Pathways to high performance:

A Qualitative Comparative Analysis of sport governing bodies

Mathieu Winand¹, Benoît Rihoux²,

Leigh Robinson¹, and Thierry Zintz²

¹University of Stirling, Stirling, Scotland, UK

²Université catholique de Louvain, Louvain-la-Neuve, Belgium

Corresponding Author:

Mathieu Winand, School of Sport, University of Stirling, School of Sport, University of Stirling,

Stirling, FK9 4LA, Scotland, UK

Email: Mathieu.winand@stir.ac.uk

Abstract

Nonprofit organizations face increasing pressure to become more performance oriented. Most

research has focused on the effects of a variety of independent variables on performance with

little research focusing on combinations of factors that impact on performance. This paper

focuses on sport governing bodies from Belgium and measures and assesses their strategic goals

and potential determinants of performance. Due to the small N-sample and the causal complexity

inherent in this research, a crisp-set Qualitative Comparative Analysis (csQCA) was carried out

which highlighted three pathways linked with high performance. High performance could be

delivered by sport governing bodies that develop innovative activities for their members and are

proactive in elite sport services; or that develop innovative activities and involve paid staff in the

decision-making processes; or that involve committed volunteers in decision-making processes

and delegate activities they are not able to deliver.

Keywords: organizational performance; sport governing bodies; nonprofit sport organizations;

qualitative comparative analysis; QCA

1

Pathways to high performance:

A Qualitative Comparative Analysis of sport governing bodies

Organizational performance is a central theme in the analysis of organizations (Cameron, 1986; Fiss, 2007; Quinn & Rohrbaugh, 1983) as many managers assess performance for benchmarking purposes. Nonprofit organizations are not exempt from this. However, little research in this field has focused on ways of obtaining high performance. Two main reasons can explain it. First, it is difficult to understand how organizational aspects of nonprofit organizations act and interact to produce performance and second, it is also difficult to define what high performance is within nonprofit organizations due to their multiple goals (Cutt, 1998; Herman & Renz, 1998; Speckbacher, 2003). This papers aims to address this gap by investigating the theory that complex constellations of factors lead to high performance in the nonprofit sector (Cairns, Harris, Hutchison & Tricker, 2007; Caldwell, Farmer & Fedor, 2008; Schmid, 2002). In line with suggestions of Wolfe, Hoeber and Babiak (2002), this research aims to investigate combinations of key determinants that can be linked with high performance of specific nonprofit organizations.

This paper considers the 49 competition oriented sport governing bodies from the Wallonia-Brussels region in Belgium – the French speaking part of the Belgian Federal State as opposed to Flanders and the German speaking Community. Each governing body is responsible for a single sport (e.g., tennis, basketball, swimming) and is required to organize sport activities and competitions for their membership. Due to their recognition by authorities, regional sport governing bodies (RSGBs) all conform to the same system of regulation which allow them to receive grants, which makes it possible to compare these organizations.

This paper begins with a presentation of organizational performance in the nonprofit organization and sport governing body context to highlight the strategic goals and the potential determinants of the performance of RSGBs. This is followed by a presentation of the methodology, including the Qualitative Comparative Analysis (QCA) approach and then the

results showing combinations of key determinants observed in high performing sport governing bodies. Finally, we discuss the three pathways to high performance and the empirical findings of this analysis.

Organizational performance of nonprofit organizations

There is a growing body of research that focuses on the performance of nonprofit organizations (Sowa, Selden & Sandfort, 2004). Nevertheless, as stated by Herman and Renz (2008, p.399) performance "continues to be an elusive and contested concept." Indeed, according to researchers (Baruch & Ramalho, 2006; Kaplan, 2001; Speckbacher, 2003; Stone, Bigelow & Crittenden, 1999), the definition of organizational performance of nonprofit organizations (NPOs) is relatively complex. The mission and purpose of such organizations are often hard to grasp and thus difficult to measure. Their financial context is a constraint as they strive for more financial stability and sustainability. Such organizations have to meet their stakeholders' heterogeneous expectations and needs which influence objectives and whose contribution is hard to assess. Finally, a conceptual difficulty facing all organizations, is that organizational performance is a social construct which does not exist independently of the beliefs and the actions of individuals (Herman & Renz, 1999). Consequently, there is no unique definition of what it represents as it has different meanings for different individuals and thus it is fraught with conceptual ambiguities and difficulties in measurement (Cameron, 1986; Quinn & Rohrbaugh, 1983).

Therefore, in order to obtain some consistency, for the purposes of this paper the definition of organizational performance proposed by Madella, Bayle and Tome (2005) for National Sport Governing Bodies (NSGBs) will be used. It requires a multidimensional approach, combining financial and non-financial measures, which is crucial in the NPO context, as was also discussed by Herman and Renz (1999) and Yavas and Romanova (2005). It refers to "the ability to acquire and process properly human, financial and physical resources to achieve the goals of the organization" (Madella et al., 2005, p. 209). As a result, organizational

performance should be understood as the combination of the 'means and ends' of organizations. The *means* is made up of the determinants of performance, including human and managerial skills. The *ends* are the strategic goals of the organization, which are the raison d'être of the organization. This traditional independent/dependent variable approach helps a better understanding of the concept of organizational performance in nonprofit organizations, such as sport governing bodies.

Organizational performance of regional sport governing bodies

In line with the above definition of organizational performance proposed by Madella et al. (2005) and based on the literature from the nonprofit organization and sport governing body contexts, the next section highlights the general strategic goals and potential determinants of success of governing bodies. Each one is adapted to the RSGB context.

Strategic goals of regional sport governing bodies

The Decree of the 26th April 1999 from the Wallonia-Brussels region in Belgium assigns three strategic goals – elite sport, sport for all, and customer strategic goals – to the 49 sport governing bodies included in the study. Elite sport strategic goal is concerned with high sport performance at international level. Sport for all strategic goal refers to mass sport activities achievement. Customer strategic goal refers to the organizations' non-sport goal of growing and spreading values. Furthermore, these strategic goals reflect dimensions that are highlighted in models of organizational performance in the sport management literature (Bayle & Madella, 2002; Chelladurai, Szyszlo & Haggerty, 1987; Frisby, 1986; Madella et al., 2005; Papadimitriou & Taylor, 2000; Shilbury & Moore, 2006; Winand, Zintz, Bayle & Robinson, 2010). It is assumed that the attainment of these three strategic goals is the consequence of high organizational performance of RSGBs, which can be achieved through key determinants i.e., the *means*.

Potential determinants of performance for regional sport governing bodies

Eleven potential determinants related to high organizational performance of nonprofit organizations and sport governing bodies can be identified in the literature and are justified and discussed below. The large number of determinants initially selected for this study comes from the fact that all relevant determinants that might play a role in high performance should be considered. Following this initial selection, it should be possible to reduce the number of determinants to focus on key determinants. A focus group discussion involving four experts two Chairs, one administrative director of RSGBs and the Vice-President of the Belgian Olympic and Interfederal Committee – were consulted about the potential determinants connected to the high performance of RSGBs. Content analysis of the focus group transcript was performed to confirm the relevance of each potential determinant in the organizational performance of RSGBs. Each determinant is now presented with criteria to assess them which have been established from the nonprofit literature and supported by the specific literature on nonprofit sport organizations. We did not take into account the age of RSGBs because the majority were created in 1977 or 1978 as a consequence of the organization and coordination of sport by regional public authorities. The experts involved in the focus group discussion confirmed the influence of the following determinants in the RSGB context.

Glisson and Martin (1980, p.33) underlined that a "highly centralized human service organization is likely to be highly productive." They highlighted the involvement of paid staff in the decision-making processes as a key criterion of governance. In line with this, Schmid (2002) linked the decentralization/centralization of management to the professionalization of the staff of human service organizations. Decentralized management is probably most appropriate when staff tend to be professional, so that the organizational structure and patterns of management are relatively informal and flexible. Centralized management is most appropriate where high levels of supervision are required and there is formalized decision-making (Schmid, 2002). In addition, Crittenden, Crittenden, Stone and Robertson (2004) showed that formal planning can be seen as

an effort to rationalize managerial practices which lead to different reactions of staff members ranging from resistance to participation. Therefore, in RSGBs the role of board members (usually volunteers) and paid staff in the decision-making process is crucial. Bayle (1999) identified that the character of the Chair, who is usually a volunteer, of a sport governing body has an effect on performance, not matter whether he/she is the main decision-maker or whether other volunteers and/or paid staff are involved in the decision-making process. This leads to two possible determinants of high performance:

- 1. Centralization, which refers to the number of decision-makers in RSGBs, whether one or two leaders are in charge of decisions in RSGBs or several individuals.
- 2. Staff involvement in decision-making, which refers to the role of the decision-maker(s) in the organization, whether the decision-making processes involve at least one paid member of staff or only volunteer(s).

The role played by technical paid staff (those in charge of sport activities) and the delegation of tasks has gained the attention of researchers in the sport management field (Bayle, 1999; Papadimitriou, 2002; Thibault, Slack & Hinings, 1991; Zintz, 2004). Because RSGBs are very small organizations with few staff (60 per cent have two or fewer paid staff), their organization chart is flat and therefore some structures overlap and formalization is reduced (Zintz & Camy, 2005). In line with Schmid (2002) and Crittenden et al. (2004), due to the small and informal structure of RSGBs, supervision of staff and professionalization, in terms of task orientation, should therefore be seen as relevant factors. Thus, a possible determinant of performance is:

3. Task orientation and supervision, which focuses on the level of division of labor and supervision of the paid staff by someone in charge.

Several researchers have pointed to the involvement of board members of nonprofit organizations in strategic planning as a key factor related to performance, and to low conflict within the board (Bradshaw, Murray & Wolpin, 1992; Ferkins, Shilbury & McDonald, 2009;

Siciliano, 1997). Brown (2005) has also identified the adherence of the board to the organization's strategy as one factor of success. Strategic planning is thus needed to keep nonprofit organizations focused on their mission and goals (Giffords & Dina, 2004). In the sport organization context, Bayle and Madella (2002) and Madella et al. (2005) also underlined the organizational atmosphere created by board members and paid staff, and the involvement of sport clubs. Together, they form part of the role of RSGBs. Other research has identified the connection to influential funders developed by board members of nonprofit organizations (Brown, 2005) and the connection of sport governing bodies to national or international partners (Madella et al., 2005; Papadimitriou & Taylor, 2000), as well as their ability to promote their sport (Bayle, 1999) as dimensions that might affect their performance. Thus, the next two determinants are:

- 4. The vision of RSGBs, which refers to the development of a strategy shared by the staff of RSGBs (volunteers and paid staff) and the relationship between them, and with sport clubs.
- 5. External relations, which refers to the strength of the external contacts of board members with local, national, international and commercial partnerships. It also refers to the promotion of the sport of the RSGBs.

The ability of board members of nonprofit organizations to attract resources has been linked with their effectiveness (Brown, 2005; Smith & Shen, 1996). In the RSGB context, this is demonstrated mainly by independence from public funds, because significant sponsorship resources are rare (Zintz, 2004). Indeed, a RSGB that receives less than 40 per cent of its funding from public resources should be considered as financially independent (Winand, 2009; Zintz, 2004). Thus, the next determinant is:

6. Financial independence, which refers to the amount of financial resources received by a RSGB from public authorities, which could make it financially independent.

The technical competencies (e.g. financial or legal) of board members, which justify their control over the organization, may affect the strategic direction that they provide and thus their

performance (Brown, 2005; Crittenden et al., 2004). Balduck, Van Rossem and Buelens (2010) have highlighted that the commitment of board members of local sport clubs to their boards is essential. Furthermore, they should possess specific competencies (cognitive, emotional and social intelligence competencies) which make them outstanding board members. Herman and Renz (1999) proposed that organizational effectiveness depends in part on the ability to be more effective at recruiting skilled board members, although they noted that there is little evidence to prove this relationship. Nonetheless, the Deloitte and Touche Consulting Group (2003) also advised sport governing bodies to take an active role in recruiting and retaining board members. Therefore the next possible determinant of performance is:

7. Board member management competency, which refers to the ability of RSGBs to attract, retain and train skilled board members.

Nonprofit organizations like sport governing bodies provide services to satisfy their membership. The development of new services is of benefit to the organization as this can lead to higher levels of performance (Deshpande, Farley & Webster, 1993; McDonald, 2007). This research focused on the innovative activities that RSGBs put in place to satisfy their members, which are referred to as service innovations (Damanpour & Aravind, forthcoming 2012; Miles, 2005). An example of this is RSGB support services and programmes to increase mass participation in sport and to develop sport activities (Madella et al., 2005; Slack & Parent, 2006). In addition, nearly all sport governing bodies have elite athletes as a specific category of membership. According to research (Deloitte & Touche Consulting Group, 2003; Madella et al., 2005; Papadimitriou & Taylor, 2000) the services that sport governing bodies provide to their elite are likely to facilitate elite performance, although due to the size of RSGBs, elite training structures are on a small scale. The next two possible determinants of performance are:

8. Innovative activities, which refers to new and different services (sport or non-sport) developed by RSGBs to satisfy their membership.

9. Elite training structures, which refers to active strategies and programs implemented to identify talented members, to develop their sport potential and to support their training.

Size has long been linked with performance and can be interpreted as the number of customers or staff (Papadimitriou, 2002; Slack, 1985; Smith & Shen, 1996). In the RSGB context, size is also crucial, as is whether the sport they promote is an Olympic or non-Olympic sport. These criteria are essential because there are used by the authorities in order to allocate grants (Decree of the 26th April 1999 from the Wallonia-Brussels region in Belgium). Thus, the final two possible determinants of high performance are:

- 10. Size of RSGBs, which refers to their number of members.
- 11. Sport objectives, which refers to the sport the RSGBs promote, whether it is an Olympic or non-Olympic sport.

Each of the determinants proposed can play a pivotal role in the achievement of the three strategic goals of the RSGBs. Alternatively, specific determinants alone might be a key success factor. In addition, a combination of a number of these determinants may also be a pathway to success. The aim of this research is to identify the pathways to high performance made up by these determinants, acting and interacting, within nonprofit sporting organizations. Therefore, the following research question guided the research:

Which combinations of key performance determinants are related to highly performing regional sport governing bodies (RSGBs)?

In order to analyze the link between the potential key determinants and performance, Qualitative Comparative Analysis (QCA) was carried out as this represents one method by which the exploration of the complexity of organizations can be conducted (Greckhamer, Misangyi, Elms & Lacey, 2008; Kogut & Ragin, 2006). This approach is discussed in the next section.

Methodology

A mixed method design based on Qualitative Comparative Analysis (QCA) was used to analyze the organizational performance of RSGBs. To conduct this innovative method, first the

achievement of the strategic goals of the 49 RSGBs was measured in order to identify high performing RSGBs. A sample of diverse RSGBs was then selected to assess the way they operate in terms of the determinants highlighted. Finally, specific QCA technique (crisp-set QCA) was used to highlight combinations of key determinants observed in the selected high performing governing bodies.

The Qualitative Comparative Analysis approach

Qualitative Comparative Analysis (QCA) is a configurational comparative approach (Ragin, 1987, 2008) which develops a conception of causality that leaves room for complexity (Berg-Schlosser & De Meur, 1994; Rihoux & Ragin, 2008) and therefore it is a valuable method for strategic management research (Greckhamer et al., 2008). Fiss (2007, p.1180) argued that configurational analysis takes a "systemic and holistic view of organizations, where patterns or profiles rather than individual independent variables are related to an outcome such as performance." Furthermore, QCA is relevant in fields where the maximum number of cases is, of necessity, limited (Rihoux & Ragin, 2008). It identifies, according to 'causal regularities', key combinations of necessary and sufficient properties (independent variables called conditions in QCA terminology) that lead to a phenomenon (dependent variable called outcome in QCA terminology) (Rihoux & Ragin, 2008). Thus, it is appropriate for this research as it aims to highlight pathways to high performance in a limited number of RSGBs.

Performance measurement of regional sport governing bodies

A quantitative measure was developed in order to identify high performing RSGBs, which was adapted from Madella et al. (2005). The 'dependent' variable (outcome) studied refers to whether or not RSGBs were able to achieve their three strategic goals (elite sport, sport for all and customers) in 2005. In line with the literature, the model included eight quantitative performance indicators (indicated in brackets for each objective) which together measured the achievement of the strategic objective(s) of each strategic goal. The elite sport strategic goal refers to the objectives 'to obtain international sport results' (measured by international sport

results) and 'to increase athletes' participation in international sport competitions' (measured by expenditure on elite athletes per international competition and number of participants in international competition). The sport for all strategic goal includes the objective 'to increase sport activities for membership' (measured by sport trainers per member and sport services expenditure per member). The customer strategic goal groups the non-sport objectives of RSGBs including 'to sustain sport values in society' (measured by the percentage of members under 18 years old) and 'to increase their membership figures' (measured by the increase in members and also specifically in female members). The validity of the indicators was considered and agreed by a second group of four experts from sport or management who use performance indicator assessment techniques (Vice-President and the General Secretary of the Belgian Olympic and Interfederal Committee and two Professors of the Louvain School of Management). The year 2005 was chosen because it followed a four-year cycle - an Olympiad - during which the pressure on Olympic sport governing bodies was very high.

Data for all RSGBs was collected using the Regional Sport Agency database. The values of the indicators in 2005 were calculated for each of the 49 RSGBs. According to standard normalization, a performance score from '0' to '10' was obtained for each indicator: the higher score, the better a RSGB performed in comparison with the other RSGBs in 2005. The average performance score for each objective and then for each strategic goal was computed.

Consequently, each RSGB obtained three performance scores showing their ability to reach each of their three strategic goals.

Finally, two complementary clustering methods were computed – Hierarchical Ascendant Classification with the Ward method and K-means (non-hierarchical) clustering (Fiss, 2009; Ketchen & Shook, 1996) – to highlight clusters including high performing RSGBs. The point of this was to minimize the intra-group variance and maximize the inter-group variance. Therefore, RSGBs included in the same cluster showed similar performance scores, but were different from the RSGBs included in another cluster. The number of clusters was determined according to the

dendrogram resulting from the Ward clustering method and three clusters emerged. The degree of convergence between the Ward versus K-means clustering methods was very high (98.2%, one RSGB - Clay shooting - is distributed in different clusters). This means that high performing RSGBs, which achieve their strategic goals better than the other RSGBs, appear to have properties the others do not have. These can be considered as key determinants of performance.

Assessment of the determinants of regional sport governing bodies

Eighteen RSGBs were selected to represent RSGBs with dissimilar combinations of determinants in order to enlarge the scope of the analysis, but still allow detailed study of the RSGBs. The sample of RSGBs covered different sizes, different sport objectives and different levels of performance. An additional criterion was that the RSGBs well known to the researchers were chosen (Ragin, 2008; Rihoux and Ragin, 2008). Semi-structured interviews were conducted with one volunteer (usually, the chair) and one paid member of staff (usually, the administrative manager) of each RSGB in the sample (36 interviews). Furthermore, an analysis of the annual reports from 2001 to 2005 of these eighteen governing bodies was carried out.

Content analysis of the interview transcripts and the annual reports was carried out to assess the way the eighteen RSGBs were operating before 2005 (the Olympiad 2000–2004), according to the eleven potential determinants highlighted in the previous discussion (These are called conditions hereafter for csQCA). A qualitative scale adapted for each determinant was developed and summarized by a unique standardized scale (strong-weak) wherever possible. Eight determinants were assessed following a similar scale from very weak to very strong: 'Centralization [CEN]'; 'Task orientation and supervision [TOS]'; 'Vision [VIS]'; 'External relations [EXR]'; 'Financial independence [FIN]'; 'Elite training structure [ETS]'; 'Innovative activities [INA]'; 'Board member management competency [BMC]'.

The determinant 'Staff involvement in decision-making [SID]' was assessed according to the status of the individual(s) involved in the decision-making process - volunteer(s) and/or paid staff. The determinant Size [SIZE] was assessed according to the threshold of 5,000 members

established by the Decree of the 26th April 1999 from the Wallonia-Brussels region in Belgium, which distinguishes large sized RSGBs from medium and small sized RSGBs. Finally, the determinant 'sport objectives [SPORT]' was assessed following the inclusion of the sport in the Olympic Games or not. Following this, it was possible to analyze the link between (high) performance and potential determinants (key success factors) using csQCA.

Crisp-set Qualitative Comparative Analysis (csQCA)

The QCA techniques are based upon the matching and contrasting of cases which eliminates negligible conditions (no matter if a condition is present or absent, the phenomenon occurs anyhow) or trivial conditions (a condition is present or absent for almost all cases) in order to highlight the minimum necessary and sufficient conditions that can 'explain' the (non) occurrence of the outcome. This process of reducing, through Boolean or set-theoretic algorithms, complex expressions into shorter combinations of conditions is called 'minimization' (Ragin, 2008; Rihoux & Ragin, 2008). Two main minimizations can be performed: with or without logical remainders. Logical remainders are logically possible configurations of conditions that researchers do not observe as empirical cases because they are limited in their selection or because such cases do not (yet) exist (Ragin, 2004). Consequently, every possible configuration, according to the conditions considered, leading to the outcome can be analyzed.

Most of the time, minimizations with logical remainders lead to parsimonious ('short') solutions.

This research focused on crisp-set QCA⁽¹⁾ (csQCA). It requires dichotomous data (1/0). Thus, the quantitative and qualitative data obtained from the measurement of performance and the assessment of the determinants was transformed into dichotomous data. This information can be usefully synthesized in a dichotomous data matrix, called a 'truth table'. This shows the configurations of the determinants (conditions) of the cases selected, linked with their performance (outcome). Each configuration refers to one or more RSGB. To be valid, each one must show only one outcome value ([1] or [0]), so that there is no contradictory configuration.

Three determinants already show dichotomous data. 'Staff involvement in decision-making: [SID]' (volunteer(s) and paid staff ([1]) or only volunteer(s) ([0])), 'Size [SIZE]' (threshold of 5,000 members splitting large size ([1]) from medium and small size ([0])) and 'sport objectives [SPORT]' (Sport included in the Olympic Games ([1]) or not ([0])). The coordination dichotomies for the other eight determinants were all coded in the same direction with a score of [1] signalling the presence (very strong, rather strong and partially) of the determinant and a score of [0] signalling its absence (none, very weak and rather weak). Thus a dichotomous picture of the configuration of each RSGB was obtained.

The number of determinants should be reduced according to the number of relevant cases selected in order to obtain a theoretically valid model. The ratio between the number of variables (conditions + outcome) and the number of cases has to be limited to 0.33 or less (Marx, 2005). Therefore, a first csQCA aimed to highlight key determinants whereas a second csQCA, carried out only with the sufficient determinants, showed combinations of key determinants leading to performance.

Finally, face-to-face interviews were carried out with actors of RSGBs to discuss the results of the second csQCA. Interpretation of the results of this study through the discussions of individuals and the fine-grained analysis of each RSGB helped to understand the sequences of conditions/determinants observed in high performing sport governing bodies (Duckles, Hager & Galaskiewicz, 2005; Pentland, 1999; Rihoux & Lobe, 2009; Rihoux & Ragin, 2008). Therefore, the richness of the data, the complexity of the cases analyzed and the actors' narratives are considered in the following discussion of the identified pathways to high performance.

Insert Table 1 about here

Results

First, the results of the performance of the 49 RSGBs are presented to highlight high performing RSGBs. Second, the synthesis of the assessment of the 11 potential determinants for

the 18 selected RSGBs is highlighted. Finally, the analysis of the key determinants of performance is shown according to the crisp-set Qualitative Comparative Analysis (csQCA).

Performance clusters for regional sport governing bodies

Performance has been defined in this research as the achievement, in 2005, of the three strategic goals of RSGBs (sport for all, elite sport and customer strategic goals). Table 1 shows the performance scores of the three strategic goals for the RSGBs (with the exception of multisport adapted and labor table tennis as they do not have all three objectives) and the higher the score, the better the performance. Seven of the 18 RSGBs subsequently selected (athletics, jiu-jitsu, archery, wheelchair sports, petanque, fencing and swimming) achieved their goals in 2005 and are considered to perform highly. They are all part of cluster 3. RSGBs included in cluster 1 show relatively low performance in achieving their three strategic goals in 2005. RSGBs included in cluster 2 perform relatively low on some strategic goals, such as elite sport, and highly on other(s). They are medium performers. Through this clustering, a clear picture of the performance of the 49 RSGBs was obtained. Following this, using researcher case knowledge, the performance data and the methodological imperative to analyze various types of RSGBs, eighteen RSGBs were selected for detailed analysis on the basis of different levels of performance, different size and different sport objectives. These are identified by italics and bold in Table 1.

Insert Table 2 about here

Configurational analysis

Table 2 shows a synthesis of the result of the primarily qualitative assessment of all the determinants for the sample 18 RSGBs, which is linked with the performance cluster they belong to.

Eight RSGBs were governed by only one or two volunteers (the Chair and/or the general secretary), without any paid staff being involved in decision-making processes. Amongst these,

six showed a strong division of labor and supervision of staff. Three of them - archery, athletics and swimming - are included in cluster 3 and thus they performed highly.

Volunteers of seven RSGBs were involved in strategic planning and shared the same strategy as paid staff. Four of these showed strong external partnerships and development of innovative activities for their members and two of them performed highly: fencing and petanque.

In contrast, eleven RSGBs showed intra-organizational conflict or a globally conflicting vision. Amongst these, six had a governance structure not involving paid staff and weak external partnerships, partially due to a lack of financial and human resources. Nevertheless, three of them performed highly: archery, jiu-jitsu and wheelchair sports.

Seven RSGBs were somewhat financially independent from public funds, although no RSGB received appropriate resources from sponsorship. Five of them had more than 5,000 members whereas eight of the ten small size RSGBs were somewhat financially dependent. This shows the strong link between size and financial dependence upon authorities.

Seventeen RSGBs showed no or weak board member management competency as only Gymnastics sought skilled board members. This makes this condition trivial (Ragin, 2008; Rihoux & Ragin, 2008). Indeed, the great majority of the RSGBs selected had no board member management competency. Consequently, this was rejected from the further analysis as it cannot be a key success factor.

Organizational performance analysis with csQCA

Building upon the determinants of the sample of RSGBs and the achievement of their strategic goals, their organizational performance was analyzed. The outcome value of the seven high performing RSGBs is [1] (cluster 3). The outcome value of eleven RSGBs (clusters 1 and 2) performing at a low level is [0]. The configuration of determinants presented by these eleven RSGBs cannot lead to high performance, which is discussed further below.

A first csQCA (minimizations with logical remainders with the software Tosmana 1.3) was performed to match and contrast the selected 18 RSGBs in order to eliminate negligible,

redundant and trivial determinants. Consequently, it identified determinants observed in high performing RSGBs which are not redundant or trivial. QCA reveals five key determinants: (1) innovative activities [INA], (2) elite training structure [ETS], (3) centralization [CEN], (4) Staff involvement in decision-making [SID] and (5) size [SIZE].

Insert Table 3 about here

The 'truth table' (Table 3) with the five key determinants shows no contradictory configurations, but twelve configurations of conditions, each with a unique outcome value. Therefore, these key determinants might be sufficient, according to the cases selected, to 'explain' the performance of RSGBs.

Insert Figure 1 about here

Figure 1 represents the solution for high performance of the second csQCA with the five key determinants. It results from minimizations with logical remainders and one fictive case ⁽²⁾ for which an outcome has been chosen. The determinants, expressed by their symbol, are followed by the values {1} or {0} according to the dichotomization. Basic logical operators are used to express the connections between the conditions. The [*] (multiplication) symbol represents the logical 'AND'. The [+] (addition) symbol represents the logical 'OR'. Finally, the arrow symbol [→] represents the link, usually causal, between the combinations of determinants and performance.

The solution of the minimization for high performance can be read as follows: the outcome value [1], which is high attainment of the three strategic goals of RSGBs (sport for all, elite sport and customers) is observed:

in RSGBs that combine innovative activities [INA{1}] *AND* have an elite training structure [ETS {1}] *OR* involve paid staff in their decision-making processes [SID{1}] *AND* innovative activities [INA{1}] *AND* large size [SIZE {1}] *OR* centralization [CEN {1}] *AND* involve only volunteer(s) in their decision-making processes [SID{0}] *AND* small size [SIZE {0}].

This solution highlights three combinations of key success determinants that are linked with high performance. It shows that RSGBs which (1) develop innovative activities for their members and have an elite training structure are likely to their strategic goals, as well as (2) large sized RSGBs which develop innovative activities and are governed by volunteers with the involvement of paid staff, and (3) small sized RSGBs which are governed by one or two volunteers.

According to Marx (2005), the model combining six variables (5 determinants and 1 outcome) to analyze performance of 18 RSGBs is theoretically valid (ratio=0.33). However, RSGBs have several other determinants that impact on their internal functioning, which are considered in the following discussion.

Insert Figure 2 about here

Discussion

Interpretation of the results of this study through the face to face interviews with three of the selected RSGBs and a fine-grained analysis of each, led to the identification of three pathways to high performance (Figure 2). The three combinations of key determinants observed in high performing RSGBs (underlined and in bold in Figure 2) are the basis of these pathways. However, even though the key determinants are crucial in these pathways, they may only emerge under specific conditions and/or following specific determinants, suggested by the interviews and fine-grained qualitative analysis.

The first pathway is based on two key determinants: elite training structure and innovative activities (Figure 2, pathway 1). The services RSGBs are able to provide to their members and elite athletes are considered crucial to performing highly. Athletics, swimming and fencing develop systems to identify talent and to develop this as well as providing new sport services to satisfy their membership, such as organized active leisure in athletics. Thus, they are proactive. The first two are large in size and the three of them are Olympic oriented. Therefore, due to their sport specificities, they receive large financial support from the authorities which makes them financially dependent upon public funds. They have sufficient revenue to invest in

services for members as well as identification and training structures for their large elite athlete pool. Moreover, they can also invest in external relations to increase membership. In line with Madella et al. (2005) and Slack and Parent (2006), this first pathway highlights governing bodies which deliver new and different activities to satisfy their membership, while at the same time providing the necessary services to develop elite performance.

Petanque illustrates the second pathway and its key determinants are its large size, the involvement of paid staff in decision-making processes and the development of innovative activities (Figure 2, pathway 2). The two employees of this governing body have lengthy experience of 15 and 21 years. Consequently, the knowledge they have about the organization is often greater than the knowledge of the board. Thus, they are involved in decision-making and they organize themselves, under the supervision of a Board volunteer. This trust between volunteers and paid staff results in a shared vision leading to the development of a common strategy realized through innovative services. Its large size allow petangue to keep experienced staff and also to be financially independent so it is free to allocate resources for the strategy developed, which includes innovative activities. The reduced formalism (Zintz & Camy, 2005) and the crucial role experienced paid staff fulfill in the decision-making processes (Bayle, 1999; Glisson & Martin, 1980) argue in favor of the decentralization of management promoted by Schmid (2002). The development of innovative activities to satisfy and attract members seems to be particularly relevant for large sized RSGBs. In addition, three RSGBs (handball, triathlon and orienteering) performed highly in the sport for all strategic goal. Therefore, the involvement of experienced paid staff in the decision-making process is advised no matter the size of the sport governing body.

Jiu-jitsu, archery and wheelchair sports illustrate the third pathway of small size and governance led by one (or two) key volunteer(s) (Figure 2, pathway 3). Due to their sport specificities, they do not attract a lot of members. Therefore, their financial and human resources are weak. They are not able to invest in an elite structure and/or innovative activities. However,

contrasting with the arguments of Smith and Shen (1996) and Brown (2005), these RSGBs, with weak financial resources, achieve their strategic goals. They rely on committed volunteer(s) and delegate activities they are not able to deliver to their sport clubs. They are reactive in supporting their sport clubs. These small sized RSGBs are governed by one or two leaders who are able to lead the whole organization despite some conflicts. As Bayle (1999) concluded, the presence of a strong leader can have an effect on performance and this might be particularly true for (very) small sport governing bodies.

Depending on financial and human resources, sport governing bodies need different approaches to achieve their strategic goals. If they have experienced staff and large or sufficient financial resources, they should be proactive and adapt services to membership and develop elite structures or involve paid staff in the decision-making process. If they have financial difficulties and/or non-experienced staff, they should invest in specific activities and utilize the experience of their volunteer(s) and support their sport clubs to develop elite structures and innovative activities.

Conclusion

Based on a mixed method design combining quantitative performance measurement, qualitative assessment and crisp-set Qualitative Comparative Analysis (csQCA), three pathways to high performance for regional sport governing bodies in Belgium have been considered. Each pathway includes key determinants that have been observed in high performing RSGBs:

- 1. innovative activities and an elite training structure;
- large size, innovative activities and involvement of staff in the decision-making processes;
- 3. small size and great involvement of one or two volunteers in the decision-making process, and the delegation of some activities.

The services RSGBs are able to provide to their members and elite athletes are considered crucial to performing highly, particularly for large sized RSGBs. However, not all RSGBs have

the opportunity to provide many services, because these need large human and financial resources. The combination of size and paid staff involvement in the decision-making processes has also been highlighted as critical. Depending on their size and the experience of paid staff, RSGBs should either focus on a shared vision or rely on leaders. Large sized RSGBs should involve experienced paid staff in their decision-making processes and develop innovative activities, while small sized RSGBs should delegate activities they can not afford. One leader of the latter RSGBs may be sufficient to manage them, but this is not advised for large sized RSGBs.

This study offers several implications for the managers of sport governing bodies (SGBs) who want to manage their organization in line with their financial and human resources. SGBs which have experienced staff and large or sufficient financial resources should be proactive. They should adapt their services to their membership needs and develop elite structures or involve paid staff in the decision-making process. Satisfaction of membership through the development of innovative sport services is seen as crucial to performing highly. SGBs which have financial difficulties and/or no experienced staff should invest in specific activities and utilize the experience of their volunteer(s) and support their sport clubs to develop elite structures and innovative activities. The presence of a leader is important for small sized organizations whereas the involvement of experienced staff in decision-making processes either by providing advice or taking part in decision-making is seen as beneficial no matter what size.

Limitations and implications for future research

There are two main methodological limitations to consider in this research. First, not all of the 49 RSGBs have been analyzed in this research. This was so that in-depth interviews could be conducted. Secondly, every solution emerging from QCA has to be carefully interpreted. Even if this csQCA has highlighted five key determinants linked with high performance, the other determinants should not be neglected because they are part of the internal functioning of each RSGB. The dichotomous calibration should not be seen as a limitation and the assumption

is that no information has been lost. Indeed, as Rihoux and Ragin (2008, p.14) stated, it may be necessary to refer "back to the cases with all their richness and specificity." Thus, the fine-grained qualitative analysis of cases and narratives through interviews was used to give a reliable interpretation of the results investigating the pathways of high performance.

In spite of such limitations, QCA has proven to be an adequate method to understand which combinations favor performance in nonprofit sport organizations. The key success factors leading to high performance were identified, as a consequence of the focus on combinations of the necessary and sufficient conditions of the QCA.

The results of this study suggest that researchers should analyze combinations of factors leading to performance and not only the net effects of variables. Indeed, this configuration analysis is useful to cover simultaneous co-occurrence of possible multiple interaction effects, which infer some logically causal chains. It goes well beyond the net effects of independent variables and future research needs to take into account the way factors affect each other in order to produce results. Their presence (or absence) might lead to different results according to the factors with which they are combined. This is particularly relevant in the nonprofit (sport) organization context, due to the complexity of these organizations – combining volunteers and paid staff, multiple strategic goals and mixed financing – which demands complex explanations.

Notes

(1) A distinction has to be made between crisp-set QCA (csQCA), multi-value QCA (mv QCA) and fuzzy-set QCA (fsQCA). In csQCA data are dichotomous so that only the presence and the absence of the conditions and the outcome are showed. In mvQCA, the conditions can display more than two values to reflect more fine-grained empirical differences (for instance, a distinction between a leadership governance, a governance involving a handful of key individuals and a governance involving the whole staff). In fsQCA, data are located in a continuum between 1 and 0, so that the degree of presence or absence of the conditions and the outcome is computed.

(2) Solution for high performance in figure 1 (with the 5 key determinants) results from a second csQCA. Indeed, the first csQCA with logical remainders of both high and low (outcome [1] and [0]) performance has shown one contradictory simplifying assumption. One logical remainder (logical remainder 1 in Figure 1) was used both in the minimization of the outcome values [1] and [0]. To solve this contradiction, the outcome value [1] was assigned to this logical remainder because it showed that elite training structure and innovative activities were identified such as crucial for RSGBs to perform highly. The latter is called a fictive case (fictive case 1 in Figure 1) which was included in the following minimizations to obtain theoretically valid results (Rihoux & Ragin, 2008).

References

Balduck, A. L., Van Rossem, A., & Buelens, M. (2010). Sports Clubs Identifying Competencies of Volunteer Board Members of Community. *Nonprofit and Voluntary Sector Quarterly*, 39(2), 213-235.

Baruch, Y., & Ramalho N. (2006). Communalities and Distinctions in the Measurement of Organizational Performance and Effectiveness Across For-Profit and Nonprofit Sectors. *Nonprofit and Voluntary Sector Quarterly*, 35(1), 39-65.

Bayle, E. (1999). *Management et performance des organisations à but non lucratif. Le cas des fédérations sportives nationales*. Unpublished doctoral dissertation, Université de Limoges, Limoges, France.

Bayle, E., & Madella, A. (2002). Development of a taxonomy of performance for national sport organizations. *European Journal of Sport Science*, 2(2), 1-21.

Berg-Schlosser, D., & De Meur, G. (1994). Conditions of democracy in interwar Europe: A Boolean test of major hypotheses. *Comparative Politics*, 26(3), 253-279.

Bradshaw, P., Murray, V., & Wolpin, J. (1992). Do nonprofit boards make a difference? An exploration of the relationships among board structure, process, and effectiveness. *Nonprofit and Voluntary Sector Quarterly*, 21(3), 227-249.

Brown, W.A. (2005). Exploring the association between board and organizational performance in nonprofit organizations. *Nonprofit Management and Leadership*, 15(3), 317-39.

Cairns, B., Harris, M., Hutchison, R., & Tricker, M. (2005). Improving performance? The adoption and implementation of quality systems in UK nonprofits. *Nonprofit Management and Leadership*, 16(2), 135-151.

Caldwell, S.D., Farmer, S.M., & Fedor, D.B. (2008). The influence of age on volunteer contributions in a nonprofit organization. *Journal of Organizational Behavior*, 29(3), 311-333.

Cameron, K. (1986). A Study of Organizational Effectiveness and Its Predictors. *Management Science*, 32(1), 87-112.

Chelladurai, P., Szyszlo, M., & Haggerty, T.R. (1987). System-based dimensions of effectiveness: The case of national sport organizations. *Canadian Journal of Sport Science*, 12, 111-119.

Crittenden, W.F., Crittenden, V.L, Stone, M.M., & Robertson, C.J. (2004). An Uneasy Alliance: Planning and Performance in Nonprofit Organizations. *International Journal of Organization Theory and Behavior*, 7(1), 81-106.

Cutt, J. (1998). Performance Measurement in Non-Profit Organisations: Integration and Focus within Comprehensiveness. *Asian Journal of Public Administration*, 20(1), 3-29.

Damanpour, F., & Aravind, D. (forthcoming 2012). Organizational Structure and Innovation Revisited: From Organic To Ambidextrous Structure. In M. Mumford (Ed.), *Handbook of Organizational Creativity*. (pp. 479-509). London: Elsevier.

Decree from the Wallonia-Brussels region. (1999, April 26). *Decree organizing Sport in the French speaking Community of Belgium*. Retrieved October 6, 2010, from http://users.skynet.be/IEF.be/articles/pol/decretsport260499.pdf

Deloitte & Touche Consulting Group (2003). 'Investing in Change' - High Level Review of the Modernisation Programme for Governing Bodies of Sport, UK Sport.

Deshpande, R., Farley, J.U. & Webster, F.E. (1993). Corporate Culture, Customer Orientation and Innovativeness in Japanese Firms; A Quadrad Analysis. *Journal of Marketing*, 57, 23-37.

Duckles, B.M., Hager, M.A., & Galaskiewicz, J. (2005). How Nonprofits Close: Using Narratives to Study Organizational Processes. In K.D. Elsbach (Ed.), *Qualitative Organizational Research: Best Papers from the Davis Conference on Qualitative Research* (pp. 169–203). Greenwich, CT: Information Age Publishing.

Ferkins, L., Shilbury, D., & McDonald, G. (2009). Board Involvement in Strategy: Advencing the Governance of Sport Organizations. *Journal of Sport Management*, 23(3), 245-277.

Fiss, P.C. (2007). A Set-Theoretic Approach to Organizational Configurations. *Academy of Management Review*, 32(4), 1180-1198.

Fiss, P.C. (2009). Building Better Causal Theories: A Fuzzy Stet Approach to Typologies in Organization Research. Working paper, University of Southern California.

Frisby, W. (1986). Measuring the organizational effectiveness of National Sport Governing Bodies. *Canadian Journal of Applied Sport Science*, 11(2), 94-99.

Giffords, E., & Dina, R.P. (2004). Strategic Planning in Nonprofit Organizations: Continuous Quality Performance Improvement-A Case Study. *International Journal of Organization Theory and Behavior*, 7(1), 66–80.

Glisson, C.A., & Martin, P.Y. (1980). Productivity and Efficiency in Human Service Organizations as Related to Structure, Size, and Age. *Academy of Management Journal*, 23(1), 21-37.

Greckhamer, T., Misangyi, V.F., Elms, H., & Lacey, R. (2008). Using Qualitative Comparative Analysis in Strategic Management Research: An Examination of Combinations of Industry, Corporate, and Business-Unit Effects. *Organizational Research Methods*, 11(4), 695-726.

Herman, R.D., & Renz, D.O. (1998). Nonprofit Organizational Effectiveness: Contrasts Between Especially Effective and Less Effective Organizations. *Nonprofit Management and Leadership*, 9(1), 23-38.

Herman, R.D., & Renz, D.O. (1999). Theses on nonprofit organizational effectiveness. *Nonprofit and Voluntary Sector Quarterly*, 28(2), 107-126.

Herman, R.D., & Renz, D.O. (2008). Advancing nonprofit organizational effectiveness research and theory: Nine theses. *Nonprofit Management and Leadership*, 18(4), 399-415.

Kaplan, R.S. (2001). Strategic Performance Measurement and Management in Nonprofit Organizations. *Nonprofit Management and Leadership*, 11(3), 353-370.

Ketchen, D.J., & Shook, C.L. (1996). The Application of Cluster Analysis in Strategic Management Research: An Analysis and Critique. *Strategic Management Journal*, 17(6), 441-458.

Kogut, B., & Ragin C.C. (2006). Exploring complexity when diversity is limited: institutional complementarity in theories of rule of law and national systems revisited. *European Management Review*, 3(1), 44-59.

Madella, A., Bayle, E., & Tomé, J.-L. (2005). The organisational performance of national swimming federations in Mediterranean countries: A comparative approach. *European Journal of Sport Science*, 5(4), 207-220.

Marx, A. (2005). Towards More Robust Model Specification in QCA: Results from the Methodological Experiment, Paper presented at the American Sociological Association, Philadelphia, PA.

McDonald, R.E. (2007). An Investigation of Innovation in Nonprofit Organizations: The Role of Organizational Mission. *Nonprofit and Voluntary Sector Quarterly*, 36(2), 256-281.

Miles, I. (2005). Innovation in services. In J. Fagerberg, D.C. Mowery, & R.R. Nelson (Eds.), *The Oxford handbook of innovation* (pp. 433-458). Oxford: Oxford University Press.

Papadimitriou, D. (2002). Amateur structures and their effect on performance: the case of Greek voluntary sports clubs. *Managing Leisure*, 7(4), 205-219.

Papadimitriou, D., & Taylor, P. (2000). Organisational Effectiveness of Hellenic National Sports Organisations: A Multiple Constituency Approach. *Sport Management Review*, 3, 23-46.

Pentland, B.T. (1999). Building Process Theory with Narrative: From Description to Explanation. *Academy of Management Review*, 24(4), 711-724.

Quinn, R. E., & Rohrbaugh, J. (1983). A Spatial Model of Effectiveness Criteria: Towards a Competing Values Approach to Organizational Analysis. *Management Science*, 29(3), 363-377.

Ragin, C.C. (1987). *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies*. Berkley, CA: University of California Press.

Ragin, C.C. (2004). La spécificité de la recherche configurationnelle. *Revue Internationale de Politique Comparée*, 11(1), 138-144.

Ragin, C.C. (2008). *Redesigning social inquiry: fuzzy sets and beyond*. Chicago: University of Chicago Press.

Rihoux, B., & Lobe, B. (2009). The Case for QCA: Adding Leverage for Thick Cross-Case Comparison. In D. Bryne, & C.C. Ragin (Eds), *Handbook of Case Based Methods* (pp. 222-242). Thousand Oaks and London: Sage.

Rihoux, B., & Ragin, C.C (2008). *Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques*. Thousand Oaks and London: Sage.

Schmid, H. (2002). Relationships Between Organizational Properties and Organizational Effectiveness in Three Types of Nonprofit Human Services Organizations. *Public Personnel Management*, 31(3), 377-395.

Shilbury, D., & Moore, K.A. (2006). A Study of Organizational Effectiveness for National Olympic Sporting Organizations. *Nonprofit and Voluntary Sector Quarterly*, 35(1), 5-38.

Siciliano, J.I. (1997). The relationship between formal planning and performance in nonprofit organizations. *Nonprofit Management and Leadership*, 7(4), 387-403.

Slack, T. (1985). The bureaucratization of a voluntary sport organization. *International Review for the Sociology of Sport*, 20(3), 145-166.

Slack, T., & Parent, M.M. (2006). *Understanding sport organizations: The application of organization theory* (Second edition). Champaign: Human Kinetics Publishers.

Smith, D.H., & Shen, C. (1996). Factors characterizing the most effective nonprofits managed by volunteers. *Nonprofit Management and Leadership*, 6(3), 271-189.

Sowa, J.E., Selden, S.C., & Sandfort, J.R. (2004). No Longer Unmeasurable? A Multidimensional Integrated Model of Nonprofit Organizational Effectiveness. *Nonprofit and Voluntary Sector Quarterly*, 33(4), 711-728.

Speckbacher, G. (2003). The economics of performance management in nonprofit organizations. *Nonprofit Management and Leadership*, 13(3), 267-281.

Stone, M.M., Bigelow, B., & Crittenden, W. (1999). Research on Strategic Management in Nonprofit Organizations: Synthesis, Analysis, and Future Directions. *Administration & Society*, 31(3), 378-423.

Thibault, L., Trevor, S., & Hinings, B. (1991). Professionalism, structures and systems: The impact of professional staff on voluntary sport organizations. *International Review for the Sociology of Sport*, 26(2), 83-98.

Winand, M. (2009). Déterminants de la performance organisationnelle des fédérations sportives : une analyse comparée des ligues sportives de la Communauté française de Belgique. Unpublished doctoral dissertation, Université catholique de Louvain, Louvain-la-Neuve, Belgium.

Winand, M., Zintz, T., Bayle, E., & Robinson, L. (2010). Organizational performance of Olympic sport governing bodies: dealing with measurement and priorities. *Managing Leisure*, 15(4), 279-307.

Wolfe, R., Hoeber, L., & Babiak, K. (2002). Perceptions of the effectiveness of sport organisations: The case of intercollegiate athletics. *European Sport Management Quarterly*, 2(2), 135-156.

Yavas, U., & Romanova, N. (2005). Assessing performance of multi-hospital organizations: a measurement approach. *Quality Assurance*, 18(3), 193-203.

Zintz, T. (2004). Configuration et changement organisationnel des ligues et fédérations sportives belges Typologie et perspectives d'évolution. Unpublished doctoral dissertation, Université catholique de Louvain, Louvain-la-Neuve, Belgium.

Zintz, T., & Camy, J. (2005). *Manager le changement dans les fédérations sportives en Europe*. Bruxelles: De Boeck Université.

 Table 1
 Performance score of the three strategic goals of the 49 regional sport governing bodies (RSGBs) in 2005

	RSGBs 2005	Customers	Elite sport	Sport for all		RSGBs 2005	Customers	Elite sport	Sport for all
	Yachting	3.41	2.96	5.22*	2	Volleyball	4.33	3.07	6.97*
	Canoeing	3.48	2.95	4.91	ter	Rugby	5.85*	2.78	6.44*
	Scuba Diving	2.96	2.93	3.76	Cluster	Parachuting	5.97*	0.28	5.05
S	Weightlifting/ power lifting	2.70	3.63	4.48	\mathbf{C}	Wrestling	4.76	0.28	7.70*
ner	Shooting	1.45	5.59*	3.25		Taekwon Do	5.33*	7.67*	3.57
OFT	Clay shooting	3.85	4.92*	5.42*		Petanque	5.28*	7.37*	3.92
performers	Gliding	1.18	3.11	2.81		Swimming	4.68	8.36*	6.10*
	Fishing	5.19*	4.84*	0.73		Table Tennis	3.83	8.25*	4.75
low	Labor Athletics	3.21	0.00	1.88	ILS	Tennis	5.96*	9.10*	4.49
+	Labor Swimming	3.66	0.57	1.56		Karate	4.49	10.00*	3.82
Cluster	Futsal	4.53	0.00	2.69	me	Labor Table Tennis	7.77*		0.00
lus	Baseball	2.13	0.00	5.09	for	Judo	3.33	6.51*	7.56*
0	Motorcycling	2.33	1.14	3.75	high performers	Cycling	5.32*	5.76*	7.48*
	Automobile	0.33	0.00	3.23		Climbing	4.78	7.49*	8.91*
	Roller-skating	2.82	0.00	3.75		Athletics	7.38*	7.60*	5.63*
	Multisports Adapted	3.60		0.00	3	Rowing	6.68*	5.69*	4.99
	Squash	7.33*	2.28	6.71*		Wheelchair sports	6.73*	8.16*	9.51*
SI:	Handball	6.90*	2.99	6.95*	Cluster	Water-skiing	7.48*	5.72*	6.58*
performers	Ice-skating	6.35*	1.96	6.91*	CI	Equestrian	8.18*	5.61*	5.46*
for	Gymnastics	6.27*	2.74	4.44		Fencing	7.34*	6.50*	4.10
per	Basketball	7.37*	2.50	4.36		Badminton	6.71*	7.15*	6.58*
	Lifesaving	9.25*	1.96	6.25*		Archery	6.50*	7.08*	5.86*
diu	Skiing	8.57*	2.57	4.76		Savate	6.79*	7.52*	7.64*
medium	Triathlon	3.87	2.35	8.45*		Jiu-Jitsu	9.00*	7.43*	7.45*
-	Orienteering	4.79	3.19	9.44*	Ma	ans of the scores	5.14	4.27	5.13
	Bs are identified according to rformance score greater than t		he 49 RSGBs	J.17	7. 2/	J.1J			

Table 2: Configurational data matrix of the determinants and performance of the 18 regional sport governing bodies selected

CASES 2005	CEN	SID	TOS	VIS	EXR	INA	ETS	FIN	BMC	SIZE	SPORT	OUTCOME
Archery	Very strong	Only	Rather	Weak	Rather	Rather	Weak	Rather	None	Small	Olympic	Cluster 3- high
•		volunteer(s)	strong		weak	weak		weak				performers
Athletics	Strong	Only	Strong	Rather	Very	Strong	Partially	Rather	None	Large	Olympic	Cluster 3- high
		volunteer(s)		weak	strong			weak				performers
Basketball	Strong	Only	Strong	Strong	Strong	Rather	Partially	Strong	None	Very	Olympic	Cluster 2 -
		volunteer(s)				weak				large		medium perf.
Canoeing	Very weak	Only	None	Weak	Weak	None	None	Very	None	Very	Olympic	Cluster 1- low
		volunteer(s)						weak		small		performers
Fencing	Weak	Volunteer(s) +	Rather	Very	Strong	strong	Partially	Weak	Weak	Small	Olympic	Cluster 3- high
		paid staff	strong	strong								performers
Futsal	Very strong		Strong	Very	Strong	None	Weak	Strong	None	Very	Non-	Cluster 1- low
		volunteer(s)		weak						large	Olympic	performers
Gliding	Very weak	Only	Strong	Very	Rather	None	Very	Weak	None	Very	Non-	Cluster 1- low
		volunteer(s)		weak	weak		weak			small	Olympic	performers
Gymnastics	Weak	Volunteer(s) +	Strong	Rather	Strong	Rather	Weak	Rather	Partially	Very	Olympic	Cluster 2-
		paid staff		strong		weak		weak		large		medium perf.
Handball	Strong	Volunteer(s) +	Strong	Very	Weak	Weak	Very	Rather	None	Medium	Olympic	Cluster 2-
		paid staff		weak			weak	weak				medium perf.
Jiu-Jitsu	Strong	Only	Weak	Weak	Weak	Rather	Very	Very	Weak	Small	Non-	Cluster 3- high
		volunteer(s)				strong	weak	strong			Olympic	performers
Orienteering	Weak	Volunteer(s) +	Rather	Very	Strong	Very	None	Rather	None	Small	Non-	Cluster 2-
		paid staff	weak	strong		strong		strong			Olympic	medium perf.
Petanque	Weak	Volunteer(s) +	Rather	Rather	Rather	Strong	Very	Rather	None	Large	Non-	Cluster 3- high
		paid staff	weak	strong	strong		weak	strong			Olympic	performers

[CEN]: centralization; [SID]: Staff involvement in decision-making; [TOS]: task oriented and supervision; [VIS]: vision; [EXR]: external relations; [INA]: innovative activities; [ETS]: elite training structure; [FIN]: financial independence; [BMC]: Board member management competency; [SIZE]: size; [SPORT]: sport objectives; [OUTCOME]: performance clusters showing achievement of the strategic goals

(continued)

CASES 2005	CEN	SID	TOS	VIS	EXR	INA	ETS	FIN	BMC	SIZE	SPORT	OUTCOME
Rugby	Very weak	Only	None	Very	Rather	Weak	Very	Rather	None	Medium	Non-	Cluster 2-
		volunteer(s)		weak	strong		weak	weak			Olympic	medium perf.
Scuba Diving	Very weak	Only	Strong	Strong	Rather	Rather	Very	Very	Weak	Large	Non-	Cluster 1- low
		volunteer(s)			strong	strong	weak	strong			Olympic	performers
Shooting	Very strong	Only	Strong	Very	Rather	Weak	None	Strong	None	Large	Olympic	Cluster 1- low
		volunteer(s)	-	weak	weak							performers
Swimming	Strong	Only	Rather	Strong	Rather	strong	Partially	Rather	Weak	Very	Olympic	Cluster 3- high
		volunteer(s)	strong		weak			weak		large		performers
Triathlon	Very strong	Volunteer(s) +	None	Rather	Weak	weak	Very	Rather	None	Very	Olympic	Cluster 2-
		paid staff		weak			weak	weak		small		medium perf.
Wheelchair	Strong	Only	Rather	Very	Rather	Rather	Weak	Very	None	Small	Olympic	Cluster 3- high
sports		volunteer(s)	weak	weak	weak	weak		weak				performers

[CEN]: centralization; [SID]: Staff involvement in decision-making; [TOS]: task oriented and supervision; [VIS]: vision; [EXR]: external relations; [INA]: innovative activities; [ETS]: elite training structure; [FIN]: financial independence; [BMC]: Board member management competency; [SIZE]: size; [SPORT]: sport objectives; [OUTCOME]: performance clusters showing achievement of the strategic goals

Table 3: 'Truth table' with the five key determinants for the 18 regional sport governing bodies selected

Regional sport governing bodies	CEN	SID	INA	ETS	SIZE	OUTCOME
Athletics, Swimming	1	0	1	1	1	1
Jiu-Jitsu,	1	0	1	0	0	1
Archery, Wheelchair sports	1	0	0	0	0	1
Petanque	0	1	1	0	1	1
Fencing	0	1	1	1	0	1
Handball, Triathlon	1	1	0	0	0	0
Canoeing, Rugby, Gliding	0	0	0	0	0	0
Scuba Diving	0	0	1	0	1	0
Futsal, Shooting	1	0	0	0	1	0
Basketball	1	0	0	1	1	0
Orienteering	0	1	1	0	0	0
Gymnastics	0	1	0	0	1	0
Logical remainder 1 / Fictive case 1	0	0	1	1	-	? → 1

The coordination dichotomies are all coded in the same direction with a score of '1' signaling the presence (strong) of the condition and a score of '0' signaling the absence (weak) of the condition ('-' is 1 or 0).

[CEN]: centralization; [SID]: Staff involvement in decision-making; [ETS]: elite training structure; [INA]: innovative activities; [SIZE]: size; [OUTCOME]: achievement of the strategic goals

Logical remainders are the combinations of conditions we do not have in the selected cases, but may be possible The arrow symbol [->] represents the assumption made on the outcome value of the logical remainder (fictive case)

Figure 1: Solutions for high performance: minimization of the outcome value [1] with logical remainders

INA{1} * ETS{1} +	SID {1} * INA{1} * SIZE{1} +	CEN{1} * SID {0} * SIZE{0}	→ OUTCOME {1}
Athletics	Petanque	Jiu-Jitsu	
Swimming		Archery	Achievement of the three strategic goals
Fencing		Wheelchair sports	(High performance)

The [*] (multiplication) symbol represents the logical 'AND'

The [+] (addition) symbol represents the logical 'OR'.

The arrow symbol [→] represents the link (usually causal) between the combinations of conditions and outcome.

The coordination dichotomies are all coded in the same direction with a score of {1} signalling the presence (strong) of the condition and a score of {0} signalling the absence (weak) of the condition.

[CEN]: centralization; [INA]: innovative activities; [SID]: Staff involvement in decision-making; [ETS] elite training structure; [SIZE]: size; [OUTCOME]: achievement of the strategic goals

Pathway 1 Big size Elite pool Proactive elite Sport Performance specificities structure **Athletics** Olympic Support from Organization of Swimming sport authorities **External relations** innovative activities Fencing Pathway 2 **Involvement of paid staff** Experience in the decision making Sport specificities paid staff processes Shared vision **Performance Big size** Self-organized but supervised Petanque Financially **Innovative External relations** activities independent Pathway 3 Sport Involvement Centralization of the Performance **Small size** specificities of volunteers decision making processes Jiu-Jitsu Innovative activities Archery Reactive elite Reactive Proactive structure Wheelchair sports

Figure 2: Pathways to high performance for regional sport governing bodies

Key determinants in bold character and underlined Performance: achievement of the strategic goals

→ : Logical sequence of conditions/determinants observed in highly performing sport governing bodies