


# The SPLISS Athletics Project: A Resource-Based Evaluation of Elite Athletics Policies

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27:1/2; 133-139, 2012

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## ABSTRACT

*Internationalisation of elite sport is increasing the interest of scientists to identify factors that affect the success of nations in international competition. An increasing number of countries have developed strategic approaches in their pursuit of success and there is an international trend towards a homogeneous model of elite sport development. At the sport-specific level there is a lack of a conceptual model and corresponding method to measure and compare the elite sport policies that lead to a competitive advantage. An important question in this perspective is how national sporting organisations develop a performance-driven management system regarding elite athletics development. Therefore, the aim of the project described here is to measure and evaluate specific policy factors contributing to success in elite athletics. The key idea behind an international comparison of policy structures is to measure the nations' competitive advantage, based on economic/management perspectives (a resource-based view). Therefore, the purpose of this project is 1) to compare countries' organisational resources and capabilities in athletics and 2) to measure the studied countries' competitive position.*

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## Competitiveness and Elite Sport Policies

**W**hether or not countries categorise themselves as winners or losers after the Olympic Games or other major sport events, most policy representatives will evaluate their performances by stating; 'we could do better next time'. It is rare that a nation's collective performance is sufficient and that is one reason why athletes improve, records get broken and elite sport systems evolve. To increase their success, national policy makers and elite sport system managers have to make strategic choices: what should we do better next time?

By developing a comprehensive elite development system, many countries believe they can create a competitive advantage over their rivals. Increasing professionalisation, based on a strategic management approach, has

become a feature of international elite sport management systems<sup>1,2</sup>. The more countries that are persuaded, the more nations are willing to invest. There is an international trend towards a homogeneous model of elite sport development<sup>1</sup>, representing key policy dimensions. Greater investment by governments has contributed to a trend of modulation against internationally successful countries, which has resulted in a growing internationalisation/competition at major international events. As a result, an increasing number of countries and athletes are in what might be called a *global sporting arms race*. Although the number of medals stays almost the same, the international competition has intensified<sup>3,4</sup>. Previously, an increasing amount of financial support resulted in better results at major events. Nowadays, countries are confronted with a diminishing rate of return on their investments: *'More money in equals more medals out'* is no longer true<sup>1,3</sup>.

The competition in athletics has been intensified during the last three decades. Figure 1 provides an overview of the number of countries participating at the IAAF World Championships in Athletics (black line), the European market share of medals (dotted line) and the European market share of Top 8 points (dashed line) since 1993. The medal points refer to the

relative value of medals won (gold representing 3 points, silver 2 points and bronze 1 point); the top 8 market share refers to the proportion of placing table points won during these competitions for top 8 performances (1<sup>st</sup> place = 8 points, 2<sup>nd</sup> place = 7 points,...).

From 1993 on, the number of countries participating at the World Championships increased slowly from 187 up to 202 in 2011. In 2011, 66 countries (32.67%) went back home with at least one top 8 place while this was 35.29% in 1993. Since 2001, the overall level of European success, expressed by the market share and placing table points is diminishing gradually. From 2001 up to 2011, both levels dropped by more than 10%. Although Europe as a continent is still in the leading position based on the number of top 8 places and the proportion of placing table points (40.66% versus 28.37% for North America), for the first time in history the European market share (34.86%) was lower than the North American market share (37.32%) at the 2009 World Championships in Berlin. Given the governance-based policy structures in Europe and the declining level of success at international championships, questions can be raised about the organisational performance of national athletics federations.

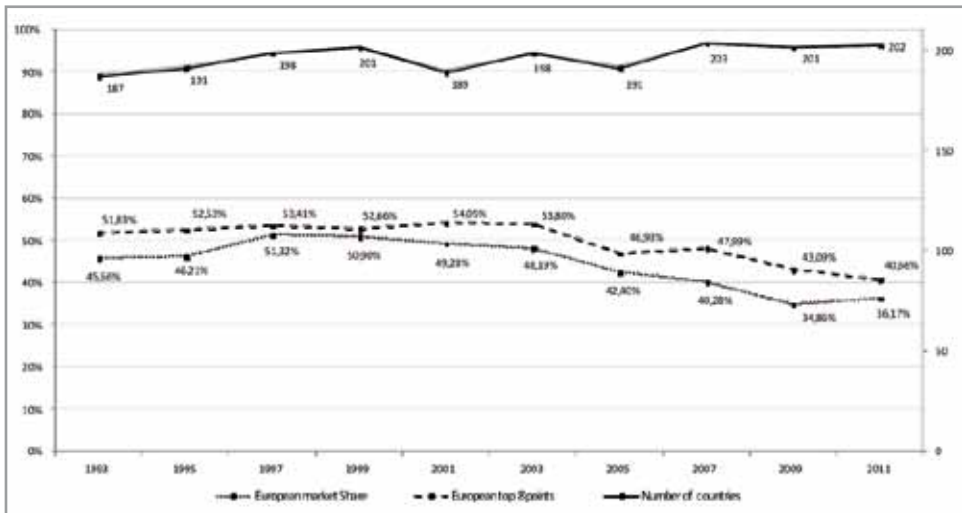


Figure 1: The number of countries, European top 8 points and European market share of medals at the IAAF World Championships in Athletics since 1993

A crucial matter in this perspective is how national sporting organisations develop a performance-driven management system regarding elite athlete development. Most countries do not have resources comparable to the USA or Russia at their disposal, but must seek the most efficient way to develop their national athletes to their highest potential. Although most national elite sport systems refer to common policy characteristics, there is a lack of scientific research on the organisational performance of national governing bodies (NGBs), which is the main organisation responsible for delivering success at elite level<sup>4</sup>.

NGBs are characterised by increasing professionalism, costumer orientation, modernisation of management and greater accountability and transparency using public funds<sup>5</sup>. These NGBs are stuck between multiple dualities; (1) a tension between elite development and club development, (2) the individualised programmes of elite athletes, the value placed on individual development paths contrary to collective needs of club members and the social value of sport participation and development and (3) the growing ambition towards a professional/bureaucratic model of management and the volunteer-based model of decision making found in many sport<sup>6</sup>. National sport governing bodies have been and are still going through systematic and environmental change towards a more business-like approach<sup>7</sup>.

What are the organisational tasks in NGBs in the quest for international sporting success? Additional research on the organisational performance of NGBs will increase understanding of the development of success at a sport specific level. Therefore, we focus here specifically on the organisational development of policy factors, as these can be changed and improved.

From a scientific point of view, an increasing amount of research describes or compares international elite sport policy at a sport overall level<sup>1,2,3,4,10,8</sup>. Only a few studies succeed in unveiling the structures and procedures of elite sport policies and compare them objectively<sup>2,9,10</sup>.

Although most researchers describe different clusters of international policy factors contributing to the development of elite sport success, there is much less known about policy determinants contributing to the development of success at sport specific level. A crucial recommendation made by DE BOSSCHER<sup>2</sup>, LAROSE & HAGGERTY<sup>14</sup> and the Sport Industry Research Centre<sup>11</sup> states that factors may differ between sports or in a group of sports.

Previous research has indicated additional sport specific research is necessary to reveal key policy determinants. *'Countries can't be competitive in all sports, but rather have a competitive advantage in some sports or specific disciplines within a sport'*<sup>15</sup>.

In athletics, some researchers made transnational comparisons of athletics policies. BÖHLKE & ROBINSON<sup>12</sup> benchmarked the Swedish athletics federation and the Norwegian skiing federation to understand the management of elite sport systems. Their major conclusion indicates that benchmarking as a process cannot be used as a copy-paste tool, as services and structures that lead to success are strongly context-dependent. Furthermore, DIGEL, BURK & FAHRNER<sup>13</sup> refer to different sports, including athletics, within the eight countries, but were unable to make specific conclusions and recommendations regarding elite sport development:

*The chosen approach does not allow us to make statements on those features within one organisation that lead to the success of a nation in a certain sport, but by the description of common structural features and differences, relevant statements can be made on equivalence (p.105).*

The purpose of the SPLISS Athletics project is to benchmark sport policy processes and structures leading to international sporting success in athletics (track and field). Therefore, we designed a specific policy framework for elite athletics describing the different policy factors at organisational level that are necessary for a coherent policy system. Based on this model, we are able to make an interna-

tional benchmark study on athletics policies to measure countries' competitive advantage based on specific organisational resources and capabilities. Resources and capabilities refer to organizational assets and processes at disposal of NGBs for athletics in pursuit for international success. The results of this benchmark will enable athletics federations to use 'evidence-based' practices and recommendations to adapt and improve their national policy structures in athletics.

## A Resource-Based Approach to Strategic Sport Policy Management

From a macro-level perspective, a nation's competitiveness can be perceived as its position on the international market place compared to other nations of similar economic development<sup>14,15,16</sup>. Furthermore, the international Institute for Management and Development (IMD) defines competitiveness as "how nations and enterprises manage the totality of their competencies to achieve prosperity or profit"<sup>17</sup>. As the first conceptualisation refers only to the output of the competition given resource equity among the different competitors, the later takes into account the process of development in international success. Rather than the performance as such, the organisational performance of a country is its source of evaluation. Therefore, from our research perspective, competitiveness refers to a more strategic approach in the development of elite athletes, related to the output of a production process of elite success.

A major perspective to conceptualise international competitiveness is the resource-based view, a strategic management approach, highlighting the unique and heterogeneous organisational resources<sup>18</sup>. This resource-based view (RBV) of strategic management examines the relationship between a firm's internal characteristics and performances<sup>19</sup>. Resources and capabilities are the foundations to create above normal rates, which in turn can lead to a sustainable competitive advantage<sup>20</sup>. Appropriately adapting, integrating and reconfiguring internal skills, competences and resources

that match the requirement of a changing environment is again a source of advantage<sup>21</sup>. It could be argued that the resource-based approach, by emphasising firm-specific efforts in developing and combining resources to achieve competitive advantage, provides the "strength-weaknesses" part of the overall SWOT-framework<sup>22</sup>.

In the last decade the resource-based view has grown in the sports management literature. SMART & WOLFE<sup>23</sup> investigated the resources that contributed to the competitive advantage in NCAA college competitions, resulting in key roles for the human and physical resources. GERRARD<sup>24</sup> concluded that the best investment of available resources and the maximising of performances are the basic ingredients of the resource-based-view. DIGEL<sup>25</sup> compared eight different countries based on a resource model for top-level sport taking into account the necessary and adequate conditions of successful action in high-performance sport. Finally, BÖHLKE & ROBINSON<sup>13</sup> modulated the different key factors in elite sport conceptualised by SPLISS<sup>26,27</sup> and HOULIHAN & GREEN<sup>28</sup> in the value chain-approach of PORTER<sup>29</sup>, which reflects all producing activities in the development of a competitive advantage.

## The SPLISS Methodology

DE BOSSCHER<sup>30</sup> developed and empirically tested a conceptual model of sport policy factors leading to international sporting success (SPLISS) in six nations: Belgium (Flanders and Wallonia), the Netherlands, United Kingdom, Norway, Canada and Italy. This study is situated at the 'overall sports level' and made an international evaluation of these countries' policies in elite sport development. Parallel with other international researchers on elite sport policies, they concluded that more sport specific research on elite sport policy development was needed.

Figure 2 provides an overview of the SPLISS model and the different pillars or policy dimensions. All key success drivers that can be influenced by policies can be distilled down to nine

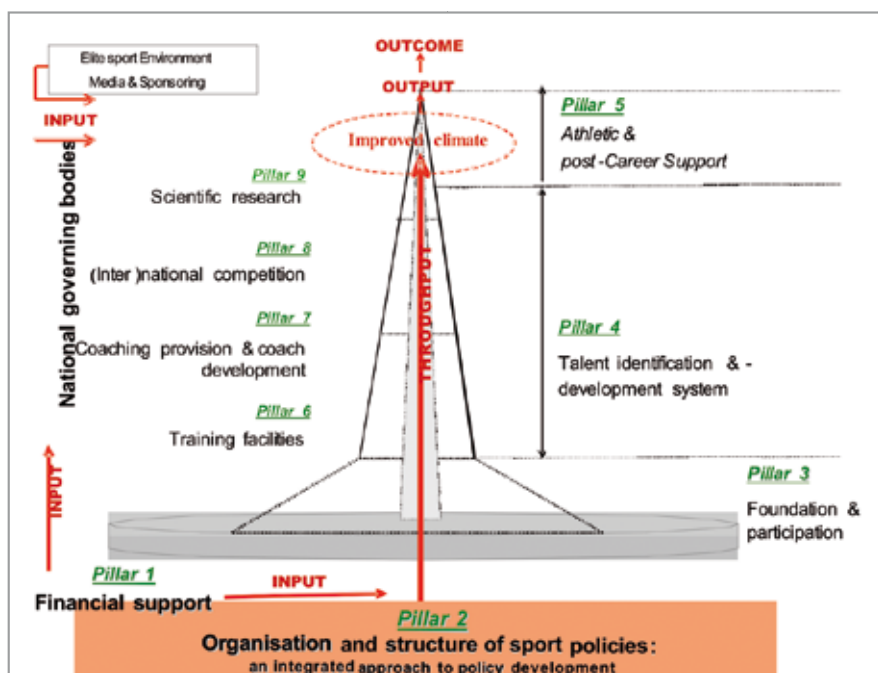


Figure 2: The SPLISS model: A conceptual model of nine pillars of sports policy factors leading to international sporting success (De Bosscher et al., 2006)

key areas or 'pillars'. Each pillar is made up of critical success factors (CSF's) or key elements that are needed within these pillars in order to be internationally competitive or to improve nation elite sport policies.

This research project is a follow up study from the SPLISS study at sport specific level (in athletics) and tries to measure and evaluate a nation's competitive advantage in elite athletics development. The research method within this project builds on previous SPLISS approaches<sup>31</sup>. Based on an international comparison of sport policy factors, and support from national sporting organisations and/or governments, an objective and quantifiable evaluation will be made on countries' organisational resources in elite athletics.

Starting from the nine pillars or dimensions in the SPLISS model, 43 international high performance directors in athletics were interviewed in 2009-2010 on the key determinants

in elite athletics policies. Together with a literature review, the results of this process contributed to an inductive-deductive analysis and the development of critical success factors or key determinants in elite athletics policies.

A specific model for athletics development consists of 10 different athletics policy dimensions (financial support, structure and organisation of athletics policies, youth participation in athletics, talent identification, and development, athletic career support, training and competition facilities, coach development and provisions, (inter)national competition opportunities, applied scientific research and the elite sport environment), 130 CSFs and more than 400 indicators. All these key determinants or critical success factors were operationalised in four different research instruments specifically for athletics: a survey for elite athletes, a survey for elite coaches and a survey for athletics clubs. In addition, an athletic policy inventory would enable an (objective) policy analysis of

structures and services in athletics. This evaluation was conducted by a national researcher through in-depth interviews with policy representatives and policy document analysis. These research instruments and the list of critical success factors were controlled for their construct and content validity by 11 international experts.

Based on these instruments, a holistic evaluation of countries' national policies in elite athletics development can be surveyed. A second major advantage of this methodology is the participation of the most important stakeholders in athletics to evaluate national athletics policy structures. Comparable to the method used to evaluate the effectiveness of major (sport)organisations, the athletics policies are evaluated from different perspectives (see among others PAPADIMITRIOU & TAYLOR<sup>32</sup>; CHELLADURAI & CHANG<sup>33</sup>). Given the difficulty of measuring the 'policy processes' as such, a stakeholders review is a 'subjective' evaluation of the critical success factors from the perspective of specific experts in athletics (athletes, coaches, clubs,...). The purpose of this (digital) questionnaire is to collect information on facts from 'first witnesses' and to measure success indicators as they are perceived by their primary users.

A total scoring system will evaluate countries elite athletics policies by developing a competitiveness score, comparable to the way the World Economic Forum (WEF) develops a global competitiveness index of countries to evaluate countries productivity. The thematic score for each dimension results from the aggregation of scores from indicators and CSFs, based on the combination of hard (policy) data and the subjective evaluation of elite athletics stakeholders.

Such an index would allow countries to identify their competitive strengths as well as the barriers to develop greater international sporting success. The relative scores of the various dimensions and indicators provide useful information for sport organisations and policy makers as to how they can improve their

policy incentives, reform athlete support structures and progress in their development of sporting success. Besides the objective score, the evaluation of countries policy structures will be completed by evidence-based feedback from efficient processes used in other countries or sport organisations, suggestions from the international elite sport literature and specific policy recommendations to improve the efficiency of countries strive for sporting glory.

Additional to policy makers experience as performance directors, national coaches and/or as a former elite athletes, scientific research based on an international comparison of federations policies can provide them crucial information on how they can improve their own national policies. 'Policy learning' by comparing different evidence-based initiatives, will improve the confidence of policy directors to continue their support to national athletes and coaches or provide additional evidence to adjust processes which could get better done. The Australian government stated in the High Performance Policy Plan<sup>34</sup> that:

'Innovation, research, science and technology will be the drivers of Australian sporting excellence in the decades to come and we will look for ways to work closer with our universities to improve our sport science base. We will prioritize investment in sport science as a key driver of our competitive advantage' (p.11).

At this moment in time, four different countries are involved in the SPLISS Athletics project; Belgium (In which both Flanders and Wallonia have a separate responsibility for sport), the Netherlands, Finland, and Canada. First overall results regarding the international comparison of elite athletics policies and the development of a competitive score for elite athletics policies are expected at the end of 2012.

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## REFERENCES

- 1 DE BOSSCHER, V. & DE KNOP, P. (2009). De effectiviteit van het Vlaams topsportbeleid. Een evaluatie van het beleid 2004-2008. Sport verruimd. 5 jaar Vlaams sportbeleid (2004-2009), 54-78.
- 2 HOULIHAN, B. & GREEN, M. (2008). Comparative elite sport development. Systems structures and public policy. Oxford: Elsevier.
- 3 VAN BOTTENBURG M. (2009). Op jacht naar goud. Het topsportklimaat in Nederland, 1998-2008,
- 4 SOTIRIADOU, K. & SHILBURY, D. (2009). Australian Elite Athlete Development: An Organisational Perspective. Sport Management Review, 12(3): 137-148.
- 5 BAYLE, E. & ROBINSON, L. (2007). A Framework for Understanding the Performance of National Governing Bodies in Sport. European Sport Management Quarterly, 7(3): 249-268.
- 6 GREEN, M. (2008). Non-governmental Organizations in Sports Development. In V. GIRVINOV (Ed.), *Management of Sport Development*, pp. 89-108. Oxford: Elsevier.
- 7 ARNOTT I. (2008). An Understanding towards Organisational Change in Swimming in the United Kingdom. International Business Research, 1(2): 110-123.
- 8 DIGEL H. (2005). Comparison of successful sport systems. New Studies in Athletics, 20(2): 7-18.
- 9 CLUMPNER, R.A. (1994). 21st century success in international competition. Sport in the Global Village, pp 298-303. Morgantown, WV: Fit.
- 10 LAROSE, K. & HAGGERY T.R. (1996). Factors associated with national Olympic Success. An exploratory study. Unpublished master thesis, Universiteit Brunswick, Canada.
- 11 SIRC. European Sporting Success. A study of the development of medal winning elites in five European countries. Sport Industry Research Centre, 2002.
- 12 BÖHLKE, N. & ROBINSON, L. (2009). Benchmarking of elite sport systems. Management Decision, 47(1): 67-84.
- 13 DIGEL, H.; BURK, V. & FAHRNER, M. (2006). High performance sport: an international comparison. Edition Sports international (Vol. 9). Weilham/Teck: Braüer.
- 14 EZEALA-HARRISON, F. (2005). On the competing notions of international competitiveness. Advanced in Competitiveness Research, 13(1): 80-87.
- 15 ÖNSUL, S.; ÜLENGİN, F.; ULUSOY, G.; AKTAS KABAK, O. & TOPCU, I. (2008). A New Perspective on the Competitiveness of Nations. Socio-Economic Planning Sciences, 42: 221-246.
- 16 BAILEY, D.; DE PROPRIIS, L.; SUGDEN, R. & WILSON, J. R. (2006). Public Policy for Economic Competitiveness: An Analytical Framework and a Research Agenda. International Review of Applied Economics, 20(5): 555-572.
- 17 GARELLI S. (2008). Competitiveness of nations: the fundamentals. International Institute for Management Development, World Competitiveness Yearbook 2008; Retrieved from <http://www.o2.imd.ch/wcc/yearbook>
- 18 ROUSE, M. J. & DAELLENBACH, U.S. (2009). Rethinking Research Methods for the Resource-based Perspective: Isolating Sources of Sustainable Competitive Advantage. Strategic Management Journal, 20: 487- 494.
- 19 BARNEY, J.B. (2001). Is the resource-based "view" a useful perspective for strategic management research? Yes. Academy of Management Review, 6(1): 41-56.
- 20 OLIVER, C. (1997). Sustainable Competitive Advantage: Combining Institutional and Resource-based Views. Strategic Management Journal, 18(9): 697-713.
- 21 TEECE, D.J.; PISANO, G. & SHUEN, A. (1997). Dynamic Capabilities and Strategic Management. Strategic Management Journal, 18(7): 509-533.
- 22 FOSS, N. & PORTER, M. (1996) Research in strategy and economics. Journal of Management Studies, 33: 1-24.
- 23 SMART, D.L. & WOLFE, R.A. (2000). Examining Sustainable Competitive Advantage in Intercollegiate Athletics: A Resource-Based View. Journal of Sport Management, 14: 133-153.
- 24 GERRARD, B. (2005). A Resource-Utilization Model of Organizational Efficiency in Professional Sport Teams. Journal of Sport Management, 19: 143-169.
- 25 DIGEL, H. (2002). A comparison of successful sport systems. New Studies in Athletics, 17(1): 37-50.
- 26 DE BOSSCHER, V.; DE KNOP, P.; VAN BOTTENBURG, M. & SHIBLI, S. (2006). A conceptual framework for analysing Sports Policy Factors Leading to International Sporting Success. European Sport Management Quarterly, 6(2): 185-215.
- 27 DE BOSSCHER, V.; BINGHAM, J.; SHIBLI, S.; VAN BOTTENBURG, M. & DE KNOP, P. (2008). The global Sporting Arms Race. An international comparative study on sports policy factors leading to international sporting success. Aachen: Meyer & Meyer.
- 28 HOULIHAN, B. & GREEN, M. (2008). Comparative elite sport development: Systems, structures and public policy. Oxford: Butterworth-Heinemann.
- 29 PORTER, M.E. (1985). Competitive advantage. New York, New York: Free Press.
- 30 DE BOSSCHER, V. (2007). Sport policy factors leading to international sporting success. Belgium: VUBPRESS, Brussels.
- 31 DE BOSSCHER, V.; DE KNOP, P.; VAN BOTTENBURG, M.; SHIBLI, S. & BINGHAM, J. (2009). Explaining international sporting success. An International comparison of elite sport systems and policies in six nations. Sport Management Review, 12: 113-136.
- 32 PAPADIMITRIOU, D. & TAYLOR, P. (2000) Organisational Effectiveness of Hellenic National Sports Organisations: A Multiple Constituency Approach. Sport Management Review; 3: 23-46.
- 33 CHELLADURAI, P. & CHANG, K. (2000). Targets and Standards of Quality in Sport Services. Sport Management Review, 3: 1-22.
- 34 AUSTRALIAN OLYMPIC COMMITTEE (2009). National High Performance Policy Plan for Olympic and Paralympic Sports in Australia 2009; Australian Olympic Committee: Retrieved on [http://corporate.olympics.com.au/files/87/AOC\\_High\\_Perf\\_Plan\\_2009.pdf](http://corporate.olympics.com.au/files/87/AOC_High_Perf_Plan_2009.pdf)