ISSN 2345-0282 (online) http://jssidoi.org/jesi/ 2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)













TRUST AND DEVELOPMENT IN EDUCATION AND SCIENCE*

Vyacheslav Volchik¹, Elena Maslyukova²

^{1,2} Southern Federal University, Bolshaya Sadovaya str. 105, 344006, Rostov-on-Don, Russian Federation

E-mails: 1 volchik@sfedu.ru; 2 maslyukova@sfedu.ru

Received 15 January 2019; accepted 28 February 2019; published 01 March 2019

Abstract. Education and science play an increasingly significant role in the development of modern society as well as the economy. The number of years people spend on education has been steadily increasing over the past century, and this phenomenon has become truly global. Thence, one would probably agree that education strengthens its importance in social and economic life, and its development becomes an important indicator of the economic well-being and sustainable development of any given country. Our paper scrutinizes the indicators of development and trust in eduction and science using a case study from Russian Federation, a country where education has a very important, yet a dubious and debatable significance. In Russian society, a paradoxical situation has developed in many ways with attitudes in society towards the state of the education system, which is reflected in the gap in the desire to give their children (or grandchildren for that matter) the highest level of education coupled with a very low rate of assessment of this very education. We measure and apply the indicators of growth of science and education based on the the level of trust which is taken as a proxy of the quality of social capital. We show that a high level of trust characterizes social capital, which contributes to the establishment of depersonalized (impersonal) social ties, both outside and inside organizations. On the other hand, the low level of trust causes a dysfunction of management and complicates the formation of social ties and is characterized by the dominance of institutions that limit the possibilities of social and professional mobility. Our results and outcomes can be useful for constructing economic and social measures for supporting the growth of science and education as well as for finding the most effective pathways for achieving the sustainable development of this field which leads to the increase in the economic competitiveness of a country.

Keywords: education, science; development; sustainability; social capital; indicators; economic growth

Reference to this paper should be made as follows: Volchik, V.; Maslyukova, E. 2019. Trust and development of education and science, Entrepreneurship and Sustainability Issues 6(3): 1444-1455. http://doi.org/10.9770/jesi.2019.6.3(27)

JEL Classifications: O15, O43, J08

Additional disciplines sociology; psychology; educology

^{*} This publication has been prepared within the framework of the project funded by the Russian Foundation for Basic Research (project No. 18-010-00581) entitled "Institutional traps of optimization of the sphere of education and science".

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

1. Introduction

The role of education and science in today's world can hardly be underestimated. The development in this field is becoming a crucial objective for any country aiming at achieving sustainable economic growth. Consequently, education strengthens its importance in social and economic life, and its development becomes an important indicator of the economic well-being of a country.

Many recent research studies and reports noted that education should be considered more widely than just a mixed good (Biesta, 2015). Instead, it should be perceived not only as a private good (i.e. accumulation of human capital of an individual) but also as a public good that forms common values and competencies that, in turn, increase the effectiveness of the community as a whole (Natkhov, 2011; Kalyugina et al., 2015; Vasylchak and Halachenko, 2016; or Gulicheva and Osipova, 2017; Tkacova et al., 2018). This becomes an important aspect in the West (including the European Union Member States and their well-designed educational and employment policies) as well as in the East (Čábelkova et al., 2015; Höschle et al., 2015; Jiroudková et al., 2015; Volchik et al., 2018; Senan, 2018).

Along with the growing importance of education in modern society there is a certain dissatisfaction with its quality. This trend can also be observed in Russia and represents a truly worrying pattern (see Volchik and Maslyukova, 2017). What can explain the decline in subjective assessments of the state of the education system in a society? Since subjective assessments of the state of the education system are largely related to a variety of personal expectations, on the one hand, underestimating the benefits of education, on the one hand, and overestimating educational expenses, on the other, leads to a decrease in educational aspirations, as well as an increase in mistrust to the education system in society, and, as a result, lower subjective assessments (Wong et al., 2015; Lisin et al., 2015; Sommerfeld, 2016; Lisin et al., 2016). One may easily agree with the argument that an increase in the duration and coverage of higher and vocational education is sometimes considered as a factor of instability in the labor market. The massification of higher education leads to the fact that graduates can not find a job that meets their expectations for qualifications and pay (see Volchik and Posukhova, 2016).

This paper takes the level of trust as the main indicator of the quality of social capital. A high level of trust characterizes social capital, which contributes to the establishment of depersonalized (impersonal) social ties, both outside and inside organizations (Strielkowski et al., 2016). The low level of trust causes a dysfunction of management and brings many complications to the formation of social ties and is characterized by the dominance of institutions that limit the possibilities of social and professional mobility. Some recent studies showed that in the context of political and economic crises, the role of citizens' confidence in institutions increases dramatically, and social and political trust in the stability of public institutions becomes more important to their economic efficiency (Putnam, 2000; Ostrom and Ahn, 2007). Moreoer, we contemplate with the idea that not only interpersonal trust depends on the quality of social capital, but also trust in social institutions which, in particular, is reflected in the subjective assessments of the shape and the level of development of the education system in a given country.

Social capital bound can be viewed in the context of different types of trust: general (to all, in general), social or personified (represented by the environment, neighbors, or colleagues) and institutional (represented by the various types of social institutions) (see Mironova, 2014; or Niño-Amézquita et al., 2017). Here, one can see that social or personified trust is a more specific matter than other types of trust. Thence, speaking of social trust, people assess their attitude not towards abstract images but towards specific people.

The Russian specifics of both personified and institutional trust are characterized by low indicators measuring this trust. In fact, among the state institutions, relatively high levels of trust over the past fifteen years have been observed only when it came to such institutions as the president and the army. These outcomes may be one of the

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

consequences of a widespread relationship that can be described in the framework of the crony capitalism model (also denoted as "crony capitalism" or "political capitalism") (see Holcombe, 2018).

2. Education and science trends worldwide

Education is becoming a global phenomenon and a very important aspect of socio-economic sustainable development. The average time spent on education by adults in developed countries is steadily growing with every region in the world affected by this positive and favourable trend. One can see that the number of years people spend in training has steadily increased over the past 100 years, and this phenomenon has become global. If in 1870 the average duration of study was 1.2 years, by the middle of the 20th century it increased to 3.2 years, and by 2010 it is more than 7 years (see Figure 1 that follows).

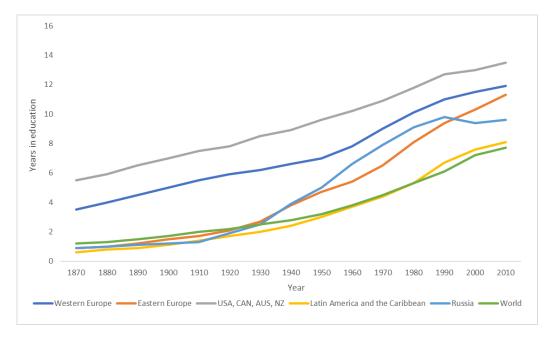


Fig.1. The average duration of training (years in education) in individual countries, 1870-2010

Source: Van Zanden (2014)

In Russian Federation, an attitude to measuring the quality and the usefulness of the education system often inclines to a paradoxical situation which is reflected in the gap in the desire to give their children (or grandchildren) the highest level of education with a very low assessment of the quality of the educational system. On the one hand, the majority of the respondents in Russia would answer the question "What kind of education would you like to give to your children or grandchildren?" by choosing the highest level of education as the most desired one. On the other hand, the assessment of the state of the education system according to the data of two waves of the European Social Research shows that this level is below 50%: in 2012, the share of respondents assessing the state of the education system not higher than 5 points was 71.75%, in 2016 this even dropped to 65.77% (European Social Survey, 2012).

Within the presented context, it becomes apparent that education is a trusting good which determines the existence of specific institutions that allow actors to make decisions about the choice of an educational institution or the trajectory of education. And here it is the quality of social capital that plays the decisive role. In relation to the education system, we are based on the following logic: a low level of trust is a fundamental characteristic of

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

Russian social capital which manifests itself in relation to the education system as a social institution. If the low level of trust in society did not affect the attitude to the education system in society, then we would see more positive assessments of the state of the education system than negative ones. That is, a low level of trust in other people is associated with low indicators of institutional trust, which, consequently, means a low level of satisfaction with the state of the education system, as the most important social institution. This can lead to distortions on the labor market and effect the wellbeing as a whole (see e.g. Stojanov et al., 2011; Abrhám et al., 2015; or Strielkowski and Weyskrabova 2014).

Since dissatisfaction with the quality of the education system prevails in society, it can be assumed that the general trend of distrust through social capital is also manifested in low assessments of the state of the education system and is responsible for the formation of institutional traps and dysfunctions in education and science.

Within the public discourse, as well as the discourses of managers and officials, there is dissatisfaction with the quality of education, which is often the key reason for its reform. Enders (2013) notes that "large-scale institutional reforms in the provision of social services in general and in higher education in particular are often legitimized by statements of loss of confidence in government institutions and their effectiveness". The distrust into the education system is reflected in assessments of the state of the education system in society which may serve as a reason to justify the need to optimize the education sector.

The effective functioning of the education system is also associated with a level of trust depending on the institutional environment. For example, Vidovich and Currie (2011) emphasize the importance of trust in higher education policies, taking as an example the analysis of changing governance policies in Australian higher education. Moreover, it can be noted that trust is a necessary determinant for the prosperity of science in democratic societies while the subjective assessments of the educational sphere are associated with social discourse and dominant ideas that become widely accepted as institutions (Markey-Towler, 2019).

3. The model and the data

In this paper, we set up a research objective aiming at confirming or disproving the hypothesis that the level of satisfaction with the state of the education system is related to the quality of social capital (trust) and are differentiated according to signs of income, position in the labor market and level of education. The information base of the research is data from the 6th and 8th waves of the European Social Research (European Social Survey) for Russia conducted in 2012 and 2016. The sample size was 1444 people (6th wave conducted in 2012) and 1405 people (8th wave carried out in 2016).

The evaluation of the state of the education system (stfedu) serves as a dependent variable. The level of assessment of the state of the education system is measured using the question: "How do you assess the current state of the education system in our country?" The possibility of answers ranged from 0 - very poor to 10 - very good. The following characteristics are used as independent variables:

- level of education (variables edu_low below average (basic group), edu_sr secondary, edu_prof professional, edu_high higher (tertiary));
- obtaining additional education in the last 12 months (variable dop_edu, answer to the question: "Have you attended any courses, lectures, trainings or classes in the last 12 months to improve your knowledge or skills necessary for work?" with answer options: 1 yes, 0 no);
- experience of the unemployed (variable u_emp, answer to the question: "Have you ever had to be without work and look for a job for more than three months?" with answer options: 1 yes, 0 no);

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

- income (variable income_1 (base group), income_2, income_3, income_4, income_5, income_5, income_7, income_8, income_9, income_10, indicating that respondents belong to one of ten groups by total income of all family members per month after deducting all taxes);
- presence of work at the present time (the work variable, which takes values 1 works, 0 does not work);
- level of trust (social capital variable trust). This variable is ordinal, i.e. the higher the value of the variable, the more the respondent agreed with the above statement (the level of trust is measured by the question: "Do you think that most people can be trusted, or do you tend to think that even excessive caution in dealing with people will not hurt?" With answers from 0 to 10, where "0" means "even excessive caution does not hurt "(basic group), and" 10 "-" most people can be trusted ").

As control variables, we consider the individual characteristics of workers: gender (gender variable: 1 - male, 0 - female); age (age variable), square of age (age2), marital status (married variable, taking the value 1 if the respondent currently lives with her spouse / partner, 0 - otherwise), type of settlement / place of residence (variables (domicil_1 - big city (base group), domicil_2 - suburb or outskirts of a big city, domicil_3 - a small town or urban settlement, domicil_4 - village / village, domicil_5 - farm or house in a rural area / farm) variables variables edu_f_low / edu_m_low - below average o (basic group), edu_f_sr / edu_m_sr - secondary, edu_f_prof / edu_m_prof - professional, edu_f_high / edu_m_high - higher (tertiary)).

In order to analyze the influence of selected characteristics of individuals on the subjective assessment of the state of the education system in society, it is proposed to build the following model of multiple regression (1) from spatial data for two time periods (based on 2012 and 2016 data):

$$y_i = x_i' \beta + \varepsilon_i \tag{1}$$

where yi is the dependent variable, x is the vector of factors (independent and control variables), β is the model parameters, ϵ is the vector of unobservable random errors.

For testing the robustness of the results, the following ordered logit/probit model models are also constructed using spatial data for two time periods (based on 2012 and 2016 data) (2):

$$P_{i}(y_{i}=k \mid x) = F(c_{i} - x'\beta) - (c_{(i-1)} - x'\beta)$$
(2)

where yi is the dependent variable, $i = (1,11)^-$, k = 0,1,2,...,10, x is the vector of factors (independent and control variables), β is the model parameters, $c_i = (-\infty, +\infty)^-$ - constants, and F is the logistic function (for ordered logit regression) or standardized normal distribution (for ordered probit regression).

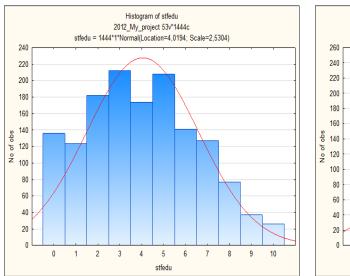
4. Results and discussions

In general, our results depicted in Figure 2 that follows demonstrate that the majority of respondents have a rather low assessment of the current state of the education system: the proportion of respondents who assessed the state of the education system as very poor (0 points) was 9.41% in 2012 and 7.47% in 2016, with the corresponding share of 10 points (very good) - only 1.80% and 1.92%.

The assessment of the state of the education system varies depending on the level of education received. Among respondents with higher education, only 6.89% highly rate the current state of the education system (grades 8-10), while 22.96% of respondents rate the current state of the education system at a low level (0-2). The largest

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

number of respondents (19.69%) who rate the current state of the education system as good (grades 8-10) have lower secondary education.



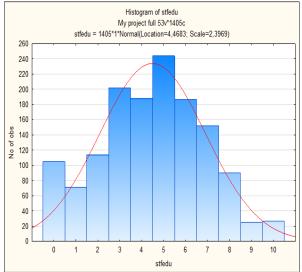


Fig.2. Histograms of subjective evaluation of education quality in Russia (2012 and 2016)

Source: Own results

Among respondents with experience of unemployed, the proportion of low marks (0-2 points) is higher than among respondents who do not have such experience (24.94% against 18.92%). In addition, our results showed that there is a parabolic dependence of the educational system estimates depending on age: the share of maximum assessments of the state of the education system reaches its minimum at the age of 46-59 years for the first period and 30-45 years for the second period of our data in question. Estimates of the state of the education system are slightly different among men and women, suggesting that they are gender-neutral. Moreover, a large number of respondents dissatisfied with the current state of the education system lived in the suburbs and villages (rural areas).

Our results show the following patterns: in both the first and second periods from which the data originates, only higher (tertiary) education adversely affects the assessment of the state of the education system in the country, which is apparently a consequence of the increase in labor market supply from highly educated workers.

Obtaining additional education during the last 12 months significantly reduces the assessment of the state of the education system only in the first period, in the second period this effect disappears. Contrary to initial assumptions, the experience of the unemployed, current employment and increased income do not have a significant impact on the assessment of the state of the education system.

In the multiple regression model for two time periods, assessments of the state of the education system are positively associated with an increase in confidence (social capital). This conclusion is also confirmed in ordinal logit and probit regressions for two time periods, however, if in the first period only estimates for trust_2 and trust_3 variables, indicating an increase in confidence to level 2 and 3, respectively, are statistically insignificant compared to the base category 0 - "Even excessive caution does not hurt", then in the second period only the variables trust_6, trust_7 and trust_8 turned out to be highly significant (see appendixes 1 and 2). Therefore, lack of trust is an important factor determining the wide dissemination in society of ideas about the need for fundamental reform and optimization of the sphere of education and science. In addition, as expected beforehand,

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

the obtained assessments of the state of the education system were gender-neutral. For two periods, the parabolic dependence of the estimates of the state of the education system on age was confirmed.

Having a spouse / partner does not affect the state of the education system. The residence effect also has no significant effect on the state of the education system: for the first period, the statistically significant predictor with a positive sign was domicil_4 (village / village living) and domicil_5 (living on a farm or in a separate house in a rural area / farm) with the basic category - domicil_1 (living in a big city), for the second period only the predictor domicil_5 is significant.

Finally, in both the first and second periods, the presence of a father's secondary education (edu_f_sr) increases the subjective assessment of the current state of the education system. The same effect is observed in the first period in relation to the predictor edu_m_sr - the presence of secondary education in the mother.

The stability of the results obtained from the data corresponding to different time periods indicates their robustness. Thus, the conducted econometric analysis confirmed the connection between the subjective assessments of the current state of the education system and the quality of social capital (trust). In addition, in all specifications, there is a negative impact of the presence of higher (tertiary) education on the assessment of the state of the education system in the country: more educated people are more critical about the state of the education system in the country. The analyzed relationship between indicators of income levels and the situation on the labor market (job availability, experience of the unemployed) and assessments of the state of the education system has not been confirmed, which apparently requires further research.

Conclusions

Overall, our results revealed a low subjective assessment of the state of the education system. One of the most important results of our study is that the level of trust is mainly positively related to the state of the education system. A special role in assessing the state of the education system in the country is assigned to the level of education received. The growth of labor supply on the part of highly educated workers and the overestimated expectations of a future career determine the human perception of his social environment, which directly affects the low subjective assessments of the state of the education system in people who have completed higher (tertiary) education.

Generally, the lack of trust into institutions may be the best indicator of public discontent with the modern world. Low public assessment of the quality of the education system serves as a basis for substantiating reforms in this area, therefore, in the discourse of reform developers, the improvement of the quality of education is associated with optimization. Optimization of education takes place against the backdrop of the dominance of the ideas of management and new management in the public sector (New Public Management, or NPM). NPM optimization is aimed at creating a competitive environment, introducing market mechanisms and rationalizing costs.

The broad spectrum of public attitudes, opinions as well as ideas about the need to optimize the sphere of education and science is institutionalized in regulatory measures and policies aimed at optimizing (reducing the number of teachers, the number of universities, scientific institutions). In the future, the quantitative assessments will serve to develop a program of qualitative research of narratives, conducting questionnaires and in-depth interviews to identify institutionalized rules that structure recurring interactions in the field of education and science, as well as answering the question of whether institutional reforms in higher education and science cause a lack of confidence and how likely it is that they will help restore confidence and raise levels of appreciation within the society and general public.

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

Appendix 1 - Factors (marginal effects) that affect the subjective assessment of the state of the education system $(2012)^{\dagger}$

	ols	margins_ologit_0	margins_oprobit_0	margins_ologit_10	margins_oprobit_10
edu_sr	-0,296	0,016	0,018	-0,003	-0,004
	(0,313)	(0,018)	(0,020)	(0,004)	(0,004)
edu_prof	-0,362	0,019	0,024	-0,004	-0,005
edu_high	(0,313)	(0,018) 0,039**	(0,020) 0,045**	(0,004) -0,008*	(0,004) -0,010**
	(0,323)	(0,018)	(0,020)	(0,004)	(0,005)
dop_edu	-0,593***	0,034***	0,037***	-0,007***	-0,008***
	(0,186)	(0,011)	(0,012)	(0,002)	(0,003)
	-0,051	0,002	0,004	-0,000	-0,001
u_emp	(0,153)	(0,008)	(0,010)	(0,002)	(0,002)
inaama 2	0,744	-0,036	-0,041	0,007	0,009
income_2	(0,474)	(0,027)	(0,029)	(0,005)	(0,007)
income_3	1,101**	-0,052**	-0,066**	0,010*	0,015**
meome_s	(0,448)	(0,025)	(0,028)	(0,005)	(0,007)
income_4	0,756*	-0,032	-0,043	0,006	0,010
	(0,456)	(0,025)	(0,028)	(0,005)	(0,007)
income_5	0,468 (0,441)	-0,019 (0,025)	-0,028	0,004 (0,005)	0,006 (0,006)
	0,651	-0,029	(0,027) -0,035	0,006	0,008
income_6	(0,443)	(0,025)	(0,027)	(0,005)	(0,006)
	0,539	-0,024	-0,032	0,005	0,007
income_7	(0,454)	(0,025)	(0,028)	(0,005)	(0,006)
	0,826*	-0,042*	-0,048*	0,008	0,011*
income_8	(0,448)	(0,025)	(0,028)	(0,005)	(0,006)
income_9	0,635	-0,031	-0,038	0,006	0,008
ilicome_9	(0,454)	(0,025)	(0,028)	(0,005)	(0,006)
income_10	0,427	-0,023	-0,025	0,005	0,005
	(0,444)	(0,025)	(0,027)	(0,005)	(0,006)
work	-0,254	0,011	0,015	-0,002	-0,003
	(0,177) 0,169***	(0,010)	(0,011)	(0,002)	(0,003)
trust	(0,026)				
	-0,099	0,006	0,008	-0,001	-0,002
gender	(0,146)	(0,008)	(0,009)	(0,002)	(0,002)
	-0,078***	0,004***	0,005***	-0,001**	-0,001***
age	(0,026)	(0,001)	(0,002)	(0,000)	(0,000)
0002	0,001***	-0,000***	-0,000***	0,000**	0,000**
age2	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
married	0,076	-0,002	-0,004	0,000	0,001
married	(0,152)	(0,008)	(0,010)	(0,002)	(0,002)
domicil_2	0,114	-0,014	-0,012	0,003	0,003
	(0,299) 0,197	(0,017)	(0,019) -0,014	(0,003)	(0,004)
domicil_3	(0,162)	-0,014 (0,009)	(0,010)	(0,002)	0,003 (0,002)
	0,429**	-0.029***	-0,027**	0,006**	0,006**
domicil_4	(0,192)	(0,011)	(0,012)	(0,002)	(0,003)
	1,991***	-0,094***	-0,105***	0.018***	0,023***
domicil_5	(0,446)	(0,028)	(0,030)	(0,006)	(0,008)
adv f an	0,509**	-0,034**	-0,032**	0,007**	0,007**
edu_f_sr	(0,234)	(0,013)	(0,015)	(0,003)	(0,003)
edu_f_prof	0,242	-0,018	-0,016	0,004	0,004
550_1_p101	(0,245)	(0,014)	(0,016)	(0,003)	(0,004)
edu_f_high	0,214	-0,017	-0,010	0,003	0,002
3	(0,281)	(0,016)	(0,018)	(0,003)	(0,004)
edu_m_sr	-0,498**	0,028**	0,030*	-0,006*	-0,007*
	(0,239) -0,207	(0,014) 0,011	(0,015) 0,013	(0,003)	(0,004) -0,003
edu_m_prof	(0,252)	(0,014)	(0,013)	(0,003)	-0,003 (0,004)
	0,007	-0,002	-0,002	0,000	0,000
edu_m_high	(0,269)	(0,015)	(0,017)	(0,003)	(0,004)
	(0,207)	-0,055**	-0,060**	0,011**	0,013**
trust_1		(0,024)	(0,025)	(0,005)	(0,006)

 $^{^\}dagger$ Note: Robust standard errors are shown in parentheses; *** p<0.01, ** p<0.05, * p<0.1

-

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

		(0,020)	(0,022)	(0,004)	(0,005)
				` ' '	
trust_3		-0,022	-0,029	0,004	0,006
		(0,020)	(0,021)	(0,004)	(0,005)
trust_4		-0,048**	-0,061***	0,009**	0,014***
		(0,020)	(0,022)	(0,004)	(0,005)
trust_5		-0,041**	-0,050**	0,008**	0,011**
		(0,019)	(0,021)	(0,004)	(0,005)
terrot 6		-0,068***	-0,082***	0,013***	0,018***
trust_6		(0,021)	(0,023)	(0,004)	(0,006)
trust_7		-0,088***	-0,103***	0,017***	0,023***
uust_/		(0,022)	(0,023)	(0,005)	(0,006)
trust_8		-0,071***	-0,084***	0,014***	0,019***
trust_8		(0,022)	(0,023)	(0,005)	(0,006)
trust_9		-0,093***	-0,109***	0,018***	0,024***
		(0,029)	(0,031)	(0,006)	(0,008)
trust_10		-0,109***	-0,117***	0,021***	0,026***
		(0,035)	(0,035)	(0,008)	(0,009)
_cons	4,962***		_		
	(0,725)				
Number of observations	1 444	1 444	1 444	1 444	1 444

Appendix 2 - Factors (marginal effects) that affect the subjective assessment of the state of the education system $(2016)^{\ddagger}$

	ols	margins_ologit_0	margins_oprobit_0	margins_ologit_10	margins_oprobit_10
edu_sr	-0,255	0,014	0,013	-0,004	-0,004
	(0,296)	(0,013)	(0,015)	(0,004)	(0,005)
edu_prof	-0,504*	0,025*	0,027*	-0,006*	-0,009*
	(0,290)	(0,013)	(0,014)	(0,004)	(0,005)
1 1:1	-0,901***	0,042***	0,048***	-0,011***	-0,015***
edu_high	(0,300)	(0,014)	(0,015)	(0,004)	(0,005)
	-0,255	0,011	0,013	-0,003	-0,004
dop_edu	(0,188)	(0,009)	(0,011)	(0,002)	(0,003)
	-0,274*	0,011	0,014*	-0,003	-0,005*
u_emp	(0,146)	(0,007)	(0,008)	(0,002)	(0,003)
. 2	-0,085	0,001	0,003	-0,000	-0,001
income_2	(0,285)	(0,013)	(0,015)	(0,003)	(0,005)
	-0,280	0,015	0,017	-0,004	-0,005
income_3	(0,310)	(0,014)	(0,017)	(0,004)	(0,005)
	-0,194	0,012	0,013	-0,003	-0,004
income_4	(0,335)	(0,015)	(0,017)	(0,004)	(0,005)
	-0,041	0,003	0,005	-0,001	-0,002
income_5	(0,293)	(0,014)	(0,016)	(0,004)	(0,005)
	-0,209	0,010	0,013	-0,003	-0,004
income_6	(0,296)	(0,014)	(0,016)	(0,004)	(0,005)
	0,279	-0,013	-0,015	0,003	0,005
income_7	(0,294)	(0,014)	(0,016)	(0,004)	(0,005)
. 0	0,220	-0,011	-0,009	0,003	0,003
income_8	(0,305)	(0,014)	(0,017)	(0,004)	(0,005)
	0,155	-0,009	-0,008	0,002	0,002
income_9	(0,353)	(0,017)	(0,020)	(0,005)	(0,006)
	-0,019	0,006	0,002	-0,002	-0,001
income_10	(0,399)	(0,018)	(0,021)	(0,005)	(0,007)
	-0,029	0,002	0,002	-0,000	-0,001
work	(0,175)	(0,008)	(0,009)	(0,002)	(0,003)
	0,113***				,
trust	(0,028)				
gender	-0,130	0,006	0,007	-0,001	-0,002
	(0,142)	(0,007)	(0,008)	(0,002)	(0,003)
age	-0,086***	0,004***	0,005***	-0,001***	-0,002***
	(0,026)	(0,001)	(0,001)	(0,000)	(0,001)
	0,001***	-0,000***	-0,000***	0,000***	0,000***
age2	(0,000)	(0,000)	(0,000)	(0,000)	(0,000)
	0,000	0,001	-0,001	-0,000	0,000
married	(0,147)	(0,007)	(0,008)	(0,002)	(0,003)

[‡] Note: Robust standard errors are shown in parentheses; *** p<0.01, ** p<0.05, * p<0.1

-

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

4	-0,536	0,020	0,030	-0,005	-0,009
domicil_2	(0,337)	(0,018)	(0,022)	(0,005)	(0,007)
	0,107	-0,008	-0,008	0,002	0,002
domicil_3	(0,149)	(0,007)	(0,008)	(0,002)	(0,003)
	0.047	-0.003	-0,004	0.001	0.001
domicil_4	(0,181)	(0,009)	(0,010)	(0,002)	(0,003)
	1.679***	-0.081***	-0.089**	0.021**	0.028**
domicil_5	(0,446)	(0,030)	(0,035)	(0,008)	(0,012)
	0.486**	-0,021**	-0.027**	0,005*	0.008**
edu_f_sr	(0,225)	(0,011)	(0,012)	(0,003)	(0,004)
	0,445*	-0,021*	-0,024*	0,006*	0,008*
edu_f_prof	(0,255)	(0,012)	(0,014)	(0,003)	(0,004)
	0,400	-0,018	-0,021	0,005	0,007
edu_f_high	(0,275)	(0,013)	(0,016)	(0,004)	(0,005)
	0,058	-0,004	-0,005	0,001	0,002
edu_m_sr	(0,229)	(0,011)	(0,012)	(0,003)	(0,004)
	0,252	-0,015	-0,017	0,004	0,005
edu_m_prof	(0,247)	(0,012)	(0,014)	(0,003)	(0,004)
	0,160	-0,009	-0,012	0,002	0,004
edu_m_high	(0,286)	(0,014)	(0,016)	(0,004)	(0,005)
	(0,200)	0,012	0,018	-0,003	-0,006
trust_1		(0,012)	(0,019)	(0,005)	(0,006)
		-0,020	-0,015	0,005	0,005
trust_2		(0,015)	(0,016)	(0,004)	(0,005)
		-0,017	-0,014	0,004	0,005
trust_3		(0,014)	(0,015)	(0,004)	(0,005)
		-0,020	-0,018	0,005	0,006
trust_4		(0,014)	(0,016)	(0,004)	(0,005)
		-0,024*	-0,021	0,006*	0,007
trust_5		(0,013)	(0,014)	(0,003)	(0,005)
		-0,052***	-0.050***	0.014***	0.016***
trust_6		(0,015)	(0,016)	(0,004)	(0,006)
		-0,037**	-0,032*	0.010**	0,010*
trust_7		(0,015)	(0,016)	(0,004)	(0,005)
		-0.061***	-0.066***	0.016***	0.021***
trust_8		(0,017)	(0,018)	(0,005)	(0,007)
		-0.026	-0.017	0.007	0,005
trust_9		(0,025)	(0,027)	(0,007)	(0,009)
	 	-0,044*	-0,044*	0,012*	0,014
trust_10		(0,023)	(0,026)	(0,006)	(0,009)
	6.095***	(0,023)	(0,020)	(0,000)	(0,009)
_cons	(0,620)	+	+		
Number of	ìííí	+	+		
observations	1 405	1 405	1 405	1 405	1 405

References

Abrhám, J.; Bilan, Y.; Krauchenia, A.; Strielkowski, W. 2015. Planning horizon in labour supply of Belarusian small entrepreneurs. *Economic research-Ekonomska istraživanja* 28(1): 773-787. https://doi.org/10.1080/1331677X.2015.1084238

Biesta, G. 2015. What is education for? On good education, teacher judgement, and educational professionalism. *European Journal of Education* 50(1): 75-87. https://doi.org/10.1111/ejed.12109

Čábelková, I.; Abrhám, J.; Strielkowski, W. 2015. Factors influencing job satisfaction in post-transition economies: the case of the Czech Republic. *International Journal of Occupational Safety and Ergonomics* 21(4): 448-456. https://doi.org/10.1080/10803548.2015.1073007

Enders, J. 2013. The university in the audit society: On accountability, trust and markets. Trust in universities, 1: 53-62

European Social Survey 2012. Retrieved from www.europeansocialsurvey.org

Gulicheva, E.; Osipova, M. 2017. Program-target method of pricing for international educational services. *Czech Journal of Social Sciences, Business and Economics* 6(1): 21-27. https://doi.org/10.24984/cjssbe.2017.6.1.3

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

Holcombe, R. G. 2018. Political Capitalism. Cambridge: Cambridge University Press.

Höschle, F.; Strielkowski, W.; Tcukanova, O., Welkins, E. 2015. Locational preference and unemployment of Asian-born immigrant in the US metropolises. *Geographica Pannonica* 19(2): 58-63. https://doi.org/10.5937/GeoPan1502058H

Jiroudková, A.; Rovná, L. A.; Strielkowski, W.; Šlosarčík, I. 2015. EU Accession, Transition and Further Integration for the Countries of Central and Eastern Europe, *Economics and Sociology* 8(2): 11-25. http://dx.doi.org/10.14254/2071-789X.2015/8-2/1

Kalyugina, S.; Strielkowski, W.; Ushvitsky, L.; Astachova, E. 2015. Sustainable and secure development: facet of personal financial issues, *Journal of Security & Sustainability Issues* 5(2): 297–304. https://doi.org/10.9770/jssi.2015.5.2(14)

Lisin, E.; Rogalev, A;, Strielkowski, W.; & Komarov, I. 2015. Sustainable modernization of the Russian power utilities industry. Sustainability 7(9): 11378-11400. https://doi.org/10.3390/su70911378

Lisin, E.; Sobolev, A.; Strielkowski, W.; Garanin, I. 2016. Thermal efficiency of cogeneration units with multi-stage reheating for Russian municipal heating systems. *Energies* 9(4): 269. https://doi.org/10.3390/en9040269

Markey-Towler, B. 2019. The competition and evolution of ideas in the public sphere: a new foundation for institutional theory. *Journal of Institutional Economics* 15(1): 27-48. https://doi.org/10.1017/S1744137418000061

Mironova A. 2014. Trust, social capital and the subjective well-being of the individual. Obschestvennye nauki i sevremennost 3:44-52

Niño-Amézquita, J.; Dubrovsky, V.; Jankurová, A. 2017. Innovations and competitiveness in regional development: a comparison of Latin America, Europe, and China. *Czech Journal of Social Sciences*, *Business and Economics* 6(1): 28-36. https://doi.org/10.24984/cjssbe.2017.6.1.4

Senan, N.A.M. 2018. Developmental review program impact on enhancing the effectiveness of "Teaching and Learning" in accounting program: a case study in a Saudi University. *Entrepreneurship and Sustainability Issues*, 6(2): 1001-1017. http://doi.org/10.9770/jesi.2018.6.2(35)

Sommerfeld, A. 2016. Education as a collective accomplishment: how personal, peer, and parent expectations interact to promote degree attainment. *Social Psychology of Education* 19(2):345-365. https://doi.org/10.1007/s11218-015-9325-7

Stojanov, R.; Strielkowski, W.; Drbohlav, D. 2011. Labour migration and remittances: current trends in times of economic recession. *Geografie* 116(4): 375-400.

Strielkowski, W.; Tumanyan, Y.; Kalyugina, S. 2016. Labour Market Inclusion of International Protection Applicants and Beneficiaries, *Economics and Sociology* 9(2): 293-302. http://doi.org/10.14254/2071-789X.2016/9-2/20

Strielkowski, W.; Weyskrabova, B. 2014. Ukrainian Labour Migration and Remittances in the Czech Republic. Tijdschrift voor economische en sociale geografie 105(1): 30-45. https://doi.org/10.1111/tesg.12052

Tkacova, A.; Kubak, M.; Androniceanu, A.; Tvaronavičienė, M.; Huculova, E. 2018. Financial Literacy Of Students In Chosen Universities – Research Platform For Regulatory Processes Of Educational System In Slovakia, E + M. Economics and Management 21 (1): 175-190. https://doi.org/10.15240/tul/001/2018-1-012

Van Zanden, J. L. 2014. How was life?: Global well-being since 1820. Paris: OECD publishing, pp. 95-96

Vasylchak, S.; Halachenko, A. 2016. Theoretical basis for the development of resort services: regional aspect. *International Economics Letters* 5(2): 54-62. http://dx.doi.org/10.24984/iel.2016.5.2.3

Vidovich, L.; Currie, J. 2011. Governance and trust in higher education. *Studies in Higher Education* 36(1): 43-56. https://doi.org/10.1080/03075070903469580

Volchik, V.; Klimenko, I.; Posukhova, O. 2018. Socio-economic sustainable development and the precariat: a case study of three Russian cities, *Enterpreneurship and Sustainability Issues* 6(1): 411-428. http://doi.org/10.9770/jesi.2018.6.1(25)

Volchik, V.; Maslyukova, E. (2017). Performance and sustainability of higher education: key indicators versus academic values. *Journal of Security and Sustainability Issues* 6(3). http://doi.org/10.9770/jssi.2017.6.3(14)

Volchik, V.; Posukhova, O. 2016. Precarity and professional identity in the context of institutional change, *Terra Economicus* 14(2): 159-173. http://dx.doi.org/10.18522/2073-6606-2016-14-2-159-173

Wong, M. E., Poon, K. K., Kaur, S., & Ng, Z. J. 2015. Parental perspectives and challenges in inclusive education in Singapore. *Asia Pacific Journal of Education* 35(1): 85-97. https://doi.org/10.1080/02188791.2013.878309

ISSN 2345-0282 (online) http://jssidoi.org/jesi/2019 Volume 6 Number 3 (March) http://doi.org/10.9770/jesi.2019.6.3(27)

Acknowledgements

This publication has been prepared within the framework of the project funded by the Russian Foundation for Basic Research (project No. 18-010-00581) entitled "Institutional traps of optimization of the sphere of education and science".

Vyacheslav VOLCHIK is the Head of the Department "Economic Theory", and Head of the Laboratory "Institutional Analysis of Economy". Research interests: institutional economics; entrepreneurship and regional development, sustainable development, socioeconomics; precariat; economics of education.

ORCID ID: orcid.org/0000-0002-0027-3442

Elena MASLYUKOVA is the Associate Professor of the Department "Economic cybernetics". Research interests: mathematical and quantitative methods in economics, entrepreneurship and regional development, econometric and statistical methods and methodology, economics of education.

ORCID ID: orcid.org/0000-0002-9918-3040

Register for an ORCID ID: https://orcid.org/register

Copyright © 2019 by author(s) and VsI Entrepreneurship and Sustainability Center This work is licensed under the Creative Commons Attribution International License (CC BY). http://creativecommons.org/licenses/by/4.0/

