



Research Paper

Innovation in Sports Management and The Role of Users, open Innovation And Sport-Based Entrepreneurship

Asst. Pof. Dr. Kenan Sivrikaya¹ Res. Assist. Ayse Demir²
Res. Assist. Tolga Fisek³

¹Istanbul Aydin University, Department of Physical Education and Sports Education

²Istanbul Aydin University, Department of Sports Management

³Istanbul Aydin University, Department of Physical Education and Sports Education

Corresponding Author: Res. Assist. Ayse Demir

Received 17 January, 2018; Accepted 31 January, 2018 © The Author (S) 2018. Published With Open Access At Www.Questjournals.Org

SUMMARY: From the perspective of innovation management, the field of sports management hosts increasingly significant developments due to its impact on other sectors of the economy and the growth of the sports industry. All sports organizations are faced with the need to innovate and changes in market conditions have become a driving force for innovations related to technologies and administrative processes, as well as service and product delivery. In recent decades sport management research has focused on adopting a more innovation-based and interdisciplinary approach in line with the emerging trends in the industry as many sports have transformed from being mostly organized by amateurs to having a business management approach. However, there are still significant reasons to expect sports industry to put into practice diverse management and innovation approaches namely due to high level of social interaction in sports, its emotional experience, engagement of consumers and uncertain outcomes. This study focuses on three concepts that increasingly emphasized by sports management researchers in recent years: user innovations, open innovations and sport-based entrepreneurship. Literature on innovation and entrepreneurship demonstrate that innovations frequently originate outside the frontiers of existing organisations. In field of sports, users represent a key role in social innovation. Involvement of players and expert users is an essential factor for successful innovation as far as sports are concerned. The aim of this study is to clarify how users influence innovations to be widely accepted by large segments of the sports market and how sports organisations are able to facilitate innovations by using external resources. In order to pursue this purpose, this study first of all focuses on “lead users” who lead a significant market trend and their peer communities by using their expertise and appropriate abilities. Secondly, it analyzes the concept of “open innovation” in sports management and examines the role of interactivity, collaboration and transparency on open innovation practices. As a part of social innovativeness in sports industry, open governance approach is mostly represented by open innovation platforms and channels. Finally this study examines the role of sport-based entrepreneurship on innovation processes in sports industry. The findings of this theoretical study shows that both user innovation and open innovation practices play a central role in the sports based entrepreneurial process and the diffusion of innovations.

I. INTRODUCTION

The innovation process is characterised by various organisational elements and inputs. The major factors of products development process include available knowledge in workforce, external networks, explicit knowledge management, cross-functional coordination, competitor intelligence, reduced cycle time, proficiency in product development process and customer input (Sattler, 2011). In the past few decades, there has been a call for adopting a more innovation-based and interdisciplinary approach in sport management research due to the initiatives that have emerged from the industry and through the contribution of users (Funk, Lock, Karg, & Pritchard, 2016). The most significant reason for such a development is that many sports have transformed from being mostly organized by non-professionals to having a profit oriented managerial approach in recent decades. Moreover, there are certain reasons for sports to retain diverse management approaches, especially due to the

uncertain outcomes, high level of social interaction, emotional experience and engagement of consumers sheltered in sports (Potts & Ratten, 2016). Thus, sport is a growing area of interest to innovation management researchers as a result of the developments in the sports industry and its influence on other industries of the economy. Rolfe & Dittmore (2015) stated that all sport organizations are challenged with the requirement of innovation. The frequent shifts in market conditions drive innovations in service and product delivery, as well as technologies and administrative processes.

The most essential mechanism for technology integration in sports industry is technology innovation mechanism which maintains motivation for technological and innovative progress. Ming & Yang (2013) argue that the selection mechanism provides technology and sports select factors required during the integration process, helps the market to choose objectives for self-development and caters foundation to innovative progress for sports. Nevertheless, Hyysalo (2009) comments that innovativeness in the industry development is not limited to technology and technique, but also requires the contribution of user practice, market, environmental and organizational dimensions, including ecological factors, regulations and cultural values. Many studies in sport management literature focus on innovation however the innovation concept is often expressed in terms of technological capacity and institutional processes. Today's increasingly changing competitive business environment and growing opportunities in communication, force organizations to seek valuable external sources even for the critical functions of their businesses. This is often achieved through social and formal networks which provide benefits such as efficient use of internal resources and increased competitiveness by exploiting the valuable opportunities obtained from external resources. Especially, the concept of social innovation has become more and more important as in the case of sports, where user experiences can identify the service gap or customer's expectations from the product almost in an exact level. In the sports literature, topics such as social networks, innovative entrepreneurship, open innovation and user-developed innovations are frequently mentioned. The contribution of this work is to integrate these three types of innovation mechanisms that are based on social networks and user's contribution under one heading and to bring the concept of social innovation in the field of sports together.

II. LITERATURE REVIEW

2.1 The Role Of Users As Actors In Network and Innovation

The process of transition from invention to innovation is considered as an ability to promote fresh idea to provide accessibility to the wider public and to attach it social rationale. Analyzing the diverse features of the innovation process assumes a focus on the role of its actors and associates the involvement of a wide range of social sciences as well as its territorial and social integration (Attali & Saint-Martin, 2015). Innovative endeavours are more vulnerable if they have no group of fans, no network and they remain inventions as they are not potentially supported by a market (Durel & Angue, 2015). Users of technologies and products have been regarded as a vital source of innovation in many different industries, such as IT solutions, musical instruments, computer games, scientific instruments, medical equipment and sporting equipment (Hienerth & Lettl, 2011). According to Baldwin, Hienerth & Von Hippel (2006) user manufacturers and user innovators for mainstream sports products hold advantages over other manufacturers mainly in terms of shorter interval between expected design times which allows higher returns on investment but more capital intensive production methods. Sattler (2011) assumes that the common practice in user innovation systems is the involvement of specific lead users into the innovation process. Such a capability, frequently described as openness to the realised and unrealised needs of potential and existing customers, is suggested to create a positive impact on the innovative performance.

2.2 Lead User Theory and Sport-based Innovation

The research examining the role of users in innovation process has focused on identifying the certain types of user innovators and each step in user generated innovations as well as the factors affecting the success of diffusion of innovations among wide range of consumer groups. The results exhibit that innovation is concentrated among a certain group of users with use information and unique needs who anticipate high innovation-related benefits. Von Hippel (1986) called these people as "lead users" and defined them through the following two important features. First of all, the needs of lead users mainly represent the needs that generalizable to all users in a marketplace however they encounter these needs long before the regular users of the marketplace face them. Secondly, lead users are positioned to utilize notably by finding a solution to those needs. In his developed Lead User Theory, Von Hippel (2005) gave a leading role to them through an intermediary lead user and carried these considerations one step further. The lead users in this work are distinguished from pioneer users by identifying them as genuine creators of services and products that she/he cannot find in a marketplace. As indicated by Praceus (2014), user innovation not only occurs because a user is motivated to utilize its benefits but also because she/he has the expertise and appropriate abilities to contribute

that field. Groups and individuals are likely to apply their own experiences, skills and knowledge to problem solving activities.

In the case of the sports, the closeness of the consumer plays a vital role. The user takes part in the process of development by testing the product. Furthermore, the prototypes are frequently provided for high level professionals. Dissimilar to other industries where the long term launching periods can result in financial losses, sports innovations usually benefit from longer testing periods. The characteristics of the innovation process are best identified where the output moves between the manufacturer and potential users during its development (Desbordes, 2001: 144).

The work of Brata et al. (2009) shows that the most significant user innovators are sports people who are equipped with sports instruments as vital parts of their life to map and observe these equipments proficiently. According to them it is also important for facilitating user innovativeness in sports to follow emerging trends in subcultures and online user communities. User innovations in sports industry are more common in some sports. Shah (2000) suggests that most of all first type innovations associated with outdoor-sports activities originated from user innovations. Users frequently develop a market that has not been previously, and create a new industry as occurred in the beginnings of the snowboarding or windsurfing industry. Hienerth (2006) identifies the user generated innovation process in several steps from the idea generation to commercialisation phases. According to him, products are often first developed by users and prototyped in order to meet tacit and specific needs in a quickly changing and very unsecure environment. If an increase in demand starts to occur, users might even start selling the product on the basis of a low cost production, and once demand and supply reach stability and a certain size, finally large producers enter the market and take over manufacturing and commercialization.

In sports industry users are posited in the central stage regarding to social innovation phenomenon. For this type of innovation, instead of sportspeople's representation by proxy through elected representatives or experts, involvement of the players is a fundamental circumstance for successful innovation. The user innovators themselves create the devices their own, stabilizing and transforming them by finding ways to push back the limits of products. Therefore it seems in sports, the division of labour between those who are supposed to use and those who design the innovation is occasionally far from distinguishable (Durel & Angue, 2015). Hyysalo (2009) identifies three significant aspects of adaptation process of an innovation within an industry where non lead users involved. First of all the user needs of early majority of adapters are elaborated in order to diffuse the community and alter its equipment and structure. Secondly, adaptation and micro innovations take form of vital and evolutionary forces that contributing and driving the user practice. And finally, settings, equipment and co-evolution of practice often changes and expands the shape of the design space. These aspects seems to provide benefits for low capital user innovators because they have better network connections to initiate user innovations and better capacity to shape the design space.

Lead user theory has made it possible to recognize, on the fringes of production systems, the significance of average players in innovation by taking the role of users into consideration in the sports industry. Additionally, it has opened up the prospect of swapping top-down innovation by a bottom-up or vertical and horizontal approaches (Boutroy, Vignal & Soule, 2015).

2.1.2. Actor–Network Theory in Sports Innovation

As a material-semiotic approach, the actor network theory (ANT) identified technologies as difficult to obtain and frequently unsteady association of non-human and human actors (Hyysalo, Jensen & Oudshoorn, 2016). ANT suggests that the success of an innovation heavily depends on the step by step or progressive creation of a network of stakeholders whose benefits in the project should be protected by interpreting or anticipating their expectations (Latour, 1996). In terms of sports innovation, an actor network factually would involve the players, sports associations, clubs, manufacturing firms, sports products and wide variety of associated people and materials (Timpka, 2008). An actor network is carried out through a specific process namely translation process which comprises three phases (Callon, 1989). In problematization stage, other actors with similar interests and goals are selected by a key actor who is established as an obligatory passage point for decision making. In intersement phase, actors are persuaded by the key actor, in order to admit the definitions that made at the beginning. The final step in the translation process is namely enrolment, where the other actors in the network gradually adapt common goals and definitions. Actor-network theory is based upon three principles in order to address the need for treating the involvements of both non-human and human actors reasonably: free association, generalised symmetry and agnosticism. Tatnall (2010) considers an actor as a black box due to the network of interactions that she/he carries out cannot be clearly traced in most occasions. Latour (2005) argues that the collective existence of actors facilitates the effectiveness of methods they have elaborated to make new product designs.

1.1. Open Innovations in Sports

The concept of open innovation has become more popular during the past two decades. The open innovation approach indicates that firms should obtain valuable resources from external companies and allocate their internal resources for them to develop new service or products (Tidd, 2014). However the model does not provide the answer clearly how or when a firm shares internal knowledge and sources external knowledge. The research on user innovation determines that users have the motivation and knowledge to generate innovations that provides solutions to unmet needs of current regular users. Hence it differentiates from the open innovation research by focusing on conditions under how users can be encouraged to be more innovative, while open innovation research eventually concentrates the benefits of innovation for a manufacturer firm (Bogers & West, 2012). It is also distinguished from other distributed perspectives by its superiority in achieving economies of scale.

When people in an organisation favour newness and change and also highly involve the innovativeness processes, firms often benefit from this circumstance especially in terms of low level resource (membership and financial) usage and high competitive environment which drives innovative outcomes (Winand, Vos, Zintz & Scheerder, 2013). The degree of openness is defined by Lazzarotti & Manzini (2014) by crossing the both dimensions of a firm's strategic position to open innovations namely the extent of external technology exploitation and the extent of external technology acquisition. Open innovation research show that sports organisations benefit from this approach mostly by remaining competitive. The work of Wemmer & Koenigstorfer (2015) demonstrates that the customers of sports clubs are at the same time their members, and they characteristically have a wide variety of expertise and professional backgrounds. They are potentially interested in the activities of clubs and they frequently volunteer for particular activities, through sporting competitions they meet other clubs' members and in some occasions they collaborate with representatives of other stakeholders. Therefore, for sports clubs innovative channels for are always open with regard to their customer and membership backgrounds. However this raises a significant question on how the open innovation can be made useful for the manufacturers in sport industries? According to Hienerth (2006), a combination of the following three strategies could be appropriate: establishing platforms for feedback and information from the overall community, establishing sub-communities innovation groups from the community and identification of lead user for sport industries. As acknowledged by Wemmer, Enrich & Koenigstorfer (2016), sports clubs can potentially utilize open innovation platforms as an easy tool to collaborate with the community and as external knowledge sources. Today, most of the commercial firms in sports industry use online communities as a tool for "open governance" and moreover the use of online communities as open innovation platforms has been in the agenda of professional sports managers.

1.2. Sport-based Entrepreneurship

Ratten (2012) describes sport-based entrepreneurship as the way of thinking of people or attitude of organisations actively engaged in the detection of new prospects in the sports field. It refers to all types of innovative activities in sports setting where majority of activities are improved with a risk taking and proactive quality. In the case of sports, there are numerous types of entrepreneurship including social entrepreneurship, institutional entrepreneurship, corporate entrepreneurship, community-based entrepreneurship, international entrepreneurship, women's entrepreneurship and technology entrepreneurship (Ciletti, 2012: 9).

The sports marketing environment can be identified within three categories of sports product groups. These are participation sports such as billiards, fishing, darts etc., spectator sports including all those organised sports leagues, individual sports, tennis, golf etc. and the last one is a diverse category consisted from sports-related products, athletic shoes, apparel and all types of sporting goods (Fullerton & Merz, 2008). Today all professional sports organisations are profit oriented businesses charging various types of fees for the entertainment provided. As both amateur and professional sports organisations can be considered entrepreneurial, the way these sports entities to be innovative provide an opportunity to achieve the organisational goals, sportive success to gain market share (Ratten, 2011a). Although particular approaches principally valorise such figures as lead users, user innovators or social networks as catalysts and sources of sports innovation, the most likely and quite simply characteristics of a hypothetical example innovator are the key skills and resources indicated in innovation processes (Boutroy et al., 2015). Hence entrepreneurship is one of the key success factors and essential complement of innovation which is utilized by entrepreneurial firms to compete in the global marketplace (Conway, 2010). Risk taking, involvement and entrepreneurship in product development are highly encouraged in an innovation oriented culture (Sattler, 2011).

Sports innovation emerges in many ways including through sports players, sports organizations and by sports teams. As claimed by Ratten (2011b), the major innovations in spectator sports during the past years have been made through computer based entrepreneurial endeavours which help the internationalization of sports and better team or individual player performance. Ciletti (2012) comments that entrepreneurial sports organisations create innovation on the basis of promotions, products and technologies. In individual sports, athletes themselves often play a dual role in innovation processes both as innovators and entrepreneurs redefining their

sports. The major difficulties in entrepreneurial innovation in enterprise setting are often associated with built-in tensions between external entrepreneurs and individuals within an organisation due to unfair allocation of scarce resources and having different perspectives and interests. In the sports domain, the crucial role of external entrepreneurs may be enhanced in enterprise level by improving the share of resources and investing in organisational orientation programs (Andersen & Ronglan, 2015).

Sport-based entrepreneurship is a dynamic process and also affects a wide variety of managerial tasks such as new sport development, product innovation, technological developments, sustainability concerns, social issues, promotional strategies, performance management, crisis management and product strategies (Hemme, Morais, Bowers & Todd, 2016). That is, entrepreneurial success in sports innovation requires attention of managers to create opportunities to reduce the effects of negative drivers and to strengthen the positive impact on entrepreneurship. Aminian, Nikkar & Sadeghi, (2014) list the top three significant priorities in sports entrepreneurship as sport facilities planning and management, matters of sport and sport services.

III. CONCLUSION

In many industries innovation is considered to be equivalent to the technological capacity and resource competences. However, in some industries, especially in the sports industry, where consumer experience is at the forefront, technological capacity and resources may not be sufficient to identify the appropriate innovation. The social aspect of innovation, the contribution of the user to the product, the ability to develop a correct network structure, and the ability to use external resources both in terms of innovation and entrepreneurship have become fundamental principles of competitiveness in the sports industry. In this study, the concept of social innovation is examined under three sections. First of all, the user innovation concept is explained by the adaptation of lead user and actor network theories to the sport industry. It is important to create a common interest area for lead users in order to benefit effectively from user innovations and to create an effective social network to spread these innovations rapidly into the user's mass. The second type of social innovation is open innovation. When technological and technical requirements of innovation are taken into consideration, R&D departments are not always sufficient especially within the limited resource structure of SME-style or non-profit oriented sports organizations. Open innovation practice in the sport business can help both to achieve efficient use of resources and to achieve more efficient user experience data through a large outsourcing flow. Finally, the key to efficiency in entrepreneur-based innovation is the inclusion of sports-based entrepreneurs in processes to innovate in the sports industry. That is why innovations in the sport are often hidden somewhere in existing sporting activities and waiting to be discovered.

References

- [1]. Aminian, E., Nikkar, H. & Sadeghi, S. (2014). The importance of sports entrepreneurship by providing appropriate strategy based on views of sport managers. International Conference on Arts, Economics and Management (ICAEM'14), March 22-23, 2014 Dubai (UAE), (pp. 20-22).
- [2]. Andersen, S.S. & Ronglan, L.T. (2015). Historical paths and policy change: institutional entrepreneurship in Nordic elite sport systems. *International Journal of Sport Policy and Politics*, 7(2), 1-19.
- [3]. Attali, M. & Saint-Martin, J. (2015). Innovation in alpine sports and leisure activities: Issues, processes and dynamics. *Society and Leisure*, 38(3), 310-314.
- [4]. Baldwin, C., Hienerth, C. & Von Hippel, E. (2006). How user innovations become commercial products: a theoretical investigation and case study. *Research Policy*, 35, 1291-1313.
- [5]. Bogers, M. & West, J. (2012). Strategic Utilization of Open and User Innovation. *Managing Distributed Innovation*, 21(1), 61-75.
- [6]. Boutroy, E., Vignal, B. & Soule, B. (2015). Innovation theories applied to the outdoor sports sector: Panorama and perspectives, *Society and Leisure*, 38(3), 383-398.
- [7]. Brata, H.O., Hagen, S. E., Hauge, A., Kotro, T. Orrenmaa, M., Power, D., et. al. (2009). Users' role in innovation processes in the sports equipment industry-experiences and lessons. (Project Number: 07028). Stensberggata: Nordic Innovation Centre.
- [8]. Callon, M. (1989). Some elements of a sociology of translation: domestication of the scallops and the fishermen at St Brieuc Bay. In: Law, J. (Ed.) *Power, action, and belief: a new sociology of knowledge*. Sociological Review Monograph, 32, (pp. 196-233). London: Routledge.
- [9]. Ciletti, D. (2012). Sports entrepreneurship: a theoretical approach. In: Ciletti, D. & Chadwick, S. (Eds.) *Sports entrepreneurship: theory and practice* (pp. 1-10). Morgantown: WV Fitness Information Technology.
- [10]. Conway, C. (2010). Sports entrepreneurship. *The International Journal of Entrepreneurship and Innovation*, 11(3), 251.
- [11]. Desbordes, M. (2001). Innovation management in the sports industry: Lessons from the Salomon case. *European Sport Management Quarterly*, 1(2), 124-149.
- [12]. Duret, P. & Angue, K. (2015). Two norms for innovation in outdoor sports: Technical and social innovation. *Society and Leisure*, 38(3), 372-382.
- [13]. Fullerton, S. & Merz, G. R. (2008). The Four Domains of Sports Marketing: A Conceptual Framework. *Sport Marketing Quarterly*, 17(2), 90-108.
- [14]. Funk, D., Lock, D., Karg, A., & Pritchard, M. (2016). Sport consumer behavior research: Improving our game. *Journal of Sport Management*, 30, 113-116.
- [15]. Hemme, F., Morais, D. G., Bowers, M. T. and Todd, J. (2016). Extending sport-based entrepreneurship theory through phenomenological inquiry. *Sport Management Review*, 38(1), 1-13.
- [16]. Hienerth, C. & Lettl, C. (2006). Exploring how peer communities enable lead user innovations to become standard equipment in the industry: community pull effects. *Journal of Product Innovation Management*, 28(1), 175-195.

- [17]. Hienerth, C. (2006). The commercialization of user innovations: The development of the rodeo kayak industry. *International R&D Management*, 36(3), 273-294.
- [18]. Hyysalo, S., Jensen, T. E. & Oudshoorn, N. (2016). *The new production of users*. New York: Routledge.
- [19]. Hyysalo, S. (2009). User innovation and everyday practices: micro-innovation in sports industry development. *R&D Management*, 39(3), 247-258.
- [20]. Latour, B. (1996). On actor-network theory: A few clarifications. *Soziale Welt*, 47(4), 369-381.
- [21]. Latour, B. (2005). *Reassembling the social: An introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- [22]. Lazzarotti, V. & Manzini, R. (2014). Different modes of open innovation: a theoretical framework and an empirical study. In: Tidd, J. (Ed.) *Open innovation research, management and practice* (pp. 15-37). London: Imperial College Press.
- [23]. Ming, G. & Yang, J. (2013). Research on modern technology and sports innovation mechanism. *Advanced Materials Research*, 680, 284-288.
- [24]. Potts, J. & Ratten, V. (2016). Sports innovation: introduction to the special section. *Innovation: Management, Policy & Practice*, 18(3), 233-237.
- [25]. Praceus, S. (2014). *Consumer innovation at the base of the pyramid: Emerging patterns of user innovation in a resource-scarce setting*. Hamburg: Springer Gabler.
- [26]. Ratten, V. (2011a). Social entrepreneurship and innovation in sports. *International Journal of Social Entrepreneurship and Innovation*, 1(1), 42-54.
- [27]. Ratten, V. (2011b). Sport-based entrepreneurship: towards a new theory of entrepreneurship and sport management. *International Entrepreneurship and Management Journal*, 7(1), 57-69.
- [28]. Ratten, V. (2012). Sport entrepreneurship: challenges and directions for future research. *International Journal of Entrepreneurial Venturing*, 4(1), 65-76.
- [29]. Rolfe, D. & Dittmore, S. (2015). A bit of strategic innovation?: Bitcoin for sports ticket sales. *Case Studies in Sport Management*, 4(1), 132-137.
- [30]. Shah, S. (2000). Sources and patterns of innovation in a consumer products field: Innovations in sporting equipment. (Working Paper No: 4105). Massachusetts: M.I.T.
- [31]. Sattler, M. (2011). *Excellence in innovation management*. Heidelberg: Gabler Verlag.
- [32]. Tatnall, A.D. (2010). Using actor-network theory to understand the process of information systems curriculum innovation. *Education and Information Technologies*, 15(4), 239-254.
- [33]. Tidd, J. (2014). Why we need a tighter theory and more critical research on open innovation. In: Tidd, J. (Ed.) *Open innovation research, management and practice* (pp. 1-13). London: Imperial College Press.
- [34]. Timpka, T. (2008). Politics of safe sports technologies: an analysis of the innovation system for artificial turfs in football (soccer). *Sports Technology*, 1(6), 267-276.
- [35]. Von Hippel, E. (1986). Lead users: A source of novel product concepts. *Management Science*, 32(7), 791-805.
- [36]. Von Hippel, E. (2005). *Democratizing innovation*. Cambridge: M.I.T. Press.
- [37]. Wemmer, F. & Koenigstorfer, J. (2015). Open innovation in nonprofit sports. *Voluntas: International Journal of Voluntary and Nonprofit Organizations* (pp. 1-27). Original paper retrieved from Springer database: DOI 10.1007/s11266-015-9571-5.
- [38]. Wemmer, F., Emrich, E. & Koenigstorfer, J. (2016) The impact of co-competition-based open innovation on performance in nonprofit sports clubs. *European Sport Management Quarterly*, 16(3), 341-363.
- [39]. Winand, M., Vos, S., Zintz, T. & Scheerder, J. (2013). Determinants of service innovation: a typology of sports federations. *International Journal of Sport Management and Marketing*, 13, 55-72.