Chapter 10

Asymmetric Interaction in Competitive Internet Technology Diffusion: Implications for the Competition Between Local and Multinational Online Vendors

Peijian Song
Nanjing University, China

Cheng Zhang
Fudan University, China

Yunjie Xu
Fudan University, China

Ling Xue
University of Scranton, USA

Ke Wang
Fudan University, China

Chenghong Zhang
Fudan University, China

ABSTRACT

This paper explores the diffusion of competitive Internet technology products in the context of competition between local and multinational corporations as well as how the diffusive interactions between technologies affect their dominance in electronic markets. Drawing on existing theories of innovation diffusion, and competitive dynamics, the authors adopted a new diffusion model that incorporates the influence of one technology’s adoption on the diffusion of other technology. The authors then validated the model using longitudinal field data of the two pairs of Internet technology products in Chinese electronic markets. The findings of this investigation suggest that Internet product diffusion can be better predicted by a competitive dynamic model than by an independent-diffusion-process model. Further, results indicate that the diffusive interaction between local and multinational corporations’ technologies can be a two-way asymmetric interaction. Such a pattern supports a conclusion of significant second-mover advantage for local online vendors in fast-growing emerging markets. The authors also examine the policy implications of these results, specifically with respect to how asymmetric interaction effects can help domestic online vendors gain second-mover advantage facing the entry of multinational corporations.

DOI: 10.4018/978-1-4666-2142-8.ch010
INTRODUCTION

Internet businesses are highly competitive in various electronic markets due to low entry barriers, easy imitation of product and service offerings, and low search cost for consumers to find information (Porter, 2001). To remain competitive, after achieving success in the home market, online firms typically internationalize their online businesses from home markets to global markets. When entering the foreign market, these multinational online corporations will face the competition of local firms. For example, in recent years, eBay has fought and lost high-profile bids to dominate the Internet auction markets in China, Japan, and Taiwan (Lemon, 2009). Specifically, when entering the Chinese consumer-to-consumer (C2C) market in 2003, eBay faced intensive competition from Taobao.com, a local C2C platform providing similar services. Three years after Google was founded, Baidu.com, a local search engine, was developed to compete with Google in the Chinese search engine market. A similar incident happened with both eBay and Google when they entered the Korean market, and faced competition from Gmarket and Naver, respectively (Ihlwan & Hof, 2006; Ihlwan, 2007). As the phenomenon reveals that multinational online vendors struggle to sustain their competitive advantage when facing competition from local vendors, it poses one critical question: How can we assess the diffusion of competitive Internet technology products in the context of competition between local and multinational corporations in global electronic markets?

Since Internet technology provides better opportunities for companies to establish distinctive strategic positioning than do previous generations of information technology (Porter, 2001), understanding the dynamics of competitive Internet technology diffusion in global electronic markets is important for both information technology (IT) scholars and practitioners. In today’s fast-paced and increasingly global markets, the competitive advantage is based heavily on ‘invisible assets,’ which are easily imitated and circumvented by substitutions (D’Aveni, 1995). Whether domestic and multinational online firms could gain a competitive advantage in domestic markets, where entry barriers are generally low and products can be easily imitated, during competition is the fundamental question IT researchers must address (Porter, 2001). Furthermore, technology firms also face the challenge of retaining, in addition to gaining, a competitive advantage. By observing numerous historical examples of IT product competition in operating systems for PCs, spreadsheets, word processing, and presentation software, it shows that all followed a similar pattern of a major breakthrough followed by a second company with an improved product becoming dominant. Therefore, it is plausible for scholars and practitioners to pay special attention to the more general second-mover advantage in IT product competition. Specifically, while global firms may achieve early competitive advantage by copying their success stories from their home markets into some foreign markets, local refinement largely is able to erode that advantage.

To illustrate this critical issue, we provide information on the annual growth of the entire Chinese C2C market as well as that of individual C2C platform providers as an example. In 2003, eBay (China)’s market share reached 72.4% after merging with the largest C2C vendor, Eachnet.com (iResearch, 2006). In the same year, a new local vendor, Taobao, entered the market. While the market experienced an exponential increase in transaction volume from that year on, eBay (China) still suffered from the competitive effect of this diffusion process. In 2007, eBay (China)’s market share dropped to 7.7% while Taobao’s increased to 83.6% (iResearch, 2008). The example of emerging localized competition between local and multinational IT firms reveals the importance of understanding the diffusion pattern in competition. An analytical paired-product diffusion model that better extracts the diffusion information than a single-product diffusion model is a worthy beginning point for capturing diffusion patterns.