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INTERNAL FACTORS OF EXPORT ACTIVITY IN RUSSIAN UNIVERSITIES

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Doctor of Philosophy in Education HSE

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VII Moscow International Conference of Higher Education Researchers “University between Global Challenges and Local Commitments” (Moscow, 2016). Talk: “International educational activities of Russian higher education organizations”.
Introduction

Export of educational services for modern universities is one of strategically important activities. Every year the number of universities participating in the international higher education market, the diversity and quality of educational programs offered to foreign students, the number of applicants seeking higher education abroad is growing.

Results of export activities depend on external factors, which can’t be directly controlled by university, and factors of intra-university level, which are regulated by the university. The external factors include the following: competition conditions on the international higher education market, the regulatory conditions for conducting international educational activities in the country where the university is located, intergovernmental agreements that facilitate the implementation of joint educational programs by universities and the development of student exchanges with partner countries, recognition of national higher education diplomas on labor markets of foreign countries, climatic and socio-economic living conditions in the country and others [Mazzarol et al., 2002; Racine et al., 2003].

The factors of intra-university level include the strategy of educational services export, university’s competitive advantages, competences and resources, characteristics of educational services offered and strategies for their promotion [Mazzarol, 1998; Racine et al., 2003; Ross et al., 2007].

Russian leading universities intend to increase the volume of educational services export and strengthen their positions on the international higher education market. In recent years, state projects are being implemented aimed at supporting and developing the export of education in Russia. One of the latest initiatives in this area is the federal project “Export of Education”, launched in November 2018. For 6 years of its implementation, it is planned to increase the number of foreign students in Russian universities by at least 2 times.

Russian universities have accumulated experience in international educational activities in different areas: attracting foreign students and lecturers, implementing double degree programs and international academic mobility programs, developing partnerships with foreign universities and joining international networks of universities, creating open online courses in English [Arefiev et al., 2017; Melikyan, 2016]. In studies of the export activities of Russian universities, successful practices of individual universities were analyzed, their positions and results on the international education market were evaluated, and foreign students studying in Russia were surveyed about the factors that influenced their choice of country and university for study [Arzhanova et al., 2016; Verevkin et al., 2015; Nefedova, 2017; Chuchalin, 2009]. But quantitative assessment of the relationship between various factors and indicators of universities’ export performance has not been carried out. Research problem consists in the selection of adequate tools for analyzing the relationships between internal factors and universities’ export results on the basis of quantitative performance indicators, as well as the research and assessment of these relationships based on a representative sample of Russian universities. The results of the study can be used in the development and adjustment of strategies of Russian universities that plan to maintain and increase the
volume of educational services export.

**Background**

Various issues related to the export activities of universities are analyzed in research works. A significant number of research papers are devoted to the study of the motives of choice by foreign students of the country and the university for study [Nefedova, 2017; Oliveira et al., 2016], problems associated with their adaptation, communication and learning [Presbitero, 2016; Tran et al., 2016], learning outcomes [Crawford et al., 2016] and the socio-economic status of foreign students [Ding, 2016] are considered.

In certain research works export activities of universities are considered as a source of income derived from the payment by foreign citizens for educational and related services and their living expenses in the country during their studies. The calculation of various items of expenditure of foreign students during their studies and residence in a foreign country was carried out [Klyachko et al., 2015; Conclon et al., 2011].

Research works on education statistics analyze quantitative data on international students at the macro-level (country level), meso-level (institutional level) and micro-level (individual level) [Barnett et al., 2016; Vogtle et al., 2016]. Several research publications present an analysis of statistical data on quantitative indicators of the export activities of Russian universities, such as the number and composition of foreign students, the income and expenses of universities from their education, and the costs of attracting foreign students. [Arefiev, 2015; Verevkin, 2015; Melikyan, 2016; Popova, 2010].

In a number of studies the export of higher education is considered as an instrument of political influence of the state on other countries [Lanshina, 2014; Torkunov, 2012]. Many papers are based on the concept of “soft power” put forward by John Nye [Nye, 2002].

In research works on management and marketing of education, the peculiarities of university strategies for the promotion of educational services on the higher education international market are considered [Vashurina et al., 2017; Chuchalin, 2009]. Research has been carried out on the export market orientation of universities, in which the specifics of the implementation of individual components of the concept of market orientation in universities in the context of recruiting foreign students and their influence on the performance indicators of universities' exports have been studied [Ross, 2012]. The prerequisites for the export market orientation of universities, such as export coordination and export experience [Naidoo, 2010], as well as export competence and the commitment of university management [Asaad et al., 2015; Naidoo, 2010] were analyzed.

In research works devoted to identification and analysis of internal factors of universities’ export activities the following factors that positively correlate with the results of the universities’ export have been identified: financial resources, positive image and recognition on the educational market, quality of educational services, influence of the alumni, level of diversification of educational courses and programs, number of international strategic partnerships and transnational education programs,
competence in the field of export activities, support of export activity on the part of management, number of employees of the marketing department and their professional qualifications [Mazzarol, 1998; Naidoo, 2010; Ross et al., 2007, 2012].

There are several Russian research works in which the experience of export activities of a particular university, its strategy on the international higher education market, and the difficulties associated with attracting and training foreign students are analyzed [Vashurina et al., 2017; Chuchalin, 2009]. Several research publications present an analysis of statistical data on the international educational activities of Russian universities [Verevkin et al., 2015; Popova et al. 2010]. Studies on the identification and analysis of intra-university factors of export performance on representative samples of Russian universities have not been conducted.

The research goal is to identify internal factors interrelated with the results of export activities of universities, explore these relationships on the basis of econometric analysis of quantitative indicators and develop recommendations for improving the educational services export strategies of Russian universities.

Research questions:
- What strategies of international educational activities are implemented by universities, on the development of which areas of this activity are they oriented?
- What are the distinctive characteristics of universities that have relatively higher results of international educational activities?
- What are the features of the relationship observed between internal factors and performance indicators of universities’ export activities?

To achieve the research goal and answer research questions, the following tasks were set:
- analyze and summarize the published results of empirical studies of the relationship between internal factors and performance indicators universities’ export activities;
- cluster Russian universities on the basis of indicators of their international educational activities and analyze the characteristics of universities by clusters;
- analyze the relationship between internal factors and performance indicators of Russian universities’ export activities based on regression analysis.

Provisions for the defense:
1. Analysis of international educational activity indicators of Russian universities allows identifying the cluster structure of universities, which is logically interpreted and quite stable over time. The differences in the performance indicators of universities, which are assigned to different clusters, are statistically significant. Clusters combine universities with close strategies of international educational activity, which have similar resources and competitive advantages in the global higher education market.

2. The internationalization of the university’s activities in various directions contributes to the achievement of high results in the export of educational services. Thus, indicators of international scientific citation and internationalization of the academic staff have positive relationship with the results of international educational activities.
3. Diversification of portfolio of educational programs for foreign students does not contribute to the achievement of high rates of universities’ export activities. This is not consistent with the findings of previous studies on the positive impact of this factor on the increase in market share and profitability. At current stage in the Russian higher education, a specialized approach is more effective.

4. Demand of foreign students for higher education services of Russian universities is inelastic for the price - the increase in the cost of education or the share of paid educational services do not have a statistically significant effect on the number of foreign students in the university.

5. It was confirmed that the implementation of international double degree programs and inclusion in international universities networks contribute to the achievement of high results in the international educational market.

The theoretical framework of the research is based on the Porter’s theory of competitive strategies and the theory of resources and competences. According to Porter’s idea, for the success in the market organizations need to choose the optimal competitive strategy taking into account the available resources and development objectives [Porter, 1980, 1985]. In accordance with the theory of resources and competencies differences in the performance of organizations are due to possession of certain resources and competences that enable them to gain competitive advantages in the market [Wernerfelt, 1984; Barney, 1991]. Based on these theories, as well as taking into account the results of previous empirical research on the topic of dissertation work, seven hypotheses were put forward.

Hypothesis 1: Cluster analysis of universities on the basis of international educational activity indicators allows identifying groups of universities characterized by homogeneity and logical identification, as well as statistically significant differences in the values of the analyzed indicators between clusters.

Hypothesis 2: There is a relationship between the internal characteristics of universities and the results of their clustering based on international educational activities.

Hypothesis 3: There is a positive relationship between the level of diversification of educational programs of the university and the results of export activities.

Hypothesis 4: There is a relationship between the terms of the acquisition of educational services of the university for foreign students and the results of export activities.

Hypothesis 5: There is a positive relationship between the competitive advantages of educational services and the results of export activities.

Hypothesis 6: There is a positive relationship between the completeness of presenting the information on the activities of the university on its official website and the results of export activities.

Hypothesis 7: There is a positive relationship between inclusion in inter-university network partnerships and the results of export activities.

Research methodology
To achieve the research objective a quantitative research methodology was applied. The analysis of the performance of Russian universities in recent years using
the methods of statistical and econometric data analysis was carried out in two main stages.

*Stage 1: Cluster data analysis*

1.1. Conducting cluster data analysis

Clustering of universities in terms of their international educational activities has been carried out. The characteristics of each cluster are described on the basis of descriptive data analysis. Table 1 shows the clustering indicators and variables for their quantitative evaluation.

Table 1 – Clustering indicators and variables for their evaluation

<table>
<thead>
<tr>
<th>Clustering indicators</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internationalization of student enrollment</td>
<td>Percent of foreign students in the total number of university students</td>
</tr>
<tr>
<td>Incoming international academic mobility</td>
<td>Number of students of foreign educational organizations who have been trained in a university for at least a semester (trimester) per 100 full-time students</td>
</tr>
<tr>
<td>Internationalization of educational programs</td>
<td>Number of international double degree higher education programs per 100 full-time students</td>
</tr>
<tr>
<td>Internationalization of university income from educational activities</td>
<td>Percent of income from foreign sources in the total income of the university from educational activities</td>
</tr>
<tr>
<td>Level of payment for foreign students</td>
<td>Average income from the payment of one year of study at the university by a foreign students</td>
</tr>
<tr>
<td>Commercialization of educational services for foreign students</td>
<td>Percent of students studying on a commercial basis in the total number of foreign students</td>
</tr>
</tbody>
</table>

1.2. Analysis and comparison of the characteristics of universities by clusters

An intercluster comparison of universities’ characteristics based on descriptive data analysis was carried out. Table 2 shows the indicators by which universities were compared and variables for their quantitative evaluation.

Table 2 – Indicators for intercluster comparison of universities and variables for their evaluation

<table>
<thead>
<tr>
<th>Clustering indicators</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Types of educational programs</td>
<td>Percent of foreign students in the basic programs of higher education</td>
</tr>
<tr>
<td>Form of study</td>
<td>Percent of full-time students out of all foreign students</td>
</tr>
<tr>
<td>Citizenship of foreign students</td>
<td>Percent of foreign students from non-CIS countries</td>
</tr>
<tr>
<td>Internationalization of the teaching staff</td>
<td>Percent of foreign citizens in the total number of scientific and pedagogical employees</td>
</tr>
<tr>
<td>Internationalization of scientific activity</td>
<td>Number of citations of publications published over the past 5 years, indexed in Scopus and Web of Science per 100 scientific and pedagogical employees</td>
</tr>
<tr>
<td>Selectivity of applicants</td>
<td>Mean value of the Unified State Exam results of students enrolled in undergraduate and specialist programs in all</td>
</tr>
</tbody>
</table>
1.3. The *internal and external validity* of cluster analysis results on the basis of one-way ANOVA, Chi-square test and control sample has been verified.

1.4. *Targeted recommendations for universities* of each cluster on transition to target clusters have been developed.

**Stage 2: Regression data analysis.**

To analyze and evaluate the relationship between internal factors and performance indicators of export activities of Russian universities, the method of linear regression data analysis was applied. Data analysis was carried out on the basis of the developed empirical research model (Figure 1).

<table>
<thead>
<tr>
<th>Clustering indicators</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of students</td>
<td>Total number of students enrolled in undergraduate, specialist or graduate programs</td>
</tr>
<tr>
<td>Income</td>
<td>Total income (in thousand rubles)</td>
</tr>
<tr>
<td>Specialization</td>
<td>Number of universities by specialization</td>
</tr>
<tr>
<td>Geographical location</td>
<td>Percent of universities from Moscow or St. Petersburg</td>
</tr>
</tbody>
</table>

**Figure 1 – Research Model**
To measure the factors quantitative variables were used (table 3).

Table 3 – Factors and variables for their evaluation

<table>
<thead>
<tr>
<th>Factor</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1. Diversification of education programs</td>
<td>Herfindahl — Hirschman index</td>
</tr>
<tr>
<td>F2. Average annual tuition for foreign</td>
<td>Average annual income of the university from the education services</td>
</tr>
<tr>
<td>students</td>
<td>provided to one foreign student</td>
</tr>
<tr>
<td>F3. Commercialization of education for</td>
<td>Percent of foreign students studying on a commercial basis</td>
</tr>
<tr>
<td>foreign students</td>
<td></td>
</tr>
<tr>
<td>F4. Selectivity of applicants</td>
<td>Average passing score of the Unified State Exam (in all forms of</td>
</tr>
<tr>
<td></td>
<td>education)</td>
</tr>
<tr>
<td>F5. Engagement in international dual degree</td>
<td>Number of dual degree programs</td>
</tr>
<tr>
<td>programs</td>
<td></td>
</tr>
<tr>
<td>F6. Engagement in transnational education</td>
<td>Engagement in transnational education programs (yes/no)</td>
</tr>
<tr>
<td>programs</td>
<td></td>
</tr>
<tr>
<td>F7. Representation of information about the</td>
<td>Position in Webometrics</td>
</tr>
<tr>
<td>activities of the university on its</td>
<td></td>
</tr>
<tr>
<td>official website</td>
<td></td>
</tr>
<tr>
<td>F8. Network partnership with foreign</td>
<td>Number of international university networks in which the university is a</td>
</tr>
<tr>
<td>universities</td>
<td>partner</td>
</tr>
<tr>
<td>F9. Participation in projects supporting</td>
<td>Participation in the &quot;Project 5-100&quot;</td>
</tr>
<tr>
<td>international competitiveness</td>
<td></td>
</tr>
</tbody>
</table>

Analysis is based on the following delay differential equation:

\[ R_{i,t} = \beta_0 + \beta_1 F_{i,t-n} + \beta_2 C_{i,t-n} + \varepsilon_{i,t-n}, \]

where \( i \) is university index, \( t \) is the academic year assessed, \( n \) is the lag length measured in years, \( R_i \) is university export performance, \( F_i \) is the vector of internal factors, \( C_i \) is the vector of control variables, \( \beta_0, \beta_1, \beta_2 \) are the vectors of regression coefficients, and \( \varepsilon \) is the error.

Regression coefficient stability was measured by analyzing models with different time lags and indicator values in different periods of time. All in all, three model specifications with differing \( t \) (assessment year) and \( n \) (lag length) values were tested:

- Specification 1: dependent variables for the academic year 2015/16, internal factors for the academic year 2014/15 (lag length of one year);
- Specification 2: dependent variables for the academic year 2013/14, internal factors for the academic year 2012/13 (lag length of one year);
- Specification 3: dependent variables for the academic year 2014/15, internal factors for the academic year 2012/13 (lag length of two years);

The combination of regression and cluster data analysis methods for solving research problems allowed a more comprehensive and deep study of quantitative data on the activities of Russian universities and increases the reliability of research results.
Sources of data for the research:
- Monitoring of University Performance Database;
- Statistical compilation “Export of Russian Education”;
- materials on the websites of Russian universities;
- results of Ranking Web of Universities (Webometrics);
- OECD and UNESCO international databases.

Research Sample
To study the positive experience of the export activities of Russian universities, the universities that have an indicator of the number of foreign students exceeding the national average have been selected. The sample comprised 173 universities, which accounted for 57 percent of the total international student enrollment in Russia in the academic year 2015/16, and received 78 percent of the cumulative university revenues from education exports. The sample includes universities from all districts of the Russian Federation, of which 31 are located in Moscow and 22 in St. Petersburg. About a third of universities are located in the Central Federal District. Universities are mostly multidisciplinary, only 20% of them are specialized.

Research results
As part of the answer to the first research question – “What strategies of international educational activities are implemented by universities, on the development of which areas of this activity are they oriented?” a cluster analysis of universities was conducted. Five clusters were distinguished (Table 4).

Table 4 – Cluster characteristics

<table>
<thead>
<tr>
<th>Cluster name</th>
<th>Internationalization of student enrollment</th>
<th>Incoming international academic mobility</th>
<th>Internationalization of educational programs</th>
<th>Internationalization of university income from educational activities</th>
<th>Level of payment for foreign students (in rubles)</th>
<th>Commercialization of educational services for foreign students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flagships</td>
<td>9.4%</td>
<td>1.5</td>
<td>0.2</td>
<td>1.9%</td>
<td>133773.6</td>
<td>47.2%</td>
</tr>
<tr>
<td>Leaders</td>
<td>6.1%</td>
<td>0.4</td>
<td>0.04</td>
<td>1.5%</td>
<td>188142.9</td>
<td>67.6%</td>
</tr>
<tr>
<td>Recruiters</td>
<td>19.2%</td>
<td>0.4</td>
<td>0.005</td>
<td>20.2%</td>
<td>121353.1</td>
<td>95.3%</td>
</tr>
<tr>
<td>Catching Ups</td>
<td>9.6%</td>
<td>0.1</td>
<td>0.02</td>
<td>2.3%</td>
<td>92136.9</td>
<td>85.7%</td>
</tr>
<tr>
<td>Outsiders</td>
<td>6.8%</td>
<td>0.2</td>
<td>0.02</td>
<td>1.1%</td>
<td>85286.6</td>
<td>36.8%</td>
</tr>
<tr>
<td>Total</td>
<td>8.3%</td>
<td>0.4</td>
<td>0.05</td>
<td>2.3%</td>
<td>108029.4</td>
<td>57%</td>
</tr>
</tbody>
</table>

Cluster 1: Flagships (32 universities)
 Universities of this cluster have the highest values of two indicators - incoming international academic mobility and internationalization of educational programs. The indicators of the internationalization of student enrollment and the internationalization of income from educational activities are relatively high. These universities have an international learning environment.

Cluster 2: Leaders (18 universities)
 Universities of the cluster have the highest level of payment for foreign students, and at the same time high rates in many areas of international educational activities.
These universities have many years of international experience, but their indicators of internationalization of educational activities are clearly lower than in the universities of the first cluster.

**Cluster 3: Recruiters (6 universities)**

The cluster is unique in its characteristics and includes mainly medical universities. These universities have very high rates of internationalization of student enrollment and internationalization of income from educational activities. Provision of education services for foreign citizens is one of the most important activities for these universities and brings significant income to them. Foreign students are trained mainly on a commercial basis. Tuition exceeds the average for the sample. At the same time, the international academic mobility is not developed in these universities, and the double degree programs are not implemented, whereas these activities are typical for universities that claim high positions in the international educational market.

**Cluster 4: Catching Ups (46 universities)**

Universities of this cluster have low indicators of international educational activities. But the level of internationalization of student enrollment and income from educational activities reaches the average for the sample, which can be considered as a basis for the further development of universities of the cluster in this direction.

**Cluster 5: Outsiders (71 universities)**

Outsiders are universities with the lowest values of the most indicators. To improve their results, they need to make significant efforts.

As part of the answer to the second research question – “**What are the distinctive characteristics of universities that have relatively higher results of international educational activities?**” an intercluster comparison was made of the characteristics of universities and the following results were obtained:

- universities of all clusters diversify the composition of foreign students, implementing both basic and additional educational programs, offering different forms of training for citizens of CIS and non-CIS countries;
- universities with higher results of international educational activities have relatively higher rates of internationalization of the scientific and pedagogical staff, scientific activities and are characterized by higher selectivity of applicants;
- clusters with high rates of international educational activities include mainly large multi-disciplinary universities that have a high aggregate income, more than half of these universities are located in Moscow or St. Petersburg;

**Recommendations to universities**

According to the results of clusterization and intercluster comparison of the characteristics of universities, recommendations to universities of different clusters are given. It is supposed that these recommendations could help universities to transit from current cluster to target clusters of a higher level.
Figure 2 shows possible routes for universities to transit from one cluster to another.

**1) Transition from “Leaders” to “Flagships”**
For transition from “Leaders” to “Flagships” cluster the following recommendations could be given to universities:
- pay more attention to the development of programs of incoming international academic mobility (strive to increase the number of students in such programs by at least 3 times);
- develop new international double degree programs (strive to increase their number by at least 5 times);
- provide support to the most talented foreign students, for example, by providing them with a discount on tuition fees;
- attract more foreign specialists to scientific and pedagogical positions, to increase by 3 times their share in the composition of the university’s academic staff.

**2) Transition from “Recruiters” to “Leaders”**
For transition from “Recruiters” to “Leaders” cluster the following recommendations could be given to universities:
- pay more attention to the development of programs of incoming international academic mobility and double degree programs;
- to ensure the proper level of quality of educational services, consider the possibility to increase the tuition fees;
- increase the number of supplementary education programs for foreign students, raising their share to 20% of the total number of programs offered to this category of students;
- increase the number of part-time programs for foreign students, raising their share to 17% of the total number of programs offered to this category of students.

**3) Transition from “Catching Ups” to “Leaders”**
For transition from “Catching Ups” to “Leaders” cluster the following recommendations could be given to universities:
- pay more attention to the development of incoming international academic mobility programs (strive to increase the number of students in such programs by at least 4 times);
- develop new international double degree programs (strive to increase their number by at least 2 times);
- to ensure the proper level of quality of educational services, consider the possibility to increase the tuition fees;
- spend more efforts on attracting foreign students from non-CIS countries;
- focus on attracting more talented and trained foreign applicants;
- attract more foreign specialists to scientific and pedagogical positions, to increase by 2 times their share in the composition of the university’s academic staff.

4) Transition from "Catching Ups" to "Recruiters"

For transition from “Catching Ups” to “Recruiters” cluster the following recommendations could be given to universities:
- develop a foreign students’ recruitment strategy;
- focus mainly on the segment of commercial educational services for foreign students;
- focus mainly on implementation of the full-time educational programs for foreign students;
- spend more efforts on attracting foreign students from non-CIS countries;
- focus on attracting more talented and trained foreign applicants.

5) Transition from "Outsiders" to "Catching Ups"

For transition from “Outsiders” to “Catching Ups” cluster the following recommendations could be given to universities:
- set the development of international educational activities as one of the priorities of the university strategy;
- focus more on the segment of commercial educational services for foreign students;
- spend more efforts on attracting foreign students from non-CIS countries;
- to ensure the proper level of quality of educational services, consider the possibility to increase the tuition fees.

As part of the answer to the third research question, “What are the features of the relationship observed between internal factors and performance indicators of universities’ export activities?” a regression data analysis was conducted. A quantitative assessment of the relationship between the internal factors considered and the performance indicators of the export activities of Russian universities was made. The analysis revealed statistically significant relationships between seven of the nine internal factors examined and export performance indicators.

There is a strong positive relationship between the number of double degree programs implemented at the university and all the considered indicators of the effectiveness of the export activities of universities. These programs are in high demand from foreign students, and their implementation requires that the university has competencies in building long-term cooperation with foreign partner universities. Competences and skills acquired in the process of organizing and implementing such
programs become the competitive advantages of the university in the international educational market and have a positive effect on the results of exports in general.

The number of international university partnerships correlates positively with the absolute indicators of export performance, i.e. foreign student enrollment and revenue from foreign students tuition. To enter the network, universities, as a rule, must have certain experience and competences in the field of international educational activities, and for successful partnership, they must work actively within the network, which contributes to the achievement of positive results of export activities.

There is a negative relationship between the level of diversification of educational programs and the number and proportion of foreign students in the university. Universities are more likely to achieve positive export results while concentrating their efforts on certain areas of international education activities and avoiding excessive diversification.

The cost of annual training of foreign citizens and the level of commercialization of their studies at the university are positively correlated with the indicators of profitability of export activities. The relationship between these factors and the number of foreign students is not observed. Thus, the demand for higher education services from foreign citizens is inelastic in price. The high cost of training in Russian universities, as a rule, is significantly lower than the cost of training in most universities in the US and Europe.

High selectivity of the university adversely affects the income from export activities. The high requirements of the university to incoming applicants may become a barrier for foreign applicants who are ready to pay for their education, but will not have a significant impact on the total number of foreign students at the university.

Universities participating in the “Project 5-100” have higher absolute indicators of export performance. This result is due to several reasons. Firstly, these universities were selected to participate in the project on a competitive basis, that is, before being included in the project, they had higher results of international activity. Secondly, as project members, they receive significant organizational and financial support. Thirdly, they are members of an association to exchange experience, implement joint projects and support each other to achieve their strategic development goals.

Indicators of the number and proportion of foreign students are more closely related to two factors - the number of double degree programs being implemented and the level of diversification of educational programs for foreign citizens. The size of export income and its share in the total income of a university from educational activities are more closely related to two other factors — the average cost of a year of study for foreign students and the level of commercialization of their education.

**Recommendations to universities**

Based on the data analysis, recommendations were provided for the development of activities of universities, depending on the selected target indicator of export performance.

**Recommendations for universities aimed at increasing the number and share of foreign students:**
- open new international double degree programs, considering that the opening of one new program may lead to an increase in the number of foreign students by an average of one study group (from 25 to 32 people);
- avoid excessive diversification of educational programs for foreign students, concentrate efforts on maintaining the proper level of quality of existing programs and carefully plan the possible benefits and costs of opening new types of educational programs for foreign students. If it is impossible to ensure the proper level and quality of programs, it is recommended to reduce diversification and focus on the development and promotion of a limited number of programs;
- join international networks of universities, considering that joining such a network can lead to an increase in the number of foreign students by an average of two to six study groups (from 54 to 180 people);
- seek participation in national projects supporting the development of international activities of universities.

Recommendations to universities aimed at increasing rates of return from teaching foreign students:
- avoid the strategy of competition for the price and set the cost of educational services, corresponding to their level;
- increase the level of commercialization of education for foreign students, provided that the proper level and quality of educational services is ensured;
- avoid too high requirements on the level of knowledge and skills of foreign applicants entering the university;
- open new international double degree programs, considering that the opening of one new program may lead to an increase in income of the university from export activities by an average of 3 – 3.8 million rubles;
- join international networks of universities, considering that joining such a network can lead to an increase in income of the university from export activities by an average of 8.7 – 15.8 million rubles.

It is necessary to take into account that the results of the export activities of universities are greatly influenced by external factors that are not the object of research. The presented quantitative estimates are based on an analysis of the real indicators of the activities of Russian universities and provide an overview of the possible increase in export performance indicators, depending on the directions of international activity development chosen by the university.

Reliability of the research results is ensured by the use of official statistics on the performance of universities, modern quantitative methods of data analysis that correspond to the objectives of the research and the characteristics of the empirical data, and the representativeness of the sample. Data analysis and interpretation of research results are consistent with the standards of research in social sciences.

The scientific novelty of research is that:

1) An approach on an empirical study of the relationship between the performance indicators of the export activities of universities and internal factors has been developed and tested. This approach can be applied to the study of various
activities of educational organizations and to identify internal factors affecting their performance.

2) For the first time, on the basis of a representative sample of Russian universities it was confirmed the presence of statistically significant relationships between the performance indicators of export activities of universities and internal factors and quantified these relationships based on an analysis of reliable statistical data on university performance in recent years.

3) An empirically based typology of strategies for international educational activities of Russian universities has been developed and an analysis and comparison of the internal characteristics of universities adhering to different strategies has been carried out.

**Limitations and further research directions**

The research covers a wide range of different internal factors of export activities of universities. At the same time, the study has a number of limitations, in particular:

- research considers only those indicators of international educational activity the data on which for the past few years is publicly available;
- external factors affecting the results of export activities of universities, are considered as exogenous factors and not included in the research model;
- research design may cause the problems of endogeneity and self-selection. To reduce their possible negative impact on the results the regression with time lags was used, the results of the model evaluation were checked on data for different years and a control subsample of universities with low or zero export results was included in the main sample.

The presented research can be expanded and supplemented in the following areas:

- inclusion in the analysis of a larger number of factors and indicators evaluating the performance of export activities (more detailed analysis of the national composition of foreign students, the specifics of international educational activities of specialized universities, educational concepts that are attractive to foreign students, and competitive in the international higher education market);
- analysis of changes in the values of indicators of universities for a longer time period using the panel data analysis methods;
- more detailed study of peculiarities of the influence of selected internal factors on the export results based on the mixed research methodology (combination of qualitative and quantitative methods of data analysis);
- conducting an international comparative study with the inclusion in the analysis of factors of regional and country level.

**Practical significance of the research**

The research results reflect the real state of the international educational activities of Russian universities, analyzed on the basis of publicly available statistical data, and contain relevant empirical data on the export activities of Russian universities over the past few years. They can be taken into account by government higher education authorities for developing targeted projects of higher education exports. Employees of universities can use the results for the development of foreign students’ recruitment
programs, as well as when making decisions on the allocation of resources by university activities.

References
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