

Article

Formulation of student sports clubs development strategy based on cluster analysis

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Abstract. The development of student sports clubs is one of the key priorities in student sports, and in this direction an ambitious goal has been set to establish clubs in 100% of universities and colleges. To achieve this goal, a typical model of a student sports club was developed, however, at the current stage of development, not all clubs can apply it since they are characterized by a variety of organizational forms. To increase the effectiveness of the development of student sports clubs, it is necessary to improve approaches to strategic management, which would take into account differences of the level of clubs' development. In this article, the author suggests recommendations for formulation of a student sports clubs development strategy based on cluster analysis. The results of the cluster analysis of student sports clubs revealed 5 clusters according to the level of development, and the belonging to a club in a certain cluster affects the determination of the potential stakeholders, the conduction of competitive analysis, the definition of strategic priorities, the development of functional strategies for student sports clubs. In this regard, the use of cluster analysis for the strategic management of student sports clubs is an effective tool, especially in the context of digitalization of management in student sports.

Keywords: student sports, student sports club, strategic development, strategy, cluster analysis

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Разработка стратегий развития студенческих спортивных клубов на основе кластерного анализа

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Аннотация. Развитие студенческих спортивных клубов является одним из ключевых приоритетов развития студенческого спорта, и до 2024 года поставлена глобальная цель – создать студенческие спортивные клубы в 100% образовательных организациях высшего образования и профессиональных образовательных организациях. Для достижения поставленной цели разработана типовая модель студенческого спортивного клуба, однако в настоящий момент модель не может быть применена во всех клубах ввиду многообразия форм и особенностей их развития. Для повышения эффективности работы по созданию и развитию студенческих спортивных клубов необходимо усовершенствовать подходы к стратегическому управлению клубами, которые будут учитывать различия в уровнях развития студенческих спортивных клубов. Предлагаются рекомендации по разработке стратегий развития студенческих спортивных клубов, основанные на проведении кластерного анализа клубов по уровню развития. Результаты кластерного анализа выявили 5 кластеров студенческих спортивных клубов по уровню развития. Сравнение основных показателей клубов по кластерам показало, что принадлежность клуба к тому или иному кластеру влияет на определение круга потенциальных стейкхолдеров, проведение конкурентного анализа, определение стратегических приоритетов

развития клубов и необходимость разработки функциональных стратегий. Таким образом, использование кластерного анализа может стать эффективным инструментом, применяемым в стратегическом управлении студенческими спортивными клубами, в том числе в условиях цифровизации системы студенческого спорта.

Ключевые слова: студенческий спорт, студенческие спортивные клубы, стратегическое развитие, стратегия, кластерный анализ

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Introduction

The student sports development is nowadays one of the most important directions of the sports development in the Russian Federation. The goals and objectives of the student sports development are reflected in such strategic planning documents as The Strategy of Development of Physical Culture and Sport in the Russian Federation until 2030 [1], The Concept of Student Sports Development in the Russian Federation until 2025 [2], the Intersectoral Programme of Student Sports Development until 2024 [3]. The key goal is to establish student sports clubs (hereinafter – SSC) in 100% universities and colleges in Russia [4]. At the same time, the development vector of SSC in student sports system as a whole remains uncertain. This uncertainty is caused by the fact that student sport management in universities might be realized within various organizational forms of student sports clubs [5–7].

The need to solve this problem is reflected in the task of the Intersectoral Programme of Student Sports Development until 2024, such as “systematization and methodological support of student sports clubs”. To implement the task, the activity of development of a student sports club typical model is planned [3, 8].

As for a SSC typical model, the optimal form of sports work in SSC is the consolidation of all resources under the brand of SSC, ensuring the involvement of students in the management process. This way the SSC typical model is formed. Coordination of the interests of staff and students will make it possible to make optimal decisions for further development, and the participation of students in the processes of management, marketing, media coverage, PR and partnership contribute to the formation of the brand of the club and improve the image of the educational organization as a whole [9].

Nevertheless, the typical model reflects the activities of SSC in the most efficient management model. At the same time, the variety of SSC management models do not allow to form a model

relevant to all clubs at the current stage of development. So, the typical model is a kind of standard, the ultimate goal of the SSC development in current conditions of the student sports system, but the very way to achieve this goal will differ depending on the current state of the clubs.

As a consequence, the successful implementation of the SSC typical model depends on the level of strategic management in the clubs. However, this issue is still very rarely discussed and studied. The existing documents concerning the SSC development absolutely do not disclose the issues of strategic management [10, 11]. As for scientific researches in the field of the SSC management, the publications of Russian authors also concern some aspects of the clubs activities, but few works are devoted to the issues of strategic management. The publications dealing with this issue describe the practice of individual clubs [12, 13, 14], but do not propose methodologies for the SSC strategic management.

The aim of the research is to formulate recommendations for determining the process of the formulation of a SSC development strategy based on cluster analysis.

Materials and research methods

The research represents the results of the monitoring of 80 student sports clubs. Information was collected on the following areas of the clubs activities:

- organizational development of the SSC (organizational structure and management level);
- sports work of the SSC (organization of sports events, sports classes, sports teams, as well as the implementation of the projects of the Association of students sports clubs (hereinafter – SSCA) and the formation of club corporate culture);
- level of club autonomy (funding and partnership);
- marketing and promotion of the club (branding and social-media marketing).

According to the results of the monitoring, a rating of 80 student sports clubs was compiled. Based on the rating data, a hierarchical cluster analysis was implemented using RStudio. The Ward method was chosen as a method of analysis, the Euclidean distance was used as the metric.

Results and its discussion

The rating methodology was based on the methodology of the club assessment within the framework of the competition named “Best student sport club” [15], but it also included such issues as organizational development and funding sources. The data contain information concerning the clubs organizational structures, management elements (presence of a strategy, mission, goals, plans), the indicators of sports work (the number of sports events and corporate events, sport classes, university sports teams and the number of sports under the jurisdiction of the SSC), types of funding sources, the number of partners, as well as information about elements of branding and social-media marketing. The rating evaluates the activities of SSC in the following areas (each area is estimated at 125 points): organizational development, sports work, club autonomy, club marketing and promotion.

According to the results of cluster analysis, 5 clusters of SSC by the level of development were identified (Fig. 1).

A comparative analysis of clusters by areas of activity is presented in Fig. 2.

The 1st cluster includes the leading student sports clubs in Russia (“Berkut”, “KAI-Zilant”, “Kronverkskiye Barys” etc.) and has more than 90 points for three areas of activities. The 2nd cluster (“Arslan”, “Gornaya Mashina” etc.) is far behind the 1st cluster, but it still shows good results of sports work (up to 70 points). The third cluster (“Baltiysky Fenix”, “Yastreby Tuvy” etc.) and the fourth cluster (“Bonchevskiy Tigry”, “Burevestnik” etc.) show approximately the same results within organizational development (both have 54 points) and also marketing and promotion (42 and 41 points respectively), but the 3rd cluster has low results within the autonomy (only 20 points). The lowest results are shown in the 5th cluster and do not exceed 35 points for all areas of activity (“Aspid”, “Morskiye Volki” etc.), and the clubs themselves seem close to the student initiative boards.

A detailed description of the clubs activities by the clusters is given below.

1. Organizational development of the SSC.

As for organizational structure, all the clusters except the 5th one, have structures which include the majority of functions concerning sport management issues. Event-management is the most widespread function for the 1st, 3rd and 4th clusters (88.89%, 62.50% and 71.43%), but in the 2nd cluster only 25.00% have this function in the structure. The management of sports classes and teams as well as the management within structural divisions is mostly spread in the 1st cluster (88.89% and 77.78%), which is due to the high number of activists and the number of sports in the clubs. Volunteer management is

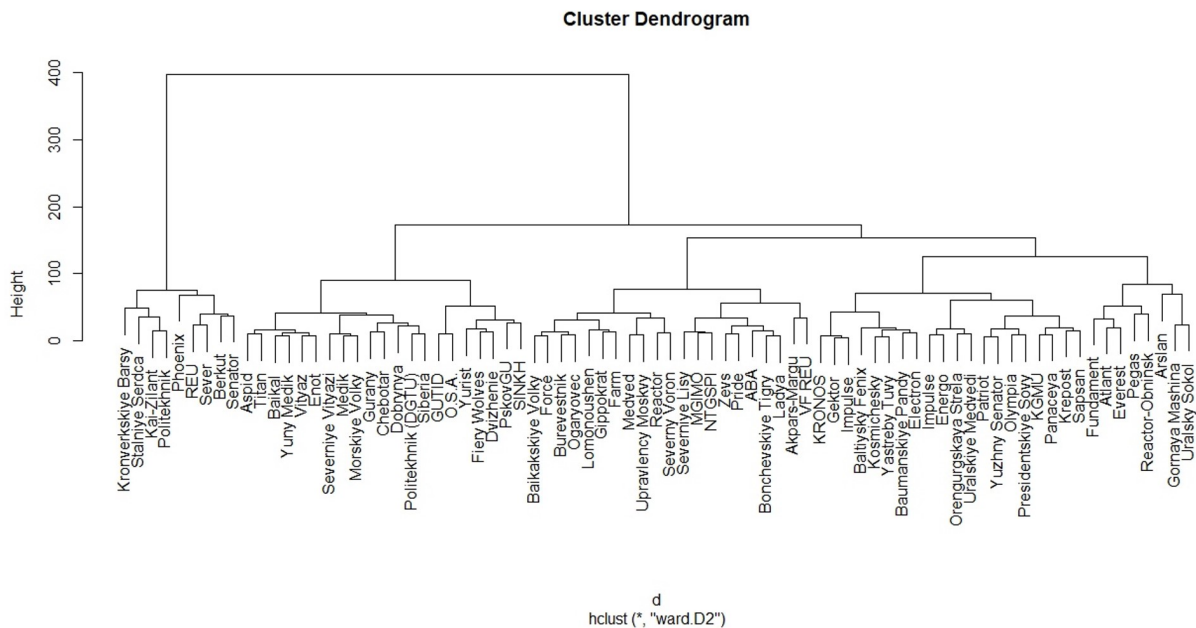


Fig. 1. Clusters of student sports clubs by level of development

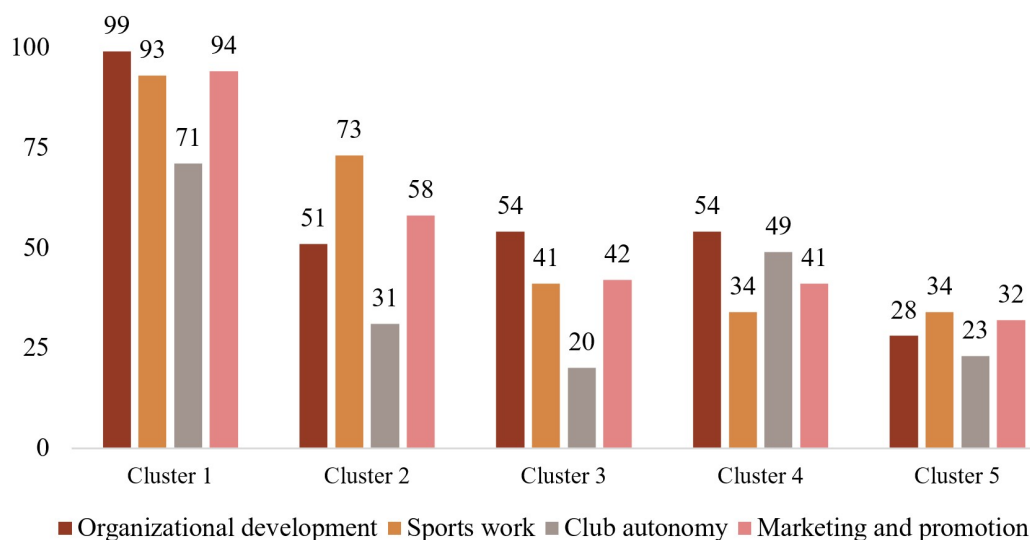


Fig. 2. Comparative analysis of student sports clubs by cluster (color online)

developed in the 1st and the 4th clusters (66.67% and 52.38%). As for the functions concerning marketing and promotion and media, the functions of photo/video making and SMM are highly widespread in all the clusters (more than 60% for all) except the 5th cluster (33.35% and 23.81%). The position of a PR manager is widespread in clubs of the 1st and the 4th clusters (88.89% and 57.14% respectively), and sports marketers are found only in the clubs of the 1st cluster (44.54%), which indicates a low level of this issue in the SSC system as a whole. As for the club management, the main differences relate to the presence of the strategy. In the 1st cluster, 88.89% of clubs are developing strategies, in the 2nd and the 3rd cluster strategies have been developed by more than 60% of the clubs. The 4th and 5th clusters have a few clubs with developed strategies (33, 33% and 19.05%, respectively).

2. Sports work of the SSC. There is a significant gap between the indicators of the sports work in the clubs of the 1st cluster and all the rest. First, sports classes and sports teams are highly developed in the clubs of the 1st cluster (on average, 18 classes and 14 teams), the clubs of the 2nd cluster have on average 7 classes and 10 teams under their jurisdiction, and in all the other cases, the clubs do not have enough ability to manage sports classes and sports teams, because other structural divisions are responsible for. This may be due to the fact that all the clubs in 1st cluster have hired employees in the structure, while the other ones are managed and developed mainly by activists. The number of sports events per year and the types of sports covered are also much higher in the clubs of the 1st cluster (43 events and 26 sports), the clubs of the 2nd cluster have on av-

erage 15 events per year and 15 developed sports, while for the rest of the clusters these indicators do not exceed 10 in both cases.

3. Club autonomy. As for the funding sources, in all the clusters more than 85% of the clubs are financed only from the budgetary funds of the educational organization. Among non-budgetary sources, the most common is grant support – 66.67% among the clubs in the 1st cluster, 42.86% among the clubs in the 4th cluster, for the other clusters the indicator does not exceed 25%. Commercial activity is found only in the clubs of the 1st cluster (44.54%). Partner's support and donations are more typical for the clubs of the 4th cluster (42.85% and 28.57%, respectively). In general, it is advisable for the clubs in all the clusters to expand nonbudgetary funding sources.

Among partner interactions, as expected, the most common is interaction with an educational organization, students, and SSCA – it is typical for more than 75% of the clubs. However, interaction with the other student sports clubs is less widespread – it is more common for the clubs in the 3rd cluster (68.75%), for the clubs in the 1st, 2nd, 4th clusters it is 55.56%, 50.00% and 57.14%, respectively, and among the clubs of the 5th cluster, only 42.86% interact with the other student sports clubs. The establishment of partnerships outside the SSCA system is most typical for the 1st cluster – more than 50% of the clubs interact with all the subjects of student sports (student sports organizations, sports organizations, executive authorities, commercial organizations). In the clubs of the 2nd and the 4th clusters, partnerships with sports organizations are relatively widespread (50.00% and 47.62%,

respectively), and in the 4th cluster, 57.14% of the clubs interact with commercial organizations. The clubs in the 3rd and the 5th clusters show low rates of interaction outside the ACCS system, less than 13% of the clubs in these clusters interact with other subjects.

4. Marketing and promotion of the SSC. In this area, the elements of SSC branding were analyzed, because the formation of clubs brands is one of the priorities of the SSCA. As for the elements of the clubs brand, the most common element is logo, and it is developed in 100% of the clubs in the 1st, 2nd, 3rd and 4th clusters, and 90.48% of the clubs in the 5th cluster. Branding elements such as a mascot and a motto are common only in the 1st cluster – 77.78% and 88.89% of the clubs, respectively. In the other clusters these elements are spread in less

than 40% of the clubs. As for the other branding elements, such as brand legend, outdoor branding, these are also common in the 1st cluster (66.67%) and in the 2nd cluster (50.00%), for the rest of the clusters these elements are spread in less than 25% of the clubs.

The results of the research figure that it is necessary to take into account the heterogeneity of the SSC, providing different clusters and thus forming different strategic priorities for the clubs.

This fact has an impact on the process of the formulation of the SSC development strategy. The author proposes the following process model (Fig. 3).

According to the model, the process of formulation of the SSC development strategy consists of two main phases:

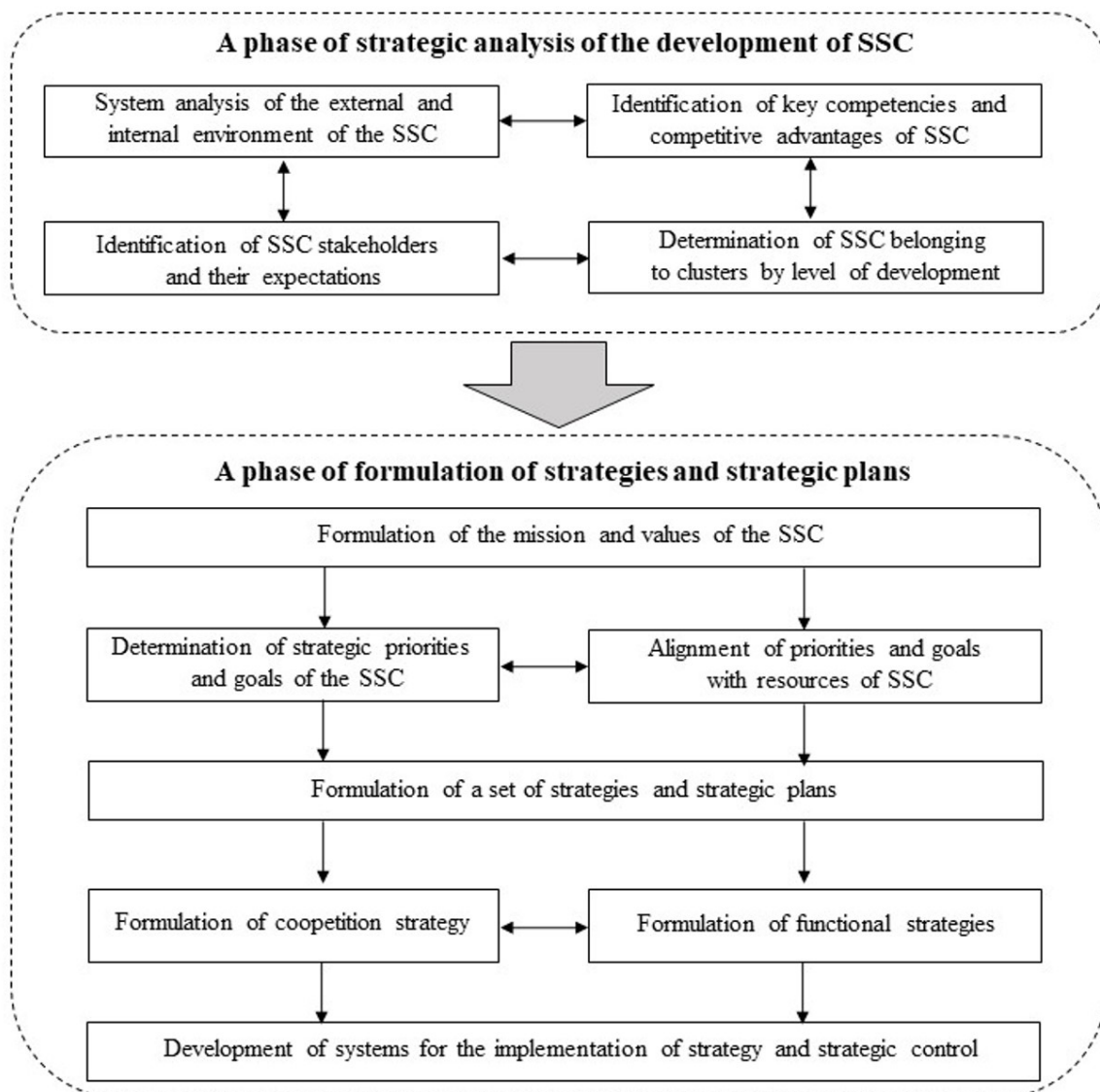


Fig. 3. Formulation of a strategy of student sports club development

- the phase of strategic analysis of the SSC development;
- the phase of formulation of strategies and strategic plans.

The phase of strategic analysis of the SSC development include some stages that correspond to the results of cluster analysis.

Determination of the SSC cluster by the level of development and the identification of the SSC competitive advantages. The analysis of key success factors is carried out on the basis of a club belonging to a definite cluster, the competitive advantages of the club or lagging development indicators being identified. This will make it possible to objectively evaluate the degree of current development of the club, taking into account the initial characteristics and operating conditions, and, accordingly, set achievable goals.

On the other hand, it may be more important for the SSC development to apply the key success factors not to a single cluster, but to provide comparison with the clubs in their region. This will make it possible to determine priority areas for development within the framework of the competition strategy: the interaction of the clubs that are direct competitors in order to achieve common goals – the development and popularization of mass sports. For example, if a club has poor performance in sports and mass work, and another is in partnership, it is advisable to combine efforts and interact through the implementation of joint projects – sports and mass events, educational events, etc., which will allow to expand the scale of projects.

Identifying groups of stakeholders and their expectations. At this stage, the expectations of internal stakeholders – an educational organization and students, are studied. Besides in the process of identifying external stakeholders, the clubs should focus on belonging to a certain cluster, since each cluster is characterized by groups of stakeholders optimal to interact with.

After carrying out all the stages of the strategic analysis, it is advisable to generalize the most significant factors using the SWOT analysis tool (assessment of strengths, weaknesses, opportunities and threats) and build a cross matrix based on it to determine possible directions for strategic development.

The next phase of formulation of strategies and strategic plans is common for different types of organization, as well as student sports clubs, but the following stages reflect the results of cluster analysis as well.

Determination of the strategic priorities of SSC. Strategic priorities are built separately for

each SSC, taking into account the strategic analysis carried out, however, it is possible to identify possible areas of development that correspond to the level of development of the clubs in the clusters. Possible strategic priorities of SSC by clusters proposed by the author, identified as a result of a comparative analysis of clusters, are reflected in table 1. In addition to the presented priorities, it is notable that all SSC should pay attention to finding additional financial sources (Table).

Formulation of a co-opetition strategy and functional strategies. Co-opetition strategy is a way to establish interaction with sports organizations in the system of student sports, which are potential competitors, but the unification of efforts and partnerships will contribute to the achievement of common goals – the development of physical culture and sports. This strategy takes into account co-opetition as a significant characteristic of sports management [16].

As for functional strategies, there are some examples of functional strategies applied to SSC, such as communication strategy, strategy for sports and mass work, student engagement strategy, marketing and PR strategy, financial strategy, product strategy.

The co-opetition strategy is recommended for all the clubs, and the need to develop separate functional strategies also depends on belonging to the cluster.

Thus, the approach proposed by the author to the student sports club development strategy takes into account the conclusions obtained in the course of the study, namely, the heterogeneity of the SSC development and the need for active interaction with stakeholders.

Conclusions

In order for student sports clubs to reach a new level of development, it is necessary to solve two main tasks – to form a unified management model for student sports clubs, which would allow the efficiency of student sports clubs and become a guide for the clubs development, as well as improve the quality of clubs strategic management to make this model achievable.

In this case, conducting cluster analysis in relation to the SSC system is definitely a useful tool. Firstly, belonging of a SSC to a particular cluster contributes to more accurate results of competitive analysis, since clubs can compare their performance data with those in the same cluster. Secondly, the division of clubs into clusters according to the level of development will make it

Table

Strategic priorities of student sports clubs by cluster

| Cluster | Organizational development | Sports work | Club autonomy | Marketing and promotion |
|-----------|--|---|--|--|
| Cluster 1 | Development of sports marketing | Increase of the number of student sports classes and teams | Interaction with sports organizations | Brand promotion |
| Cluster 2 | Development of volunteer management and structural division management | Improvement the activities of the SSC in all areas of sports work | Interaction with student sports leagues and commercial organizations | Development of some elements of branding |
| Cluster 3 | Development of PR and structural divisions management | Improvement of the sports event and expansion of number of sports | Establishing interaction outside the SSCA system | |
| Cluster 4 | Development of the management of student sports classes and teams | | Interaction with student sports leagues | |
| Cluster 5 | Formation of organizational structure | Establishing interaction with structural divisions for sport events | Interaction with other SSC | Brand creation |

possible to determine how close certain clubs are to the implementation of the SSC typical model. This Strategic priorities of student sports clubs by cluster is important in the context of the formation of the register of SSCs as one of the activities of the set of measures aimed at creating and supporting the activities of student sports clubs [8].

Since the development process is largely focused on the results of cluster analysis, it is necessary to use digital tools to improve the quality of SSC strategic management. Considering the establishment of the National University Sports Portal, it might become an ideal platform for displaying statistical data on the activities of the SSC, not only for reporting purposes, but also for posting it in the public domain so that the SSC can effectively conduct a strategic analysis.

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