“Systematization of drivers of change in the higher education system of the Russian Federation”

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SYSTEMATIZATION OF DRIVERS OF CHANGE IN THE HIGHER EDUCATION SYSTEM OF THE RUSSIAN FEDERATION

Abstract
In modern conditions, the higher education system of the Russian Federation is characterized by high degree of changeability. It is caused by need of quick and adequate response to changes of internal and external environment. The specified changes are determined by the nature of requirements and interests of stakeholders, which interact with higher education institutions: satisfaction of needs of stakeholders becomes an ultimate goal of development and the most important condition of existence of any organization, including the sector of higher education. Therefore, stakeholders become the main driving forces (drivers) of change in activity of higher education institutions. The research goal is to systematize drivers of change in the higher education system of the Russian Federation. The main research methods are analysis (for detection of the set of drivers of change), classification (for allocation of types of drivers), and the construction method of managerial models (for creation of matrices of changes). Following the research results, current changes in activity of Russian higher education institutions are divided into 4 types: changes in educational, research, innovation and entrepreneurial management activity. The main groups of stakeholders (drivers of change) are distinguished, and their influence on change in activity of higher education institutions is justified. Drivers of change are classified by 2 features: “by attitude to a higher education institution” – into external and internal, “by nature” – into obligatory and initiative. The matrices of necessary and initiative changes are designed. They create interrelation between types of changes and their influence on interests of key stakeholders of Russian higher education institutions (effects, which can be favorable, unfavorable and neutral). The possibility of using the matrices of changes as a tool of managerial decision-making in activity of Russian universities is justified.

INTRODUCTION
Higher education institutions operate in conditions of difficult dynamic environment. That is why they are open to changes, have ability to dodge and adapt to various circumstances and conditions. The leading American figure of education Hesburgh (1971) noted that “a university is one of the most traditional institutions of our society, and at the same time it is an institute that is responsible for changes more than others. These changes make our society one the most unsteady in the history of the mankind”. According to Clark (2011), today there are considerable changes in higher education (and higher education, in its turn, causes considerable changes in the society). These changes require development of a systematic approach to changes.

Today there are considerable changes in higher education, which are determined by the government policy (in particular, reduction of the budgetary financing, optimization of network of higher education institutions, etc.) and also by commitment of universities to maximum...
satisfaction of interests of stakeholders (in particular, introduction of innovative educational technologies, improvement of commercialization mechanisms of results of intellectual activity, etc.). Current changes in the Russian higher education system demand the detailed analysis, which is not possible without determination and systematization of the drivers (driving forces) of change.

1. LITERATURE REVIEW

The main aspects of the theory of organizational change management are rather deeply investigated and revealed in domestic and foreign systems of scientific knowledge. In relation to the higher education system, these issues are reflected in the works of Brown (2013), Storberg-Walker and Torraco (2004), Halasz (2010), Torraco and Hoover (2005). In particular, Halasz (2010) distinguishes two types of changes, which are carried out in higher education institutions – changes by the principle “from top to bottom” (they are characterized by premeditated planning) and by the principle “from bottom to top” (they are based on spontaneity, improvization). The specified types of changes supplement each other, and that is why they are quite often used in conjunction.

High dynamics of development of the higher education system at the present stage of economic development requires more detailed study and systematization of the drivers (driving forces) of change, taking into account the specifics of this system.

Various factors can be considered as the main drivers of change in the higher education system (for example, transition to mass higher education, change of requirements for students with account of principles of lifelong learning, strengthening of requirements for university graduates from enterprises, growth of competition between higher education institutions, etc.) (Grant, 2003; Patria, 2012). Pincus et al. (2017) consider two groups of the driving forces of change in the higher education system: financial (for example, reduction of the budgetary financing from the state) and technological (for example, the growing competences in the labor market). Schofield (1991) distinguishes four groups of reasons for changes in higher education institutions: certain people and groups within a higher education institution, the managerial decision-making system in a higher education institution, the organizational structure of a higher education institution, external forces.

In fact, the specified factors are somehow connected with actions of stakeholders of higher education institutions. However, the authors do not unambiguously designate stakeholders as the drivers of change, though they note that the key feature, which defines successful change management, consists in interaction with stakeholders (Brown, 2013). The features of interaction between universities and stakeholders were revealed in the works of Mainardes, Alves, and Raposo (2010), Slaba (2015), Kettunen (2015), Marić (2013), Drantusova and Knyazev (2013), Savvinov and Strelkovskiy (2013). The mentioned authors consider influence of interests of stakeholders on development of higher education institutions. However, they do not interrelate stakeholders and changes, which are carried out in activity of higher education institutions.

Within the research, the groups of stakeholders are designated as the driving forces (drivers) of change in the higher education system, and their systematization is carried out with account of the Russian specifics. The aim of the article is to identify and systematize the drivers of change in the higher education system of the Russian Federation.

2. METHODOLOGY

The following methods are used for achievement of the research goal: analysis (for determination of types of changes in the Russian higher education system, detection of the set of drivers of change), classification (for allocation and grouping of drivers of change), the construction method of managerial models (for creation of the matrices of necessary and initiative changes).

3. RESULTS

Satisfaction of stakeholder needs is the ultimate purpose of development. It is also the most important condition for existence of any organization,
including the sector of higher education (Abidin, 2015; Samah & Kamaruzaman, 2008; Gresko, Rakhmanova, & Solodukhin, 2012). According to the stakeholder concept (the stakeholder theory), in conditions of the modern economy, actions of an organization depend on a wide set of interests and inquiries of stakeholders, which influence on adoption of relevant decisions on tendencies of its further development. The stakeholder concept becomes a development basis for those organizations, which are interested in maintenance of favorable relations with a wide range of stakeholders. Higher education institutions, behavior of which is defined by manoeuvring between interests of numerous stakeholders, are definitely among such organizations (Gresko, Rakhmanova, & Solodukhin, 2012).

Interaction of higher education institutions with stakeholders should be based on three basic principles (Podolskaya & Kharlamova, 2017):

- a materiality principle: a university should know its stakeholders and also their most significant (essential) interests;
- a completeness principle: a university should understand the main interests, inquiries, needs of its stakeholders and also their opinion on the most important issues;
- a reaction principle: a university should consistently react to vital issues, which are in the interaction field with stakeholders.

In the course of the research, it was concluded that stakeholders determine the level of competitiveness of higher education institutions and influence on their development purposes. It predetermines the nature of changes, which are carried out in the higher education system. All the stakeholders can be considered as a unified and sometimes contradictory whole, equivalent of aims, motives and interests of parts that will influence on a development pathway of a higher education institution (Savvinov & Strekalovskiy, 2013).

When requirements of stakeholders change, a higher education institution estimates the feedback, defines its purposes and improves the processes for satisfaction of stakeholder needs. According to Halasz, changes can affect various fields of activity of higher education institutions, in particular (Halasz, 2010):

- mission and strategic aims;
- educational programs and technologies;
- manpower resources;
- research, inventions and innovations;
- internal organization and management structure;
- mechanisms of resources allocation within a university;
- relations with environment;
- organizational culture.

Changes, which take place in the higher education system, affect not only substantial and pedagogical components of education, but also its scientific and technological components (Burganova, 2014).

In general, all the changes, arising in the activity of higher education institutions, can be divided into 4 groups:

- changes in educational activity;
- changes in research activity;
- changes in innovative and entrepreneurial activity;
- changes in management activity.

Changes in educational activity are aimed at creating a new educational space in higher education institutions on the basis of using innovative educational technologies, developing and introducing new educational programs and products.

Changes in research activity include improvement of the results of publication activity, differentiation of financing sources for research and inventions.

Changes in innovation and entrepreneurial activity presuppose improvement of commercialization mechanisms of the results of intellectual activity, and development of innovative infrastructure.

Changes in management activity imply improvement of organizational and management technologies (in the field of personnel management, organization of a quality management system, etc.).

The specified types of changes are closely connected: changes, arising in one field of activity of high-
In general, the abovementioned types of changes are carried out for the fullest satisfaction of key stakeholder needs of the higher education system. The following groups are distinguished as stakeholders, which induce universities to carry out changes in their activity (Figure 1):

- households (enrollees and their parents): act as key consumers of educational services of higher education institutions;
- employers (large industrial enterprises, enterprises of small and medium business, social welfare institutions): act as consumers of educational services, results of scientific research, innovations and university graduates;
- the state: is a key customer of educational services, results of scientific research, innovations, university graduates. Its feature as a stakeholder of the higher education system is the legislative nature of its activity: the state implements the policy in the sphere of higher education, which determines the main conditions (framework) of development of higher education institutions. In this sense, it is mostly about the mandatory requirements applicable to higher education institutions, and not about interests (needs) of the state;
- society (various public organizations and associations, which are not directly connected with the higher education system, but they are interested in social partnership): acts as the subject of the social order for higher education;
- employees: this category includes two groups of stakeholders – managerial personnel and other employees who are interested in the fullest satisfaction of needs in the corresponding working conditions.

Consequently, stakeholders as key consumers of products and services of the higher education system become drivers (driving force) of change, which are carried out at universities.

Drivers of change in the higher education system can be systematized by several criteria (Table 1).

**Figure 1. Influence of stakeholders on changes in the activity of higher education institutions**

![Diagram showing the influence of stakeholders on changes in the activity of higher education institutions]

**Table 1. Drivers of change in the higher education system of the Russian Federation**

<table>
<thead>
<tr>
<th>Criterion of classification</th>
<th>Types of drivers of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. By attitude to a higher education institution</td>
<td>1.1. Drivers of external environment</td>
</tr>
<tr>
<td></td>
<td>1.2. Drivers of internal environment</td>
</tr>
<tr>
<td>2. By the nature of changes</td>
<td>2.1. Obligatory (necessary)</td>
</tr>
<tr>
<td></td>
<td>2.2. Initiative</td>
</tr>
</tbody>
</table>
The main criterion of systematization of drivers should be considered the criterion “by attitude to a higher education institution”. According to it, all drivers of change can be divided into two groups:

- drivers of external environment;
- drivers of internal environment.

Both external and internal factors play an important role in readiness of higher education institutions for carrying out changes.

External stakeholders, with whom higher education institutions interact, can be considered as drivers of external environment: the state, households, employers, and society in general.

The state as a subject of management is the most important driving force of change in the higher education system by means of a mechanism for implementation of the state policy: higher education institutions carry out changes according to requirements, imposed by the state. Along with that, the state is the most important supplier of financial resources (budgetary financing). It predetermines readiness of higher education institutions for carrying out changes for satisfaction of the state's interests. It is the main stakeholder of the higher education system. The state determines tasks and tendencies of change of this system (Drantusova, 2013). The changes, which are carried out in higher education institutions in accordance with requirements and interests of the state, cover all main activities of higher education institutions – educational, research, innovative and entrepreneurial management activity.

Households determine the nature of changes, which are carried out in educational activity of universities.

Employers as consumers of educational services, results of scientific research, innovations and university graduates determine the nature of changes in educational, research, innovative and entrepreneurial activity of higher education institutions.

The society indirectly influences on development of the higher education system and is affected by this system through a mechanism of knowledge transfer.

Internal stakeholders of higher education institutions act as drivers of change of internal environment:

1) managerial authority. The structure of control and management in higher education significantly influences on formation of any process of changes, which begins with determination and reaching consensus in respect of the development purposes of a higher education institution. As a rule, the managerial authority becomes a source of changes in the university under the influence of requirements and interests of external stakeholders (drivers of change of external environment);

2) higher-education teaching personnel and other employees.

Thus, interrelation of the higher education system with key external and internal stakeholders is based on the principles:

- of ensuring compliance with the requirements, imposed by the main stakeholders (first of all, by the state);
- of the fullest satisfaction of needs (interests) of stakeholders.

Proceeding from the specified principles, there is one more criterion of classification of the drivers of change – “by the nature of changes”. According to it, all the drivers of change in the higher education system can be divided into two groups:

- obligatory or necessary (caused by the legislative requirements). The state acts as the main driver of obligatory changes;
- initiative (carried out in accordance with the requirements and interests of internal and external stakeholders).

The obligatory changes are carried out according to the policy pursued by the state in the sphere of higher education (i.e. they are focused on interests of the state), but at the same time they affect interests of other stakeholders. This influence can be reflected in the matrix of necessary changes (Figure 2).
This matrix shows the interrelation between the types of obligatory changes (changes in educational, research, innovative and entrepreneurial, management activity) and their influence on interests of key stakeholders of higher education institutions (effects). The effects of carrying out obligatory changes in the higher education system can be divided by the following characteristics:

- by stakeholders (taking into account their involved interests). Households, employers, the state, society, employees are distinguished as key stakeholders, whose interests are influenced by obligatory changes in the higher education system;

- by the nature of effects (favorable – correspond to interests of the distinguished stakeholders, unfavorable – contradict interests of stakeholders).

The analysis of the Figure 2 allows us to conclude that all obligatory changes completely meet requirements and interests of the state, and therefore they have favorable effect for this stakeholder (“a green zone”). At the same time the specified changes exert impact (have effect) on interests of other stakeholders, and the specified influence can be both positive (favorable effect – “a green zone”) and negative (unfavorable effect – “a red zone”). It should be noted that obligatory changes in management activity, as a rule, affect only interests of internal stakeholders (employees) of higher education institutions, and for other stakeholders they are neutral (do not affect their interests directly) – “a yellow zone”.

Initiative changes are carried out due to initiative of higher education institutions in accordance with needs and interests of key stakeholders. This influence is presented in the matrix of initiative changes (Figure 3).
The analysis of the Figure 3 allows drawing the following conclusions:

1. Because of the fact that initiative changes in the higher education system are aimed at the fullest satisfaction of needs of the main stakeholders, the effects of changes for the specified stakeholders are of favorable nature (“a green zone”): changes in educational activity are carried out with due regard to interests of households and employers; changes in research, innovative and entrepreneurial activity – with consideration for interests of employers; change in management activity – taking into account needs of employees. In general, the matrices of necessary and initiative changes serve as a tool for adoption of managerial decisions: if change gets to the “red zone”, then the measures, directed to softening of unfavorable effects for interests of the corresponding stakeholder, should be taken, i.e. such changes are subject to paramount management.

2. Effects of initiative changes for other stakeholders, whose interests aren’t considered as primary, are of neutral nature (“a yellow zone”). The internal stakeholders are an exception – the staff of a higher education institution. Any initiative changes in educational, research, innovative and entrepreneurial activity can be both favorable (“a green zone”) and unfavorable (“a red zone”) for them.

4. **DISCUSSION**

In this research, the interrelation between the current changes in activity of the Russian universities and stakeholders who are considered as the drivers (driving forces) of change, is established. The types of drivers of change in the Russian higher education system are designated for the first time, and their systematization is carried out according to their relation to a higher education institutions and the nature of changes.

**CONCLUSION**

Following the research results, the main drivers of change in the Russian higher education system are identified: households, employers, the state, society, employees. The revealed drivers are systematized by two features: by attitude to a higher education institution – drivers of external environment (households, employers, the state, society) and drivers of internal environment (employees), by the nature of changes – obligatory (necessary) (the state) and initiative (households, employers, society, employees).

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