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USER-EXECUTIVES AND INNOVATION DECISION IN THE SPORTS INDUSTRY

Keywords: user innovation, top management team, the sports industry

INTRODUCTION

Von Hippel in his landmark research on user innovation (Von Hippel, 1976) state that the source of innovation is not only from producers but also from users (Bogers, Afuah, & Bastian, 2010). Studies on user innovation have considered diverse topics such as industry dynamics, entrepreneurship, firm boundaries, innovation communities, measurement, policy, motivation, efficiency, and position in firms (Baldwin, Hienerth, & von Hippel, 2006; Hienerth, von Hippel, & Berg Jensen, 2014; Katila, Thatchenkery, Christensen, & Zenios, 2017; Lakhani & Wolf, 2003; Shah & Tripsas, 2007; von Hippel, 2005). In brief, this literature informs a recognition of the importance of users as potential sources of value for firms and society at large (Bogers et al., 2010).

In this research proposal, we focus the sports industry to add to this literature given the several features of the industry. First, the levels of participation and professionalism in sports are ranged widely from daily exercises to school teams and professional leagues. User innovation in the sports industry may, therefore, arise from both selective professional users and a wide base of casual users. This also implies that innovation in the sports industry will also affect most people's healthy living as well as the performance of elite players in professional games. Second, sports activities often take place among people in groups or teams. Within and between these groups and teams, sports enthusiasts often take a leading role to promote the sport, including the

techniques and latest sports equipment to the fellow group members. Lastly, the economic and innovative potential of the extended sports industry is non-negligible. While sports products innovation remains intensive and competitive among major brands, the scope has expanded to the provision of various services (e.g., gym, coaching, etc), sports data processing as well as the latest wearable devices technologies.

User innovation and producer innovation

User innovation contrasts with producer innovation in several aspects. To begin with, users are less coordinated than producers when innovating. Typically, producers will organize a team of engineers and specialists for R&D, and each team member will take charge of a designated range of task to launch the new product efficiently. In contrast, users and hobbyists usually innovate and create new things independently or in loosely-organized communities (Von Krogh, Spaeth, & Lakhani, 2003), which might be less efficient than producers. However, the loose coupling of wide-ranging specializations of individual users participating in the innovation may imply that user community could probably be more creative than producers (Hienerth et al., 2014; Yayavaram & Ahuja, 2008). Limited absorptive capacity and unsuitable firm practices may hinder the producer from getting the upper hand when it fails to absorb the sticky tacit knowledge of user's demand from users (Di Gangi & Wasko, 2009; Foss, Laursen, & Pedersen, 2010; Von Hippel, 1976).

As for the diffusion of innovation, a producer may spread innovative ideas by promoting and selling its products, while user does so through peers, such as the community of sports hobbyists. Take hiking for example (RAASCH, HERSTATT, &

LOCK, 2008), hikers will sense the difference of climate in different periods when hiking. Once hikers got the information, they share the information to peers. While this demonstrates the real-time sharing of information among peers, advanced users will also share professional skills and further details with other users with similar knowledge background and level of experience. In these cases, knowledge sharing is highly efficient and effective.

The structure and information sharing function of the user community

Users tend to form communities with various types of users and applications. These communities often have the structure of a series of concentric circles: the inner and outer circles represent the core and the periphery of user communities, respectively (Crowton et al., 2006; Muller, 2006; Lakhani, 2006). Peripheral members often join on the sideline as the topic of the community shifts, while core members drift into the center as their interest. There are also active members who deeply engage for a month or two then disengage (Wenger et al., 2002). This concentric structure also applies to online communities where users perform various roles and share innovative ideas and solutions in virtual spaces (Von Krogh, Spaeth, & Lakhani, 2003). The dynamic and permeable structure of user communities greatly benefits the sharing of information when active users with diverse skills and experience join and contribute and when core users with passions help organize and facilitate information sharing.

Users can also spot emerging demand and innovate spontaneously before producers receive sufficient market signals that justify a business venture. Take sporting

communities in ‘extreme’ sports for example: sporting enthusiasts will form sporting enthusiast communities because they share consistent experience and background. When the market size was meager and economic benefits were unclear to producers, most participants of extreme sports would innovate for personal use and share with fellow enthusiasts (Hienerth et al., 2014). Innovation by professional users makes another case for user innovation given demand uncertainty. In their professional life, professional users may employ specific products to perform their trade and can bring valuable feedbacks and ideas for product producers in innovation (Laursen, 2011; Shah & Tripsas, 2007). Most professional users are also connected through professional communities and unions of peer experts using same products; these connections can bring wider access to networks of diverse and user-relevant information (Afuah & Tucci, 2012).

Internalizing user innovation

Producers who did not pay sufficient attention to user communities could thus miss important information (Hyysalo, 2009). From the viewpoint of producers, firms can leverage user innovation by interacting with users, gathering users’ ideas or even cooperating with users to acquire new solutions. For instance, producers who value

users' knowledge may become planters instead of hunters by supplying innovation toolkits to users (Franke and Schreier, 2002). Firms may also create user communities to create and improve new products and subsequently take the role of manufacturing innovative products (Jeppesen & Frederiksen, 2006). Users in this co-creation community are motivated by the availability of new products for their demand to share their day-to-day experience with the producer.

Taking one step further, firms may internalize of user community by having users in executive teams, and the users' contribution to innovation is highly related with the position they take (Katila et al., 2017). Users within the firm can be helpful by expanding the variety of ideas to solve a firm's innovation problems. Because of their experience using the product every day, the professional user can find out the problem of the product and apply finding into their organization. However, when a professional user faces decision uncertainty, the potential negative characteristics of users can arise from the users' cognitive entrenchment, overconfidence, and task conflict.

We posit that top management team members with a different level of participation in sports have a different impact on innovation and firm decision.

Hypothesis 1 User as a member of the top management team has a positive impact on firm innovation

Hypothesis 2 User taking different positions in the top management teams have a different impact on innovation

Data and method

We compile an analytic sample by searching for sports firms in Crunchbase. Several keywords were used in the search, including sporting goods, sports, fitness, boating, fantasy sports, outdoors, soccer, cycling, basketball, baseball, etc. We then identify and profile the firm executives of these firms according to their Crunchbase and LinkedIn pages. Subsequently, we search for worldwide patents assigned to these sports firms and executives in the PATSTAT database. Lastly, we categorize executives by their level of experience in sports, education and work experience.

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