

**Do non-profit sport organisations innovate?
Types and preferences of service innovation within regional sport federations**

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Abstract

Research question: Little is known about innovation in the non-profit sport sector. The present research addresses this gap by questioning whether and to what extent sport federations innovate. It aims to identify types of innovation implemented by sport federations and their attitude and preferences towards innovation.

Research methods: An online questionnaire was administered to a sample of key representatives (i.e. Chair, Secretary General or Directors) of regional sport federations in Belgium (n=101; 70% response rate).

Results and Findings: Directed content analysis of the service innovations described by respondents reveals ten different types of sport and non-sport service innovations. Results suggest that membership size and categories of sport influence preferences in knowledge creation/appropriation, and ultimately the type of innovation developed. This paper also suggests that sport federations are driven by demands by members in meeting their expectations of new services and are not risk averse. On average, the sport federations surveyed have a positive attitude towards newness which favours innovativeness.

Implications: The present study would help researchers to advance further into the knowledge of service innovation in non-profit organisations. It should act as a foundation for research and practice on specific types of service innovation in sport. Managers should realise the importance of attitude for innovation and use the suggested typology to provide new services in different categories and meet members' expectations.

Keywords: service innovation, types of innovation, attitude towards newness, sport federations, sport management

Organisations within the non-profit sport sector such as sport clubs and sport federations face challenges as they compete for membership and resources such as sponsorship, grants, facilities, and volunteers (Newell and Swan, 1995; Vos & Scheerder, 2014; Wicker & Breuer, 2011; Winand, Vos, Zintz, & Scheerder, 2013). Given the competitive pressure that surrounds non-profit sport organisations (NPSOs), and the necessity to differentiate themselves from commercial sport providers (Vos, Breesch, & Scheerder, 2012), such organisations would need to mobilize resources, personal knowledge and skills to implement new ideas, i.e. to innovate. The sport industry has been viewed as a competitive market where being innovative and proactive, favouring risk and creating value and are crucial (Ratten, 2010, 2011a, 2011b). Yet, little is known about innovation in NPSOs, whether or not they innovate, their attitude towards newness and the type of innovations they eventually adopt. The present exploratory study aims to investigate whether and to what extent sport federations innovate, to identify types of innovation within sport federations, and to highlight preferences in knowledge creation/appropriation according to membership size, categories of sport and managers' personal views. The following research questions are addressed: Do sport federations innovate? What types of innovation are implemented by sport federations? Are there types of innovation favoured by specific categories of sport federations? Do sport federations' directors and board members favour newness, and does it impact innovativeness? The present paper contributes to the knowledge on sport management, non-profit and innovation by addressing types of innovation developed by organisations in the non-profit sport sector and their preferences of innovation.

First, the paper defines innovation and service innovation, followed by a review of the literature on innovation in NPSOs. Second, the research context, data collection and analysis are presented in the method section. Third, results setting out percentages of innovative sport

federations, their types of innovation and preferences are presented. Finally, a discussion is drawn from the analysis, and research and managerial implications are suggested.

Literature

Service innovation

Innovation is the successful exploitation of new ideas (Francis & Bessant, 2005). It was originally conceptualised as a dichotomy of technical versus administrative innovations (Crossan & Apaydin, 2010; Daft, 1982; Damanpour, 1996; Gopalakrishnan & Damanpour, 2000). Technical innovations are directly linked to the core activity of the organisation such as its main products or services. Administrative innovations involve the organisation's social structure, administrative processes and managerial aspects needed to achieve the organisation's core activity. Recently, different integrative models have been suggested which identify specific types of innovation. Oke, Burke, and Myers (2007) distinguished product innovation from service innovation, where the latter results in improvement in the delivery and attractiveness of a product. Yet this definition is very much linked to products whereas some organisations are not dedicated to manufacture or to sell products, but to offer services only. Indeed, since the core activity of NPSOs is oriented to the delivery of services (e.g. organising sport competitions, running sport programmes and offering training opportunities), they aim at adopting types of service innovation, being most relevant to them, as opposed to product innovation (Newell & Swan, 1995; Winand et al., 2013). A definition of service innovation distinct from product delivery has been suggested by researchers such as Damanpour and Aravind (2012), Lee, Ginn and Naylor (2009) and Walker (2008) as the introduction of new services to existing or new groups of customers in order to increase the effectiveness of the organisation, its quality and/or the customers' satisfaction.

Innovation in the service industry often lies in non-technological areas, in which there could be made a distinction between innovation in services (i.e. a supply approach) and service

innovation (i.e. a demand approach) (Rubalcaba, 2007). The present study takes a demand approach to the analysis of innovation in service organisations. It focuses on the relationship between the organisation and the customer in meeting his or her needs, or more generally through meeting market demands (Walker, 2008). Innovative services are hence considered new to the adopting organisation and to customer/user target group(s), but not necessarily to a whole sector or industry. Service innovation results from the application of new knowledge to develop new services (Damanpour, 1991; Popadiuk & Choo, 2006). They are new acts or processes (Hipp & Grupp, 2005), and cannot be physically manipulated or owned. Services are purchased for a defined period of time, price (fee), within a limited area, using specific equipment (Lovelock & Gummesson, 2004). As underlined by Edvardsson and Olsson (1996), in service innovation, instead of the service itself that is produced, the new conditions for the service to take place could be considered as innovative.

Members of fitness centres receive access to sport facilities and sport programmes or gain the right to use a sport trainer's expertise. Services are characterised by the integration of the customer, meaning that the production and consumption of services happen simultaneously (Gallouj & Weinstein, 1997; Hipp & Grupp, 2005). A training session can only be seen or experienced if it is followed. The interaction between the training provider represented by an expert and the trainees attending the programme implies the service. The intangible characteristic of services makes it more difficult to detect a modification or an improvement in comparison with products. Therefore identifying and analysing service innovation can be considered a challenge both in research and practice.

Innovation in non-profit sport organisations

NPSOs such as sport federations or sport clubs organise sport activities and competitions for their members from different age groups and abilities (Piéron & De Knop, 2000; Zintz & Winand, 2013). As underlined by Newell and Swan (1995, p.329), NPSOs focus on

promoting their sport through “the provision of programs and services to their members.” The authors acknowledge NPSOs need to exploit new ideas in order to foster higher levels of participation and international excellence. Innovation has undoubtedly been a key part of national sporting success at international sport competitions such as Team GB track cycling’s record of medals at Olympic Games (<http://www.bbc.co.uk/sport/0/olympics/19089259> accessed 07/04/2015), however there is little evidence in research with regards to new ways to promote participation through service innovation. Though, Newell and Swan (1995) argued the ability to innovate is as just as important for NPSOs as it is for other organisations as NPSOs compete for resources to promote their sport. As suggested by Ratten (2012), both for-profit and non-profit sport organisations can show sport entrepreneurship and innovative behaviour. In their conceptual paper, Newell and Swan (1995) used institutional isomorphism (DiMaggio & Powell, 1983) to explain that although NPSOs receive support to promote innovation from their interorganisational network, they may also be restricted to develop types of innovation that do not conform with the norms established by their network (e.g. Sport Council). Newell and Swan’s (1995) paper does not provide further insight into the type of innovation that would be adopted but do acknowledge the importance of new services in order to encourage sport participation.

At the same time, Thibault, Slack and Hinings’ (1993) paper on strategy formulation in NPSOs identifies that NPSOs which innovate (called innovators) aim at developing new programs and initiatives that focus on increasing the number of members and coaches and retain them. Again, the authors do not provide specific examples to support their arguments but argued these organisations show strong competitive position (i.e. low investment needed to participate) and low program attractiveness (i.e. ability to provide services and programs to members). Therefore, according to Thibault et al. (1993) NPSOs could increase their attractiveness by promoting innovative services to get more people involved in their sport.

The importance of service innovation in NPSO is highlighted, but evidence of their innovativeness and types of service innovation is missing.

More recently, researchers (Caza, 2000; Hoeber et al., 2009; Hoeber & Hoeber, 2012) have investigated case studies of innovation in the NPSO contexts. Caza (2000) analysed a Canadian provincial sport organisation (i.e. Amateur Boxing Association) which has developed two innovations as a response to pressure for change: a new athlete ranking system and a new computer scoring system. Only the first innovation was successfully implemented while the other one failed. Caza (2000) analysed the context receptivity of these two innovations. Findings from Caza's (2000) study show that a large part of the success of innovation is due to careful management, alongside with a clear and coherent implementation. The continuous support of a recognised leader (i.e. Vice President of Operations and Competitions) within the organisation seemed important in the success of the athlete ranking system, and the author argued a positive attitude towards that innovation was shared between organisation members though this was not assessed. The reasons for the implementation of the innovations described in the paper (e.g. administrative simplification, attract sponsors and professionalization and modernisation) are to some extent in line with the stated issues and pressure for change Canadian sport organisations face (e.g. need to find alternative sources of revenues, decrease in competitive success and increase of leisure participation). The type of the innovations described is not clear. They are not directly related to the core activities of the organisation, but seem to relate to administrative systems.

Hoeber et al. (2009) undertook an exploratory qualitative study based on interviews to highlight innovations that have been implemented by Canadian communities sport organisations in four different sports (i.e. soccer, swimming, curling and ultimate Frisbee). A range of innovations has emerged such as new programmes, new online services, and new partnerships with external stakeholders, but the list is incomplete and the research lacks details on these specific innovations. Associated to the latter exploratory research, a case

study has been published by Hoeber and Hoeber (2012) which analyses the innovation process and determinants that supported the use by a Canadian community soccer organisation of a new device tracking game-time information called 'Electronic Game Sheet'. The development of this technological innovation was achieved through a close partnership with a local software and Web services company and aimed at improving efficiency and service quality. Hoeber and Hoeber (2012) showed that successful implementation of that innovation requires managerial support and a committed staff, a simple structure and a small staff size, resulting in good communication and flexibility. The authors show that NPSOs can be innovative but the intended outcomes (e.g. referees' and players' satisfaction, service quality, gain in efficiency) of the innovation are not fully disclosed. Attitude of staff, player and particularly referees seemed to having played a key role in the successful implementation of the innovation studied by Hoeber and Hoeber (2012) in a community sport organisation context.

Examples from the sport management literature show that NPSOs implement new sport programs or administrative systems that can be recognised as service innovations. Two types of service innovation seem to emerged which could be associated to technical or administrative innovations. One the one hand, NPSOs develop new services focussing on their core activity such as sport programs and recreational physical activities. These sport service innovations target not only members, both amateur and elite, but also coaches, trainers, referees, and officials. An example of a new sport service innovation is a new training programme called 'Start to Run' developed by Athletic Sport Federations (i.e. Vlaamse Atletiekliga and Ligue Belge Francophone d'Athlétisme) and sport clubs in Belgium to assist people from all ages to get active and run five kilometres (<http://www.sport.be/starttorun> ; accessed 31.10.2014). On the other hand, NPSOs also develop new services in support of the core activity such as online services and managerial processes. As suggested by researchers (Piéron & De Knop, 2000; Zintz & Winand, 2013),

NPSOs need to manage the non-sporting aspects of their sport. This includes for instance communication, administration, equipment and facilities management. Any new service in these areas would be considered non-sport service innovations.

Although instructive and original, previous research on innovation in the NPSO context does not provide any clear guidance to analyse innovation in NPSOs. Research has not yet drawn an overall picture of innovation in NPSOs but individual stories of single innovation and has arrived to similar conclusion in term of support they require, without evaluating the level of that support, e.g. the attitude towards innovation, the degree of innovativeness, and the elements which lead towards one innovation in particular, i.e. preferences in innovation types. In the following section it is argued that knowledge organisational individuals possess influences the type of innovation that will be implemented. Relevance to non-profit organisations is examined.

A review on knowledge and attitude toward innovation

Organisations devote time for their staff to creating (or appropriating) new knowledge internally or externally by exploring new opportunities or developing existing products or services (Cohen & Levinthal, 1990; Levinthal & March, 1993). Whether the source of innovation is from inside or from outside the organisation, the willingness to explore or to exploit ideas that are new to the organisation is crucial for its success. People commitment and attitude towards innovation is seen by scholars (Damanpour, 1991; Damanpour & Schneider, 2009; Polanyi, 1966) as the main starting point for knowledge creation and therefore the application of new knowledge. Attitude is defined by Eagly and Chaiken (1993, p.1) as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor.” Attitude favouring new knowledge application would consequently facilitate innovation implementation (Rogers, 2010). At an early stage, attitude

of staff towards newness is crucial to knowledge creation/appropriation (Damanpour & Aravind, 2012), and could guide preferences in types of innovation.

Authors like Bierly, Damanpour, and Santoro (2009) showed that organisations tend to rely on knowledge their staff possesses and that has been proven to be successful. Staff experience and preferences with a specific knowledge favour the implementation of same types of innovation due to lower resistance to change and higher commitment (Bierly et al., 2009; Walsh & Ungson, 1991). The capability of organisations to innovate is related to their absorptive capacity, i.e their ability to recognise the value of new ideas, to assimilate them and exploit them, and is largely depending of their level of prior knowledge (Cohen & Levinthal, 1990). In the non-profit context, Hull and Lio (2005) argued non-profit organisations would be more inclined to adopt process innovations which according to the authors represent less risk, lower cost and could result in immediate organisational benefit as opposed to product innovations. Furthermore, Hull and Lio (2006) suggested staff of non-profit organisations may not see the benefit or necessity for their organisation to innovate. These authors argue that non-profit staff take fewer risks in their strategic decisions due to the fragile structure of their organisation, its strong culture and non-profit goals, as well as the rather complex distribution of responsibilities (Hull & Lio, 2006). There is no evidence that this is the case for NPSOs, but this argument suggests that if non-profit organisations choose to innovate, they would implement types of innovation within their knowledge comfort zone. As a consequence, it would be possible to highlight patterns of innovation according to organisation-related characteristics. These patterns can reveal certain types of innovation in which an organisation excels, or believes it can excel because it possesses knowledge of these types. Consequently, that organisation can more easily assimilate new but similar knowledge to create new opportunities and obtain an advantage from it (Damanpour & Aravind, 2012; Roberts & Amit, 2003).

Smith and Tushman (2005) found that successful organisations develop streams of innovation over time. This is supported by a study from Damanpour, Walker, and Avellaneda (2009) in the public service sector in England which shows that durable organisational effectiveness was achieved through a history of innovation activity, i.e. combination of different types of innovation over time rather than an occasional innovation success. Not only is it important to innovate, but also to implement various innovations over time, and large organisations which are able to attract more financial resources and skilled professionals would be in a better position to innovate (Damanpour & Schneider, 2006; Frambach & Schillewaert, 2002). These organisations would be able to create and assimilate a larger collection of knowledge and capabilities to allow the implementation of different types of innovation over time. On the other hand, research found that smaller organisations are more flexible, less bureaucratic and could easily and quickly adapt and accept change (Damanpour & Schneider, 2006; Hoerber & Hoerber, 2012). While there is no clear cut result on this question, the general view tends to favour the positive effect between innovation and size (Camisón-Zornoza et al., 2004; Damanpour, 1992). Innovations inducing radical changes would particularly be related to large organisations because they would require additional and key resources (McDermott & Prajogo, 2012), leading to exploration innovation creating new markets and new to the world products or services. However, the importance of size for innovation reported in non-profit making organisations seems lower than those reported in for-profit making organisations (Damanpour, 1992).

No matter their size, knowledge creation and appropriation in non-profits is constrained by external and internal control mechanisms which limit the range of innovations they are able to develop (Damanpour, 1996; Hull & Lio, 2006). According to Hull and Lio (2006, p.57), non-profit organisations have “less freedom in market consideration [compared to for profits] as their market is usually an intrinsic part of the organization’s mission, laid out in the charter”. In line with findings from Desbordes (2002) who studied the commercialisation of

new products in the sport equipment industry, external factors such as regulatory agencies' scrutiny (e.g. public authorities and international sport bodies) could limit the range of innovation that NPSOs could develop. As a result it could be argued that the type of sport promoted by NPSOs (e.g. Olympic vs non-Olympic and team vs individual sports) would influence their ability to innovate and the type of innovation they implement.

Method

Research context

This study focuses on sport federations in Belgium that are recognised by the public authorities (i.e. the Flemish or French-speaking Communities). Due to the process of federalisation of the Belgian state since the 1970s, most of the national sport federations have split into regional sport federations in order to obtain subsidies from their respective governments (Scheerder & Vos, 2013). As a result of this political process, public sport policy is a competence that is organised and coordinated by the communities. As a consequence, in Belgium regional sport federations are in charge of the tasks and activities that are usually executed by national sport federations in other countries (Scheerder, Zintz, & Delheye, 2011). These tasks and activities consist of, among others, the organisation of competitions, the promotion of club-organised sport, the support of elite athletes, etc. At the time of the research, the number of regional sport federations recognised by the public authorities in Belgium equalled 144.

Data collection

The present article analyses whether sport federations innovate, the types and their preferences of innovation. Although the data used were not initially collected for the specific purpose of identifying innovation types within sport federations, the quality of data obtained and high response rate allowed to develop such findings. An online survey, previously tested

among twenty NPSOs in Belgium (i.e. sport clubs), was sent in 2010 to all of the 144 regional sport federations in order to evaluate the number and type of new initiatives (i.e. service innovations) they implemented. Key persons (i.e. the Chair, the Secretary General - throughout or Director) were invited to complete the standardised questionnaire. The questionnaire was designed in three main sections. First respondents were asked to rate four items listed below on a Likert scale (1 = completely disagree to 5 = completely agree) intended to assess their attitude towards the development of new ideas in the form of new services. These items adapted from Damanpour and Schneider (2006) and Frambach and Schillewaert (2002) are: (i) *suggestions of sports clubs should be taken into account*, (ii) *sport federations should deliver new expectations of their members*, (iii) *more financial investment (even risky) should be made by sport federations to develop new services for members*, and (iv) *each sport federation should invest in the development of new services*.

Second, respondents outlined initiatives that have been implemented for the first time by their sport federation, according to a list of general categories of services that a sport federation can offer adapted from Piéron and De Knop (2000) and Zintz and Winand (2013) who highlighted sport federations' main missions, activities and operations. This list included the following sport services: (1) leisure sport activities for different age groups (i.e. under 12, under 18, adults and above 50), (2) the organisation of sports, (3) the introduction of sport rules, (4) training programmes for coaches, referees and elite athletes, (5) sport events; and the following non-sport services: (6) elite sport services, (7) talent identification systems, (8) communication services, (9) sport facilities management, (10) services related to sport equipment, and (11) online services. A similar approach to collect data about service innovations was designed by Subramanian and Nilakanta (1996) who used a list of services adopted by banks. Respondents had the option to indicate services they provide but were not listed, by using the category (12) 'other services'. Respondents shortly described each service mentioned and provided information about sustainability over time. They also indicated when

services were introduced for the first time, before or after 2006. A period of four years before the survey that took place in 2010 was the period during which a service could be considered new, which is in line with the sport federations' quadrennial strategic plans. In this way the time that a service could be considered to be innovative was restricted in line with other studies (Gopalakrishnan & Damanpour, 2000; Jaskyte & Dressler, 2005; Subramanian & Nilakanta, 1996).

The third part of the questionnaire asked participants on a Likert scale (1 = completely disagree to 5 = completely agree) whether they considered their sport federation is innovative, and whether it provides innovative services. Finally, in order to get a hold over the size of the organisations being investigated, data were collected from the respective public authorities with regard to the number of members of the sport federations.

Membership size is considered a reliable indicator of a NPSO size (Winand, Vos, Claessens, Thibaut, & Scheerder, 2014). Furthermore, as a contextual factor, it accounts for the number of individuals directly or indirectly targeted by an organisation's innovations (Damanpour, 1992) which is particularly important for service innovation relying on the interaction with the users.

Data analysis

The perceived level of sport federations' innovativeness is calculated through the percentage of respondents who agree (i.e. scores 4 or 5) their sport federation is innovative.

Service innovations mentioned by respondents were filtered to include only those services that were implemented for the first time between 2006 and 2010 and which were continually in place. Directed content analysis of the description of these service innovations was used to validate their belonging to pre-established categories and to extent or refine these categories (Hsieh & Shannon, 2005). Initial categories were eventually grouped and/or reworded to better report the description of service innovations. Furthermore, new categories were created

to allocate service innovations that did not fit in any particular categories. Average scores of the number of service innovations for each category were calculated in order to indicate to what extent sport federations innovate and which type of service innovation they had mostly implemented.

Sport federations' attitudes towards newness were computed by the average score of the four items measuring attitude towards newness, validated by factor analysis (i.e. Principal Component Analysis) and Cronbach's alpha ($\alpha > .7$). A paired sample t-test was used to determine significant differences between categories. ANOVA was applied to detect whether significant differences occur in types of innovation between groups of federations according to their size, their sport (Olympic vs non-Olympic; individual sport vs team sport vs multi-sports), and the attitude of their staff towards newness.

Sample representation

In total, 101 representatives of the different sport federations participated in the survey, which accounts for a response rate of 70 percent. Since the level of tenure of respondents in their sport federation was, on average, 11.8 years ($SD= 6.9$), it can be argued that the respondents in the sample possess sufficient experience within their sport federation in order to provide reliable answers. The majority of respondents were directors (38% Administrative Director and 24% Sport Director) and 38 percent were board volunteers (14% Chair and 24% Secretary General). In the sample, 35 sport federations (34.7%) are related to Olympic sports, whereas 66 (65.3%) are non-Olympic, showing a reliable representation in terms of sports compared to the total number of 54 (37.5%) Olympic and 90 (62.5%) non-Olympic categories of sports. Among the 101 sports federations surveyed, 60 were representing an individual sport, 16 a team sport, and 25 both individual and team sports, i.e. multi-sports federations. The average membership size of the sample is 13,285 individual members ($SD= 29,295$). A third of the sample of sport federations is considered small with less than 2,390

individual members, and a third is considered large with more than 10,740 individual members, in line with the Decrees from the Flemish and French speaking Communities. The membership figures are missing for eight sport federations. Note that membership size of the regional sport federations in Belgium can be considered small and medium organisations compared to firms.

Limitations

Methodological limitations with regard to the present study need to be considered. First, the survey has targeted one respondent per sport federation who has answered on behalf of his/her organisation. Despite the high level of experience of participants in the survey and the high response rate which allowed for reliable answers, individuals might not have reflected the point of view of their organisation. Second, the majority of respondents were employees of the sport federations versus the board volunteers. This might also have had an influence on the answers given to the questions, although anonymity was guaranteed. Third, the attitude towards newness scale was collected by the use of closed questions for which a degree of agreement was required. This process allows for cross-sectional analysis in order to compare sport federations, but might have restricted the nuance each respondent would have wanted to provide.

[Insert table 1 about here]

Results

Do sport federations innovate?

Fifty-five percent of respondents considered their sport federation is innovative and fifty-five percent considered their sport federation provides innovative services. A total of 458 new services were implemented in the four years preceding the survey by the 101 sport federations. Results show that the number of service innovations implemented over a four year time period by sport federations which took part in the survey ranged from 0 to 15, with

an average of 4.53 ($SD=3.32$) service innovations. This number can be split into two main categories, i.e. sport and non-sport service innovations. On average, sport federations have implemented a significantly ($p<.05$) higher number of non-sport innovations ($M=2.75$; $SD=2.16$) compared to sport innovations ($M=1.78$; $SD=1.74$). The distribution of the percentages of sport federations that have implemented service innovations is presented in table 1. Thirteen sport federations (12.87%) did not innovate while almost a third (32.67%) implemented between four to six innovations, and a few (7.92%) implemented ten or more. A quarter (25.74%) of the sport federations surveyed did not implement sport service innovations while a majority (58.42%) implemented between one to three sport service innovations. Eighteen sport federations (17.82%) did not implement non-sport services innovations while almost half of them (46.53%) implemented between one to three of these.

[Insert table 2 about here]

Types of innovation in sport federations

Table 2 shows the ten different types of service innovation that have been implemented by sport federations, respectively four sport service innovations and six non-sport service innovations. For each type, information is provided on the average number of innovations implemented among the 101 sport federations and the percentage of sport federations that implemented at least one type.

Sport service innovations include new sport activities for all affiliated individual members, leisure sport activities for youngsters and/or for adults, and competitive sport events for participants. Sport for all activities refer to new activities accessible to all members, including, among others, families and disabled people. Examples of these new activities are a national day of cycling, a family sport day and initiation activities to curling for the disabled. Youth and adult leisure sport activities target specific age groups, e.g. toddler initiation to jujitsu, a tennis camp for youth, a start to golf course for adults and senior sports days. Competitive sport events include new competition activities for elite as well as amateur

athletes. Examples are the organisation of new tournaments and open competitions for different age categories. Non-sport service innovations are non-sporting activity innovations and include training programmes for officials, elite sport services, online services, sport promotion, club management support, and sport equipment services. Training programmes are addressed to officials and volunteers working for and with sport federations, and aim to improve their skills. Elite sport services refer to new systems to support young talent as well as senior athletes such as new systems and protocols to detect talents and the creation of a new talent pool academy. Online services are virtual services used by clubs, members and staff to facilitate administrative tasks and to improve processes of communication such as a new online member administration system, new online platform to report competition results and personal webpages for clubs. Sport promotion relates to newly edited magazines and newsletters sent by post mail or web mail. Club management support concerns new services offered by sport federations to assess or improve the way sport clubs are managed such as a support service offered to clubs in order to develop their local sports network and a procedure to grant quality labels for clubs. Sport equipment services are new services provided to sport clubs and members to facilitate the purchase or the rental of equipment at preferred prices through their sport federation. Sport federations have developed a variety of service innovations. On average, they have implemented 3.26 ($SD=1.95$) different types. Two of the most popular service innovations amongst the sample are new training programmes for coaches, officials and referees ($M=0.72$; $SD=0.88$) that have been implemented by 47.52% of the sport federations surveyed, and new online services ($M= 0.57$; $SD=0.57$) that have been implemented by half of the sport federations surveyed.

[Insert table 3 about here]

Innovation preferences for sport federations

According to the membership size of sport federations, no significant differences emerged in the total number of service innovations implemented by different groups of size. However,

significant differences are identified when it comes to specific types of service innovation between small (below 2,390 individual members), medium (between 2,390 and 10,740 individual members) and large (over 10,740 individual members) sport federations (Table 3). Medium-sized sport federations implement significantly more new training programmes for coaches, officials and/or referees ($t_m=1.13$; $SD=0.99$) than is the case for small ($t_s=0.52$; $SD=0.72$) and large ($t_l=0.58$; $SD=0.76$) sport federations. Small sport federations implement significantly less new club management support services ($m_s=0.06$; $SD=0.25$) in comparison to large federations ($m_l=0.39$; $SD=0.67$). Small sport federations implement significantly less new online services ($o_s=0.32$; $SD=0.54$) than medium ($o_m=0.71$; $SD=0.69$) and large federations ($o_l=0.71$; $SD=0.59$).

[Insert table 4 about here]

Table 4 shows significant differences in the number of specific types of service innovation between Olympic and non-Olympic sport federations. Olympic sport federations implement significantly higher numbers of new training programmes ($t_o=0.97$; $SD=0.92$) and new elite sport services ($e_o=1.11$; $SD=1.18$) than non-Olympic ($t_{no}=0.59$; $SD=0.84$; $e_{no}=0.33$; $SD=0.69$). On the other hand, Olympic sport federations show significantly lower numbers of new sport for all activities ($s_o=0.31$; $SD=0.68$ vs $s_{no}=0.71$; $SD=1.03$). This seems to be consistent with the orientation of Olympic sport federations towards elite sport. No significant differences in the number of innovations were found between team sport, individual sport and multi-sports.

Individual organisational members' attitude towards newness was measured by 4 items (Cronbach's alpha = .73). The results indicate that the sport federations have, on average, a positive attitude towards newness ($M=3.81$; $SD=0.6$). Two-thirds of them have average scores higher than 3.5, showing their openness to new knowledge being introduced into their sport federation. The item "sport federations should deliver new expectations of their members" received the higher score ($M=4.07$; $SD=0.75$) compare to the other items

measuring attitude towards newness, and the item “more financial investment (even risky) should be made by sport federations to develop new services for members” received the lowest score ($M=3.51$; $SD=0.93$), nevertheless showing a disposition to take risks. Table 4 shows differences between categories of sport where sport federations managing team sports have significantly higher attitude towards newness ($M=4.14$; $SD= 0.34$) compared to individual sports ($M= 3.71$; $SD= 0.64$).

[Insert table 5 about here]

Table 5 presents differences in the number of innovations implemented between groups of sport federations with indifferent (i.e. scores between 2.5 and 3.5) and positive (i.e. scores over 3.5) attitude towards newness. The latter develop significantly more service innovations in general ($si_p=5.03$; $SD= 3.27$), particularly new leisure sport activities for adults ($a_p=0.4$; $SD= 0.65$), new training programmes ($t_p=0.87$; $SD= 0.94$) and new management support to sport clubs ($m_p=0.36$; $SD= 0.62$). Furthermore, sport federations with positive attitude towards newness implement a significantly higher number of different types of service innovation ($di_p=3.57$; $SD=1.94$), showing a diversity of innovation being implemented.

Discussion

Sport federations were considered innovative by a majority of respondents and a substantial number of service innovations has been identified in the present research, though their impact was not assessed. Newness of the service innovations identified has been established in reference to the organisation implementing the services within four years preceding the survey. A majority of sport federations innovates and some sport federations are considered highly innovative as they implemented multiple and different types of service innovations. For example, 12 sport federations implemented six to seven different types of service innovation over a time period of four years.

In total, ten different types of service innovation have been put forward from this study. A difference is made between sport service innovations and non-sport service innovations. Sport service innovations represent the core activities of sport federations and non-sport service innovations are the processes in support of these core activities. Sport service innovations target the range of sporting activities that would be offered by sport federations to their members. According to Thibault et al. (1993), NPSOs would innovate in order to increase the number of members and retain them. These innovations are original initiatives addressed to different levels of participation or target group(s), i.e. elite or amateur, and to different age groups, supposedly to raise or keep members' satisfaction high. Extending on Thibault et al. (1993) concept of program attractiveness, sport federations would not only innovate in new sport services, but also in administrative services, supposedly to increase the organisation effectiveness or its quality to members. As an example, half of the sport federations surveyed have implemented new online services which demonstrates the importance given to enhancing the quality of virtual services. At the same time, almost half of the sport federations have developed new training programmes which shows the priority given to skills development and to improving its delivery within sport federations. These non-sport innovations target sport federations' members (including sport clubs), volunteers, officials and staff.

The results of the present study showed that on average significantly more non-sport innovations were implemented by the sport federations compared to sport innovations. According to Cohen and Levinthal (1990) and Bierly et al. (2009), the capability of organisations to innovate is related to the prior knowledge and experience of their staff. The absorptive capacity of sport federations would favour the implementation of a higher number of non-sport service innovations, though this needs further research. According to Hull and Lio's (2006) administrative innovations (i.e. non-sport service innovations in the present study) would be preferred by non-profit organisations as they represent less risk, lower cost

and could result in immediate benefits. However, the present study findings contradict Hull and Lio's (2006) arguments that NPSOs are risk averse. On average, it has been shown that staff within the sport federations surveyed favour newness. Moreover, respondents have, on average, agreed their sport federation should take financial risks to provide new services to members. The freedom associated with each type of innovation could also explain why sport federations implemented a greater number of non-sport service innovations compared to sport service innovations, as suggested by Hull and Lio (2006) and Damanpour (1996) in the non-profit context, and by Newell and Swan (1995) and Desbordes (2002) in the sport context. Indeed sport federations are regulated by external bodies (e.g. international sport federations and public authorities) and in line with institutional theory (DiMaggio & Powell, 1983), these bodies can limit the ability of sport federations to develop new sporting ideas that do not conform with their regulation. The monopolistic control of a sport by international governing bodies could impact on the ability of NPSOs to innovate.

Sport federations whose staff favour newness are significantly more innovative and develop different types of service innovation. These types include leisure sport activities for adults, training programmes as well as club management support. In line with previous research in other contexts (Damanpour, 1991; Damanpour & Aravind, 2012; Damanpour & Schneider, 2009) and in the non-profit sport context (Caza, 2000; Hoerber & Hoerber, 2012), the present study demonstrated that attitude favouring the introduction of new knowledge within NPSOs is critical to the level of innovativeness. Results suggest that sport federations highly favouring newness were implementing diverse types of service innovation, suggesting they develop streams of innovation over time. Although the present research has not related innovativeness to performance, mainstream literature (Damanpour et al., 2009; Smith & Tushman, 2005) suggests a history of innovation activity is associated to durable organisational effectiveness.

A closer look at the attitude towards newness scale reveals that sport federations in the sample consider they should deliver new expectations of their members. Sport federations have rated this item with the highest score. This implies that their innovations would be driven by demands by members in line with previous suggestions from Thibault et al. (1993) and Newell and Swan (1995). Most sport federations do not have research and development system that can anticipate (or create) new demands as that can be observed in for-profit organisations. Sport federations seem to adopt a demand approach to service innovation with a willingness to meet members' expectations. Given their limited resources, this reactive approach, as opposed to being proactive and anticipating new demands, would use members' knowledge and expertise by leaving them to suggest, create and/or develop new ideas. Indeed, in the sport context, as shown by Franke and Shah (2003), consumers play an important role in generating new ideas. In contrast with other industries where innovation is usually developed internally, and is controlled and commercialised, innovation in sport can be developed by users (e.g. sport participants) (Franke & Shah, 2003). Innovations emerging from the demand can then be retrieved by sport federations which would refine and diffuse them to all clubs and members. Consequently, it can be questioned whether innovativeness would be influenced by the size of the demand, i.e. membership size.

The present study shows differences in particular types of service innovation between ranges of membership size of sport federations, but not when taking all types together. This means that the membership size of sport federations impacts its ability to implement specific types of service innovation, but not its innovativeness as a whole. This result could reveal that a potential critical size is crucial for particular service innovations, whereas a certain amount of resources and/or target audience (i.e. number of members of the organisation) make the implementation of specific innovations possible or valuable. Indeed, small sport federations (fewer than 2,390 members) have implemented less new training programmes, club management support and online services as compared to medium and/or large-sized

federations. Large and medium sport federations seem better equipped to develop such new services that require a rather higher level of resources, skills, and/or sufficient number of potential users. This supports McDermott and Prajogo's (2012) argument that large organisations would implement innovations demanding additional and key resources. On the other hand, membership size of sport federations is not considered critical for other service innovations in line with studies from Damanpour (1992). An explanation might lie in the distinction between exploration and exploitation innovations (Tushman & Smith, 2002). The latter would rely on existing knowledge to incrementally improve the offer of services to satisfy existing members and would not necessitate high level of resources or skills.

Findings suggest that the sport characteristics managed by sport federations influence preferences in knowledge creation/appropriation, and ultimately the type of innovation developed. In line with Bierly et al. (2009) some sport federations might be inclined to develop similar types of innovation over time. Olympic sport federations develop significantly less new sport for all activities, more new training programmes for officials and more elites sport services than non-Olympic sport federations. Olympic sport federations are driven by sport competitions and sport success so that they need skilled officials to deliver results (e.g. coaches) and regulate competitions (e.g. referees), as well as the best trained athletes. Non-Olympic sport federations are also committed to sport performance (e.g. World Championship), but due to sport regulation in the country (i.e. Belgium), they are less supported to run elite sport programmes. This finding supports Newell and Swan's (1995) argument that NPSOs are restricted to develop types of innovation that do not conform with the norms or regulations established by their network, such as the Sport Council. This could explain why non-Olympic sport federations have fewer knowledge, preferences and/or incentives to develop new elite sport services and to improve their officials' training programmes. At the same time, sport federations managing team sport have significantly

higher attitude towards newness compared to individual sport. Even though further investigation should be made, this finding suggests a culture around team sport that differs from individual sport where team sport federations are more open to the development of new services to meet members' expectations compared to individual sport federations. However, no differences in term of the number of innovations implemented were found between these two sport categories.

Conclusion

The present study shows that NPSOs innovate. Types of service innovation implemented by sport federations have been identified as well as innovation preferences according to organisational characteristics. From the present study it is clear that membership size of the organisation and Olympic feature of sport impact specific types of innovation but not the innovativeness of the organisation as a whole. It is thus important to look at different types of innovation and specific determinants that impact them separately. The present research shows that sport federations favour newness and seem driven by demands by members. Sport federations are willing to take risks in order to meet members' new expectations. A positive attitude towards newness, which was demonstrated by the sport federations surveyed, favours knowledge creation/appropriation and innovativeness.

Despite being the first study that shows a map of service innovations within NPSOs, the present research lacks information on the origins of the innovations implemented and the scale and impact of them. It assumes that each service innovation is worth the same. This limitation provides an opportunity to develop further research on the influence of the network of sport federations and the impact of service innovation in term of organisational change and performance. These opportunities are discussed below.

Research implications

As suggested in the present study, and in line with Hull and Lio (2006), sport federations might be constrained by external and internal factors in applying new knowledge. Further research could investigate why specific innovation preferences occur. As suggested by Bierly et al. (2009), Cohen and Levinthal (1990), and the present study, given their absorptive capacity, sport federations might prefer to innovate in their knowledge comfort zone which could shape a vicious circle that for its part prevents them from developing radical innovations. Further study could investigate what the constraints are on innovation for NPSOs. It could analyse to what extent NPSOs take risks in creating new knowledge, i.e. outside their comfort zone, and the support they might receive and barrier they face from their network.

The diffusion of new sporting practices within sport federations needs a closer investigation to determine under which circumstances these new ideas are developed and whether individual members and sport clubs engage into the innovation process. Sport clubs are best placed to communicate with their members with whom they have close contacts. Moreover, they are able to use local facilities and resources to facilitate the running of new sport activities. Sport federations might not have the ability to develop service innovation requiring too specialised knowledge, resources or infrastructure. According to Hoerber and Hoerber (2012) and Newell and Swan (1995), they would rely on partnerships to successfully develop and implement these service innovations. Furthermore, they could use individual members' knowledge and expertise in generating ideas (Franke & Shah, 2003). Further research could investigate the presence of innovation networks and its impact on the ability of NPSOs to innovate.

Further research could analyse the link between innovation and performance, mentioned by Smith and Tushman (2005) and Damanpour et al. (2009), in the context of non-profit organisations. In particular, do streams of innovation lead to high performance? The method

applied in this research can be used to facilitate the evaluation of service innovation types within non-profit organisations. Organisations developing streams of different types of innovations over time can be identified and their performance can be measured in terms of members' satisfaction, quality improvement, attractiveness or membership increase (for an account of performance measures, see Winand et al., 2014). Furthermore, given the link between attitude and innovation confirmed in the present study, further research could test whether attitude, innovation and performance are related in the non-profit sport context.

Managerial implications

The present study has implications for managers of NPSOs as it highlights the importance of attitude towards newness when applying new and different types of knowledge. Managers should encourage a positive attitude towards the development of new ideas within their organisation. They might also want to encourage application of different types of innovation which could be associated to higher performance. This requests the creation and/or appropriation of different types of knowledge. It would increase the range of activities and services offered by the organisation, both sport and non-sport, in order to perform on various dimensions of the organisational performance spectrum. The list of innovation types presented in this paper can be used to foster diversity in innovation implementation. It can help managers to understand what types of innovation they implement in order to exploit new opportunities meeting members' expectations and to build innovation streams.

Finally, through the present investigation, preferences towards innovation adoption have been highlighted in line with membership size and sport categories. According to the type of organisation, managers could identify which new ideas are favoured. They would be able to build further on their success and investigate opportunities to create partnerships and favour knowledge exchange.

The present study contributes to the literature on sport management, non-profit organisations and innovation. It can be used by scholars and practitioners as a guide and source of innovation types for sport federations. It would help researchers and managers to advance further into the knowledge of service innovation in non-profit organisations and act as a foundation for research and practice on specific types of service innovation in sport.

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Table 1. Percentages of sport federations implementing service innovations

Number of innovations	0	1-3	4-6	7-9	10+	Mean (SD)
Sport innovations	25.74%	58.42%	13.86%	1.98%	0.00%	1.78 (1.74)
Non-sport innovations	17.82%	46.53%	28.71%	6.93%	0.00%	2.75 (2.16)
Total innovations	12.87%	28.71%	32.67%	17.82%	7.92%	4.53 (3.32)

Note. SD: Standard deviations are in brackets; N=101

Table 2. Types of service innovation in sport federations

	Mean (SD)	Min 1 (%)	Definition / examples
SPORT INNOVATIONS	1.78 (1.74)	74.26	
Sport for all activities	0.57 (0.94)	34.65	Activities for all affiliated members, including disabled and cross generation sport activities.
Youth sport leisure activities	0.52 (0.82)	36.63	Leisure sport activities for under 18 years old.
Competitive sport events	0.38 (0.76)	26.73	League cup, championships, tournaments and opens.
Adults sport leisure activities	0.31 (0.58)	24.75	Leisure sport activities for adults
NON-SPORT INNOVATIONS	2.75 (2.16)	82.18	
Training programmes	0.72 (0.88)	47.52	Training programmes for coaches, officials or referees
Elite sport services	0.60 (0.96)	36.63	Talent identification systems, elite sport support services
Online services	0.57 (0.57)	50.50	Websites, web platforms, online membership administration.
Sport promotion	0.44 (0.70)	33.66	Magazines, newsletters
Club management support	0.25 (0.54)	19.80	Quality labels for clubs, club management and networking support
Sport equipment services	0.17 (0.43)	14.85	Equipment leasing schemes, sport club equipment group purchase services
TOTAL INNOVATIONS (4y period)	4.53 (3.32)	87.13	

Note. SD: Standard deviations are in brackets; N=101

Table 3. Results from One-Way analysis of variance by membership size

	Membership size			Sig.
	Small	Medium	Large	
Training programmes	0.52 ^a (.72)	1.13 (.99)	0.58 ^a (.76)	*
Online services	0.32 (.54)	0.71 ^a (.69)	0.71 ^a (.59)	*
Club management support	0.06 ^a (.25)	0.29 ^{ab} (.59)	0.39 ^b (.67)	#

Note. Small < 2390 members; Medium > 2390 and < 10740 members; Large > 10740 members

Standard deviations are in brackets

^a & ^b indicate the result of a Tukey's post-hoc test.

Clusters with the same letter in superscript do not significantly differ.

$p = .05$ / * $p < .05$

Table 4. Results from One-Way analysis of variance by categories of sport

	<i>Olympic sport</i> (n=35)	<i>Non-Olympic sport</i> (n=66)	Sig.
Sport for all activities	0.31 (.68)	0.71 (1.03)	*
Training programmes	0.97 (.92)	0.59 (.84)	*
Elite sport services	1.11 (1.18)	0.33 (.69)	***

<i>Type of team, individual or multi-sports</i>				
	Team sport (n=16)	Individual sport (n=60)	Multi-sports (n=25)	Sig.
Attitude towards newness	4.14 ^a (.34)	3.71 ^b (.64)	3.85 ^{ab} (.56)	*

Note. Standard deviations are in brackets

^a & ^b indicate the result of a Tukey's post-hoc test.

Clusters with the same letter in superscript do not significantly differ.

* $p < .05$ / *** $p < .001$

Table 5. Results from One-Way analysis of variance by attitude towards newness

	<i>Attitude towards newness</i>		Sig.
	Positive (n=67)	Indifferent (n=34)	
Service innovation	5.03 (3.26)	3.56 (3.26)	*
Diversity of innovation	3.57 (1.94)	2.65 (1.84)	*
Adult sport leisure activities	0.40 (.65)	0.12 (.33)	*
Training programmes	0.87 (.94)	0.44 (.70)	*
Club management support	0.36 (.62)	0.03 (.17)	**

Note. Standard deviations are in brackets

* $p < .05$ / ** $p < .01$