# GENERAL CONCEPTS OF ORGANIZATIONAL AND ECONOMIC MECHANISMS OF RESOURCE MANAGEMENT OF THE HIGHER SCHOOL OF THE REGION

<sup>A</sup>MARAT R. SAFIULLIN, <sup>b</sup>ALIYA A. ABDUKAEVA, <sup>c</sup>MAXIM V. SAVUSHKIN

<sup>a.b</sup>Kazan Federal University, 18 Kremlyovskaya street, Kazan 420008, Russia

<sup>b</sup>State Budgetary Institution Center of Perspective Economic Researches of Academy of Sciences of the Republic of Tatarstan, 84/32 Profsoyuznaya St, 117997 Moscow, Russia

<sup>c</sup>University of management of TISBI, 420012, Kazan, Mushtari st., 13, Russia

email:<sup>e</sup> Leonid.Elshin@tatar.ru, <sup>b</sup>info@prescopus.com <sup>c</sup>info@ores.su

Abstract. An extremely relevant task at the moment is the fundamental understanding of the place and role of Russian higher education in the current and promising processes of innovation of the socio-economic environment. An analysis of this kind is complex, difficult to structure, but it is extremely necessary to increase the efficiency of using the resources of higher education at the same time, as it allows correctly and in more detail understanding what society is seeking from higher education and what it is ready to provide for its development. This article is devoted to a partial solution of the issue posed. The study defines and substantiates a system of higher education, in accordance with which a number of supporting trends of such development are identified in the context of forming clustering mechanisms.

Key words: Russian higher education, society, partial solution.

#### **1** Introduction

The central link in the reproduction of education as a social phenomenon (and, above all, its innovative field) is a scientific seminar, acting as a kind of research laboratory. Confirming themselves in the conditions of quite fierce external and internal competition, the scientific seminars are combined in the networks with an open circulation of information, initiating information fields, where the dominants, strategies and standards are ultimately formed.

In the societies with a high information exchange ratio, the "metabolization" of scientific innovation groups and centers, i.e. their closure to the energy of encompassing landscapes, occurs through clustering, which acts here as a form of landscapenetwork symbiosis with a corresponding adjustment of institutions. In this sense, the cluster itself is, so to speak, a network institutional complex. In the societies that admit sufficiently wide inclusions of local landscape and institutional metabolisms that are really isolated from globalization flows, the integration of landscape institutional complexes into a kind of a single system is carried out by the efforts of supercorporations, the role of which is often played by the state.

The impossibility of accelerating the reform of the socioeconomic system through the development of administrative regionalization processes, on the one hand, and the need to transfer regionalization processes to the plane of socio-cultural construction, on the other hand, make relevant the task of optimizing the institutional trajectories for the development of landscape areas. The solution to this problem allows identifying the sources of potential or already unfolding network clustering ( Sternberg, 2000: Weber, 2014: Wespel et al, 2013). At the same time, in the course of such a decision, it becomes necessary to develop the strategies for managing the clustering processes, which in turn implies the direct connection of some part of the state corporations to the corresponding landscape with an aim of restructuring and reinstitutionalizing them to adjust to these processes (Sazesh & Siadat, 2018).

### 2 Methods

The above considerations form the basis for the conceptualization of managing material, financial, informational and other strategic flows that are directed to the field of education. This conceptualization involves a combination of network and landscape principles of strategic resource management, taking into account the institutional invariants for the development of regional resources. Moreover, the system of goals and objectives shall be built in such a way as to transfer the bulk of the institutional pressure from the informational components of the cluster to the landscape ones.

The resources of higher education in the region are composed of the intellectual, labor, financial and other resources of the reproduction of educational technologies, institutionalized in the system of regional scientific and educational centers (Tödtling & Kaufmann, 1999: Gafurov et al, 2017).

The institutional trajectory of the development of the region implies the presence of a number of invariants, the selection of which is of undoubted importance in the context of future institutional design. In the context of a higher school in the region, this means choosing a part of its institutional field, on the basis of which the remaining part will be transformed in accordance with the regional clustering goals that are being formed. Creation of a criterion base for such a choice involves analyzing the indicated system of invariants and, in turn, serves as the basis for developing some conceptual schemes for strategic planning and management in the field of resource supply for higher education (Tereso et al, 2018).

# **3 Results And Discussion**

Being the institutions, i.e. not only objects, but also subjects of institutional pressure on their environment, the higher school centers acquire certain political resources (Strongin & Chuprunov, 2012: Wiig, 1995: Nechepurenko, 2005). This is manifested not only and not so much in the "fusion" of the scientific and educational elites with the power at all levels, but, above all, in the fact that education, as a way of society's reproduction of its social structure, reproduces power elites along with the information shells surrounding them, i.e. representations of these elites about their self-identification within society, about the imperatives that determine their course of action, etc. And this is perhaps the most important thing.

Mastering the field of business consulting, the field of higher education acquires the *entrepreneurial activity resources* (Bogdanova, 2017). In this sense, the problem of finding the application points for this activity, i.e. the issue of ecology interaction between business and education, comes to the fore. Being closed within the education field, such activity can significantly deform the resources of its production and reproduction cycles, replacing the main systemic goal of education - genome socialization - with many secondary goals, the hypertrophy of which ultimately leads to the declusterization of entire regions from the point of view of the basic innovative clusters forming the world development, and their loss from the processes of socio-cultural construction (Beiki & Vahidi Elizaie, 2016).

In addition to highlighting the *functional* layer of classification, it is possible to involve other division principles of higher education in the analysis of the tasks posed: by the form of ownership, by the levels of education system (Kuteynitsyna, 2011), by the main system links, etc. The choice of the layer under consideration is due to two methodological approaches, conceptualizing the studied complex of issues in the required direction. Namely, by the point of view of the supercorporation (external influence) and the approach of the "point of view" of the education system as a whole (self-regulation). In a certain sense, two extreme cases are distinguished, although education does not form a systemic integrity that gives it the necessary autonomy at the regional level, especially since the very concept of "regionality" implies subordination and intersubordination to a common center.

On the other hand, the cluster itself is the "center" (of course, with different principles of aggregation and centralization). Therefore, the "point of view" of the systematic paradigm of the

development of education that it generates can be considered a system of views from the perspectives and level of clusterforming scientific and educational centers, since they (with full awareness) have the right to choose both specific strategies and ideologies of structural schemes of resource provision for the educated cluster areas or launch sites for them.

On the basis of such classifications, one can try to single out indicator systems that reflect the innovative potential of universities, the scientific and technical potential of the region, and the feature of human factor.

In accordance with the two methodological approaches noted above, it is possible to propose indicators for assessing the current configuration of the higher school resource subsystems in accordance with the above typification. These subsystems are in a state of dynamic equilibrium with each other and with their environment, and their development trends are determined by the application points of various interests, which leads to the prevalence of some target imperatives over others and, as a result, to the concentration of influence centers in some areas of resource supply based on others.

From the point of view of the determining influence, the resource configuration shall look like the chain shown in Fig. 1 (arrows are directed from the determining sphere to the subordinate one).



Figure 1. Functioning scheme of cluster-forming resource flows

This chain is a principal functioning scheme of cluster-forming flows within the framework of potential reproduction of the corresponding innovative cluster. In reality, this scheme is distorted due to circulation, doubling (and multiple multiplication) or removal of arrows, as well as due to their adjustment by bypassing various links of resource supply. In relation to educational and scientific centers, this scheme underlies the principle of consistent subordination of target imperatives in the internal policy of a university. This principle is implemented according to the scheme shown in Fig. 2.



Figure 2. Functioning scheme of cluster-forming resource flows in relation to educational centers

As experience shows, the reversal of arrows in the last diagram leads to the predominance of simulation training models and the actual conversion of the system of technological complexes of reproduction of scientific areas into business consulting, aimed at accumulating financial resources in the hands of "influence groups" that control the use of university potential within the framework of local reproduction of "status landscape".

The actual ratio in the control chains differs significantly from the view shown in Fig. 1. This is due to all previous institutional drift of the higher school of the region. To study this state, it is necessary to single out a system of basic institutional invariants for the development of the resource supply system of higher education, in accordance with which a number of supporting trends of such development can be identified in the context of forming clustering mechanisms.

#### 4 Summary

Let us consider regional institutional invariants from the point of view of the possibility of making influence on them from the side of micromeso-, macro- and mega-level formations, i.e. from a management perspective in the broadest sense.

The problem of analyzing invariants from the point of view of two aggregation planes from the standpoint of supercorporations, which have, among other things, administrative means of influencing the processes (which is itself an invariant), and a system of scientific laboratories that can affect the environment only through the network management, i.e. environmental impact,

from the point of view of the central link of future clustering, is of particular interest.

1. *Invariants for the development of intellectual resources.* The invariants for the development of intellectual resources of the Russian regions include isolation, sublimation, and scattering.

Closure is understood not only as the reproduction of this type of resource based on the local gene pool, but as closed information cycles reproduced by the considered environment. The research subjects, as a rule, do not go beyond the framework proposed by traditionalism. The slowdown in professional growth is an invariant that permeates all the fields of regional life.

Sublimation is an invariant for the development of selfexpression. It reflects the programmedness (traditionality) of the corresponding information environment, which consists in the transition of research imperatives from innovation to imitation as the researcher reaches certain age milestones or status positions. Recognizing his/her absence of demand and lack of environment and incentives for further development as a kind of "ceiling", the specialist is trying to transform his/her activity into an administrative or business plane, either implementing his/her ideas about organizing an appropriate educational and scientific center, or forming consortia to create microclusters that "metabolize" separate educational areas due to part of "status landscape" of the region. In addition, sublimation reflects the "shift" of the real field of competition from the field of scientific innovation to the field of control over the flows of status groups.

The last invariant- scattering -reflects the high probability of scattering of scientific directions. If the difficulties of creating a scientific school are largely due, among other things, to a lack of resources for its formation (inaccessibility of approaches to topical issues of the world level, limited student enrollment), as well as to the formed ideas of the university environment on the adequacy of existing directions, then the difficulties of maintaining, as well as developing the scientific school are based primarily on the need for high energy costs in the broadest sense, which can only be compensated by adjustment of regional scientific schools in the federal system of "verticals" that makes the scientific schools to re-focus on the value of administrative order. This situation leads to a real stagnation of scientific areas

and the dispersion of their ideological complex in the plane of various kinds of "political technologies" or business technologies.

2. Invariants for the development of labor resources. One of these invariants can be called idiosyncratic, which means self-estrangement from the goals and ideology of one's professional status, and, ultimately, from the very labor object. The main workplace in the representations of this resource range is perceived as the basis for maintaining one's own status (if there is no attempt to integrate into consortia organized informally by the specialists of the first group of invariants), while the activity tip is directed, as a rule, into the field of entrepreneurial activity in servicing the simplest public metabolisms.

3. Invariants for the development of material resources. The material resources of higher school in the region are "tied" to its comprehensive city-forming landscape. Therefore, essentially the only basic invariant of their development is both potential and relevant limitations in the development of the regional city-forming landscape. This circumstance puts limits on the level and dynamics of those scientific studies and technologies that are material-intensive in their essence (natural and technical sciences).

4. Invariants for the development of financial resources. This aspect of the problem allows for greater detail in view of certain positions in favor of its dominance in the framework of modern concepts. Since financial resources are formed and operate in the form of flows, a significant part of which have non-regional sources, it is natural to divide the entire resource sphere in the field of financing into two large groups: invariants of the general nature and invariants of local, specific or traditional nature.

The invariants of the general nature include as follows:

1. Redistributive nature of resource supply. This invariant reflects one of the deep-seated phenomena of the Russian financial field its non-comprehensive nature. In other words, the financial system does not cover all aspects of society, all segments of the population and the entire institutional landscape at the level declared by it at the same time. Such coverage is impossible at the same time, therefore it spreads over time into a system of mutually switching cycles with incomparable amplitudes, which is one of the prerequisites for chronic social arrhythmia. The chain of switches in this system is one of the elements of the power field of society.

An example of the effect of this invariant is actually represented by the paid nature of education, when some part of the financial resources of the population is redistributed in favor of some teaching staff of the universities.

2. Minimization of formal responsibility. The essence of this invariant is that any financial system is responsible for the functioning of flows within itself. When the system is left, responsibility is switched to the consumer. The size of the final network section before leaving the system, where liability is disconnected, can reach significant sizes, as shown by the experience of delays in wages, the peak of which occurred in the 90s.

The invariants of the special nature include as follows:

The traditional nature of regional resource supply, which is the result of conservative trends inherent in the region with clearly declared "self-sufficiency". The closed metabolism of the economic and socio-cultural spheres of the region resists changes in which the threat of prevailing model subculture is visible. At the level of everyday consciousness, this leads to the predominance of passive moods, the psychology of elementary survival.

# **5** Conclusions

The considered groups of invariants allow one "groping" a number of imperatives in the plane of internal and external incentives for the development, whose analysis allows identifying positive trends, having the potential for synchronization within the framework of counter-stagnation programs.

### Acknowledgement

This work is performed at the expense of the subsidy allocated to Kazan State University for the fulfillment of the state task in the field of scientific activity (No. 26.9776.2017/BCH (Russian: 26.9776.2017/BH)

## Literature

1. Bogdanova, M.V.: Ethnicity of the university: sociological operationalization of the potential of "unwritten rules", Sociological Journal. No. 2. 2017, 153-170 p.

2. Gafurov, I.R., Safiullin, M.R., Yelshin, L.A.: Mechanisms and directions for the development of higher schools in the system of innovative and technological development of the national economy, Alma mater (Bulletin of the Higher School). No. 11. 2017. 5-10 p.

3. Kuteynitsyna, T.G.: Labor market and vocational education: institutionalization of interaction. LAP LAMBERT Academic Publishing, Saarbrücken, 2011.

4. Nechepurenko, A.S.: Modeling the processes of functioning and development of university complexes in the context of reforming the education system. Thesis for the degree of candidate of economic sciences. Novocherkassk: 2005. 198 p.

5. Sternberg, R.: Innovation networks and regional development evidence from the European Regional Innovation Survey: Theoretical concepts, methodological approach, empirical basis. European Planning Studies. № 8(4), 2000. 389-401 p.

6. Strongin, R.G., Chuprunov, E.V.: Scientific and educational centers and networks of an innovative university. N. Novgorod: Publishing House of the NNGU, 2012. 134 p.

7. Tödtling, F., Kaufmann, A.: Innovation systems in regions of Europe—a comparative perspective. European planning studies, 7(6), 1999. 699-717 p.

8. Weber, L.: Preparing universities for an era of change. Economica, 2014. 280 p.

9. Wespel, J., Orr, D., Jaeger, M.: Implications of Excellence in Research and Teaching. International higher education, (72), 2013, 13-15 p.

10. Wiig, H.: What comprises a regional innovation system? An empirical study / H. Wiig, M. Wood. Sweden, 1995. 42 p.

11. Sazesh, A., Siadat, S.A.: The Relationship between Quantum Management and Organizational Agility in Ministry of Roads and Urban Development of Golestan Province, Iran. Dutch Journal of Finance and Management, 2(2), 2018. 51 p. https://doi.org/10.29333/djfm/5827.

12. Beiki, V., & Vahidi Elizaie, E.: Investigation on the effect of the variability of risk and funding on innovation on firms. UCT Journal of Management and Accounting Studies, 4(1), 2016. 7-16 p.

13. Tereso, A., Ribeiro, P., Cardoso, M.; An Automated Framework for the Integration between EVM and Risk Management. Journal of Information Systems Engineering & Management, 3(1), 2018. 03 p.

#### Primary Paper Section: A

Secondary Paper Section: AH, AE