



**STRATEGIC UNIVERSITY MANAGEMENT BASED ON THE THEORY OF THE
RESOURCE CONCEPT**

***GESTÃO ESTRATÉGICA UNIVERSITÁRIA COM BASE NA TEORIA DO CONCEITO
DE RECURSOS***

***GESTIÓN ESTRATÉGICA UNIVERSITARIA BASADA EN LA TEORÍA DEL
CONCEPTO DE RECURSO***

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ABSTRACT: The article considers the possibilities (potential) of strategic management in the higher school of Russia (based on the example of Russian transport universities) through the prism of the theory of the resource concept. In such a concept, a university represents a set of resources and competencies, rather than a set of business processes. The article shows the development areas of the Russian universities from 2000 to 2020 and the experience of implementing the open innovation model based on the Samara State University of Railway Transport. The article presents the model of university resources and competencies transformation into products and services, as well as the formula interrelating scientific and innovative activity and education. The main factors of strategic university management are formulated based on the resource concept.

KEYWORDS: University management. Theory of the resource concept.

RESUMO: O artigo considera as possibilidades (potenciais) de gestão estratégica na escola superior da Rússia (com base no exemplo das universidades de transporte russas) através do prisma da teoria do conceito de recursos. Nesse conceito, uma universidade representa um conjunto de recursos e competências, em vez de um conjunto de processos de negócios. O artigo mostra as áreas de desenvolvimento das universidades russas de 2000 a 2020 e a experiência de implementar o modelo de inovação aberta baseado na Universidade Estadual de Transporte Ferroviário de Samara. O artigo apresenta o modelo de transformação de recursos e competências universitárias em produtos e serviços, bem como a fórmula interrelacionando a atividade e a educação científica e inovadora. Os principais fatores da gestão estratégica da universidade são formulados com base no conceito de recursos.

PALAVRAS-CHAVE: Gestão universitária. Teoria do conceito de recurso.

RESUMEN: El artículo considera las posibilidades (potencial) de la gestión estratégica en la escuela superior de Rusia (basada en el ejemplo de las universidades de transporte rusas) a través del prisma de la teoría del concepto de recurso. En tal concepto, una universidad representa un conjunto de recursos y competencias, en lugar de un conjunto de procesos de

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negocio. El artículo muestra las áreas de desarrollo de las universidades rusas de 2000 a 2020 y la experiencia de implementar el modelo de innovación abierta basado en la Universidad Estatal de Transporte Ferroviario de Samara. El artículo presenta el modelo de transformación de recursos y competencias universitarias en productos y servicios, así como la fórmula interrelaciona la actividad científica e innovadora y la educación. Los principales factores de la gestión estratégica universitaria se formulan en base al concepto de recurso.

PALABRAS CLAVE: *Gestión universitaria. Teoría del concepto de recurso.*

Introduction

The concept of strategic management belongs to economic theory, although it borrows approaches and methods of analysis from other fields, such as psychology, political science, sociology, cybernetics, etc. The researchers who believe that the theory of strategic management should be considered from the standpoint of an interdisciplinary approach are fair. The very same strategic management in the field of socially significant services, the methods used, and the models should be considered as an extension of economic theory.

For the market sector of the Russian socioeconomic system, strategic management is used very successfully; however, for the economy of the state-public sector, to which universities partially belong, such management is not often used. Strategic university management based on the theory of the resource concept focuses on two main elements, namely, competitive advantage and resources. The approach of separating operational management from strategic management first proposed and implemented in 1921 at General Motors, seems to be very justified.

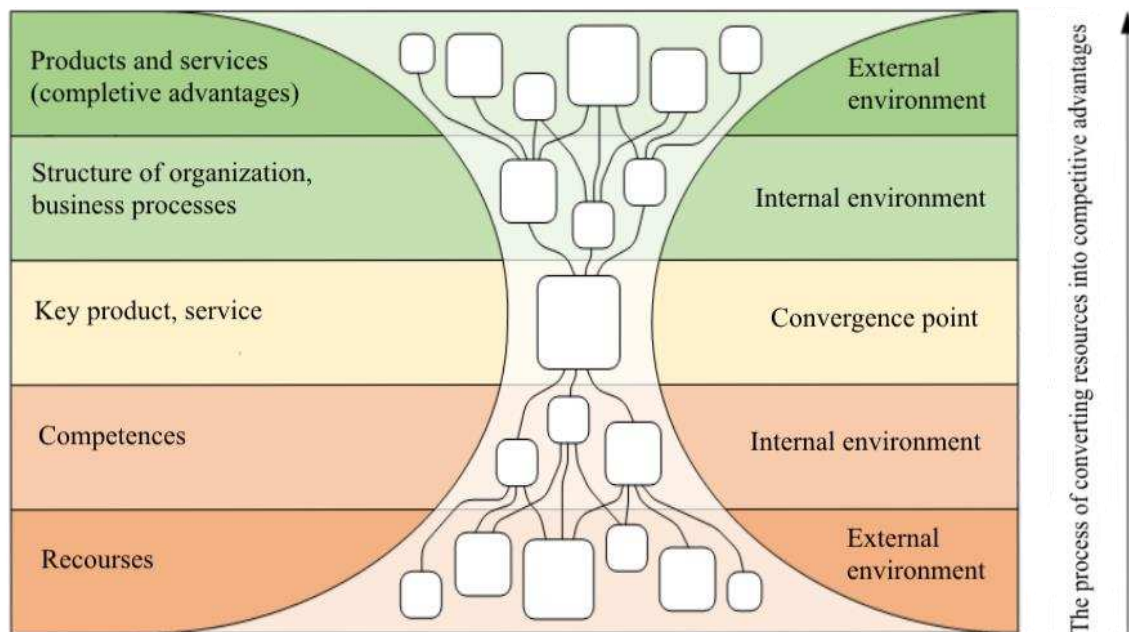
There are two factors in favor of the idea of using strategic management in higher education. The first factor is related to time. The processes taking place in higher education are very long, and the period between successive points of cause-and-effect relationship is usually long (5–10 years or more). For example, the results of the author's research show that the time between the decision to start implementing a new educational program and the response of the market or business about the quality of providing a socially significant service is at least 5–6 years. The second factor concerns the shift of the interest of the educational organization's owner, implementing higher education programs from economic efficiency to achieving the goals set, or using the knowledge obtained in the course of scientific work when commercializing the result.



Methods

The basic notions of the resource concept are resources and the effectiveness of their use, products and services, abilities, and key competencies. In the field of human resource management, branches of the resource concept have also been used, such as the concept of dynamic abilities and the concept of intellectual potential. Today, the resource concept has taken a dominant position in the theory of strategic management. In this concept, the university is considered as a set of resources and competencies, rather than a set of business processes (Figure 1).

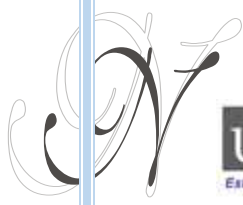
Figure 1 – A model for converting resources and competencies into products and services



Source: Prepared by the author

In the concerned model, competence is a combination of the university's abilities obtained based on resources (personnel, methodical, methodological, and technical). The main sources of competitive advantages are resources and the ability to configure them in changing environments to achieve the best result. The tasks of the university's management are to accumulate resources and configure unique combinations of innovative processes, organization, as well as employee training, team development, and training of supervisors.

At that, not all management teams can turn resources into competitive advantages. In this concept, the university is considered as a set of resources and competencies, rather than as a set of business processes.



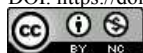
The period of the recent 20 years of the development of Russian universities has revealed the main condition for the success of educational organizations, among which the key role is played by the commonality of goals and the importance of cooperation among the employees of the organization, as well as the leadership qualities of the heads of educational institutions, their readiness, and ability to work in new conditions.

Recognizing the obvious advantage of universities that use close integration of the education process with scientific and innovative activities, it is impossible not to note the success of the application of the open systems model by universities. The *openness* of universities is manifested in relation to the external environment—business, the state, citizens, and other stakeholders. A striking example is the open innovation model used in the *science and innovation* business block when the university is transformed into a hub that provides the transfer of not only in-house but also third-party innovations. In this regard, it is impossible not to recall the theory of entrepreneur-innovator by I. Schumpeter, which describes the role of universities in the University 3.0 model in the best possible way.

Let's return to the concept of strategic management, which focuses on competitive advantages. This approach is not typical for higher education, since the competitive environment for universities takes place only at the current stage of the development of the Russian higher education system (2005–2020). In the period of 1990–2005, Russian universities did not compete, but survived, trying to preserve the teaching staff and the necessary level of scientific and laboratory facilities. The experience of creating world-class scientific and scientific-educational centers in Russia, conducted by the Ministry of Education and Science in 2018–2020, has justified an approach based on strategic management. The teams of regional groups that have successfully allocated and correctly identified their resources have received satisfaction of their applications for the competition. There is no doubt that such a bet on resources in the future will ensure the sustainable development of not only the very universities but also interuniversity collaborations.

The creators of the resource concept theory are scientists Penrose (1959), Wernerfelt (1984, 1995), Rumelt (1974, 1984), Teece (1980, 1982, 2002), Barney (1986), Bowman (1990), Prahalad and others (PRAHALAD; BETTIS, 1986; PRAHALAD; HAMEL, 1990, 1994). In Russia, the theory of the resource concept was promoted by Katkalo (2011), and Bukhvalov and Katkalo (2004, 2008).

As for the Russian higher school, the mission-goals-strategy logic seems to be fair, which considers the strategy as a means of achieving the set goals. The scientific nature of

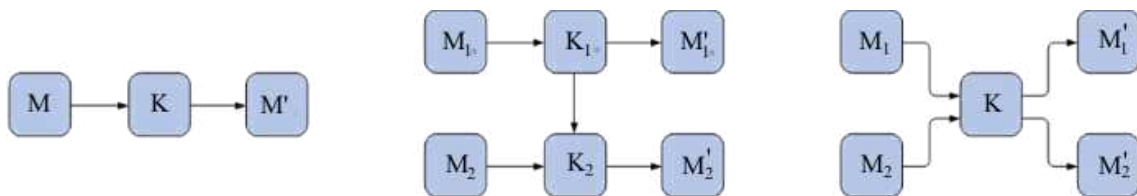


strategic management in universities is evidenced by the cause-and-effect determinism and the ability to predict.

Strategic university management

The basis of an innovative university in the University 3.0 model is the close relationship between scientific and innovative activity and education. Like electrical circuits, the model of such a university operation can be represented in the form of a four-terminal network (Figure 2).

Figure 2 – The formula for the relationship of scientific and innovative activity and education



Source: Prepared by the author

In this model, two flows have a common point. The first stream “money-knowledge-money” refers to scientific and innovative activities. It is this flow that gives new knowledge (K1), which is transformed into knowledge formed by educational programs in the “money-knowledge-money” flow. The model assumes the primacy of scientific and innovative activity for the education block. The practical implementation of the open innovation model based on the Samara State University of Railway Transport allowed identifying the following principles of its use:

1. Interdepartmental research teams working at the intersection of scientific fields have the greatest effect.
2. The university needs to provide *socially distributed research potential* in the form of human resources, i.e., consultants, developers, practitioners, and theorists.
3. The social relations of research teams tend to be nonhierarchical. The most effective teams are those formed spontaneously, rather than initiated by the command-administrative system. This principle is most effectively implemented in a situation where the university creates an environment for teamwork.



4. Students are not just formally involved in scientific and innovative activities but very scientific and innovative activities are carried out by teams that include mentors and students. In this case, the creation of new knowledge occurs together with the process of their development.

The relevance of strategic management for universities was most acutely manifested in 2020 during the pandemic when the situation ceased to be predictable and new approaches to the formation of university education were required. The complexity of the situation for universities was reinforced by two related factors. The first factor is digitalization, the penetration of digital economy products into all sectors, and higher education was no exception. The second factor is a decrease in interest in higher education. The value of the certificate on education has decreased for the employer and, as a result, for the potential applicant. Instead, the focus of business attention was attracted by the competencies and loyalty of the employee that was confirmed in practice. The situation required searching and identifying resources, as well as new management tools, including strategic university management.

University management can be divided into three groups: strategic (the level of products and markets), administrative (the level of organizational structure and resource allocation), and operational (the level of budgeting and controlling). The end of the era of sustainable development has prompted universities to replace planning with strategizing. The essence of the long-term strategy of the university is to form and maintain competitive advantages in relation to other universities as market participants.

For the strategic university management, the principle is valid, which is that any weak strategy that is implemented is much better than any strong strategy that is not implemented. The level of management and the planning horizon is inversely proportional to the detail of forecasting. For strategic management for 15–20 years ahead, detailed planning is not required due to a large degree of uncertainty.

For higher education, a situation is typical when authoritative managers can choose not the best options for strategies, striving for the best personal finance and status position. A typical example is a situation in 2000–2015 when a sharp increase in disciplines occurred during the transition to competence-oriented educational programs. This resulted in the emergence of a huge number of dwarf disciplines, which has led to worsening logic and sequence of mastering the material. At that, the leaders of public opinion of universities have received their author's courses, benefited in the short term, but lost in the long term. At the



turn of the 2000s, universities faced a problem of the university culture and the ethics of the work of scientific and pedagogical staff. The universities that have strong, stable academic traditions won. The university's strategy should take into account the interests of the founders (for public universities) and the owner (for private universities). This may concern staffing of the industry, the cost of the organization, the status of the organization etc. (Table 1).

Table 1 – Structure of University stakeholders

State	Regulators. Federal State authorities	Regional ministries and departments	Employees	Population
	Founders	University	Clients (Population and business)	
Business	Associations	Suppliers	Investors	

Source: Prepared by the author

University strategic management factors

Let formulate the main factors of strategic university management based on the resource concept:

1. Developing the university as an innovative entrepreneurial higher educational institution;
2. Providing professionalization of structural division heads, including those involved in scientific and educational activities;
3. Integrating scientific and educational structural units;
4. Considering the priority of key performance indicators of international rating systems of universities and scientific organizations;
5. Differentiating approaches for natural-scientific and sociohumanitarian blocks;
6. Increasing brand value;
7. Striving for multichannel financing;
8. Identifying and practicing spot work with stakeholders;
9. Creating a dynamic management structure, selecting and forming groups, project, and task teams.



The priority of dynamic organizational abilities in the strategic university management is the key to a long-term competitive advantage and the basis for sustainable development.

Final considerations

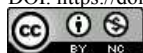
The strategic university management is characterized by a dichotomy between universal and unique solutions, between economic and social efficiency, between internal and external factors, and between quick and delayed profit. The effectiveness of strategic university management should be considered in dynamics since the university management system evolves together with the university. This is clearly shown through the prism of the university office of the rector: 1990–2000 was the period characterized by the emergence of vice-rectors for marketing, 2000–2010 for informatization and capital construction, 2010–2020 for production relations, and 2020–2030 for digital transformation.

The external environment of higher education is characterized by three processes: the power is taken by clients, i.e., applicants and students of courses; competition is increasing; changes become permanent. The strategic university management (internal environment) is characterized by four processes: creating and developing brands; developing corporate governance and corporate culture; managing development; increasing attention to the evaluation of education by the business. Gradually, the focus of attention is changing from price competition towards competition of quality, brands, and digital services.

The competence of the university management team to integrate and create unique configurations of internal and external competencies in a rapidly changing environment is acquiring great value. The presented approach to forming a university development strategy based on the theory of the resource concept will ensure the sustainable development of the university.

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