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Early mover advantage in e-commerce platforms with low entry barriers: The role of customer relationship management capabilities

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ABSTRACT

This research investigates whether early mover advantage (EMA) exists among entrepreneurial e-tailers operating on third-party e-commerce platforms. Contrary to traditional wisdom, the current research hypothesizes that e-tailers may enjoy early mover advantages because of the consumer demand inertia amplified by the nature of the Internet and the system design characteristics of e-commerce platforms. We also argue that customer relationship management capabilities help enhance early mover advantages in an online setting. We employ panel data on 7309 e-tailers to perform analyses and find empirical evidence that strongly supports the abovementioned hypotheses.

1. Introduction

The concept of early mover advantage (EMA) posits that early movers into a new marketplace may acquire certain advantages over subsequent entrants and thus achieve a strong competitive advantage in the form of high market share or returns [17,34]. Timing a new market entry or the adoption of technology, such as the Internet, is an important strategic choice for firms [17,28]. Although the strategic early entry of e-commerce firms has attracted research interest, the issue has yet to be fully explored in the literature.

The following main types of e-tailing business models enjoy different sources of EMAs: e-commerce platforms, independent stores, and e-tailers operating on third-party platforms. E-commerce platforms are online platforms that provide technological solutions to numerous small sellers. Examples of e-commerce platforms include Taobao, eBay, and Amazon. These firms enjoy EMAs from entry barriers resulting from network effects and advanced IT infrastructure [33]. Strong empirical evidence supports the existence of EMAs in this business model [33].

Independent stores are those that sell branded products through their stand-alone official websites. Examples of such stores include Walmart and Zappos. These firms enjoy EMAs from the entry barriers created by investment in IT infrastructure. They may also leverage prior brand reputation and organization capabilities to achieve EMAs because many of them are built upon their traditional offline businesses [30,48,52]. Mixed empirical evidence supports the existence of EMAs in this business model [40,42,43].

E-tailers operating on third-party platforms are largely ignored by the literature. In contrast to the two previous categories, which are represented by mostly large-sized organizations, e-tailers operating on third-party platforms are small- and medium-sized enterprises (SMEs). They do not seem to enjoy EMAs because third-party platforms feature extremely low entry barriers and hypercompetition [8]; specifically, these platforms require small upfront investments in technology because they provide readily available technological features, standard web store templates, and easy-to-use administration capabilities. The services offered by third-party platforms further minimize learning costs. The aggregation of e-tailers in a central location further reduces the switching costs of consumers. These characteristics do not seem to support the existence of EMAs. Prior research has also purposely excluded small- and medium-sized e-tailers from their samples [42].

However, studying the EMAs of e-tailers is important because (i) e-tailers represent a large market share when aggregated [60],

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(ii) platform-based sales have demonstrated a considerable increase as tens of thousands of entrepreneurial firms burgeon and wither on such platforms as Amazon and Taobao [60], and (iii) SMEs are lagged adopters of new technologies. Therefore, studying the EMAs of e-tailers can help such firms in timing their entry into online platforms. The current work intends to address this research gap.

Based on the literature on EMAs in low-entry-barrier industries [39], which underscores the importance of demand-side inertia as a potential source of EMAs, we argue that EMAs do exist for e-tailers operating on third-party platforms mainly because of demand-side factors that favor early movers, including Internet-enhanced prototypicality and product-specific reputational advantages [29], high-switching costs [29], and herding effects [25,4,7]. Although independent e-tailers also enjoy these sources of EMA to a certain extent, the nature of platform-based selling may strengthen such sources for participating e-tailers. For example, because independent e-tailers are scattered across the Internet, consumers cannot easily imitate the behaviors of other customers. In this case, herding behavior is minimized because of the invisibility of the sales of other stores. We further discuss the role of customer relationship management (CRM) capabilities in reinforcing demand-side factors, which lead to EMAs on the Internet.

To empirically investigate the existence of EMAs in third-party e-commerce platforms, we employ 38 weeks' worth of panel data on 7309 e-tailers operating on Taobao, one of the largest third-party e-commerce platforms in the world. This platform has an extremely low entry barrier and hosts millions of entrepreneurial e-tailers without significant physical presence. With this approach, we can control for the effect of entry barriers as a source of firm EMAs and focus on the essential demand-side sources of EMAs and on the role of CRM in moderating such advantages. The empirical analyses support our theoretical hypotheses. This research contributes to the literature by elaborating upon the sources of EMAs of e-tailers on third-party e-commerce platforms. Moreover, it extends the boundaries of both EMA and CRM theories and identifies the role of organizational CRM capabilities in creating and enhancing EMAs.

2. Theoretical background

2.1. EMA theory

The concept of first mover advantage was introduced to the industrial organization economics literature in the 1950s [17], and its development in management began through the work of Lieberman and Montgomery [34]. Since its development, the concept of first mover advantage has been expanded to the management literature and has been gradually employed interchangeably with EMA [17,34,57].

The EMA literature consists of three research streams [56]. The first stream examines the sources of EMA [35]. For example, Kerin et al. [29] summarize the important sources of EMA, namely, entry barriers created by economies of scale, preemption of key resources, technological expertise and experience, and behavioral demand-side factors such as shaping customer preference and becoming the "prototype" against which all later entrants are judged. In the second stream, EMA theory explores firm-level resources and capabilities that allow organizations to exploit EMAs [17,35]; such resources include technological capabilities [13,18], political resources [19], and social identity [5]. The third research stream investigates the relationship between environment and competitive advantage based on the order of market entry [56,38].

The Internet presents a special context for studying EMA because of its unique nature [33,58]. On the one hand, the Internet renders some sources of EMA, such as the achievement of technological leadership, the preemption of valuable resources (e.g., input factors and location), and the creation of customer switching costs, less relevant [34]. This condition is the result of the falling prices of hardware and software, the high imitability of online business models, the virtual space nature of Internet businesses, and the easiness of online switching for customers. On the other hand, the Internet offers new/enhanced sources of EMA. Varadarajan et al. [58] argue that Internet firms continue to enjoy significant EMAs derived from three sources: network effects (especially enjoyed by platform-based business models), technological innovation protected by patents, and non-contractual switching costs created by firms by leveraging the availability of customer data online and the ability to provide personalization tools.

Table 1 summarizes several empirical studies on EMAs in the e-commerce field. Researchers have tested the main effect of online entry order on various performance measures, including profitability, cost, revenue, and market share. Their samples include general Internet firms that consist of e-tailers [33,30], the e-tailing industry [42,43], and a subset of e-tailers and multi-channel retailers [48]. The EMAs of Internet firms are only confirmed in limited research [30,48], with strong support found for online businesses with network effects [33].

Several researchers have also examined the mediating effect of organizational capabilities, including patents (a measure of technological capability) [33], operational and advertising capabilities [52], and prior business models [48], on EMAs. The study of Lieberman [33] is the only study to examine the role of environmental characteristics (e.g., industry with network effects) on EMAs.

The review of the literature on EMAs online reveals the following. (1) Existing research has studied e-tailers as platforms or independent stores with stand-alone domain names but has yet to explore the EMAs of entrepreneurial e-tailers operating on third-party ecommerce platforms. (2) Existing research has not focused on the demand-side behavioral sources, which are important in creating EMAs among e-tailers on online platforms. (3) Existing research has not studied the role of CRM capabilities that can fortify the impact of such sources.

2.2. Customer relationship management (CRM) capabilities

This research emphasizes that the CRM capabilities of e-tailers reinforce EMAs because they function as comprehensive indicators of the ability of firms to strengthen the demand-side sources of EMA [54]. CRM capability is defined as a firm's capability of building and integrating the required resources, activities, and processes to manage customer relationships while simultaneously creating both firm and customer value [9,6]. CRM capabilities have proven to be profitable for companies [1,50]. CRM activities directly enhance customer relationship quality; consequently, these activities add to the non-contractual switching costs of customers [14,31,36,49] and help increase customer lifetime value for firms [51]. Customer attraction, conversion, and retention are the three major dimensions of CRM objectives [9,20,47,62].

Internet technologies produce new marketing tools and tactics to help firms attract, convert, and retain customers. Customer attraction refers to the ability of e-tailers to attract online traffic to their web stores operating on e-commerce platforms [42]. To attract and acquire new customers, e-tailers can utilize an array of online marketing tools such as banner advertisements, search engine marketing, social marketing, e-mail marketing, and affiliated marketing tools. Customer conversion refers to the ability of e-tailers to convert potential visitors into purchasers. Sticky