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Enhancing product innovation performance in a dysfunctional competitive environment: The roles of competitive strategies and market-based assets☆

Weiping Liu*, Kwaku Atuahene-Gima

[a] Department of Management, School of International Business Administration, Shanghai University of Finance & Economics, 777 Guoding Road, Shanghai, China
[b] Nobel International Business School (NIBS), Accra, Ghana

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ABSTRACT

Dysfunctional competition (typically involving violation of intellectual property rights) is common in emerging economies, making it difficult for innovators to profit from their innovation activities. Firms operating in emerging economies must choose appropriate strategies to address the idiosyncratic challenges of dysfunctional competition and achieve competitive advantage. The utility of competitive strategies (cost leadership and differentiation) and market-based assets (customer orientation, competitor orientation, and marketing creativity) were assessed for their ability to help an innovating firm deal with dysfunctional competition and improve the returns from innovation. Data from a survey of managers in 282 Chinese high technology companies demonstrates that an emphasis on cost leadership, a customer orientation and creative marketing predicts better product innovation performance in environments with a high level of dysfunctional competition. Differentiation and a competitor orientation were found to be less effective.

1. Introduction

At the time when the French fashion house Yves Saint Laurent was selling only its brand of cigarettes in China, copies of its leather goods, belts, suits and shirts were already available in China's major cities with slightly altered versions of the YSL logo (Wall Street Journal, 1993). Dysfunctional competition is also pervasive in technology-based industries, not only in China, but also in many emerging economies that share a "well-earned reputation as a free-for-all when it comes to patents and copyrights" (The Economist, 2008). For example, piracy of computer software has been found to be widespread in China (von Krogh & Haefliger, 2007). The International Intellectual Property Alliance estimates that approximately 80% of business computer software in use in China in 2010 consisted of pirated editions (International Intellectual Property Alliance, 2012).

Dysfunctional competition has been a key feature of emerging economy markets, especially in the early years of development. Without the governance of formal developed institutions such as IPR, competition in such markets is often unhealthy, unfair or even unlawful (Li & Atuahene-Gima, 2001). Pervasive dysfunctional competition results in illicit and/or immoral competitive actions including hostile imitation, counterfeiting, patent violations, trademark infringements, and the widespread availability of "me-too" products.[1] It can also provoke escalating price wars (Guo, 1997). A situation thus arises in which "generically weak institutions at the macro-level permit variations in dysfunctional conditions at the meso-level" (Du, Kim, & Aldrich, 2016, p. 473).

Developing and introducing innovative products which satisfy consumer needs is a good basis for competitive advantage, but dysfunctional competition may significantly affect the outcomes of corporate innovation activities. Due to weak IPRs and inadequate contract enforcement (Cao & Lumineau, 2015; Poppo & Zenger, 2002), the innovator's core technology and ideas may easily leak to others. The product design, patented technology, trademarks or even brand may be used without authorization by hostile competitors. These dysfunctional competitive practices make the management and protection of knowledge difficult. Competitors can freeride on the innovator's efforts and match their offers quickly, compromising the distinctiveness of a firm's new products and corroding its returns. Unfair competition has been widely recognized as key barriers to innovation in emerging economies like China (Zhu, Wittmann, & Peng, 2012). A survey of Western companies trading in China also identified "…unfair competition and poor

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* Corresponding author.
E-mail address: liu.weiping@mail.shufe.edu.cn (W. Liu).

[1] In this discussion, "dysfunctional competitors" refers to companies using dysfunctional competitive practices, and "dysfunctional products" refers to the products offered by dysfunctional competitors.

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protection of intellectual-property rights as being among their biggest business challenges" (Wall Street Journal, 2010).

Scholars and practicing managers recognize the difficulties of profiting from innovation in an environment with a weak appropriability regime and a high level of dysfunctional competition. Specifically, the profiting from innovation (PFI) framework (Teece, 1986) focuses on the appropriation of profits from innovation and examines the effectiveness of mechanisms such as patents, complementary assets, and secrecy in helping a firm appropriate value from innovation. However, profiting from innovation requires both the development of new products (value creation) and the appropriation of profits (value appropriation) from them (Dosi, Marengo, & Pasquali, 2006; Jacobides, Knudsen, & Augier, 2006; Mizik & Jacobson, 2003; Wang & Chen, 2010). Most prior scholarship in this area has primarily focused on the value protection process; it has left the question of what kind of new products to be offered and how, i.e. the ultimate value creation process in such environments, relatively unexplored.

Recently, scholars argue that the impact of dysfunctional competition may not always be negative, since it can force a firm to become more focused and seek a more effective strategy in their innovative activities (Sheng, Zhou, & Lessassy, 2013). For example, a cost leadership strategy has enabled firms such as Lenovo and Goodbaby to maintain an advantage over their competitors and offset the deleterious effects of dysfunctional competition. They exploit their cost advantages in new ways and rely on ongoing, continuous, low-cost innovation to exploit market opportunities (Zeng & Williamson, 2007). By offering new products at much lower prices, they out-perform their competitors in satisfying customer needs and have achieved notable market success. Given the theoretical and practical importance of this issue, it remains worthwhile to investigate the effectiveness of competitive strategies and capabilities in helping firms exploit market opportunities and improve innovation performance in a dysfunctional competitive environment.

Responding to the call for more studies to "examine the practice of innovation in the emerging market context, identify new patterns, and theorize their underlying rationale" (Subramaniam et al., 2015, p. 9), we investigate corporate innovation in an emerging economy of China. We believe that China offers a rich context for such studies because of its largest untapped market with the highest growth potential on the one hand, and the pervasive dysfunctional competition observed there on the other hand. We specifically focus on high-tech firms since these firms have a technology focus and are under high pressure to develop new products. Despite the hostile and unfavorable competitive environment, some of them have grown quickly to be global players over the last two decades.

2. Literature review

2.1. Dysfunctional competition

A question fundamental to business strategy and innovation is: how does competition determine the value each competitor appropriates? In addressing this question, most academic studies have assumed a constructive and functional competitive situation. Competition begins when a firm introduces a new product to the market to either seize market opportunities or satisfy unmet customer needs. Although successful new products may motivate competitors to imitate or respond with new products that have better features, a market-based institutional framework, particularly one with a well-developed system of property rights protection, inhibits both imitation and illegal activities, helping innovators retain the rewards generated by their innovations (Dickson, 1992; Hunt & Morgan, 1995). The positive forces of market competition, coupled with the rewards associated with innovation, incentivize devoting resources to innovation (Hunt, 2000). But this sanguine view of competition rests heavily on the existence of market-supporting institutions which enforce fair "rules of the game" and fair competitive processes (North, 1990). Moving beyond economies with well-established institutions, however, the support of such institutions often cannot be assumed.

Emerging economies usually suffer from a lack of such formal, market-supporting institutions during the transition process (Peng & Heath, 1996). The protection of intellectual property rights offered by patents, trademarks, and even trade secrets is normally inadequate if not entirely ineffective. The safeguarding function of contract is often insecure and opportunistic behavior such as information leakage is frequent (Cao & Lumineau, 2015; Poppo & Zenger, 2002). This imperfect institutional environment is conducive to dysfunctional competition behaviors, such as unbridled imitation, patent and copyright violation, trademark infringement, and false advertising (Li & Atuahene-Gima, 2001). The technological core, the image and the market position of an innovative firm can then easily be destroyed by less innovative imitators with little fear of legal sanctions. They may attempt to imitate a new product at much lower cost and offer consumers a more attractive price-quality relationship. Due to the low institutional barriers to imitation, firms can find themselves confronted with a large number of competitors, who are likely to match the innovator's offers quickly. If so, competition often shifts towards price, forcing the original innovator to cut prices too, perhaps even to below his higher average unit cost. Such unbridled competitive practices and cut-throat price competition challenge the assumptions of workable and effective market competition, and can be described as dysfunctional. Dysfunctional competition refers to the extent to which "…the competitive behavior of firms … is opportunistic, unfair, or even unlawful" (Li & Atuahene-Gima, 2001: 1125).

In many contexts, in China and India for example, the institutional framework cannot impose severe punishments on unlawful or unethical competitive activities. Such an institutional environment promotes dysfunctional behavior such as copyright piracy and counterfeiting which can corrode the value of a firm's new products. The intense competition and hostile imitations make innovation a costly and risky investment (Teece, 1986).

2.2. The profiting from innovation (PFI) framework

Success in new product development is not independent of the environment in which a firm operates. External market conditions such as appropriability conditions are prominent environmental factors that influence firm NPD activities. Teece's PFI framework (Teece, 1986) views "appropriability regime" as a particularly relevant environmental condition and investigates the mechanisms and strategies that best help a firm appropriate value from its innovation in environments with different appropriability conditions. The framework classifies such mechanisms into two broad categories: the formal legal protections and the informal complementary measures.

Formal legal protection usually center on the strength and efficiency of legal and regulatory protection (Teece, 2000). Patents, copyrights and trademarks are formal protections which can supplement secrecy to help prevent knowledge leakage, enabling a firm to protect itself against imitation and profit from innovation.

Strong formal protections normally favor innovators, but that does not mean that firms can never generate a return from their innovations in environments with underdeveloped institutions. The framework's complementary assets category takes in factors such as production capabilities, the supply chain, distribution networks, and the ability to provide after-sale service (Srivastava, Fahey, & Christensen, 2001). When appropriability is uncertain, the framework proposes that firms rely on complementary assets to restrain competition and secure returns from innovation (Teece, 1986). These firm-specific assets complement innovation throughout a firm's value chain and make imitation by competitors more time-consuming and expensive. They help a firm maintain returns which might otherwise be competed away.

This is certainly a useful perspective, but the PFI framework tends to