

# Internationalization of the educational services market through development of the system of remote education

## Possibilities and barriers

Yuri Treshchevsky and Ivan Igolkin

*Voronezh State University, Voronezh, Russian Federation, and*

*Maksim Shatalov*

*Voronezh Institute of Law and Economics, Voronezh, Russian Federation*

### Abstract

**Purpose** – The purpose of this paper is to study the possibilities and potential barriers on the path of internationalization of the educational services market through development of the system of remote education.

**Design/methodology/approach** – In order to determine the influence of development of the system of remote education on the process of internationalization of the educational services market, the authors use the method of regression analysis. A regression curve is built, containing the model of paired linear regression and the value of determination coefficient. The research object is the market of higher educational services – as it is subject to internationalization and distribution of remote education. The research is performed based on the 2017 data by the example of countries from various regions of the world that show different rates and levels of socio-economic development but that achieved the largest success in development of the system of remote education – the USA, the UK, Brazil, China, South Korea, Italy, Germany, India, Malaysia, Australia, South Africa and Russia. Due to the absence of the official international statistics on the issue of internationalization of the educational services market, the proprietary method is used for determining its level.

**Findings** – It is concluded that remote education has a slight influence on the process of internationalization of the educational services market in the countries of the world, though it has large potential in the sphere of stimulation of internationalization of the educational services market, as it allows providing educational services of equal quality and equal cost for domestic and foreign students.

**Originality/value** – The developed and presented model of managing the development of the remote education system of a modern university in the interests of stimulating internationalization of the educational services market allows overcoming these barriers and opening the existing potential of remote education in the sphere of stimulation of internationalization of the educational services market.

**Keywords** Internationalization, Development of the remote education system

**Paper type** Research paper

### Introduction

Internationalization of the educational services market is a perspective direction of its development and one of the key tasks of national strategies of managing this market in modern countries of the world, which are implemented as a reaction to the challenges of globalization. Internationalization stimulates increase of volume of the educational services market, ensuring the following multiple advantages.

One of them is reduction of this market's dependences on demographic fluctuations. For example, over the recent years, Russian universities have faced the consequences of the demographic crisis of 1990s, as a result of which the number of applicants reduced, as compared to previous periods, which was followed by reduction of academic staff. Internationalized markets of educational services are more sustainable to natural demographic declines, as they may attract applicants from abroad.



Another advantage of internationalization is connected to reduction of dependence of the educational services market on the incomes of population. Provision of educational services on the paid basis is the most important direction of activities of a modern commercial university. That is why reduction of effective demand leads to a crisis of overproduction, which leads to forced reduction of average market prices for educational services and increases the risk of bankruptcy of universities. Internationalized markets of educational services face this problem not so often.

Another advantage of internationalization of the educational services market is constant update of educational programs. Closed markets of educational services do not exchange information with external world and thus are limited by scientific inventions and practical experience. Internationalization opens access to achievements of the global science and practice, allowing supporting educational program in the actual state and training more qualified specialists.

However, in striving for these advantages, national markets of educational services face high complexity of internationalization. The applied tools – exchange of lecturers and students and international branding – are not very effective due to either low efficiency or high expenditures. This explains high topicality of studying the issues related to internationalization of the educational services market.

This paper offers a hypothesis that, similarly to commodity markets, which internationalize by means of online trade, a perspective tool of internationalization of the educational services market could be development of the remote education system. The purpose of the work is to verify the offered hypothesis and study possibilities and potential barriers on the path of internationalization of the educational services market through development of the remote education system.

## Materials and method

Popularity and necessity of internationalization of the educational services market and practical experience of implementation of this process are studied in the works of Bedenlier (2017), Bogoviz *et al.* (2017), Calvo (2017), Churski *et al.* (2017), Goncharov *et al.* (2016), Guo and Guo (2017), Healey (2017), Lau and Lin (2017), Mellita *et al.* (2017), Popkova *et al.* (2015) and Ruan (2017).

Peculiarities and potential of development of remote education are reflected in the works of Darojat (2018), Firat *et al.* (2018), Guo *et al.* (2017), Isaev *et al.* (2013), Klibanov *et al.* (2018), Kravets *et al.* (2013), Roberts (2018) and Wen *et al.* (2018). International remote education is viewed in the works of Kerimbayev *et al.* (2017), Schoonheim *et al.* (2014) and Yueh *et al.* (2014).

Results of the performed literature overview showed that theory and practice of internationalization of the educational services market are studied by the modern economic science in detail. However, current and potential roles of remote education in this process are not sufficiently studied and require additional attention.

For determining the influence of development of the remote education system on the process of internationalization of the educational services market, we use the method of regression analysis. A regression curve is created in Microsoft Excel, which contains the model of paired linear regression and the value of determination coefficient.

The research is performed based on the 2017 data by the example of countries from various regions of the world that show different rates and levels of socio-economic development but that achieved the largest success in development of the system of remote education – the USA, the UK, Brazil, China, South Korea, Italy, Germany, India, Malaysia, Australia, South Africa and Russia. Due to the absence of the official international statistics on the issue of internationalization of the educational services market, the proprietary method is used for determining its level. It envisages calculation

of the index of internationalization of the educational services market according to the following formula:

$$Iiesm = (Dfs \times GCse \times QE) \times 100\%, \quad (1)$$

where Iiesm is the index of internationalization of the educational services market; Dfs the share of foreign students in the general structure of students of universities; GCse the global competitiveness of the system of education; and QE is the quality of education.

In formula (1), index of internationalization of the educational services market is measured in percent (1–100); the larger the value of the index, the higher the level of internationalization of the national market of educational services. The indicator of internationalization of the educational services market is share of foreign students in the general structure of students of universities, according to the report of the OECD “Online Education Database,” – within the offered methods it is presented as shares of 1, by calculating the ratio of value in a certain country to the maximum value among countries of the world (in 2017 – 45.9 percent).

The indicator of internationalization of the educational services market is the global competitiveness of the educational system. It is determined as a position of the leading university of the country in the global ranking of universities of the world according to the materials TopUniversities “QS World University Rankings.” The following scale is used for bringing this value down to common measuring units (shares of 1):

- If the university’s position in the ranking is in the interval from 1 to 10, the indicator is assigned with the value 1.
- If the university’s position in the ranking is in the interval from 11 to 30, the indicator is assigned with the value 0.95.
- If the university’s position in the ranking is in the interval from 31 to 50, the indicator is assigned with the value 0.90.
- If the university’s position in the ranking is in the interval from 51 to 70, the indicator is assigned with the value 0.85.
- If the university’s position in the ranking is in the interval from 71 to 100, the indicator is assigned with the value 0.80.
- If the university’s position in the ranking is in the interval from 101 to 150, the indicator is assigned with the value 0.75.
- If the university’s position in the ranking is in the interval from 151 to 200, the indicator is assigned with the value 0.70.
- Next 50 positions’ assigned value of the indicator is reduced by 0.5.

The indicators of internationalization of the educational services market include also the quality of education, which is determined according to the value of the indicator “5.03 Quality of the education system” by the World Economic Forum’s “The Global Competitiveness Report.” It is transferred into shares of 1 by finding its ratio to the maximum value (7 points). Share of remote education in the structure of higher education is determined according to the materials ICEF Monitor. The basic data for calculations are given in Table I.

## Results

The results of bringing the indicators down to common measuring units and calculation of the index of internationalization of the educational services market in the countries of the world in 2017 are shown in Table II.

Based on the data of Table II, the regression curve shown in Figure 1 is built.

**Table I.**  
Share of remote  
education and  
indicators of  
internationalization of  
the educational  
services market in the  
countries of the world  
in 2017

Countries of the world	Share of remote education (%)	Share of foreign students (%)	Quality of higher education, points (max. 7)	Position of the leading university in the global ranking (among 1,000 universities of the world)
USA	20	4.6	5.6 (4th position)	1 (Massachusetts Institute of Technology)
UK	14	18.5	4.7 (22nd position)	5 (University of Cambridge)
Brazil	12	1.2	2.6 (125th position)	121 (Universidade de São Paulo)
China	10	1.4	4.5 (29th position)	25 (Tsinghua University)
South Korea	9	1.7	3.5 (81st position)	36 (Seoul National University)
Italy	8	5.0	3.7 (66th position)	170 (Politecnico di Milano)
Germany	8	7.7	5.4 (9th position)	64 (Technical University of Munich)
India	7	0.5	4.6 (26th position)	172 (Indian Institute of Technology Delhi)
Malaysia	6	0.8	5.2 (14th position)	114 (Universiti Malaya)
Australia	5	15.5	5.1 (16th position)	20 (The Australian National University)
South Africa	4	0.3	2.8 (114th position)	191 (University of Cape Town)
Russia	2	3.0	3.7 (64th position)	95 (Lomonosov Moscow State University)

**Source:** Compiled by the authors based on OECD (2018), TopUniversities (2018), World Economic Forum (2018) and ICEF Monitor (2018)

Countries of the world	Share of foreign students	Quality of higher education, points	Position of the leading university in the global ranking	Index of internationalization of the educational services market (%)
USA	0.10	0.80	1.00	8.02
UK	0.40	0.67	1.00	27.06
Brazil	0.03	0.37	0.75	0.73
China	0.03	0.64	0.95	1.86
South Korea	0.04	0.50	0.90	1.67
Italy	0.11	0.53	0.70	4.03
Germany	0.17	0.77	0.85	11.00
India	0.01	0.66	0.70	0.50
Malaysia	0.02	0.74	0.75	0.97
Australia	0.34	0.73	0.95	23.37
South Africa	0.01	0.40	0.70	0.18
Russia	0.07	0.53	0.80	2.76

**Table II.**  
Calculation of the  
index of  
internationalization of  
the educational  
services market in the  
countries of the world  
in 2017

**Source:** Compiled by the authors

As is seen from Figure 1, remote education performs slight influence on the process of internationalization of the educational services market in countries of the world. Thus, growth of the share of remote education in the structure of services of higher education by 1 percent leads to increase of the level of internationalization of the educational services market in countries of the world by 0.44 percent. The received value of determination coefficient shows that internationalization of the educational services market in countries of the world is by 5.48 percent explained by the share of remote education.

At the same time, remote education possesses large potential in the sphere of stimulation of internationalization of the educational services market, as it allows providing educational services of the same quality and price for domestic and foreign students. Therefore, attraction of foreign students for receipt of remote education is simpler and more accessible than receipt of traditional education, as they do not have to leave their countries and change their way of life, let alone additional expenditures.

This shows that there are serious barriers on the path of using remote education in the interests of stimulation of internationalization of the educational services market. The performed qualitative analysis of this process allowed determining the main barriers:

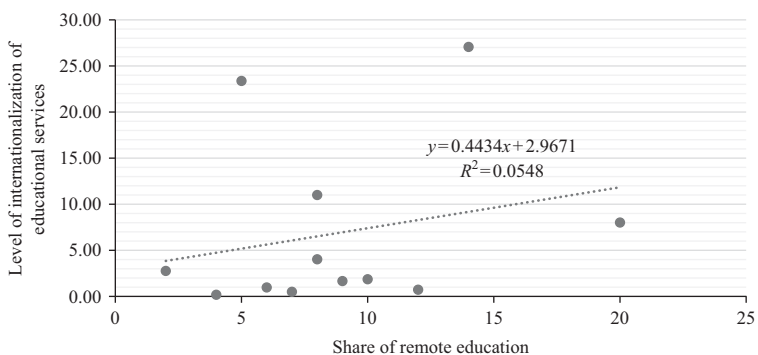
- Low reputation of remote education: belief of society, applicants, undergraduates and employers that its value is lower as compared to traditional education.
- High labor intensity of provision of international remote education: necessity for translation of constantly updated educational programs to foreign languages.
- Low level of interest of academic staff in provision of international remote education: absence or low value of material (bonus to salary) and non-material (position in ranking of lecturers) benefits for efforts for provision of international remote education.

For overcoming these barriers, we developed the model of managing the development of the remote education system of a modern university in the interests of stimulating internationalization of the educational services market as shown in Figure 2.

As is seen from Figure 2, the object of management in the offered model is management of university. It conducts systemic marketing studies of the international educational services market (object of management), aimed at determination of actual tendencies of demand and offer and determination of global competitiveness of the university. Management of the university also conducts branding of remote education in the market of educational services, which could be aimed at growth of demand for services in the sphere of remote education of this university or on the whole for this segments of the market.

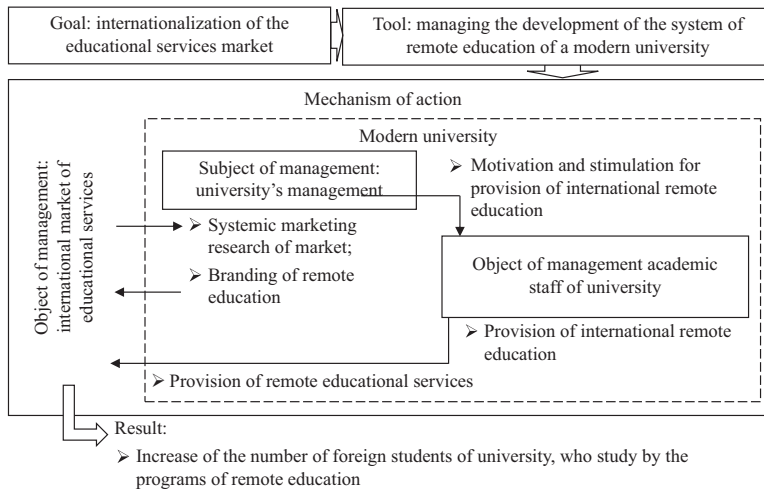
As to the second object of management – academic staff of university – its management implements a highly effective strategy of motivation and stimulation for provision of international remote education and creates favorable conditions, providing any required support, including help in translation of educational programs to foreign languages (provision of translators).

Academic staff of university prepares necessary educational programs that will be in demand in the market of educational services according to the results of marketing research and provides remote educational services in this market. Due to this, the number of foreign students of the university who study by the programs of remote education grows, which, in case of mass implementation of this model, leads to internationalization of the university and the national educational services market.



**Figure 1.** Regression curve that reflects the influence of share of remote education on the level of internationalization of the educational services market in countries of the world (2017)

Source: Compiled by the authors



Source: Compiled by the authors

**Figure 2.** Model of management of development of the remote education system of a modern university in the interests of stimulating internationalization of the educational services market

### Conclusions

Thus, the offered hypothesis was proved – remote education possesses wide capabilities in the sphere of stimulating the internationalization of the educational services market, as it allows attracting a large number of foreign students. However, this potential of remote education is not used in countries of the world, which is caused by serious barriers on the path of development of international remote education. These barriers include low reputation of remote education, high complexity of its provision and low interest of academic staff of universities.

The developed and presented model of managing the development of the remote education system of a modern university for stimulating internationalization of the educational services market allows overcoming these barriers and opening the existing potential of remote education in the sphere of stimulating internationalization of the educational services market. The basic precondition of implementation of this model is activation of highly effective managerial efforts of management of a modern university, aimed at development of international remote education.

At that, it should be taken into account that management of university does not always seek the goals of internationalization of its activities and development of the remote education system, which could be a limitation of practical application of this model. That is why in the scale of national educational services market the offered model should be supplemented in view of active participation of state regulators of this market, which actions should be aimed at stimulating the management of universities for highly effective management of the process of development of international remote education. This defines perspectives of further research.

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**Corresponding author**

Yuri Treshchevsky can be contacted at: [utreshevski@yandex.ru](mailto:utreshevski@yandex.ru)

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