

A study on factors affecting the utilization of Electronic Commerce in Small and Medium sized Enterprises

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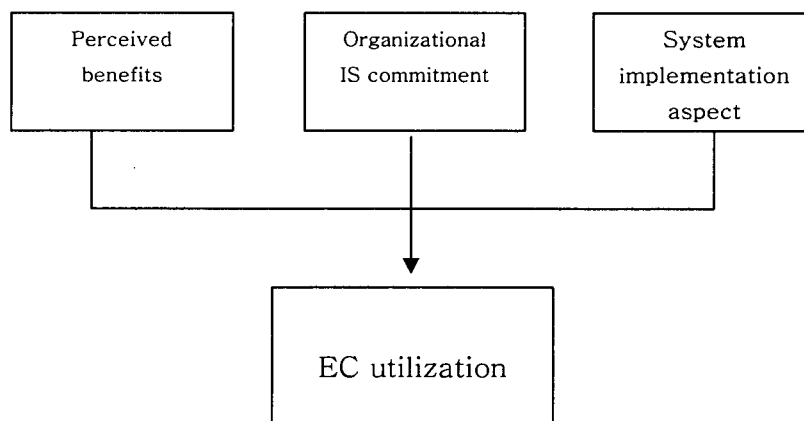
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A series of changes, which have occurred over the world at large, can be summarized with any of these two words: "Informationalization" or "IT Revolution". It is such an informational society in which both the productivity and processing ability of information are the primary means of production. The IT Revolution could be placed alongside the Industrial Revolution, as it forces enterprises to compete not only in the physical world but also in the new cyber world. In particular, the emergence in the 1990's of Electronic Commerce (EC) based on the internet has represented a new business environment with Information Technology(IT) being regarded a key driver for that change(Kim Yong Young, 1999). Currently, many companies have invested in IT and made efforts to implement EC to strengthen their competitive base. However, not all companies, in particular the Small and Medium sized Enterprises(SMEs) have fully utilized the IT and EC in spite of the estimation that EC would provide many advantages such as decreasing transaction costs and enlarging the market(Jang Heng Sun, 1999), what is worse despite numerous studies about internet use by SMEs, there is a dearth of research identifying the organizational rationale behind the adoption of internet-based EC. In order to expand the utilization of internet based EC in SMEs, it is necessary to improve the understanding of EC utilization in SMEs by analyzing which specific factors are affecting the utilization of EC.

Most previous studies of IT adoption and implementation have excessively focused on large corporations. Generally having distinct characteristics contrasting from the large corporations, SMEs revealed a distinctive style in their computerization(Lees, 1987; Raymond, 1985; Kim Gil Jo etc; 1992). A review of the published IS literature on the adoption and implementation of IT and EC in SMEs shows that organizational characteristics, environmental characteristics, IS characteristics, strategic characteristics and CEO characteristics are main factors affecting the implementation of IT and EC(James Y.L. THONG, 1999; Grafton and Andy Bytheway, 1996; Cragg and King, 1993; Han Jae Min, 1998 etc.). However, these studies have only focused on internal system utilization within individual organizations or cases of specific corporations, so they have limited application in the overall implementation of EC.

Adoption of the new technology like internet can be viewed as an innovation for a firm(Damanpour, 1991), and an organization's decision to adopt an innovation is influenced by attributes of innovation(Rogers, 1983), environmental factors from within the organization and externally(Farhoomand & Drury, 1998). Studies of the adoption of other forms of technology indicate that SMEs are likely to consider numerous factors when contemplating the adoption of EC(Lefebvre et al, 1991; Thong & Yap, 24). This study aims to analyze the various factors affecting the utilization of EC in SMEs in points of perceived advantages, organizational IS commitment, and system implementation aspect. EC is different from prior IT in the case of organizational business and SMEs have many disadvantages for EC utilization compared to the large corporations. That is why positive understanding and interests of the need for EC, especially the peceived benefits of EC should be given to EC utilization of SMEs. Organizational readiness, that is organizational IS commitment, is also important due to lack of finacncial and technical resources of SMEs. Finally several other factors must be considered in the EC system implementation process. Therefore the primary purpose of this study is to identify and analyze factors affecting the utilization of EC in SMEs in terms of perceived benefits, organizational IS commitment, and system implementation aspect.

This study intends to empirically investigate which factors are affecting the utilization of the EC in SMEs by doing a questionnaire survey for both companies currently implementing and those not implementing EC. As the figure below, this study analyzes whether the independent variables which are perceived benefits, organizational IS commitment, and system implementation aspect are significantly related to the dependent variable which are user satisfaction and usage. This study examines whether there is any statistical difference among industry types and between companies which've implemented EC already and companies which are not implementing EC yet in the matter of EC utilization as well.



[Figure] Research model

Despite contrasting topics and approaches, many studies of SMEs and internet recent-published share the common view that increasing utilization of internet-based EC in SMEs will change their business way(Abell and Lim, 1996; Barker, 1994; Fuller and Jenkins,

1995; Poon and Swatman, 1995, 1996, 1997; Sieber, 1996). In fact, national economy can grow through the SMEs' development utilizing the EC, because SMEs play a great role in national economy. Despite of many disadvantages, it is said that SMEs can further stimulate their business with the internet-based EC. Throughout this study, it is expected that EC could be considered as an important thing and diffused fast as a competitive means in SMEs.