Evolution of Web-Based Shopping Systems: Characteristics and Strategies

Changsu Kim, Yeungnam University, Korea

Robert D. Galliers, Bentley College, USA and London School of Economics, UK

Kyung Hoon Yang, University of Wisconsin-La Crosse, USA

Jaekyung Kim, University of Nebraska-Lincoln, USA

ABSTRACT

This article offers a theoretical analysis of evolutionary processes in WBSS strategies. For that purpose, we propose a research model that shows strategy patterns. Based upon the model, we identified several types of strategies. In our research model, WBSS are classified into four types: (1) general-direct-sales (GDS); (2) general-intermediary-sales (GIS); (3) specialized-direct-sales (SDS); and (4) specialized-intermediary-sales (SIS). On the basis of these four categories of WBSS, we analyze the characteristics of WBSS and suggest five evolution strategies for WBSS, which have implications for both theory and practice. Amazon.com’s strategic movements, such as product line expansion through alliance and acquisition, provide an exemplary case of the evolution of WBSS strategy. We expect that this research will serve as a guide for Internet businesses and as a catalyst for new research agendas relevant to Web-based shopping and electronic commerce.

Keywords: strategy; Web-based shopping systems (WBSS)

INTRODUCTION

E-commerce has been actively diffused on the basis of advanced Internet technologies, enlarging its sphere of utilization and the scale of the global electronic market, radically (Fenn, 2001; Looney & Chatterjee, 2002). The most well-known Internet business models are the so-called dot-coms, which have adopted several types of WBSS applications (Kim & Galliers, 2004, 2006; Porter, 2001). Dot-coms are located around the world and are pursuing a variety of opportunities as global marketers, interacting with global customers and businesses through the Internet (Howcroft, 2001; Rifkin & Kurtzman, 2002; Worthington & Boyes, 2001). However, early in 2000, many dot-com companies collapsed. The lesson learned is that making money on the Internet is
still not easy, which makes it necessary to create new ways of doing business (Gulati & Garino, 2000; Holzwarth, Janiszewski, & Neumann, 2006; Paper, Pedersen, & Mulbery, 2003). Even though many dot-com companies have disappeared and competition is getting severe, the diffusion of Web-based shopping businesses is continuous, increasing in both the number of customers and the volume of business (Kim, Galliers, & Yang, 2005).

The aim of this paper is to address what WBSS must do to survive and prosper continuously. We insist that the appropriate evolution strategy can be one of the most critical factors. To verify our premise, we classify four types of WBSS models, analyze the characteristics of each WBSS model, and attempt to address the evolutionary path of each WBSS strategy. We show the case of Amazon.com’s evolutionary path as an example to demonstrate our theory. Thus, we expect this study to serve as a useful guide for researchers to build theoretical e-commerce models and for practitioners to make plans for their Internet businesses.

LITERATURE REVIEW

Web-Based Shopping in E-Commerce
According to Arlitt, Krishnamurthy, and Rolia (2001), Web-based shopping aims to personalize online shopping to provide global interactive business, customer convenience, and global market efficiency, which implies that Web-based shopping belongs to the business-to-consumer (B2C) e-commerce business model. As of yet, there is no agreed upon terminology for Web-based shopping (Van Slyke, Comunale, & Belanger, 2002). There are, however, many terms in use, which include Internet mall, virtual mall, cyber mall, electronic mall, virtual storefront, online storefront, online store, online shopping mall, electronic shopping mall, Internet shopping mall, electronic shopping systems, cyber mall systems, and WBSS. Generally, WBSS are described as Internet-based shopping systems for selling and buying products, information, and services; and they are classified by transaction patterns (Arlitt et al., 2001), which include e-tailers such as the virtual merchant; clicks and bricks; manufacturer direct; and the market creator. Therefore, we limit the scope of this research to B2C e-commerce.

Web-Based Shopping Systems
WBSS have been researched from two viewpoints: business and technical. Studies focusing on the business aspects explored the phenomenon of Internet business through Web sites, online stores, and virtual markets as a limited concept of WBSS (Heijden, 2003; Nour & Fadlalla, 2000). Spiller and Lohse (1998) identified five different types of Internet retail stores: (1) super stores, (2) promotional store fronts, (3) plain sales stores, (4) one page stores, and (5) product listings. These are classified by size, type of services, and interface quality. However, this classification system does not consider the technical aspects of the Internet.

Nour and Fadlalla (2000) also classified Internet-based virtual markets according to two principal categories: product type and delivery mode. They identified four distinct Internet-based virtual markets: (1) electronic publishing and software, (2) electronic tele-services, (3) digitally enabled merchandising, and (4) digitally enabled services. However, this is a broad conceptual model for virtual markets rather than a model of WBSS. This research, therefore, seems somewhat limited in explaining the taxonomy and the evolution of WBSS. Torkzadeh and Dhillon (2002) measured factors that influence the success of Internet commerce. They suggested that the relative strength of shopping convenience and ecological issues are fundamental objectives. Recently, Heijden (2003) investigated an extension of the technology acceptance model (TAM) to explain the individual acceptance and usage of a Dutch generic portal Web site.

Several studies explored the technical aspects of WBSS, including scalability, network traffic, architecture, and virtual reality. Arlitt et al. (2001) investigated the issues affecting the performance and scalability of WBSS. They found that personalization and robots can have