Internal Factors of Education Export Performance in Russian Universities

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Abstract. A survey was carried out in order to analyze the relationship between the universities' internal factors and the indicators of their education export performance. Quantitative data was collected to describe the activities of Russian universities over recent years. Regression analysis was used to identify correlations between the indicators. The sample consisted of 173 universities from different federal districts of Russia. Achievement of the research goal necessitated the construction and quantitative assessment of various regression model specifications calculated based on how variable values changed over time. Estimates confirm a positive relationship between the number of international network partnerships, the number of double degree programs and the export performance indicators. Diversification of education programs available to international students correlates negatively with international student enrollment. Tuition and the level of commercialization of education for foreign students demonstrate a positive correlation with education export profitability but show no relationship with international student enrollment. No correlation was found between web presence of universities, engagement in transnational education programs and education export performance. The findings are used to discuss promising vectors of education export development in Russian universities.

Keywords: higher education exports, international education marketing, university revenues, international students, global education market

International education marketing has become a priority for many Russian universities[1], allowing them to boost their revenues, increase their national and global rankings and qualify for government grants.

Russia's government has been supporting the national universities in their education export activities. The new top-priority governmental project, Development of the Export Potential of the Russian

Translated from Russian by I. Zhuchkova.

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[1] International higher education marketing, or export of higher education, is a situation where educational services are provided to international students, whether in the university's home country or abroad, via transnational education programs or distance learning degrees.

Education System, approved in May 2017 is aimed at making Russian education more attractive and competitive in the global education market. The project's target goals include tripling both the number of international students in Russian universities and that of international online learners, and providing a fivefold increase in revenues from the export of Russian education. About five billion rubles has been allocated to this project, which is expected to take eight years[2].

University export performance is affected by external and internal factors. The former include the regulatory framework, environmental and socioeconomic conditions, and competitive landscapes of the national and global education markets [Racine, Villeneuve, Theriault 2003; Mazzarol, Soutar 2002; Asaad 2008], while the latter are controlled by universities and include strategic benchmarks in international education marketing, available resources and competencies, the characteristics of educational services offered, and the strategies used to promote them [Ross, Heaney, Cooper 2007; Racine, Villeneuve, Theriault 2003; Mazzarol, Soutar 1998].

According to the Monitoring of Russian Universities' Performance, 267,000 international students were enrolled in 712 universities in the academic year 2015/16. Fifty-six universities had over 1,000 foreign students each, and 13 earned over 100 billion rubles each from the export of higher education[3].

Russian universities have many years of international education marketing experience. Organizational practices and mechanisms for success in education exports can be identified by revisiting this experience and exploring the factors of export performance. Research findings may provide guidelines for developing and fine-tuning the export strategies of Russian universities.

This article presents the results of a study designed to analyze the relationship between internal factors and university export performance in Russia. Internal factors are understood as the processes and characteristics of a university that are under its direct influence. Statistics on Russian universities' activities over the recent years was collected and investigated, and regression analysis was used to explore the relationships between the indicators.

1. Neoliberalism as the Theoretical Framework of Research

Recent years have seen changes in Russian higher education affecting university export activities. Government funding has been cut, and

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[2] Passport of the priority project Development of the Export Potential of the Russian Education System: http://static.government.ru/media/files/DkOX-erfvAnLv0vFKJ59ZeqTC7ycla5HV.pdf

[3] Information and analytical reports on performance of higher education institutions. Official website of the Main Data Processing Center of the Federal Agency for Education of the Russian Federation: http://miccedu.ru/monitoring/

targeted grants for universities have been introduced, which imply supplementary results-based financing[4]. Governmental agencies assess university performance every year on the basis of quantitative indicators, and some low-performing universities have been reorganized as a result [Melikyan 2014]. The changes have increased the level of commercialization and competition in higher education. Tuition has become one of the primordial sources of revenue for a number of universities, so they have started attracting international students in order to bring their educational activities up to a new level. About half of all the Russian universities had over 100 foreign students each in the academic year 2015/16[5].

The existing environment in which universities operate has found its way into the theory of neoliberalism, which approaches universities as autonomous organizations capable of promoting their services in a competitive market and striving to enhance their performance and competitive position to maximize their revenues [Chirikov 2016].

Neoliberalism has been brought into the ideas of academic capitalism and entrepreneurial university. Academic capitalism is defined as the whole range of university activities to procure additional funds from external sources, in particular by attracting higher-paying students. Academic capitalism manifests itself at the institutional level and at the level of units and individuals [Slaughter, Lesli 1997; Leslie, Oaxaca, Rhoades 2001]. The concept of entrepreneurial university has been born from developing the idea of academic capitalism at the institutional level. Entrepreneurial universities are largely defined as having no fear of commercializing the production and distribution of knowledge [Clark 1998].

Premises of neoliberalism constitute the theoretical framework of this study. Universities are regarded as education market participants that have a certain degree of autonomy and can strengthen and expand their position in the global education market. It is assumed that development of relevant university activities as well as changes in the characteristics of educational services offered and university operation conditions will improve university export performance even in the short term.

Quantitative indicators of scale and profitability are used to evaluate university export performance. Internal factors of export performance include the levels of commercialization and diversification, competitive advantages, and tuition.

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[4] Order of the Government of the Russian Federation No. 2006-r On Approving a Plan of Actions to Develop the Top Universities by Increasing Their Competitive Performance Amongst World-Class Research and Education Centers of October 29, 2012: http://www.garant.ru/products/ipo/prime/doc/70150350/

[5] According to the Monitoring of University Performance: http://indicators.miccedu.ru/monitoring/

2. Exploring the Internal Factors of University Export Performance

Tim Mazzarol of the University of Western Australia was among the first to conduct a large-scale study of the relationship between the diverse characteristics of internal university policies and export performance. The sample consisted of a total of 315 international marketing managers and recruiters in educational institutions in Australia, New Zealand, the United Kingdom and United States. Econometric analysis found the most important factor of university export performance to be *Image and Resources*, which embraces the following indicators: possession of strong financial resources, market recognition, reputation for quality, possession of a strong alumni base, and ability to offer a broad range of courses. The second most important factor is *Cooperation and Integration*, which includes the number of international strategic alliances and transnational education programs [Mazzarol 1998].

Vik Naidoo of the University of Sydney performed an online survey of 407 international student recruiters at universities in the United Kingdom, Australia and New Zealand. Econometric analysis confirmed the hypothesis that success of an export strategy depends on the university's readiness to undertake this type of activity, measured by the level of its market orientation. The latter, in its turn, is determined by the marketing competencies of university staff, the level of administrative support, and coordination efficiency [Naidoo 2010].

A team of researchers at Griffith University (Australia) led by Mitchell Ross conducted two studies about international student recruitment efficiency determinants, one qualitative and one quantitative. Econometric analysis of data obtained in an online survey of 302 international student recruiters in Australian universities confirmed a positive relationship between university's market orientation, orientation for teaching, innovative capacity and recruitment efficiency [Ross, Grace 2012]. Semi-structured interviews with education marketing practitioners in five universities and five vocational schools in Australia and New Zealand showed that market orientation, a strong recruitment marketing team and field-specific education of relevant staff correlate positively with the percentage of international students in total enrollment. A negative correlation was revealed between the experience (number of years) in international student recruitment and the proportion of foreign students. The authors conclude that greater international marketing experience affects the flexibility of an educational institution, hindering its export development [Ross, Heaney, Cooper 2007].

Available research findings show that in order to enhance their export performance, universities must develop market orientation, be ready for innovations, expand alliances with foreign universities that are active in the market, and take a professional approach to promotion of educational services by attracting marketing professionals and integrating various education marketing strategies.

3. Research Methodology
3.1. Internal Factors

The existing findings on the subject, personal empirical and research experience, and accessible information on the export performance of Russian universities provided the basis for selecting eight internal factors that may be related to international marketing activities of universities:

· Diversification of education programs;
· Engagement in international dual degree programs;
· Engagement in transnational education programs;
· Network partnerships with foreign universities;
· Tuition for international students;
· Commercialization of education for international students;
· Web presence;
· Selectivity.

Each factor has been assigned a quantitative indicator to assess university performance in the given aspect.

F1. Diversification of education programs
When a university expands the range of its educational services, it increases the probability of international enrollments growing in number and duration [Mazzarol 1998]. Russian universities offer "no-gap academic tracks", which include preparation for entry tests followed by bachelor's, master's and doctoral degrees on an ongoing basis [Arefyev, Sheregi 2016].
The Herfindahl-Hirschman index was used to evaluate diversification of education programs [Hirschman 1964]. The index is calculated by squaring the percentages of students in different majors in total international student enrollment and then summing the resulting numbers, allowing one to consider the number of types of education programs and international students enrolled in them.
Indicator: Herfindahl-Hirschman index.

F2. Engagement in international dual degree programs
Dual degree programs are popular among international students as they provide the opportunity to get experience studying in different countries and obtain two full-fledged higher education diplomas within the normal program length [West 2015; Knight 2015; Snatkin, Mishin, Karshukhina 2010]. For this reason, engagement in dual degree programs may enhance the export performance of Russian universities.
Indicator: Number of international dual degree programs offered.

F3. Engagement in transnational education programs
World-class universities actively engage in transnational education (TNE) programs. For instance, TNE enrollment in UK universi-

ties is higher that international student enrollment within the country[6]. France has turned its head toward TNE over the past few years too [Ramanantsoa, Delpech 2006]. As for Russia, TNE programs have been unpopular so far, yet some universities have already embarked on promoting this type of education export [Arefyev 2016]. In addition to bringing direct profit, international branch campuses allow for attracting foreign students to the university's home country as well [Mazzarol 1998; Wilkins, Huisman 2011].

Indicator: Engagement in transnational education programs (Yes/No).

F4. Network partnerships with foreign universities

Cross-border university alliances may imply mutual support in international student recruiting and brand promotion [Mazzarol 1998]. Recent years have witnessed an increase in the number of international university networks [Melikyan 2014; Stensaker 2013]. Students can participate in exchange programs offering academic credit or pursue a degree of any level (bachelor's, master's, or doctoral) at any university within the network. Partner institutions may also offer joint and dual degree programs [Yekshikeev 2009].

Indicator: Number of international networks of which the university is a member.

F5. Average annual tuition fees for international students

Average annual tuition fees for international students may vary greatly depending on the university's reputation. Research has shown that high tuition fees may be a barrier for international students and have negative effects on university export performance [Lange 2013, Binsardi, Ekwulugo 2003]. OECD data confirms that increasing the size of tuition fees may reduce dramatically the inflow of foreign students to a country [Sanchez-Serra, Marconi 2018].

Indicator: Average annual revenue per international student.

F6. Commercialization of education for international students

In Russian universities, international students pay for their tuition, unless they study under government-funded or student exchange programs or intergovernmental agreements. The level of commercialization of education for international students may have an influence on university export performance. According to OECD data, the year in which the transition was made to fee-based education for foreign students saw their number fall by 20 percent in Denmark and by 80 percent in Sweden [Sanchez-Serra, Marconi 2018].

Indicator: Proportion of fee-paying international students.

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[6] The Scale and Scope of UK Higher Education Transnational Education, HE Global, 2016: https://www.britishcouncil.org/sites/default/files/scale-and-scope-of-uk-he-tne-report.pdf

F7. Web presence of the university and its courses

Online recruitment has become an important tool for attracting international students. An ICEF study demonstrates that universities have been allocating considerable funds to online marketing recently. It is in the best interest of a university to provide comprehensive and easily accessible information on the available courses and the aspects of academic life on its official website as well as through dedicated education portals and social media[7].

Web presence is assessed based on the position in the Webometrics Ranking[8], which describes web presence and visibility of universities[9]. The Ranking covered over 26,000 universities from over 200 countries in 2017, including 1,223 Russian universities and branch campuses.

Indicator: Position in the Webometrics Ranking.

F8. Selectivity

High levels of university selectivity, i.e. stringent admission requirements, may correlate with export performance. A number of Russian researchers use the average passing USE score to measure college selectivity [Zemtsov, Yeremkin, Barinova 2015; Prakhov 2017]. Foreign students may be admitted to Russian universities not only on the basis of their USE scores but also as Olympiad prize winners or by being awarded competitive scholarships[10]. The average USE score does not directly reflect how selective universities are in recruiting international students, but it is reasonable to assume that a university with a high passing USE score will impose stricter admission requirements on overseas students.

Indicator: Average passing USE score among university students (all modes of study).

3.2. Control Variables In order to consider the relationships between the scale of universities' activities, their financial standing and export performance, the research model includes two control variables, total enrollment (C1) and total revenues from all sources (C2). Control variable *University Location* (C3) will allow for testing the hypothesis that Moscow and St. Petersburg universities market themselves more actively as com-

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[7] Recruiting on Screen. ICEF Insights. Fall 2016. P. 44–46.

[8] Ranking Web of Universities: http://www.webometrics.info/en

[9] Zvezdina P. (2017) *Vosem' rossiyskikh vuzov voshli v top-1000 reytinga Webometrics* [Eight Russian Universities Ranked among the Top 1,000 in Webometrics]. RBC: http://www.rbc.ru/society/04/08/2017/598448d19a794717e25a1729

[10] Admission Requirements for International Students. Official website of the Ministry of Education and Science of the Russian Federation: https://studyinrussia.ru/study-in-russia/step-by-step-guide-to-applying/learn-about-funding-options/

pared to their counterparts in other cities (55 universities in the sample are located in Moscow and St. Petersburg). These two cities accepted 29.3 percent of all international students in the academic year 2015/16 and received 42.5 percent of the cumulative educational revenues from foreign sources. Control variable *University Specialization* (C4) will allow for testing the hypothesis on higher export performance of medical schools (26 universities in the sample are medical). The average percentage of international students in total enrollment and that of foreign source income in total educational revenues are twice as high in medical schools as in any other type of university in the sample.

3.3. Indicators of University Export Performance

Various quantitative indicators were used to evaluate university export performance: the proportion of international students (IS) in total enrollment [Ross, Heaney, Cooper 2007], total IS enrollment [Naidoo 2010; Asaad 2015], IS enrollment by students' home country [Racine, Villeneuve, Theriault 2003], revenue from IS tuition [Naidoo 2010], the percentage of revenue from IS tuition in total educational revenues [Asaad 2015; Mazzarol 1998], expected increase in IS enrollment in the next few years [Asaad 2015; Mazzarol 1998], the level of admission competitiveness for international entrants [Mazzarol 1998], and IS satisfaction with the quality of education [Asaad 2015; Maringe 2005].

Russia's national regulations stipulate quantitative indicators of university export performance. The Monitoring of University Performance[11] and the Project 5–100, designed to improve the competitiveness of Russia's leading universities in the global market[12], use the percentage of IS in total enrollment for this purpose. The governmental project Development of the Export Potential of the Russian Education System formulates three target indicators of university performance: the number of international students enrolled in full-time programs, the size of extra-budgetary funds received as a result of education exports, and the number of international students enrolled in online classes[13].

Indicators for assessing university export performance were selected based on the following criteria:

• Repeated use in earlier studies and/or by Russian authorities to assess the export performance of Russian universities;

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[11] Monitoring Indicator Estimation Methodology, 2017 (LO-27/05vn of 03/14/2017): http://stat.miccedu.ru/info/monitoring16/LO-27–05vn.pdf

[12] List of Requirements to Reports on Realization of Action Plans by the Universities Selected through Competitive Process for Granting State Support to the Leading Universities: https://5top100.ru/documents/regulations/20114/

[13] Passport of the priority project Development of the Export Potential of the Russian Education System: https://минобрнауки.рф/проекты/1355/файл/9551/passport_-_opublikovannyi.pdf

- Quantitative measurability;
- Public availability of annual statistics on Russian universities for the past three years.

The four indicators selected measure the scale and profitability of universities' international marketing activities and can be classified into absolute and relative.

Absolute indicators:

- R1—the number of international students enrolled in higher education programs;
- R3—revenue from international student tuition.
- Relative indicators:
- R2—the percentage of international students in total enrollment,
- R4—the percentage of international student tuition in total university revenues.

Absolute indicators measure the scale of export activities, and relative ones evaluate university export performance.

3.4. Research Model The relationship between the internal factors and export performance of Russian universities was analyzed using an empirical research model (Fig. 1). The model consists of three modules. Module one contains dependent variables measuring university export performance (four indicators). Module two includes independent variables that provide quantitative measurement of the internal factors allegedly related to university export performance (eight indicators). Module three, containing the control variables (four indicators), is added to consider the scale of international marketing activities, plus the university's financial standing, location and specialization.
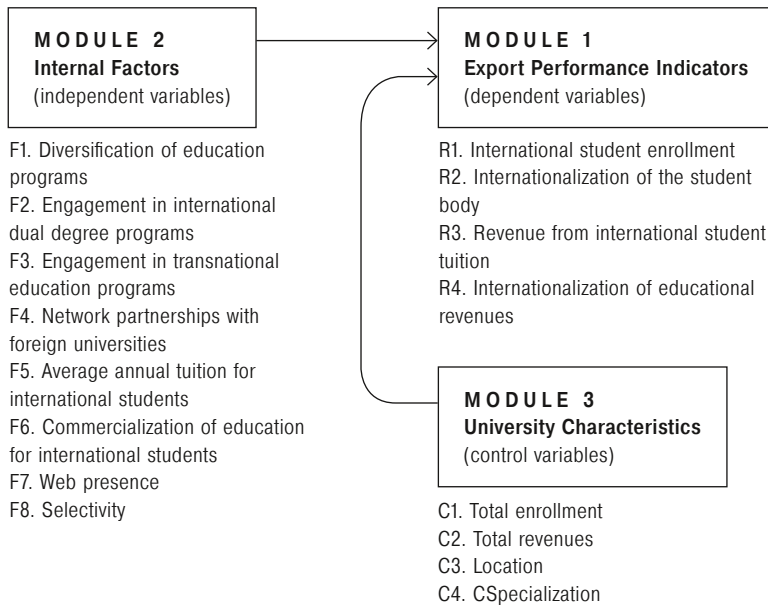
The research model has four specifications based on the dependent variables: international student enrollment, the percentage of international students in total enrollment, total revenue from education exports, and the proportion of international student tuition in total educational revenues. Independent and control variables remain the same in all the specifications.

The method of linear regression analysis was used to run a complex analysis of the relationship between the internal factors and each indicator of university export performance in relevant specifications. 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 ε is the error.

Figure 1. **Research Model**

M O D U L E 2 **Internal Factors** (independent variables)	**M O D U L E 1** **Export Performance Indicators** (dependent variables)

F1. Diversification of education programs
F2. Engagement in international dual degree programs
F3. Engagement in transnational education programs
F4. Network partnerships with foreign universities
F5. Average annual tuition for international students
F6. Commercialization of education for international students
F7. Web presence
F8. Selectivity

R1. International student enrollment
R2. Internationalization of the student body
R3. Revenue from international student tuition
R4. Internationalization of educational revenues

M O D U L E 3
University Characteristics
(control variables)

C1. Total enrollment
C2. Total revenues
C3. Location
C4. CSpecialization

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

Sources of data for the research model variables[14]:

- Monitoring of University Performance (R1, R2, R3, R4, F2, F8, C1, C2, C3, C4)[15];

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[14] Short variable names are parenthesized.

[15] Information and analytical reports on performance of higher education insti-

- *Export of Russian Education*, a compilation of statistics by the Ministry of Education and Science of the Russian Federation (F1, F3, F5, F6) [Arefyev, Sheregi 2014; 2016],
- Ranking Web of Universities (Webometrics) (F7)[16],
- Russian universities' official websites (F4).

These sources provide official annual statistics on the performance of Russian universities. To investigate the positive experience of international education marketing in Russia, the sample only includes universities with international student enrollment higher than the country's average[17]: the information on them is available in the database of the Monitoring of University Performance and in the statistical compilation *Export of Russian Education*.

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[18]. The sample represents universities from all the federal districts of Russia, including 31 from Moscow and 22 from St. Petersburg. Three universities in the sample are private, and 138 are multidisciplinary.

Leaving out those universities with lower than average export performance indicators may result in biased regression coefficients. In order to avoid significant bias, a control subsample was created, which contained 28 universities with fewer than 300 international students enrolled in the academic year 2015/16. The subsample included universities with varying international student enrollment rates, including even those with low, very low and zero value indicators. Additional model specifications making allowance for the control subsample were also tested.

The dependent variables in the model are not random but depend on the overall strategy and decision-making policy of a particular university. Econometric evaluation of such models using the method of least squares may induce endogeneity bias, so lagged independent variables were used to minimize the problem.

4. Descriptive Data Analysis

Let us now dwell into the descriptive statistics for the variables used in the regression model.

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tutions. Official website of the Main Data Processing Center of the Federal Agency for Education of the Russian Federation: http://miccedu.ru/monitoring/

[16] Ranking Web of Universities: http://www.webometrics.info/en/Europe/Russian%20Federation

[17] Russia's average size of international student enrollment per institution was 301.5 in the academic year 2015/16.

[18] According to the Monitoring of Higher Education Institution Performance.

Table 1. **Descriptive Statistics for the Indicators of University Export Performance During Three Academic Years**

Indicator	Academic Year	Min	Max	Mean	Standard Error	Median
R1. IS enrollment	2013/14	66	5,453	683.9	606.9	500
	2014/15	129	4,985	779.2	626.9	585
	2015/16	301	5,556	878.8	677.7	683
R2. IS percentage (%)	2013/14	0.9	58.01	7.3	6.4	5.6
	2014/15	1.2	46.7	8.3	6.0	6.7
	2015/16	1.7	32.5	9.2	5.8	7.6
R3. Revenue from IS tuition (mln rubles)	2013/14	0	358.9	23.3	44.7	9.3
	2014/15	0	485.3	30.3	61.6	12.5
	2015/16	0	653.6	46.5	71.9	13.6
R4. Percentage of foreign source revenue (%)	2013/14	0	28.1	1.8	3.2	0.7
	2014/15	0	39.6	2.3	4.3	1.1
	2015/16	0	39.13	2.6	4.5	1.2

4.1. University Export Performance Indicators

Table 1 presents the descriptive statistics for the university export performance indicators over the past three academic years.

A large spread of values in the data set is observed for every indicator. Overall, positive dynamics over the years is confirmed. Forty-seven universities had zero educational revenues from foreign sources in the academic year 2013/14, as education of international students was funded fully by the government. The number of such universities fell down to 40 in the academic year 2014/15 and then to 34 in 2015/16.

Correlation analysis revealed a statistically significant positive relationship between the university export performance indicators analyzed. A weak positive correlation is observed between international student enrollment (R1) and the size of revenue from international student tuition (R3), the weakness being explained by the fact that universities do not include the revenue received from teaching government-sponsored international students in the *foreign source income* category on their balance sheets.

There is a moderate positive correlation between the number of international students (R1) and their percentage in total enrollment (R2) as well as between foreign source revenue (R3) and its proportion in total educational revenues (R4). Big multidisciplinary universities feature higher international student enrollment and greater revenue from IS tuition while at the same time lower relative export indicators, as

Table 2. **Descriptive Statistics on the Internal Factors (Academic Year 2014/15)**

	Min	Max	Mean	Standard Error	Median
F1. Diversification of education programs (Herfindahl-Hirschman index)	0.18	1	0.5	0.2	0.4
F2. Number of dual degree programs	0	131	5	12.5	1
F3. Engagement in TNE programs	13 of 173 universities engage in TNE programs				
F4. Number of international network partnerships	0	4	0.3	0.7	0
F5. Average annual IS tuition (thousand rubles)	38.3	348.6	108.1	47.4	91.1
F6. Percentage of fee-paying IS (%)	1.9	100	55.6	27.5	55.6
F7. University position in the Webometrics Ranking	215	20,010	7,112.6	5,246.3	5,614
F8. Average passing USE score	49.9	93.1	64.6	7.9	62.6

growing total enrollment is not balanced by growth in the number of foreign students.

4.2. Internal Factors of University Export Performance

Table 2 provides descriptive statistics on the eight factors of university export performance.

F1. Diversification of education programs

International students were enrolled in education programs of nine types (Table 3), including 41 percent in Bachelor's degree programs and 25 percent in Specialist's degrees. Five or more types of education programs were pursued by international students in 142 universities. The Herfindahl-Hirschman index ranges from 0.18 to 1, which means that most universities had international students enrolled in education programs of a few types.

F2. Engagement in international dual degree programs

International dual degree programs are administered by 96 of the 173 universities. Twenty of them offer more than ten dual degrees each. The largest number of dual degree programs is observed in the Peoples' Friendship University of Russia (131), National Research University Higher School of Economics (47) and Moscow Power Engineering Institute (43).

F3. Engagement in transnational education programs

Thirteen universities engage in TNE programs, the leader being Plekhanov Russian University of Economics which administers its programs in seven countries (3,522 international students enrolled in the academic year 2014/15). Lomonosov Moscow State University offers

Table 3. **Distribution of International Students across Types of Education Programs**

	Type of Education Program	Proportion of Students (%)
1	Bachelor's degree	41.0
2	Specialist's degree	25.0
3	Internship	12.2
4	Preparation courses	8.6
5	Master's degree	8.6
6	Research degree	3.0
7	Residency	1.1
8	Medical internship	0.4
9	Doctoral degree	0.1

TNE programs in five countries, Russian State Social University in two, and the other ten only in one country each. As we can see, this type of international marketing activity is not too popular among the universities sampled.

F4. Network partnerships with foreign universities

Thirty-seven universities are members of international university networks. The highest networking activity is demonstrated by St. Petersburg State University (four networks), the People's Friendship University of Russia (three networks), Southern Federal University (three networks) and Russian State Humanities University (three networks). The other 22 universities are members of only two or one international network each.

F5. Average annual tuition for international students

Average annual tuition for international students ranges from 38,300 to 348,600 rubles. The most expensive programs are offered by Moscow State University, Moscow State Institute of International Relations and Moscow State Technical University, where international students pay on average 300,000 rubles per year. In half of the universities, tuition varies between 80,000 and 120,000 rubles.

F6. Commercialization of education for international students

The proportion of fee-paying international students varies between 1.9 and 100 percent across the sample, exceeding 50 percent in 101 universities and 90 percent in 27.

Table 4. **Descriptive Statistics for the Control Variables (academic year 2014/15)**

	Min	Max	Mean	Standard Error	Median
C1: Total enrollment	1,992	32,720	10,859.1	6,439.4	9,186
C2: Total university revenues (mln rubles)	166.7	23,014.9	2,518.5	2,971.2	1,467.7
C3: University location	55 universities are located in Moscow or St. Petersburg, the other 118 make the reference group				
C4: University specialization	26 universities are medical, the other 147 make the reference group				

F7. Web presence of universities and their courses

In the Webometric Ranking, Russian universities are ranked between 215 and 20,010[19], Moscow State University and St. Petersburg State University being the highest climbers. Only eight universities make it to the top 1,000. It can be thus assumed that Russian universities pay little attention to creating and updating the content on their official websites.

F8. Selectivity

The average USE score in all modes of study varies between 49.9 and 93.1 with the arithmetic mean of 64.6 and standard error of 7.9.

Descriptive analysis of the eight internal factors shows a large dispersion of values in each of them. Universities differ greatly in their web presence, tuition, and level of commercialization. Over half of the universities engage in dual degree programs, but very few participate in international university networks or administer TNE programs. Nearly all the universities enroll international students in education programs of more than one type.

4.3. Control variables

Table 4 displays the descriptive statistics for the control variables.

The sample is heterogeneous at the scales of total enrollment (C1) and total university revenues (C2). Both indicators demonstrate a great variation between the maximum and minimum values as well as high values of standard error. Fifty-five universities are located in Moscow and St. Petersburg, and 26 universities in the sample are medical.

There are correlations among some of the internal factors and control variables (Table 5).

The position in the Webometrics Ranking (F7) correlates negatively with the number of dual degree programs (F2), total enrollment (C1)

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[19] The lower the indicator value, the higher the position in the ranking.

Table 5. **Correlation Coefficients among the Independent Variables**

	F2	F3	F4	F5	F6	F7	F8	C1	C2	C3	C4
F1	−0.354**	−0.066	−0.262**	−0.160**	0.073	0.311**	−0.029	−0.314**	−0.314**	−0.234**	0.360**
F2		0.162*	0.301**	0.229**	−0.137*	−0.428**	0.145**	0.343**	0.372**	0.201**	−0.313**
F3			0.162*	0.165**	0.020	−0.196**	0.176**	0.121	0.216**	0.191*	−0.059
F4				0.214**	−0.069	−0.328**	0.283**	0.316**	0.371**	0.214**	−0.137
F5					0.141**	−0.216**	0.412**	0.154**	0.391**	0.476**	0.133*
F6						0.128*	0.120*	−0.077	−0.006	0.117	0.374**
F7							−0.261**	−0.457**	−0.535**	−0.098	0.198**
F8								0.065	0.390**	0.336**	0.346**
C1									0.483**	0.075	−0.360**
C2										0.343**	−0.006
C3											−0.069

Kendall's tau coefficients, significance level (p-value): ** 1%; * 5%.

and total revenues (C2). These correlations can be explained by the fact that information on large universities with ample financial resources and competitive education programs is widely available on the Internet, so they are ranked higher in Webometrics.

The average annual tuition for international students (F5) correlates positively with the average USE passing score (F8) and university location (C3). That is to say, education is more expensive in highly selective universities located in Moscow and St. Petersburg.

Therefore, there are some correlations among the independent variables but no explicit multicollinearity (strong linear relationships among independent variables). Correlation coefficients never exceed 0.5, which means that the correlations are weak, very weak or statistically insignificant.

5. Regression Analysis Results

Analysis involved four regression models with different dependent variables (R1–R4) and a common set of independent (F1–F8) and control (C1–C4) variables. Table 6 outlines the model specifications with the dependent variables for the academic year 2015/16 and the independent variables for the academic year 2014/15.

All the regression models constructed are statistically significant, and their quality criteria are acceptable for further interpretation of the results. Let us now dwell into the relationships between each of the internal factors and different indicators of university export performance, one by one.

Table 6. **Regression Analysis Results (models 1–4)**

Independent Variables	Dependent Variables			
	MODEL 1 R1: Number of IS Enrolled in Higher Education Programs	MODEL 2 R2: Percentage of IS in Total Enrollment	MODEL 3 R3: Revenue from IS Tuition	MODEL 4 R4: Percentage of Revenue from IS Tuition in Total Educational Revenues
Constant	541,9 (516,6)	2.3 (5.1)	86,118.9 (57980.1)	0.12 (4.5)
Internal factors: variable coefficients, their significance and standard error (in parentheses)				
F1: Diversification of education programs (Herfindahl-Hirschman index)	**608.6** **(239.6)****	**7.2** **(2.4)*****	15,940.8 (26886.6)	1.8 (2.1)
F2: Number of dual degree programs	**28.9** **(3.5)*****	**0.2** **(0.03)*****	**3,398.9** **(392.2)*****	**0.06** **(0.03)****
F3: Engagement in TNE programs	107.3 (145.5)	0.9 (1.4)	9,013.4 (16326.9)	0.5 (1.3)
F4: Number of international university partnerships	**117.2** **(63.2)***	0.8 (0.6)	**15,805.5** **(7096.4)****	0.7 (0.6)
F5: Average annual tuition for international students	0.001 (0.001)	0.0001 (0.0001)	**0.5** **(0.2)*****	**0.0001** **(0.0001)*****
F6: Percentage of fee-paying international students	−1.4 (1.5)	−0.009 (0.02)	**630.9** **(170.9)*****	**0.06** **(0.01)*****
F7: Position in the Webometrics Ranking	0.005 (0.009)	**0.0001** **(0.0001)*****	0.5 (1.04)	0.0001 (0.0001)
F8: Average USE score	−11.3 (7.9)	0.03 (0.08)	**−2,552.3** **(896.1)*****	−0.06 (0.07)
Control variables: variable coefficients, their significance and standard error (in parentheses)				
C1: Total enrollment	**0.05** **(0.009)*****	**−0.0001** **(0.0001)****	−0.5 (0.97)	−0.0001 (0.0001)
C2: Total revenues	0.0001 (0.0001)	0.0001 (0.0001)	0.002 (0.002)	−0.0001 (0.0001)
C3: University location (1 for Moscow or St. Petersburg, 0 for other)	−35.3 (110.4)	−1.1 (1.1)	**−28,068.2** **(12,390.5)****	**−3.2** **(0.9)*****
C4: University specialization (1 for medical, 0 for other)	**364.9** **(156.4)****	**3.7** **(1.5)****	29,428.6 (17,550.6)*	0.2 (1.4)
Criteria of model quality				
R2 (adjusted R2)	0.565 (0.533)	0.420 (0.377)	0.515 (0.478)	0.260 (0.205)
F (p-value)	17.3 (0.000)	9.7 (0.000)	14.1 (0.000)	4.7 (0.000)

Bold type indicates statistically significant regression coefficients. Significance level (p-value): *** 1%; ** 5%; * 10%.

1. The universities offering a variety of education programs to international students at different levels of education (those with low Herfindahl-Hirschman indices) demonstrate lower numbers and proportions of international students. Reducing the diversification of education programs by 10 percent is estimated to bring on average 61 additional international students and increase their proportion in total enrollment by 0.7 percent. The hypothesis that the factor analyzed is related to the indicators of university export profitability is thus not confirmed.

2. The number of dual degree programs offered by universities is positively related to all four export performance indicators. According to estimates, adding another dual degree program will increase the number of international students on average by 29, their proportion in total enrollment by 0.2 percent, revenue from education exports by 3.3 mln rubles, and its percentage in total educational revenues of the university by 0.06 percent.

3. TNE programs are administered by 13 universities in the sample, including those with low export performance. Quantitative analysis is not enough to assess the relationship between engagement in TNE programs and university export performance.

4. The number of international university partnerships correlates positively with the absolute indicators of export performance, i. e. international student enrollment and revenue from IS tuition. Joining a global university network will increase the number of international students on average by 117 and revenue from education exports by 15.8 mln rubles.

5. Average annual tuition for international students determines universities' export pricing policies. This indicator is positively correlated with revenue from education exports and its percentage in total educational revenues. Increasing the size of tuition per international student by 1,000 rubles is estimated to increase a university's annual foreign source revenue on average by 500,000 rubles and its proportion in total educational revenues by 0.1 percent. Data analysis did not reveal any correlation between tuition and the number or proportion of international students. It can be assumed that a small increase in the size of tuition will not have a significant effect on the flow of international students.

6. The more commercialized the education for international students is, the greater the university revenue from export and its proportion in total educational revenues. A one-percent increase in the level of commercialization will increase annual revenue from education exports on average by 631,000 rubles and its proportion in total educational revenues by 0.06 percent. The hypothesis about this factor being related to the number and percentage of international students is not confirmed. It can be assumed that an increase in the number of government-sponsored places for international students will not influence their enrollment greatly.

7. Analysis did not reveal any significant correlation between the position in the Webometrics Ranking and the export performance indicators. The regression coefficient is significant yet very low in the model specification with the dependent variable *Percentage of international students in total enrollment* being insignificant in the rest of the specifications. Therefore, the hypothesis that the web presence of a university is related to how successfully it attracts international students is not confirmed.

8. High university selectivity correlates negatively with revenue from education exports. An increase in the average passing USE score by one point results in an average reduction by 2.5 mln rubles in revenue from foreign sources. This factor is not related to the other indicators of university export performance. The implication is that high university selectivity may become a barrier for fee-paying international students but will not affect total international student enrollment significantly.

Analysis of correlations between the control and dependent variables shows that total enrollment correlates positively with the number of international students and negatively with their proportion. That is, large universities have more international students, but the proportion of such students in total enrollment is lower than in small and medium-sized universities. According to the findings, an increase in total enrollment by 1,000 students will result in the number of international students growing on average by 50 and their percentage in total enrollment reducing by 0.1 percent. The control variable *Total university revenues* does not correlate with university export performance.

Moscow and St. Petersburg universities demonstrate, on average, lower export profitability than universities in other cities, while there are no statistically significant differences in international student enrollment between them. Medical universities perform better in three of the four export performance indicators, so medical degrees are obviously more popular among international entrants.

Standardized regression coefficients were calculated in order to identify key factors of university export performance and compare the strength of relationship between each factor and the export performance indicators[20]. Analysis reveals that the number and proportion of international students correlate the most with two factors: the number of dual degree programs and the diversification of education programs for international students. Revenue from education exports and its proportion in total educational revenues is related the most with average annual tuition for international students and the level of commercialization of education for them.

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[20] When calculating the standardized regression coefficients, values of all the variables analyzed are transformed into z-scores.

Table 7. **Specifications of Models 1.1–1.4.**
Dependent Variable: International Student Enrollment

Independent Variables (Academic Year 2012/13)	Dependent Variable			
	MODEL 1.1. Academic Year 2013/14 (One-Year Lag)	MODEL 1.2. Academic Year 2014/15 (Two-Year Lag)	MODEL 1.3. Academic Year 2013/14 (Control Subsample Included)	MODEL 1.4. Academic Year 2014/15 (Control Subsample Included)
Constant	201.9 (464.4)	22.7 (489.2)	206.4 (396.1)	12.3 (415.6)
Internal factors: coefficients, their significance and standard error (in parentheses)				
F1	259.1 (279.02)	181.2 (293.9)	3.6 (225.7)	−70.7 (236.8)
F2	**32.7 (3.5)***	**30.1 (3.7)***	**31.8 (3.3)***	**29.3 (3.5)***
F3	**282.9 (138.7)****	215.2 (146.1)	**276.6 (126.3)****	209.9 (132.5)
F4	58.9 (61.1)	69.6 (64.3)	63.2 (58.1)	74.6 (60.9)
F5	**−0.002(0.001)***	**−0.001 (0.001)****	**−0.002 (0.0001)***	**0.001 (0.001)***
F6	−0.018 (0.329)	−0.13 (0.35)	−0.06 (0.3)	−0.17 (0.33)
F7	0.01 (0.009)	0.009 (0.009)	0.008 (0.008)	0.007 (0.008)
F8	−3.2 (7.2)	1.4 (7.6)	−1.9 (6.03)	2.8 (6.3)
Control variables: coefficients, their significance and standard error (in parentheses)				
C1	**0.034 (0.008)***	**0.04 (0.008)***	**0.035 (0.007)***	**0.04 (0.008)***
C2	−0.0001 (0.0001)	0.0001(0.0001)	−0.0001 (0.0001)	0.0001(0.0001)
C3	134.9 (89.9)	15.7 (94.7)	**151.1 (81.4)***	54.4 (85.4)
C4	**299.8 (143.5)****	**253.3 (151.1)***	**407.2 (122.1)***	**368.4 (128.1)***
Criteria of model quality				
R^2 (adjusted R^2)	0.520 (0.484)	0.500 (0.463)	0.538 (0.508)	0.531 (0.501)
F (p-value)	14.4 (0.000)	13.4 (0.000)	18.2 (0.000)	17.8 (0.000)

Bold type indicates statistically significant regression coefficients.
Significance level (p-value): *** 1%; ** 5%; * 10%.

In order to test regression coefficient stability, alternative models were estimated with the internal factors for the academic year 2012/13 and time lags of one and two years, i. e. the export performance indicators were taken for the academic years 2013/14 and 2014/15.

Additional models based on an extended sample were calculated to ensure that there was no bias in estimates of the regression coefficients. The extended sample included a control group of 28 randomly selected universities, which had fewer than 300 international students enrolled in the academic year 2015/16. Tables 7–10 display the estimates for the additional models.

Table 8. **Specifications of Models 2.1–2.4.**
Dependent Variable: Percentage of International Students in Total Enrollment

Independent Variables (Academic Year 2012/13)	Dependent Variable			
	MODEL 2.1. Academic Year 2013/14 (One-Year Lag)	MODEL 2.2. Academic Year 2014/15 (Two-Year Lag)	MODEL 2.3. Academic Year 2013/14 (Control Subsample Included)	MODEL 2.4. Academic Year 2014/15 (Control Subsample Included)
Constant	8.8 (5.9)	5.5 (5.6)	8.1 (5.3)	4.9 (5.02)
Internal factors: coefficients, their significance and standard error (in parentheses)				
F1	4.3 (3.6)	3.7 (3.3)	0.3 (3.01)	−0.8 (2.9)
F2	**0.17 (0.04)*****	**0.15 (0.04)*****	**0.16 (0.04)*****	**0.14 (0.04)*****
F3	1.4 (1.8)	0.8 (1.7)	1.3 (1.7)	0.7 (1.6)
F4	0.5 (0.8)	0.4 (0.7)	0.5 (0.8)	0.4 (0.7)
F5	−0.0001(0.0001)	−0.0001 (0.0001)	−0.0001(0.0001)	−0.0001 (0.0001)
F6	−0.002 (0.004)	−0.002 (0.004)	−0.003 (0.004)	−0.002 (0.004)
F7	**0.0001(0.0001)****	**0.0001(0.0001)****	0.0001(0.0001)	**0.0001(0.0001)***
F8	−0.08(0.09)	0.006 (0.09)	−0.04 (0.08)	0.04 (0.08)
Control variables: coefficients, their significance and standard error (in parentheses)				
C1	**−0.0001 (0.0001)***	**−0.0001 (0.0001)****	**−0.0001 (0.0001)***	**−0.0001 (0.0001)***
C2	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
C3	**2.4 (1.1)****	0.8 (1.1)	**2.9 (1.1)*****	1.7 (1.03)
C4	**4.1 (1.8)****	**3.3 (1.7)***	**5.9 (1.6)*****	**5.4 (1.5)*****
Criteria of model quality				
R^2 (adjusted R^2)	0.295 (0.242)	0.289 (0.236)	0.251 (0.204)	0.248 (0.200)
F (*p*-value)	5.6 (0.000)	5.4 (0.000)	5.3 (0.000)	5.2 (0.000)

Bold type indicates statistically significant regression coefficients.
Significance level (p-value): *** 1%; ** 5%; * 10%.

No significant differences are observed between regression co-efficients in models with different specifications; however, there are some deviations. In particular, the models of earlier periods feature no significant correlation between diversification of education programs, the number of international university partnerships and international student enrollment or between diversification of education programs and the percentage of international students. The models estimated

Table 9. **Specifications of Models 3.1–3.4. Dependent Variable: Educational Revenue from Foreign Sources**

Independent Variables (Academic Year 2012/13)	Dependent Variable			
	MODEL 3.1. Academic Year 2013/14 (One-Year Lag)	MODEL 3.2. Academic Year 2014/15 (Two-Year Lag)	MODEL 3.3. Academic Year 2013/14 (Control Subsample Included)	MODEL 3.4. Academic Year 2014/15 (Control Subsample Included)
Constant	3,140.2 (40,559)	31,928.5 (55,845.1)	2,644.8 (33,490.1)	17,912.3 (46,169.6)
Internal factors: coefficients, their significance and standard error (in parentheses)				
F1	22,266. 9 (24,366.6)	32,050.3 (33,549.9)	12,200.4 (19,079.8)	13,810.7 (26,303.4)
F2	**2,088.3 (303.8)***	**2,609.8 (418.3)***	**2,065.9 (278.9)***	**2,562.6 (384.5)***
F3	16,868.9 (12,110.9)	16,014.6 (16,675.5)	17,727.9 (10,674.8)	13,924.1 (14,716.3)
F4	4,390.1 (5,332.03)	**12,621.1 (7,341.6)***	4,627.2 (4,909.7)	**12,143.7 (6,768.6)***
F5	0.006 (0.05)	0.004 (0.07)	0.004 (0.04)	−0.003 (0.06)
F6	13.5 (28.7)	**70.9 (39.5)***	11.5 (26.4)	**69.7 (36.4)***
F7	−0.2 (0.8)	0.5 (1.1)	−0.08 (0.7)	0.4 (0.9)
F8	−208.6 (627.1)	−90.3 (863.4)	−157.9 (510.6)	−549.3 (703.9)
Control variables: coefficients, their significance and standard error (in parentheses)				
C1	**1.2 (0.7)***	1.01 (0.96)	**1.2 (0.6)***	1.04 (0.86)
C2	**−0.005 (0.02)***	−0.001 (0.003)	**−0.005 (0.02)***	−0.001 (0.002)
C3	12,871.7 (7,850.5)	−2,041.2 (10,809.2)	**12,657.3 (6,884.6)***	−912.9 (9,491.2)
C4	**35,635.3 (12,527.9)***	**44,846.3 (17,249.5)***	**39,365.3 (10,324.1)***	**47,915.7 (14,232.8)***
Criteria of model quality				
R^2 (adjusted R^2)	0.324 (0.273)	0.325 (0.274)	0.335 (0.293)	0.332 (0.287)
F (p-value)	6.3 (0.000)	6.4 (0.000)	7.9 (0.000)	7.8 (0.000)

Bold type indicates statistically significant regression coefficients.
Significance level (p-value): *** 1%; ** 5%; * 10%.

for later periods demonstrate statistically significant correlations between the specified indicators.

Neither do the models of earlier periods show statistically significant correlations between average annual tuition, average passing USE score and revenue from education exports or between average annual tuition, commercialization of education for international students and the percentage of foreign source revenue in total educational revenues. However, such correlations are observed in the models of later periods.

Table 10. **Specifications of Models 4.1–4.4.**
Dependent Variable: Percentage of Foreign Source Revenue in Total Educational Revenues

Independent Variables (Academic Year 2012/13)	Dependent Variable			
	MODEL 4.1. Academic Year 2013/14 (One-Year Lag)	MODEL 4.2. Academic Year 2014/15 (Two-Year Lag)	MODEL 4.3. Academic Year 2013/14 (Control Subsample Included)	MODEL 4.4. Academic Year 2014/15 (Control Subsample Included)
Constant	−2.01 (3.3)	−0.4 (4.4)	−1.9 (2.8)	−1.1 (3.6)
Internal factors: coefficients, their significance and standard error (in parentheses)				
F1	1.9 (1.9)	2.01 (2.6)	0.6 (1.6)	0.5 (2.1)
F2	**0.05 (0.03)***	**0.06 (0.03)***	**0.05 (0.02)****	**0.06 (0.03)***
F3	0.7 (0.9)	0.7 (1.3)	1.1 (0.9)	0.6 (1.2)
F4	0.4 (0.4)	0.6 (0.6)	0.4 (0.4)	0.6 (0.5)
F5	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	−0.0001 (0.0001)
F6	0.002 (0.002)	0.002 (0.003)	0.002 (0.002)	0.002 (0.003)
F7	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
F8	0.04 (0.05)	0.008 (0.07)	0.04 (0.04)	0.03 (0.06)
Control variables: coefficients, their significance and standard error (in parentheses)				
C1	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)	0.0001 (0.0001)
C2	**−0.0001 (0.0001)****	−0.0001 (0.0001)	**−0.0001 (0.0001)****	**−0.0001 (0.0001)***
C3	0.2 (0.6)	−0.7 (0.8)	0.2 (0.6)	−0.6 (0.8)
C4	**1.7 (1.02)***	**2.8 (1.3)****	**2.3 (0.9)*******	**3.5 (1.1)*******
Criteria of model quality				
R^2 (adjusted R^2)	0.134 (0.069)	0.140 (0.076)	0.135 (0.080)	0.136 (0.081)
F (p-value)	2.1 (0.02)	2.2 (0.01)	2.4 (0.006)	2.5 (0.005)

Bold type indicates statistically significant regression coefficients.
Significance level (p-value): *** 1%; ** 5%; * 10%.

Such deviations may indicate instability of these regression coefficients. However, quantitative indicators of universities' activities over a longer period of time should be analyzed to confirm this hypothesis, which currently does not seem possible as there is no publicly accessible data on the activities of Russian universities for earlier periods.

To ensure that there was no bias in the regression coefficients, additional models were estimated, which included a control group of 28 randomly sampled universities with low and very low export performance indicators. Analysis of regression coefficients in the alterna-

tive model specifications did not reveal any meaningful differences as compared to the base models; differences between the significant regression coefficients are minimal. It can be thus safely assumed that no meaningful bias is observed in the linear regression coefficients.

6. Conclusion and Implications

The study allowed for empirical assessment of relationships between the preselected internal factors and export performance of Russian universities. Analysis revealed statistically significant correlations between six of the eight factors and the export performance indicators.

The strongest correlation observed is the positive one between the number of dual degree programs and the indicators of university export performance. Dual degree programs are in high demand among international students. Engagement in such programs demonstrates that a university is able to build meaningful long-term partnerships with foreign universities and that the quality of its education is recognized globally. Universities offering international dual degree programs possess the necessary international marketing competencies that provide them with a competitive edge in the global education market, which has a positive effect on export performance overall.

The study confirmed a positive relationship between membership of international university networks and the absolute export performance indicators. A university normally should have achieved a specific degree of maturity in international education marketing to join an international university network and cooperate actively within that network to maintain the status of an effective partner. Such competencies contribute to education export performance in themselves.

A negative correlation was observed between diversification of education programs and export performance, which allows for concluding that education exports are more likely to be successful among universities that focus on a limited number of international education programs and avoid excessive diversification.

Annual tuition for international students correlates positively with university revenues, yet this factor is not related to the number or percentage of international students. Otherwise speaking, demand for higher education among international students is perfectly inelastic. This can be explained by the differences in higher education costs across countries: even the highest tuition payments in Russian universities are usually lower than those of most American and European universities. Besides, the recent ruble crash has made education in Russia financially attractive for students from a whole lot of countries. For this reason, differences in the size of tuition fees among Russian universities are not too significant for international entrants.

Analysis showed that Russian universities engage insufficiently in the development of transnational education programs and networking with overseas research and educational institutions, which makes

it difficult for them to succeed in many sectors of the global market of higher education.

The education export performance of Russian universities is greatly influenced by external factors. Therefore, positive results may only be achieved by using an integrated approach that implies both the active involvement of universities and governmental measures to attract international students and provide them with a supportive environment.

References

Arefyev A., Sheregi F. (2014) *Eksport rossiyskikh obrazovatelnykh uslug: stat. sbornik. Vyp. 4* [Export of Russian Educational Services: A Statistical Compilation. Iss. 4], Moscow: Sotsiotsentr.

Arefyev A., Sheregi F. (2016) *Eksport rossiyskikh obrazovatelnykh uslug: stat. sbornik. Vyp. 6* [Export of Russian Educational Services: A Statistical Compilation. Iss. 6], Moscow: Sotsiotsentr.

Asaad Y. (2008) *An Investigation into the Relationship between Export Market Orientation and Export Performance in Universities: A Study in the British Higher Education Sector*. Available at: https://www.brunel.ac.uk/__data/assets/file/0020/91019/phdSimp2008YousraAsaad.pdf (accessed 10 August 2018).

Asaad Y., Melewar T. C., Cohen G. (2015) Export Market Orientation Behavior of Universities: The British Scenario. *Journal of Marketing for Higher Education*, vol. 25, no 1, pp. 127–154.

Binsardi A., Ekwulugo F. (2003) International Marketing of British Education: Research on the Students' Perception and the UK Market Penetration. *Marketing Intelligence & Planning*, vol. 21, no 4/5, pp. 318–327.

Chirikov (2016) How Global Competition is Changing Universities: Three Theoretical Perspectives. *Research & Occasional Paper Series: Center for Studies in Higher Education*, no 5.16, pp. 1–7. Available at: https://cshe.berkeley.edu/publications/how-global-competition-changing-universities-three-theoretical-perspectives-igor (accessed 10 August 2018).

Clark B. (1998) *Creating Entrepreneurial Universities: Organizational Pathways of Transformation*. Guildford, UK: Pergamon.

Ekshikeev T. (2009) Razvitie konkurentnogo potentsiala vuza na rynke obrazovatelnykh uslug [Development of Competitive Potential of a High Educational Institution on the Market of Educational Services]. *Problems of Modern Economics*, no 2(30). Available at: http://www.m-economy.ru/art.php?nArtId=2574 (accessed 10 August 2018).

Hirschman A. O. (1964) The Paternity of an Index. *The American Economic Review*, vol. 54, no 5, pp. 761–762.

Knight J. (2015) Are Double/Multiple Degree Programs Leading to "Discount Degrees"? *International Higher Education*, no 81, pp. 5–7. Available at: https://ejournals.bc.edu/ojs/index.php/ihe/article/download/8729/7854 (accessed 10 August 2018).

Lange T. (2013) Return Migration of Foreign Students and Non-Resident Tuition Fees. *Journal of Population Economics*, vol. 26, no 2, pp. 703–718.

Leslie L., Oaxaca R., Rhoades G. (2001) Technology Transfer and Academic Capitalism. AAAS *Science and Technology Policy Yearbook* (ed. A. Teich), Washington, DC: Committee on Science, Engineering, and Public Policy, American Association for the Advancement of Science, pp. 261–277. Available at: http://firgoa.usc.es/drupal/files/ch23.pdf (accessed 10 August 2018).

Maringe F. (2005) Interrogating the Crisis in Higher Education Marketing: The CORD Model. *International Journal of Educational Management*, vol. 19, no 7, pp. 564–578.

Mazzarol T. W. (1998) Critical Success Factors for International Education Marketing. *International Journal of Educational Management*, vol. 12, no 4, pp. 163–175.

Mazzarol T., Soutar G. (2002) "Push-Pull" Factors Influencing International Student Destination Choice. *International Journal of Educational Management*, vol. 16, no 2, pp. 82–90.

Melikyan A. (2014) Osnovnye kharakteristiki mezhdunarodnykh setey universitetov [Key Features of International University Networks]. *Voprosy obrazovaniya / Educational Studies Moscow*, no 3, pp. 100–117. DOI: 10.17323/1814–9545–2014–3–100–117

Melikyan A. (2014) Sliyaniya i prisoedineniya vuzov v Rossii i za rubezhom [Mergers and Acquisitions of Universities in Russia and Abroad]. *Higher Education in Russia*, no 5, pp. 134–145.

Naidoo V. (2010) From Ivory Towers to International Business: Are Universities Export Ready in Their Recruitment of International Students? *Journal of Studies in International Education*, vol. 14, no 1, pp. 5–28.

Prakhov I. (2017) Determinanty ozhidaemoy otdachi ot vysshego obrazovaniya v Moskve [Determinants of Expected Return on Higher Education in Moscow]. *Voprosy obrazovaniya / Educational Studies Moscow*, no 1, pp. 25–57. DOI: 10.17323/1814–9545–2017–1–25–57

Racine N., Villeneuve P. Y., Theriault M. (2003) Attracting Foreign Students: The Case of Two Universities in Quebec. *Journal of Studies in International Education*, vol. 7, no 3, pp. 241–252.

Ramanantsoa B., Delpech Q. (2006) *L'enseignement supérieur français par-delà les frontières L'urgence d'une stratégie. France Stratégie.* Available at: http://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/rapport-enseignement-superieur-26–09–2016-final-web_0.pdf (accessed 10 August 2018).

Ross M., Heaney J-G., Cooper M. (2007) Institutional and Managerial Factors Affecting International Student Recruitment Management. *International Journal of Educational Management*, vol. 21, no 7, pp. 593–605.

Ross M., Grace D. (2012) Exploring the International Student Recruitment Industry through the Strategic Orientation Performance Model. *Journal of Marketing Management*, vol. 28, nos 5–6, pp. 522–545.

Sanchez-Serra D., Marconi G. (2018) Povyshenie stoimosti obucheniya dlya mezhdunarodnykh studentov: palka o dvukh kontsakh [Increasing International Students' Tuition Fees: The Two Sides of the Coin]. *Mezhdunarodnoe vysshee obrazovanie*, no 92, pp. 18–20. Available at: https://ihe.hse.ru/article/view/7559/8381 (accessed 10 August 2018).

Slaughter S., Leslie L. L. (1997) *Academic Capitalism: Politics, Policies, and the Entrepreneurial University*. Baltimore: John Hopkins University.

Snatkin I., Mishin A., Karpukhina E. (2010) *Analiz program dvojnykh diplomov mezhdu ES i rossijskimi vuzami* [Analysis of Double Degree Programmes between EU and Russian HEIS]. Available at: http://www.vstu.ru/upload/internships/analiz_programm_dvoynyh_diplomov_mezhdu_es_i_rf.doc (accessed 10 August 2018).

Stensaker B. (2013) Translating Globalization into Practice: University Networks—Towards a New Stratification of Higher Education? *Making Policy in Turbulent Times. Challenges and Prospects for Higher Education* (eds P. Axelrod, R. D. Trilokrekar, T. Shanahan, R. Wellen), Montreal, QC, & Kingston, ON: McGill-Queen's University, pp. 249–268.

Vashurina E., Evdokimova Ya. (2017) Razvitie sistemy privlecheniya inostranny-kh studentov: regionalnaya model [Developing Foreign Student Recruitment System: Regional Model]. *Journal University Management: Practice and Analysis*, no 1, pp. 41–51.

West C. (2015) Degrees without Borders. *International Educator*, July + August, pp. 21–32. Available at: https://www.nafsa.org/_/File/_/ie_julaug15_degrees.pdf (accessed 10 August 2018).

Wilkins S., Huisman J. (2011) Student Recruitment at International Branch Campuses: Can They Compete in the Global Market? *Journal of Studies in International Education*, vol. 15, no 3, pp. 299–316.

Zemtsov S., Eremkin V., Barinova V. (2015) Faktory vostrebovannosti vedush-chikh vuzov Rossii [Factors of Attractiveness of the Leading Russian Universities Overview of Literature and Econometric Analysis of the Leading Universities]. *Voprosy obrazovaniya / Educational Studies Moscow*, no 4, pp. 201–233. DOI: 10.17323/1814–9545–2015–4–201–233