The Network Structure Of Innovation — Insights From A Sport Innovation Incubator

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Background and aim of the research

Network-based research is a burgeoning research paradigm originating in sociology but gaining increasingly attention and recognition in other research fields including economics, strategic management, entrepreneurship, supply chain management, and sport management (Hoang & Antoncic, 2003; Jack, 2010; Wäsche, Dickson, Woll, & Brandes, 2017). Sport incubators are a relatively new form of entrepreneurial networks comprising various start-up companies in sport business. The purpose of this research is to analyse and understand the structure and outcome of a specific sport innovation incubator utilising Social Network Analysis (SNA). First, we explore network characteristics such as the type and structure of relations among involved companies and their network positions. Second, we analyse how network structure influences the innovation process, the object of innovation and the intensity of innovation.

Theoretical background or literature review

Literature on entrepreneurial networks is rich as evidenced by several meta-analyses (Hoang & Antoncic, 2003; Jack, 2010). Major shortcomings are a lack of knowledge about the structure and content of ties to understand "what is really going on" between individuals, teams, or organisations in networks. With regard to sport management there is only little knowledge on sport-based entrepreneurship (Ratten, 2011) and no study has foucssed on sport incubators. Incubators are a relatively new phenomenon in the sport industry. The international and competitive environment of sport business requires the development of innovative technologies, services, and products. Sport incubators form an interorganisational network in the field of sport management.

Knowledge on the conditions, structure, and outcomes of interorganisational sport networks is sparse (cf. Wäsche et al., 2017). There are two major streams of network research: first, the impact of networks on various outcomes; second, antecedents of networks and their development process (Jack, 2010). This study belongs to the former group of studies. While entrepreneurial network research focuses on outcomes such as entrepreneurial effectiveness and venture performance, other studies show that network and related social capital can influence knowledge acquisition, exploitation, and hence innovation performance. This study investigates the structure of a whole network with regard to innovation.

Methods, research design, and data analysis

Quantitative network data is collected via a cross-sectional survey in a French incubator for innovative start-up companies in sport business. While most companies focus on the development of digital technologies and sport-related information technology, the incubator is open for all kinds of sport-related business. The survey is conducted one year after the creation of the incubator with all start-up companies that entered the incubator at its inception and that stayed for one year at least (n = 16). Explorative interviews with the incubator management team and visits at the incubator are undertaken at the beginning, half-time, and end of the first year of incubation. The survey contains 18 questions. Three questions concern the whole network and allow the simulation of ties between all start-up companies in both directions.

Innovation is operationalised via the phases of the innovation process, the level of novelty of innovations, and the types of innovation. The directional ties of the start-up companies to incubator's institutional and economic partners is taken into account and also motivations for joining the incubator and realised outcomes. This data allows calculation of SNA variables such as density, centrality, betweenness, strength of ties, and other. These will be correlated to the innovation parameters.

Results, discussion, and conclusions

A first inspection of the data shows that the incubator network is moderately dense and highly centralised. The specifically set up network administrative organisation holds the most central position and thus ensures effective network coordination (cf. Provan & Kenis, 2008). Further analyses will provide implications for future research of sport incubators using the SNA paradigm. Managerial implications for start-up companies but also incubator managers and partners of incubators will provide advice on how to best manage relations and interactions and how to benefit from those in terms of innovation and other performance variables.

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