

## **ORIGINAL SCIENTIFIC PAPER**

# Attitudes of Sport Organization Officials toward Links between the Sports Sector, Sports Industry, and Knowledge Organizations with Innovations in Montenegrin Sport

Stevo Popovic<sup>1,2,3</sup>, Dusko Bjelica<sup>1,3</sup>, Miodrag Zarubica<sup>4</sup>, Sanja Pekovic<sup>2,5</sup> and Radenko Matic<sup>2,6</sup>

<sup>1</sup>University of Montenegro, Faculty for Sport and Physical Education, Niksic, Montenegro, <sup>2</sup>Western Balkan Sport Innovation Lab, Podgorica, Montenegro, <sup>3</sup>Montenegrin Sports Academy, Podgorica, Montenegro, <sup>4</sup>University of Montenegro, Faculty of Electrical Engineering, Podgorica, Montenegro, <sup>5</sup>University of Montenegro, Faculty of Tourism and Hotel Management, Kotor, Montenegro, <sup>6</sup>University of Novi Sad, Faculty of Sport and Physical Education, Novi Sad, Serbia

## Abstract

It is well-known that modern organizations stand out as leaders in their industries have one common factor that brings them together around the fact they are successful: they are all principally committed to innovation. This fact also applies to sports. Empirical research was conducted to determine a research analysis of attitudes of sport organization officials toward links between the sports sector, sports industry, and knowledge organizations with innovations in Montenegrin sport. Seventy-five subject representatives of sports organizations were randomly assigned as a sample, while the questionnaire used is based on the Community Innovation Survey (CIS). Descriptive statistics were employed to test the hypothesis. This study confirmed that there is significant potential for improving innovation in sports in Montenegro. Policymakers and other stakeholders, including sports administrators and other sports leaders, should increase the ability of sports organizations to innovate in sports.

Keywords: sport organization, sport lab, sport society, innovation policies, Montenegro

#### Introduction

It is well-known that modern organizations stand out as leaders in their industries have one common factor that brings them together around the fact they are successful: they are all principally committed to innovation (Janinovic et al., 2020; Ringuet-Riot, Carter, & James, 2014). However, the level of commitment to innovation varies from industry to industry (i.e., from sector to sector) (Negassi, Lhuillery, Sattin, Hung, & Pratlong, 2019). As underscored by Oerlemans and collaborators (Oerlemans, 1998), different sectors employ different internal and external resources to become innovative.

Accordingly, innovation activity is the topic of study in

many disciplines, which implies certain modifications and adaptations in approaches that depend on the field in which someone wants to innovate. Common to all of them is the need to adopt new business principles and strategies that bring openness to innovation. Therefore, their necessity in achieving a competitive advantage in the market has been confirmed by practitioners and researchers. This situation sets innovations in an unavoidable place in the growth and development of organizations (McDonald, 2007; Sawhney, Wolcott, & Arroniz, 2006; Zimmermann, 1999). Such importance has led to the expansion of research to discover factors that facilitate or hinder the application of innovations. Robbins and Judge (2013)



Correspondence:

S. Popovic

University of Montenegro, Faculty for Sport and Physical Education, Narodne omladine bb, 81000 Niksic, Montenegro E-mail: stevop@ucg.ac.me highlight innovation as a feature that is essential for assessing an organization's culture.

In general, the property of organizational innovation can be understood as the degree of acceptance or non-acceptance of change, with an important examination of the magnitude of resistance to change. These changes are determined by the need for progress of the organization and can be considered to be impulsive reactions to the demands of the business environment. The inevitable changes in the business environment of all organizations, including sports organizations, require their adaptation to the new circumstances. This includes all stages of innovation, from introduction to implementation. Accordingly, the process of innovation is imposed on modern sports organizations as the biggest challenge. According to Wolfe, Wright and Smart (2006), it should be a constant challenge for those most successful sports clubs, which have a long tradition in a professional sports context. From another aspect, Covell, Walker, Siciliano and Hess (2007) indicate that regardless of success, sports organizations must create a product or service that is better or different from the competition. It can be said that this situation constantly creates pressure on sports managers to compete through their innovations. These factors created the climate in which innovations become an important segment of the development plans of sports organizations. There is almost no segment that is not determined by innovations (technical innovations, stadium, as a programme distribution channel, IT equipment, Internet communications (website, social networks, etc.), advertising equipment, financial (e.g., loyalty cards), organizational-management functions, training-technological methods, devices, props, and similar.

Therefore, it is clear for all sports sectors that special attention needs to be dedicated to innovation in the sports industry. Sports organizations strive to adapt, renew, and develop, like all other organizations, through engaging people who, with their new ideas and creativity, manage to move things forward. New strategies are being established with an emphasis on innovative activities, which leads sport to change from its traditional form in a way it becomes an innovated platform on which we play completely differently, look at it differently, and organize it completely differently (Popovic, Bjelica, Pekovic, & Matic, 2021; Tjønndal, 2016). In other words, sport is adapting to new needs that arise in the market, to position sports organizations and possibly to achieve competitive advantages (Shilburi, 2011).

The aforementioned changes in the sports industry and a certain dominance in the market are due to innovations that primarily reflect the introduction of contemporary technologies in sports in new products (Balmer, Pleasence, & Nevill, 2012; Luptáková, & Antala, 2017; Windt et al., 2020), and services (Chi & Res, 2005; Li et al., 2016; Matsuwaka, & Latzka, 2019; Mukhopadhiai, 2014; Liebermann et al., 2002; Tufekcioglu et al., 2021). However, it should be borne in mind that sport as a dynamic and very turbulent sector is changing much faster than other sectors, and the need for frequent analysis and monitoring occurs faster than in other industries. Furthermore, the research in the field of innovation has improved significantly in recent decades, even though empirical research in the field of innovation in sport is less common (Tjønndal, 2016) and research on strategy in the sports context (Matic, Popovic, Pekovic, & Milovanovic, 2021). Research in sport innovations has increased in recent years, but published articles are scattered in different journals, and knowledge is not linked in joint professional associations. Thus, knowledge about innovations in sport and strategies in sport contexts cannot be found systematized in one place. It is also crucial to mention that the analysis of previous research in the field of innovation found that researchers were mainly limited to studies aimed at the private and public sector while avoiding exploring sport as a vital part of contemporary society, which limits the understanding of innovation as a phenomenon and what preceded the innovation, as well as the potential consequences. This limited the possibility of promoting innovation through strategy and strategic management in sport (Ratten, 2017).

Furthermore, taking into consideration the fact that the share of gross domestic product (GDP), related to sport, varies from 1.76% to 3% in total GDP in the European Union (EU), as well as that total employment in the EU that is generated by sports activities is 7.3 million, which is equivalent to 3.5% of total employment in the EU (Bichi, Wijlens, & Wallace, 2015), it must be unequivocally concluded that sport is an important economic factor in the development of the EU and plays a significant role in all national economies, both within the EU and within the countries of the Western Balkans that aspire to become EU members (Montenegro is a candidate for EU membership in an advanced stage of negotiations). Therefore, any new study is welcome, as well as any gathering within scientific associations, in order to generate knowledge on the subject area, mostly because sport plays an important role in several major social challenges, such as physical inactivity, but also sustainable development and educational gaps.

This study aims to analyse the attitudes of sport organization officials towards the links between the sport sector, sport industry, and knowledge organizations with innovations in Montenegrin sport, in order to determine the situation on the field and possible potential for progress in this area.

## Methods

Seventy-five subject representatives of sports organizations were randomly assigned as a sample. They were from all geographical parts of Montenegro and represented their sports organizations as executive directors, presidents, secretaries, founders, and similar who have a basic knowledge of the main business flows of their organization and potential innovative activities.

The questionnaire used is a modified version of the Community Innovation Survey (CIS) applied to collect empirical data (35 items). The questionnaire has contained four separate parts: (1) general information (12 items); (2) innovative activities (12 items); (3) cooperation (6 items); and (4) market (5 items) and was distributed electronically (Google Form). The questionnaire was shared by social network tools and sent to the randomly selected contacts.

Descriptive statistics were employed to test the hypothesis by analysing sports organisation officials' attitudes toward links between the sports sector, sports industry, and knowledge organizations with innovations in Montenegrin sport and promoting (unacceptable) situation on the ground.

#### Results

From the general information perspective, it is important to emphasize that most of the selected sports organizations do not have more than eight employees, while their business focus (Figure 1), as expected, is directed primarily to services (89.3%), then products (6.7%) and, finally, trading (4.0%).

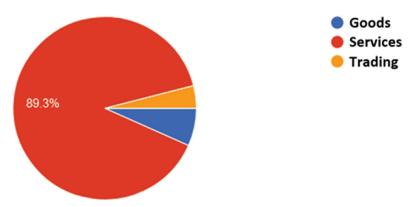


FIGURE 1. The main type of activities of the sports organization.

It is interesting to point out that more than half of these sports organizations are privately owned (50.7%), as well as the fact that in 64% of surveyed organizations annual revenues range from 0 to 100,000 euros, and in 14.7% in the range from 100,001 to 500,000 euros (Figure 2), which does not deviate much from European standards, provided that the distribution is evenly distributed in the first category. However, 32% of respondents indicated that their income has increased compared to the previous year was encouraging, as was the fact that 38.7% of respondents stated that their income has not changed compared to the previous calendar year. Also, it is important to point out that 73.3% of respondents stated that they carry out their activities individually, while 26.7% are part of a group, then 92% of organizations direct their activities at the national level, while 8% have international engagement, as well as that 80% of organizations have clients exclusively from Montenegro.

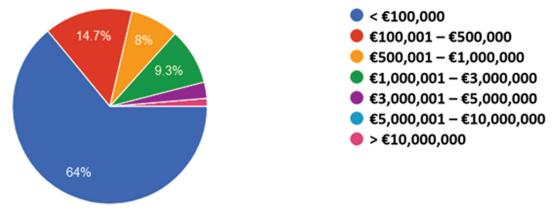


FIGURE 2. Total revenue of sports organization on an annual basis (in 2019).

Furthermore, it is interesting to point out that 58.7% of the surveyed sports organizations do not have an employee responsible for innovative activities (Figure 3), while in those organizations that have one, the majority stated that only one person is in charge of these activities. Nevertheless, 42.7% of respondents stated that, in the previous three years, the organization has introduced new or significantly improved products or services, then new or significantly improved working methods (45.3%), new or significantly improved marketing activities (50.7%), new or significantly improved organizational activities (56%), and new or significantly improved innovative activities related to environmental protection (57.3%), while only 21.3% of respondents indicated that their organization received any form of financial support for innovative activities.

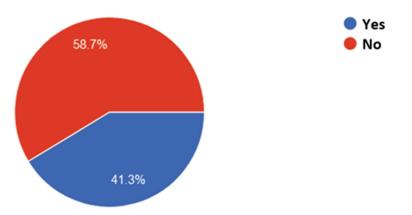


FIGURE 3. Is the person(s) employed in sports organization responsible for innovative activities?

When asked to state how much profit the sport organizations spend annually on innovation, 17.3% of respondents answered that they allocate over 5%, then 20% pointed out that they allocate 3-5%, and 16% to allocate 1-3%, while 13.5% stated that they allocate less than 1%, and as many as 33.3% did not allocate at all (Figure 4). In contrast, when asked to state what share of the sports organization's income is the result of innovative activities in the past financial year, as many as 45.3% of respondents answered that there is no such income, while only 7% of respondents stated that over 50% of income is the result of innovative activities.

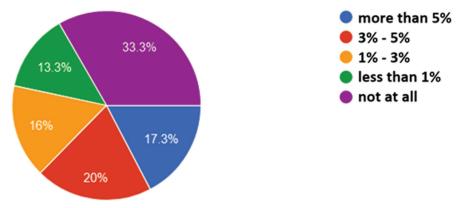


FIGURE 4. How much profit sports organization spends annually on innovation?

It is interesting to note that 33.3% of respondents recognize internal sources as the most important source of knowledge that leads to the development of innovation in the organization, then 32% believe that these are personal and informal contacts with other organizations and colleagues from the region, 20% believe that these are research and development (R&D), 1.3% that these are customers, while 13.3% of respondents did not respond specifically. Finally, it is worth noting that only 26.7% of respondents from sports organizations stated that they had established cooperation with universities, while 88% had never heard of the term "open innovation" (Figure 5), and 86.7% of respondents had not heard the term "innovation platforms". In addition, about half of the respondents believe that there is uncertainty in the market: new competition is emerging, and the sports market is growing in Montenegro.

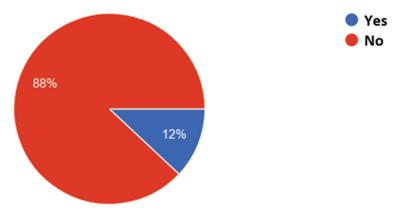


FIGURE 5. Are you familiar with the concept of "Open innovation"?

## Discussion

Expert readers of innovation literature increasingly encounter research on innovation and strategies for innovation in sport as a separate academic field of research. Specifically, scientific articles which dealt with the systematic analysis of published publications in the subject area come across an increasing number of original, reviewed, and other articles dealing with the subject area. In addition to scientific and professional articles, increasing numbers of academic networks and associations that support the aforementioned idea are emerging (Tjønndal, 2016). One interesting fact is that the areas of innovation in sport and strategies for innovation in sport also stand out as a separate scientific field in the field of sports sciences, and there is an increasing number of publications analysing the current situation in the field and promoting the idea of creating a crucial multi-disciplinary field and as many professional associations, scientific journals and conferences as possible, which would be held with the subject topics. Thus, they already exist: primarily an association such as the European Platform for Sport Innovation (EPSI), a non-profit organization that aims to provide a suitable environment to encourage the development of sport organizations, and thematic projects primarily reflected in academic networking. One more excellent example of this fact is the COST Action CA18236, entitled "Multi-disciplinary innovation for social change (SHIINE)", approved under the COST programme, in order to show through the adoption of multi-disciplinary innovation methods how to respond to social issues with a design approach that has a problem-oriented ethos, supporting positive social changes and the development of international public policy discourse (Action CA18236 - COST, 2021).

The results of this study indicate an inadequate situation in the field regarding sport organizations in Montenegro, so it is crucial to point out certain negative results and give clear guidelines on how to overcome weaknesses. First, it a fact of some concern that in the previous three years one third of sports organizations in Montenegro have not had innovative activities, that more than a quarter of sports organizations have not even improved marketing activities, and that 78.8% of sports organizations have not received any form of financial support for innovative activities (Popovic et al., 2021). Also, one third of sports organizations do not have financial allocations for innovations, while almost half do not have any income from such investments (Popovic et al., 2021) at a time of massive expansion of innovation across the EU. These results indicate that sport organizations officials in Montenegro are not adequately trained for innovations in sport and the implementation of strategic management of sport innovations. They are not sufficiently informed about available calls, grants, and funds and ways to apply for financial support for the realization of their projects. However, the interpretation of these results should be considered, including the findings from some authors (Stewart & Smith, 1999; Smith & Shilbury, 2004), which revealed inertness and conservatism of sports organizations in the application of innovations. Also, some authors have noted that the history or tradition of sports organizations can influence deterrence from innovative strategies (Smith & Shilbury, 2004). The situation is somewhat better with the application of innovations that come from sports sciences, given the direct impact on competitive success. Nevertheless, some of the obtained results indicate a significant potential for improving sport innovations in Montenegro. In realizing these potentials, Popovic (2017) suggests that firms should work more on wellknown Montenegrin sports product while making a brand.

In order to overcome the aforementioned shortcomings, it is necessary, by following the example of European practice, to form a national laboratory for innovations that would exclusively deal with this issue. However, there has not been a significant impact of market uncertainty on the operations of sport organizations in the previous three years (10.7%), nor on financial resources on investment in innovations (12%), nor on new competitors (20%); moreover, the impact of human resources on investment in innovation is greater than 50%. All of this supports and justifies the establishment of a national innovation laboratory (Popovic et al., 2021). Policymakers and other interested parties in the field, including sport administrators and other research institutions, enhance the ability of sport organizations to benefit from innovations in the field.

#### Acknowledgement

This research has been done within a national project under the title "Montenegrin Platform for Innovation in Sport" that was approved by the Ministry of Science in Montenegro (No.03/1-062/20-263/2 from 28 April 2020), as well as in line with the SHIINE COST Action's objectives (CA18236).

#### **Conflict of Interest**

The authors declare that there are no conflicts of interest.

Received: 02 April 2021 | Accepted: 19 May 2021 | Published: 01 June 2021

#### References

Action CA18236 - COST. (2021, March 20). COST Association. https://www.cost.eu/actions/CA18236/

Balmer, N. Pleasence, P., & Nevill, A. (2012). Evolution and revolution:

Furthermore, until the national laboratory sees the light of day, the "Western Balkan Sport Innovation Lab (WBSI Lab)", established on 26 November 2020, could work to overcome the identified shortcomings and recommendations made in this study, especially because the regional organization was founded by five university researchers and experts in the field: two from Montenegro (Sanja Pekovic and Stevo Popovic), two from Serbia (Ivana Milovanovic and Radenko Matic) and one from Bosnia and Herzegovina (Dino Mujkic). The main goal of the WBSI Lab is to build links between sport and related disciplines, industry and knowledge organizations in the field of innovation, through creating business opportunities for its members, coordinating and managing prepared and implemented investments, research and development, organizational and IT projects and through identifying opportunities for innovation that will fulfil the health, social, environmental, and market needs of individuals and legal entities living and working in the Western Balkans, while identifying 18 specific goals that represent the main activities of the organization that are available in the official documents of the organization (Matic et al., 2021).

Although there is no large research database, the available knowledge leads to the conclusion that innovations in sport are mainly focused on various empirical research as well as, in particular, new technologies, sport equipment and products, and still with a significant gap with a focus on innovation in sport in terms of social, historical, and organizational perspectives. The development of new technologies is crucial for the development of contemporary sport, but research examining social innovations in sport, strategies for innovations in sport, effective leadership and management of innovations in sport are no less important.

However, sport branding is not at the desired level in Montenegro, and working on recognizing Montenegrin contemporary sports product and making a brand must be more prominent.

The aforementioned represents areas that have not been sufficiently examined thus far, even in Montenegro. Therefore, it is worth emphasizing that the main limitation of this study is that it did not address these issues. The basic recommendations for future research in this area are to explore new perspectives on innovations in sport, followed by new strategies for sport innovations and implementation, strategic management of innovation in sports. At the same time, the first step in improving the current situation could be reflected in identifying the crucial factors that should influence the improvement of this area and their evaluation and compliance with the methodology that would also be determined by experts in this field.

Gauging the impact of technological and technical innovation on Olympic performance. *Journal of Sports Sciences*, 30(11), 1075-1083. doi: 10.1080/02640414.2011.587018

- Bichi, A., Wijlens, R., & Wallace, E. (2015). Strategic Research and Innovation Agenda 2016-2021. Bruxelles, Belgium: EPSI – European Platform for Sport Innovation.
- Chi, E. H., & Res, P. A. (2005). Introducing wearable force sensors in martial arts. IEEE Pervasive Computing, 4(3), 47-53. doi: 10.1109/MPRV.2005.67
- Covell, D., Walker, S., Siciliano, J., Hess, P. (2007). *Managing Sports Organizations – responsibility for performance - 2nd edition*. Burlington: Elsevier.
- EPSI The European Platform for Sport Innovation. (2021, March 20). EPSI European Platform for Sport Innovation. https://epsi.eu/
- Janinovic, J., Pekovic, S., Vuckovic, D., Popovic, S., Djokovic, R., & Pejic Bach, M. (2020). Innovative Strategies for Creating and Assessing Research Quality and Societal Impact in Social Sciences and Humanities.

Interdisciplinary Description of Complex Systems, 18(4), 449-458. doi: 10.7906/indecs.18.4.5

- Li, R. T., Kling, S. R., Salata, M. J., Cupp, S. A., Sheehan, J., & Voos, J. E. (2016). Wearable Performance Devices in Sports Medicine. *Sports health*, 8(1), 74–78. doi: 10.1177/1941738115616917
- Liebermann, D. G., Katz, L., Hughes, M. D., Barlett, R. M., McClements, J., & Franks, I. M. (2002). Advances in the application of information technology to sport performance. *Journal of Sports Sciences*, 20(10), 755-769. doi: 10.1080/026404102320675611
- Luptáková, G., & Antala, B. (2017). Collaborative learning with application of screen-based technology in physical education. *Montenegrin Journal of Sports Science and Medicine*, 6(2), 49-56. doi: 10.26773/ mjssm.2017.09.007
- Matic, R., Popovic, S., Pekovic, S., & Milovanovic, I. (2021). Leading Sports Innovation Laboratory for the Western Balkans. In Montenegrin Journal of Sports Science and Medicine Supplement of 18th Annual Scientific Conference of Montenegrin Sports Academy and 16th FIEP European Congress "Sport, Physical Education, Physical Activity and Health: Contemporary perspectives", 10(1 Suppl 1), P2, Dubrovnik: Montenegrin Sports Academy. doi: 10.26773/mjssm.210401
- Matsuwaka, S.T., & Latzka, E. W. (2019). Summer Adaptive Sports Technology, Equipment, and Injuries. Sports medicine and arthroscopy review, 27(2), 48–55. doi: 10.1097/JSA.00000000000231
- McDonald, R. (2007). An investigation of innovation in non-profit organizations: The role of organizational mission. Non-profit and Voluntary Sector Quarterly, 36, 256-281. doi: 10.1177/0899764006295996
- Mukhopadhyay, S. C. (2014). Wearable sensors for Human Activity Monitoring: A review. *IEEE Sensors Journal*, 15(3), 1321-1330. doi: 10.1109/JSEN.2014.2370945
- Naslin, G., & Avice, E. (2006). Health, sport and innovation (in French). *Science and Sports*, *21*(4), 177-178. doi: 10.1016/j.scispo.2006.07.006
- Negassi, S., Lhuillery, S., Sattin, J. F., Hung, T. Y., & Pratlong, F. (2019). Does the relationship between innovation and competition vary across industries? Comparison of public and private research enterprises. *Economics of Innovation and New Technology*, 28(5), 465–482. doi: 10.1080/10438599.2018.1527552
- Oerlemans, L., Meeus, M., & Boekema, F. (1998). Do networks matter for innovation? The usefulness of the economic network approach in analysing innovation. *Tijdschrift voor Economische en Sociale Geografie*, 89, 298–309. doi: 10.1111/1467-9663.00029
- Popovic, S. (2017). Contemporary sports product and making a brand. *Exercise and Quality of Life, 9*, 37-41. doi: 10.31382/eqol.170605

- Popovic, S., Bjelica, D., Pekovic, S., & Matic, R. (2021). Montenegrin Platform for Innovation in Sport. In Montenegrin Journal of Sports Science and Medicine Supplement of 18th Annual Scientific Conference of Montenegrin Sports Academy and 16th FIEP European Congress "Sport, Physical Education, Physical Activity and Health: Contemporary perspectives", 10(1 Suppl 1), P1, Dubrovnik: Montenegrin Sports Academy. doi: 10.26773/ mjssm.210401
- Ratten, V. (2017). *Sports Innovation Management* (1st ed.). London, UK: Routledge.
- Ringuet-Riot, C., Carter, S., & James, D. A. (2014). Programmed Innovation in Team Sport Using Needs Driven Innovation. *Procedia Engineering*, *72*, 817-822. doi: 10.1016/j.proeng.2014.06.139
- Robbins, S. P., & Judge, T. A. (2013). *Organizational Behaviour, 15th edition*. New Jersey: Pearson Education, Prentice Hall.
- Sawhney, M., Wolcott, R.C., & Arroniz, I. (2006). The 12 different ways for companies to innovate. *Sloan Management Review*, 75–81. doi: 10.1109/ EMR.2007.329139
- Shilbury, D. (2011). Competition: The Heart and Soul of Sport Management. *Journal of Sport Management*, 26(1), 1-10. doi: 10.1123/jsm.26.1.1
- Smith, A., & Shilbury, D. (2004). Mapping cultural dimensions in Australian sporting organizations. *Sport Management Review*, 7, 133-165. doi: 10.1016/S1441-3523(04)70048-0
- Stewart, R. & Smith, A. (1999). The special features of sport. *Annals of Leisure Research*, *2*, 87–99. doi: 10.1080/11745398.1999.10600874
- Tjønndal, A. (2016). Sport, Innovation and Strategic Management: A Systematic Literature Review. *Brazilian business Review*, *13*, 38-56. 10.15728/edicaoesp.2016.3
- Tufekcioglu, E., Konukman, F., Kaya, F., Arslan, D., Ozan, G., Erzeybek, M. S., & Al-Sawi, E. A. (2021). The Effects of Aquatic Watsu Therapy on Gross Motor Performance and Quality of Life for Children with Cerebral Palsy. *Montenegrin Journal of Sports Science and Medicine*, 10(2), Ahead of Print. doi: 10.26773/mjssm.210904
- Windt, J., MacDonald, K., Taylor, D., Zumbo, B. D., Sporer, B. C., & Martin, D. T. (2020). "To Tech or Not to Tech?" A Critical Decision-Making Framework for Implementing Technology in Sport. *Journal of athletic training*, 55(9), 902–910. doi: 10.4085/1062-6050-0540.19
- Wolfe, R., Wright, P. M., Smart, D. L. (2006). Radical HRM innovation and competitive advantage: The Moneyball story. *Human Resource Management*, 45(1), 111–145. doi: 10.1002/hrm.20100
- Zimmermann, H. (1999). Innovation in non-profit organizations. *Annals of Public and Corporate Economics, 70,* 589-619. doi: 10.1111/1467-8292.00125