers of e-commerce and adoption decision
3. A positive association between the activity of the informal groups within an organization and the adoption of B2B EC.
4. A strong positive relationship between decision maker’s preference towards negative information and the adoption decision by the firm.

It must be noted that some factors such as IT maturity and perceived operational benefits did not impact a firm’s adoption of B2B EC. To summarize, the decision maker’s characteristics (preference for negative information), firm’s external environment (price intensity), organization context (perceived barriers), and organizational learning characteristics (informal groups) have an influence on the B2B EC adoption. Surprisingly, technological context does not influence the decision to adopt B2B EC.

Implications of Findings

Our findings suggest that organizations under severe price competition are most likely to adopt B2B EC. This implies that organizations consider B2B EC when they are under pressure to cut prices in response to competition. Thus organizations might use B2B EC to attain competitive

advantage in order to achieve cost leadership (9). For example: Exostar is a multi-firm B2B marketplace serving a consortium consisting of Lockheed Martin, BAE Systems, Raytheon, Boeing, Rolls Royce and their suppliers, resulting in reduced transaction costs for participating firms. An implication might be that organizations that adopt B2B EC are able to cut prices easily because of reduced buyer search costs and derive an economical price for their products (2).

Our research also found that informal communication processes would influence the adoption of B2B EC. These informal communication mechanisms include champions, virtual teams, social networks that quickly disseminate information about new technologies and promote their adoption in the organization. This finding is consistent with those from other studies (6) that found that champions act as agents of change management, which is also essential for IS/IT adoption. Organizations should encourage such informal communication processes even though such processes are not directly related to IS/IT. As such, involvement of IS department in the informal communication processes is desirable to promote adoption of EC. IS departments should take more active role in understanding, promoting and integrating EC within the traditional information processing systems in the organization. Else, the approaches taken within the organizations will be fragmented and unconnected. This will result in systems or subsystems that need to be integrated later, which will be difficult and time consuming.

We found that perceived barriers of EC will negatively influence the adoption decision. Some of these barriers are security concerns on the internet, ethical and legal issues, resistance to change, and reliability/capability of networks. In order to alleviate the concerns of organizations, perceived or real, ISP and IT firms should inform them of the technological solutions available. IT consultants should educate the firms' executives that Internet security is not purely a technical issue but a management issue as well. Also, adopting the internet technology requires corresponding changes in corporate policies, practices and IS. Additionally, governmental bodies should establish required laws by incorporating the legal and ethical issues of the Internet transactions. These internet-related regulations should be known to the organization for conducting proper business transactions on the Internet. In recent studies, trust on the Internet, reliability of the web, and trustworthiness of online vendors have also been highlighted as important barriers to online transactions (15). In order to overcome these barriers, IT consultants and ISPs should provide training and education to firms on security and reliability assurances and benefits of using B2B EC.

Our research shows that B2B EC adoption is likely in organizations where the decision-maker has preference towards negative information. This implies that decision maker's information processing characteristics make a difference in the firms' adopting or non-adopting of EC. However, there is little research in EC concerning the decision maker's characteristics. A prior study examined decision-maker variables such as job tenure and positional power of the decision maker and found that these characteristics impact IS/IT adoption (11). Since perceived barriers have negative effect on EC adoption, it may imply that decision-makers should be educated and trained in the knowledge of EC and its capabilities and protection. The adoption can be accelerated by IT consultants who provide necessary training to the organizations and break these knowledge barriers.

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