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Designing the University Competitiveness Management System: Functions, Levels, Objects

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The purpose of the current study was to investigate the problem of systemic university competitiveness management in order to propose a vision of the structure of the university competitiveness management system (UCMS), its levels, functions, and management objects based on the implementation of the constructive competition theory. The basic research methods included the following: content analysis, analysis of the modern concepts of university competitiveness management. The constructive theory of competition was used as the basic methodology of the research. Based on certain factors affecting competitiveness, the competitiveness of university (Cu) coefficient was calculated. At the intersection of four management functions (planning, organization, motivation, and control) at three levels of competitive behavior (strategic, tactical, situational) and three spheres of system influence (resource usage, optimizing actions, achieving results), 36 special functions of competitiveness management have been identified. At the same time, it was unveiled that the implementation of the UCMS in the overall university management structure is accompanied by organizational changes. In view of this, the success of the operating activities of the university as a higher education institution should be ensured by monitoring competition in the market and implementation of the competitiveness management program developed precisely for this institution. The study revealed that the competitiveness of the university increased after the introduction of the UCMS, the coefficient of competitiveness (Cu> 1). Implementation of the proposed competitiveness management system can significantly increase planning flexibility, adaptability and contribute to an increase in the world ranking of universities in developing countries.

Keywords: university competitiveness, management, high education development, innovations

INTRODUCTION

Universities must be open to innovation, respond to the external changes and challenges, and become involved in the competitive struggle in the field of education and scientific research (Baltaru & Soysal, 2018). Management methods, leadership, profitability

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criteria, investment, as well as marketing strategies adopted from business have become common in higher education (Bileviciute et al., 2019; Prisăcariu, 2015). Competitiveness is managed as an integral indicator of the performance of an educational organization similarly to a complex indicator characterizing the economic activity of an educational organization (Altbach & Salmi, 2011; Jackson, 2015). University competitiveness management is an activity aimed at the formation of managerial decisions, which, in their turn, should be aimed at resisting all kinds of external influences and achieving leadership in accordance with the strategic goals of the institution. The university manages its economic activity indicators indirectly through the achievement of performance results. Competitiveness cannot be managed directly (Vasiliev, 2020). Competitiveness can be increased given that it is a set of indicators characterizing the effectiveness of educational and scientific activities of an organization. Therefore, an intra-university system of indirect management of the competitiveness of an educational organization, where the implementation of all general management functions is carried out in relation to competitive actions in educational activities, can be noted (Vasiliev, 2020). Market economy formation dictated strict functioning rules for any institution in terms of identifying and demonstrating its competitive advantages effectively. Strategic planning of administrative activity of an educational institution, an object of market competition environment specializing in educational services provision, requires a careful design of a management development program in order to increase its economic effects. On the other hand, the large number of national and foreign educational institutions creates a rather saturated supply. In the context of diversity and activation of rational demand, this prompts the management commune to intensify strategy planning in a competitive market (Saberifar, 2020).

Competitiveness and competitive advantage

Today, the competitive approach is widely applied to the relationships in higher education (Musselin, 2018; Obermiller et al., 2005; Redondo et al., 2018). There is a causal relationship between competitive advantages and competitiveness. A number of researchers define competitiveness as the ability of an organization to create and maintain competitive advantages (Ekshikeev, 2009; Redondo et al., 2018). They demonstrate company strengths and characteristics that ensure its uniqueness and advantages over competitors and, in addition, serve to better meet consumer needs. That is, competitiveness can be considered as a process of managing competitive advantages, the strengths of the company, and the events aimed at their creation and management, as well as their result (G. Dimitrova & T. Dimitrova, 2017). Some authors have emphasized the need to adapt pure market and marketing logic to the university setting (Gibbs & Murphy, 2009). The emergence of private universities and the need to ensure the educational value and keep public sector support pushed the university administration and its various bodies to look for the ways to create value, test and keep university competitiveness (Elloumi, 2004).

Three major challenges that higher education institutions will face and that have fundamental impact on research and practice have been identified: (1) the need to enhance prestige and market share; (2) the need to embrace an entrepreneurial mindset;

and (3) the need to expand interactions and value co-creation with key stakeholders (Pucciarelli & Kaplan, 2016). In these new socioeconomic scenarios, the role of entrepreneurial universities is not only to generate/transfer knowledge but also to contribute to/provide leadership for the development of entrepreneurial thinking, actions, and institutions (Guerrero et al., 2016). At the modern stage of technological development, universities have ceased to be the only transmitters of knowledge having assumed the role of business units facilitating the generation of innovations. The key criteria for assessing the competitiveness of universities were the commercialization of developments, export of educational services, etc. (Hwang et al., 2017; Budzinskaya, 2018; Wong, 2019). Regional competitiveness and university spillovers foster innovation activity of entrepreneurial firms (Audretsch et al., 2012).

University competitiveness planning

The most critical educational problems can be analyzed using a three-level competitive behavior approach assuming analysis of behavior at a strategic (industry/macro), tactical (group/meso) and situational (firm/micro) level (Baumann et al., 2019). The most important problem of the competitiveness of Russian universities is the lack of strategic level. This is a problem of strategic flexibility, which consists in the inability to constantly track changes in the education market and adjust long-term development plans of universities in accordance with these changes (Pucciarelli & Kaplan, 2016; Rubin, 2017a). The traditional approach to the strategic development of university education in many developing countries is to set plans for several years, usually in the horizon of up to five years, and strictly implement them. But the speed of actual changes in educational technologies and the technological base of education has significantly accelerated, therefore, universities in developed countries are adjusting their development in line mode (Abad-Segura et al., 2020). The transfer of this experience to developing countries and, in particular, its implementation in Russia may be hampered by insufficient access to financial resources and management's unpreparedness for constant structural changes (Parakhina et al., 2017; Wong, 2019). It can be stated that there is a structural nature of the management crisis affecting the whole system of university education (Parakhina et al., 2017). A number of scientific publications focus not on the competitiveness of universities, but on separate factors to ensure it or specific tools to improve it, for example: benchmarking academic excellence (Khan & Matlay, 2009; Skelton, 2005); entrepreneurship (Nabi et al., 2017); knowledge management (Naser et al., 2016); educational innovation (Blackley et al., 2020; Vera et al., 2006), reputation (Plewa et al., 2016); brand (Hemsley-Brown et al., 2016). Most of these assessment methods relate to the identification of the position of a particular university at the tactical level from three levels of competitive behavior, in medium-term competition and among universities of the same technological direction or within the same country and region. Russian scientists apply a competitive approach to the relations in the field of higher education based on the current Russian educational legislation (Vasiliev, 2017), and the provisions of the constructive theory of competition, which distinguishes resource competition, performance competition, and competition for the perfection of processes and competitive actions (Rubin, 2017a, 2017b). In the constructive theory of competition, there are three levels of competitive

behavior: strategic, tactical and situational (Rubin et al., 2019). Strategic management is carried out at the level of the top management of a higher educational institution and focuses on long-term development prospects in order to form, maintain and increase competitiveness (Asrar-ul-Haq & Anwar, 2016; Nawaz & Gomes, 2014; Pucciarelli & Kaplan, 2016).

The tactical level contributes to the development of tactics for ensuring competitiveness, namely a set of types, techniques, and methods aimed at the implementation of a competitive strategy (Mingming, 2017). The situational approach is based on the fact that the suitability of various management methods is determined by the situation. Situational management is carried out in real-time and at the situation development speed pace (Mingming, 2017; Zihui & Yong, 2017). When managing the competitiveness of a higher educational institution, as a rule, the direct objects are in-demand graduates, highly qualified personnel, financial resources, and production capabilities (Zihui & Yong, 2017). The superior results of world-class universities (highly sought graduates, leading-edge research, and technology transfer) can essentially be attributed to three complementary sets of factors at play in top universities: (a) a high concentration of talent (faculty and students), (b) abundant resources to offer a rich learning environment and to conduct advanced research, and (c) favorable governance features that encourage strategic vision, innovation, and flexibility and that enable institutions to make decisions and to manage resources without being encumbered by bureaucracy (Bassi, 2019; Salmi, 2009).

The basic competitiveness of a university is formed at the situational level, which is also well studied by academic researchers (Endovitsky et al., 2020; Moskovkin & Yawei, 2018). The most important factor in the formation of competitiveness at the basic micro level, researchers recognize the digitalization of all aspects of university education (Safiullin & Akhmetshin, 2019). University competitiveness is formed as a set of components; the most important factors include general popularity and reputation, quality of education, the prestige of specialties, the amount of investment, the speed of response of a higher educational institution to changing demands of society, the professionalism of scientific and pedagogical staff (Dachyar & Dewi, 2015; Parakhina et al., 2017). There are three basic strategies that can be followed to establish world-class universities: picking winners, clean-slate approach, and hybrid formula (Endovitsky et al., 2020; Salmi, 2009).

Problem statement

In order to successfully implement competitive strategies in the educational services market and achieve a competitive advantage over competitors, the university needs a competitiveness management system. At the same time, UCMS cannot be separated from the general management system of the university; it should be organizationally and structurally integrated into the general management system of the university (Vasiliev, 2017). University competitiveness management has always been considered a means of improving the quality of education and developing the innovative component of the domestic economy. As a consequence, it became an indispensable component of the overall university management system that exerts a direct effect on the success of its

operational and economic activities as a business entity and determines the degree of its academic success in the market (Okanović et al., 2021).

However, the analysis of the management structures and practice of the structural organization of Russian universities, both state and non-state educational institutions, shows that there are no competitiveness management systems that are organizationally embedded in the management structure.

Russian universities, such as the Synergy University, National Research University, Higher School of Economics, Moscow Higher School of Social and Economic Sciences (Shaninka), National University of Science and Technology (MISiS), are aware of the importance of managing their competitiveness.

This issue has been aggravated in connection with the fact that the Ministry of Science and Higher Education of the Russian Federation has used "competitiveness" to describe the objectives of Project 5-100, which is in fact a Russian initiative of academic excellence. The application model of the term of "competitiveness", which was taken as the basis for describing the goals of the Russian program of academic excellence, determined that the scientific paradigm of university competitiveness is methodologically linked to world rankings and indicators of academic excellence, but not to regional education systems in Russia. In particular, the criticism of the methods and indicators of the Russian initiative of academic excellence, the specificity and contradictory results of its implementation in 2013-2020, have actualized this issue for the Russian higher education system. Hence, the question of how close Russia has been to the understanding of how a university can ensure appropriate performance indicators and whether a system for managing the competitiveness of Russian universities can be developed on this basis arises. A similar study on the compliance of Russian universities with the requirements of international markets against the background of their real competitiveness established the importance of the geographical location of the university for its global competitiveness. According to the authors, this factor played the most critical role in shaping the competitive potential of the surveyed universities (Cimermanová, 2018; Endovitsky et al., 2020).

The purpose of the research is to study the issue of systemic university competitiveness management and to offer a certain vision of the university competitiveness management system (UCMS) structure, its levels, functions and management objects, based on the application of the constructive theory of competition. The object of the research is UCMS (University Competitiveness Management System).

The research objectives are as follows:

to analyze the relationship between the functions, levels and sphere of influence of the UCMS;

to determine the factors of competitiveness;

to assess the competitiveness of the Synergy University before and after the implementation of UCMS.

METHOD

The scientific principles described were implemented in the UCMS development and introduction into the general management system at the Synergy University in Moscow (Russia).

The study took place from September 2018 to December 2020.

The analysis of the modern concepts of university competitiveness management was carried out in the field of academic sources through a Google Scholar search with the inclusion of Russian and foreign authors. Studies were selected that do not overlap in content, contain innovative approaches to the management of competition in university education, and take into account the specifics of developing countries. Preference was given to studies published starting in 2017. An overview of studies selected for these principles is contained in the Literature review section above.

Based on these sources, as well as related publications, a content analysis was carried out, the task of which was to identify and compare various structures and organizational matrices of competition management in higher education. After that, proceeding from the analysis of the existing difficulties, characteristic both for Russia and for a number of developing countries, the authors developed and propose here their own university competitiveness management system (UCMS). The academic literature analysis and the thorough systematization of theoretical and methodological aspects made it possible to design the UCMS (Figure 1).

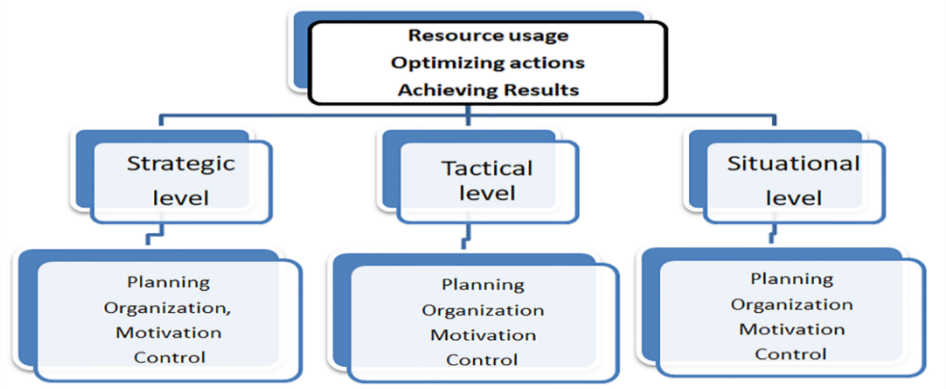

Figure 1
UCMS level

The system consists of four traditional management functions (planning, organization, motivation, and control) (Fayol, 2016), which are implemented at three levels of competitive behavior (strategic, tactical, situational) and affect the use of resources, the achievement of results, as well as the optimization of the competitive actions of the university.

The study has also analyzed and assessed the competitiveness of the Synergy University before and after the implementation of UCMS. For this, the factors of competitiveness have been analyzed and determined (Table 1).

The selection of factors was based on the results of the content analysis of university competitiveness studies, as mentioned above. We selected those factors that are clearly distinguished by all the selected works and in relation to which there are no differences in the interpretation and formulation of the essence of these factors and their influence on university competitiveness. At the same time, the ranking of various factors by the authors of the studies participating in the selection was not taken into account, as well as the level of significance for the competitiveness of the university, which the authors of the studies used in the context of the analysis attributed to them.

Table 1
Factors affecting university competitiveness

Factor	Variable	Description
Academic Reputation	A_1	Number of university applicants
Employer Reputation	A_2	Number of referee employers who approve of the organization and are willing to hire students.
International Students	A_3	Share of international students
Investments	A_4	Amount of investment in the university
Faculty Student Ratio	A_5	Number of students at all levels of training (bachelor's, specialist's, master's degree)
University brand	A_6	Advertising, participation in exhibitions, public conferences
Research papers and citation	A_7	University-adjusted citations, research papers (Scopus, WOS) per faculty member
Price	A_8	Development of a flexible pricing policy – customer focus

Source: developed by the author based on (Ali & Anwar, 2021)

The calculation of the university competitiveness coefficient is given below; C_u is university competitiveness, C_b is the competitiveness before, C_a is the competitiveness after the implementation of the developed project. Earlier, factors that affect the competitiveness of the university were identified based on the literature analysis (the link, Table 1).

It should be noted that in order to ensure maximum objectivity, the factors that are of actual importance have been considered. Abstract factors such as location have not been considered. The competitiveness coefficient is calculated based on the formula (1):

$$C_u = \sum \alpha_i \left(\frac{A_{ia}}{A_{ib}}\right)^{\beta i} \quad (1)$$

where αi is the coefficient of the importance of the i-th parameter compared to other factors being analyzed (it is determined based on the survey method); A_{ib} shows factors before the implementation of the project, A_{ia} — factors after the implementation of the developed project.

βi = 1 when an increase in A_i contributes to an increase in competitiveness (for example, the amount of investment), βi = –1 when an increase in A_i leads to a decrease in the competitiveness of the university (for example, the cost of training). The sum of all factors does not exceed one (the specific weight is calculated, the larger value is 1)

The competitiveness coefficient can have the following values: if C>1, the university has become more competitive; if C=1, the competitiveness of the university has not changed; if C<1, the competitiveness of the university has decreased.

Data analysis. Comparative statistical and descriptive analyses were used to analyze the results. The statistical data were processed in Statsoft Statistica V. 6.0 and Microsoft Excel.

FINDINGS

Each competitive action of the university has a certain impact on the use of resources and the achievement of the results of educational activities, as well as on the optimization of the competitive actions of the university. In this context, the key elements of the intra-university competitiveness management system of Russian higher educational institutions are the following subsystems:

management of competitiveness in the field of achieving the results of educational activities,

management of competitiveness in the field of the use of educational resources,

management of competitiveness in the field of the optimization of educational activities.

As a result, at the intersection of four management functions (planning, organization, motivation and control) at three levels of competitive behavior (strategic, tactical, situational) and three elements of the competitiveness management system (resource usage, optimizing actions, achieving results), 36 special functions have been identified (Table 2).

Table 2
Special functions of university competitiveness management

		Strategic level	Tactical level	Situational level
Planning function	AR (Achieving results)	regular strategic planning and the definition of relevant goals in accordance with changes in world educational trends	determination of medium-term goals in an environment of group and regional competition	situational planning aimed at achieving results within the current curriculum
	(RU) Recourse usage	Strategic planning for attracting long-term resources with a horizon of 3 to 10 years	planning of attracting regional resources and regional resources on a medium-term basis (up to 3 years)	situational planning for the attraction and use of resources for specific programs and goals within the current curriculum
	OCA (Optimizing actions)	planning the reform and development of the university using the existing advantages with the goals of a certain share of the educational market	tactical planning of changes in educational programs and their provision with goals in their competitive group or region in the medium term (up to 3 years)	situational planning conducting training, taking into account the direction of education development and sustainable achievement of medium and long-term goals
Organization function	AR	clarification of the long-term algorithm of interaction between departments and faculties, preferential directions of scientific work and implemented teaching methods	tactical organization of transformation, scientific activities and training in departments and faculties	organization of a curriculum for students and teachers in connection with the implementation of structural, technological and pedagogical changes in the direction of increasing competitiveness

	RU	strategic long-term allocation and provision of resources for the functioning of academic research and student learning	tactical allocation of resources at the level of deputies and institutions to optimize the achievement of medium-term goals	flow situational organization of the use and distribution of resources to support academic research activities and training curriculum
	OCA	strategic optimization of transformations and implementation of technologies, taking into account the current competitive environment and its behavior	tactical optimization of the activities of departments and faculties in order to increase their competitiveness in the medium term and at the regional level	a system of situational organizational optimization solutions based on time management, knowledge management and resource management to improve the efficiency of educational and research work
Motivation function	AR	maintaining a system of motivating higher achievements among students, teachers and administrative management of the university through a system of titles, incentives, payments, awards, etc.	maintaining the system of motivating the achievements of students, teachers and administrative management at the level of regional competition and at the level within departments and faculties	support of tactical motivation through the implementation of modern technical capabilities and pedagogical methods that ensure the engagement of students and teachers
	RU	maintaining the strategic motivation of the research, teaching staff and management to increase the rank and popularity of the university, create networking and attract resources	maintaining tactical motivation of the research, teaching staff, students and management to increase the rank and prominence of the university at the regional level, create regional networking and attract appropriate resources	situational motivation to increase the amount of financial, material, reputational and other resources of the university by all participants through the system of social recognition and incentives within the university
	OCA	strategic incentives for competitive advancement through a system of awards and reputation for researchers, teachers, students and management	stimulating competition for high achievements between departments and faculties, as well as within university divisions, as well as at the regional level	situational optimization of educational and research activities with a focus on the best achievements of competitors in each separate area
Control function	AR	strategic changing and control of long-term results; control over the stages of continuous reform of the training system	tactical control achievement of medium-term goals, position in ratings, user ratings	situational control of implementation of programs and training schedules, achievement of short-term goals by students, teachers and the university as a whole
	RU	strategic control of the obtaining financial, material and other resources	tactical control of allocating medium-term resources and attracting regional resources and capabilities	situational control of over the optimal use of resources in the process of teaching activities; control over the implementation of saving technologies
	OCA	strategic control of implementation of competitive solutions in the field of education in the world	tactical control of the competitive actions of regional universities and universities in the same field of activity	situational control of everyday functional action providing training

Relationship between functions, levels, and scope of influence

At the planning stage, competitive strategies (for example, improvement of the quality of training, development of a flexible pricing policy, design of advertising activities) are developed in the intra-university competitiveness management systems; the key competitive advantage of the university (for example, innovative educational programs, in-demand specialties, high-quality infrastructure) is highlighted in the educational services markets; the core of the education business (for example, investments, start-ups), the ways to increase university competitiveness, and the design of the organizational structure of the university are determined.

The three key elements of the intra-university competitiveness management system (achieving results, using resources, optimizing competitive actions) are directly related to planning as a management function. **Planning** involves the determination of the results of educational activities, volumes and ways of the use of educational resources, and processes associated with the optimization of competitive actions. These activities can be planned. Thus, planning as a management function affects all three areas of competitiveness: the use of resources, the achievement of results, as well as the optimization of competitive actions.

The organization of educational activities as a management function is also carried out at the strategic, tactical and situational levels of management. At the strategic level, the organization of educational activities of a university involves the formation of an organizational structure and the establishment of relationships between its bodies, which aim to best implement the strategy of the educational organization. At the tactical level, the organization of educational activities of a university involves the implementation of operational coordination and distribution of resources between the departments and employees of the university. At the situational level, the organization of educational activities involves self-organization of each employee in the context of the implementation of professional activities, making independent decisions based on the situation that coordinate communications with other employees and provide them with resources to act.

The use of educational resources and the optimization of competitive actions is influenced by the organization as a management function. Thus, a well-planned organization (coordination) of actions can increase competitiveness both in the field of the optimization of competitive actions and the use of educational resources. First of all, organization is the impact on the behavior of the subjects of activity. As a management function, organization directly influences the actions of the personnel. However, organization, as a management function, does not affect competitiveness in the field of achieving the results of educational activities (the development of student competencies).

Motivation in an educational organization can also be carried out at the strategic, tactical and situational level. At the strategic level, the Department of Human Resources Management deals with motivation. At the tactical level, each manager who has subordinates is responsible for motivation. At the situational level, each employee is responsible for self-motivation.

In addition, motivation can be carried out for strategic, tactical and situational purposes. At the strategic level, motivation is expressed in measures to adequately convey the content of the strategic values and goals of the educational organization (in the context of corporate culture) to all university employees. At the tactical and situational level of management, personnel motivation ensures a part of professional competency – psychological readiness and the ability to perform tactical operations and situational actions.

The achievement of the results of educational activities is directly related to the actions of motivated workers; therefore, motivation should include the idea of the results of educational activities and a vision of the ways to achieve them. Motivation creates a benchmark for increasing competitiveness in the field of achieving results of educational activities. The degree of optimization of competitive actions of employees and the educational organization also depends on motivation. Thus, motivation is also manifested in the three areas of competitiveness: achieving results, using resources, optimizing competitive actions.

The control function of competitiveness management is also unevenly implemented at three levels of the university competitiveness management system. Control is a comparison of the planned competitiveness indicators with the achieved ones. In educational organizations, this function is usually delegated to specialized internal management control and audit divisions that report to the top management of the university. Control as a decision-making process based on the comparison of planned indicators with the results of educational activities is of great strategic and tactical importance. Due to the variability of competitive situations, control over the compliance of the planned and achieved indicators is carried out to a lesser extent, or is not performed at all.

University competitiveness factors

Control as a management function is primarily associated with the determination of the achieved results of educational activities. Therefore, control is determined by the competitiveness in the field of achieving the results of educational activities. It is possible to control not only the results achieved but also the resources used in educational activities. However, the processes of the optimization of competitive actions are not an object of control, but, on the contrary, act as a mechanism for transforming plans and resources into the activity results. At the same time, studies by Russian scholars on the competitiveness of Russian universities argue that establishments with greater institutional freedoms in management are more competitive in international terms. Consequently, the level of institutional income as a significant factor of international competitiveness of Russian higher educational institutions remains another fundamental factor of action. In all samples, the group of institutions with high income shows higher positions in QS company rankings (Endovitsky et al., 2020).

Synergy University competitiveness before and after UCMS implementation

The results of the competitiveness coefficient calculation are given in Table 3.

Table 3
Calculation of the university competitiveness coefficient before and after the implementation of the developed project

Competitiveness factors	Importance of factor α	$\frac{A_{ia}}{A_{ib}}$	C_u
A1- Academic reputation	0.23	0.90	0.207
A2 - Employer reputation	0.20	1.25	0.25
A3- International students	0.15	1.00	0.15
A4 – Investments	0.10	1.11	0.11
A5 - Faculty Student Ratio	0.08	1.25	0.10
A6 – Advertising	0.12	1.25	0.15
A7 - Research papers and citation	0.07	1.12	0.078
A8 – Price	0.13	1.00	0.13
Total	1.00		1.175

The calculated coefficient is > 1, which shows that the university competitiveness has increased; this may indicate the effectiveness of the developed project.

Based on the results obtained, it can also be noted that Academic reputation (α> 0.2) and Employer reputation (α> 0.20) are important factors in university competitiveness management while research papers and citations and the number of university students have less significance (α <0.1). The experience of the introduction of a number of special functions into the general university management system at the Synergy University in Moscow (Russia) required a dramatic change in the organizational structures related to the university competitiveness management.

DISCUSSION

Given the above, the following issues should be elaborated: the application of the competitive approach to the activities of universities; university competitiveness in the context of the search for sources of funding outside of market competition; organizational changes in the university.

The issue related to the content of the "university competitiveness" concept outside of market competition is still debatable: it is not clear whether university competitiveness can be considered outside of the competitive approach. Currently, the competitiveness of a Russian university is being interpreted in the context of its ability to attract more sources of funding for its educational and scientific activities regardless of market competition in the regional markets of paid educational services and scientific research.

Turkish researchers investigated the relationship between university competitiveness and the challenge of digital education, which has emerged under the COVID-19 pandemic. They point out the significant impact of digital education on the success and operational mechanism of the educational establishment in a specific market. In line with this, using the example of educational institutions in Uzbekistan, their research also shows that the education quality assessment directly depends on the indicators of competitiveness of the institution and has a separate place in the general management system of universities. Based on the system performance indicators that allowed evaluating

education within the framework of management criteria according to the results of participants' preparedness for practical activities, it was determined that by forming a decent and competitive field of influence, the university optimizes the main aspects of its activities (Abduvakhidov et al., 2021).

Universities compete with each other in the context of funding. There are many targeted funding programs to promote educational and scientific projects, scientific grants, competitions, initiatives of academic excellence, which are funded by the government, public funds and organizations on a competitive basis. Therefore, research teams, university and college personnel can generate income for their organizations in the form of research grants. Thus, university competitiveness goes beyond the market competition of the university.

In this case, the following university competencies come to the fore:

the ability to consider internal data to manage target performance indicators;

the ability to interact with the competition commission representatives;

the ability to timely and accurately submit applications, projects and programs for seeking funding.

It is a common case in Russia when top-ranking universities whose practice is taken as an example for determining academic excellence develop a kind of competitiveness based on the interaction with government authorities and public organizations. Nevertheless, it is still being discussed whether it is possible to specifically assess and develop competitiveness in less efficient universities.

In similar studies, it was determined that in strategic planning of competitiveness management, the university should be consumer-oriented as in the economic and social space it positions itself as a competitive organization providing high-quality educational services (Steiner et al., 2013). The key consumer of educational services is the applicant who determines university competitiveness while being influenced by various sources of information and having their own view of the value of education received at a particular university (Mingming, 2017).

Scientists note that in order to increase competitiveness on the basis of the conducted research, or the involvement of the most talented students having a business idea, start-ups – a new innovative business, as a rule, a small enterprise – can be organized. The university can also receive income from the activities of start-ups created within the educational institution (Secundo et al., 2017).

On the other hand, researchers point out the priority of learning style and format quality as the main advantage of a university. It has been multiply argued that the formation of competition in the market of educational services is not expedient enough as universities perform rather social mission than economic. University administration management should be aimed at the formation of a powerful and qualified commune of educators and teachers. The role of the quality of educational services is highly emphasized here.

It should also be noted that the study of organizational changes that contribute to the implementation of UCMS in the general management system of the university is a separate scientific topic that requires a special methodology and practical verification.

CONCLUSION

The competitiveness of an educational organization is not an object of management as in the management process, a controlling influence is exerted on an employee and a student of the educational organization, groups of people, teams, communities and other stable social systems, as well as on knowledge and educational resources.

General management functions (planning, organization, motivation, control) combined with the levels of competitive behavior (strategic, tactical, situational) and the spheres of influence of UCMS (use of resources, optimization of competitive actions, achievement of results) form 36 special functions of university competitiveness management implemented by UCMS. The introduction of UCMS into the general management structure of the university is accompanied by organizational changes. It has also been determined that after the introduction of UCMS, the competitiveness of the university increased (C>1). Education management administration and universities should be acutely aware of the markets that the educational institutions are competing in, and the type of performance indicators that should be used to assess and manage university competitiveness in these markets, as well as of the ways to effectively implement 36 special functions of the university competitiveness management system.

Further research in the field should focus on the formation of specific (first prototypical and later individual) mechanisms for implementing a competitiveness-boosting strategy for a university as a business entity. For employing this strategy in the educational process within the market economy, there should be a certain theoretical system of the interrelation of levels, functions, and objects within the limits of competitive advantages' formation.

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