The Universities and Economic Modernisation in the Bordering Regions of Russia and Belarus

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Abstract

This article examines the correlation between economic development and higher education in the bordering regions of Russia and Belarus. We stress that, in post-industrial society, universities are becoming a major driver of innovative regional socio-economic development and modernisation. This study aims to establish how universities affect the economic development of the bordering regions of Russia and Belarus. The development of universities and engagement in higher education are important indicators of regional competitiveness in the knowledge economy. We emphasise the need to create universities that are capable of promoting regional innovative development. The top-ranking Russian universities and the Belarusian border calls for the establishment of the so-called "universities promoting regional innovation". Innovative regional development requires synergy between higher education and the economy. Economic modernisation must precede the creation of new universities. Otherwise, graduates have no other choice than to move to more developed regions. The Bryansk and the Pskov regions rank low in the education index, which has an adverse effect on the local high-tech industries. This research is the first attempt to compare the bordering regions of Russia and Belarus in terms of university graduates in total population and engagement in higher education.

Keywords

Bordering regions of russia and belarus · Higher education · Regional modernisation · Educational background

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Introduction

Educational background is a basic characteristic of the human capital of the region. Moreover, it is an important indicator of the regional investment climate and innovative development. The proportion of university graduates is a key measure of a population's education. The educational background of the regional population is strongly affected by the situation in, and the development of the regional educational system. As a rule, regions with more developed higher education systems have a higher proportion of university graduates. Another important measure is engagement in higher education, i.e. the number of students per 10,000 population. As to regional and cross-country comparisons, the Education Index has been incorporated in the Human Development Index (Lisichenok and Chernyavskii 2013; Bobylev and Grigor'ev 2016).

Differentiation in education—differentiation in development. More than 120 years ago, the famous Russian economist and educationalist, Professor of Moscow Imperial University, Ivan Ivanovich Yanzhul, wrote about the influence of education on national development: "Once Russia is educated, it will be rich too" (Yanzhul 1896). This phrase has a bearing on the current discussion about the trajectories of economic development in the bordering regions of Russia and Belarus. Economic modernisation is impossible without innovative development, which in its turn requires significant investment in education, particularly higher education. Many researchers have stressed this fact (Emel'yanov and Khachaturyan 2011; Koritskii 2010). However, doubts have been expressed as to the demand for human capital in today's Russia (Gimpelson 2016). The problem of human capital development in the bordering regions of Russia and Belarus has been discussed in a monograph by Russian and Belarusian geographers (Katrovskii and Kovalev 2017). Innovative regional development requires a favourable climate for innovations. Thorsten Hagerstrand stresses that the efficacy of innovation diffusion depends on the retransmission capacity of cities and regions to a much greater degree than on the distance, the former being strongly affected by the human capital (Hagerstrand 1967).

As society is trading the path of post-industrial development, the measures of the population's education (including the proportion of university graduates) are becoming increasingly important indicators of regional development. An analysis of census data shows that the number of university graduates has significantly increased with the bordering regions of Russia and Belarus over the past sixty years. However, in 1959 and 2009–2010, the number of university graduates was below the respective national averages both in the Russian and Belarusian regions. The gap between these regions and the respective national capitals was even wider (Table 1).

In the Soviet period, a major trend was the growing proportion of educated people. The literacy rate and the proportion of university graduates traditionally are the two traditional measures of a population's education.

An important trend observed in the bordering regions of Russia and Belarus in the post-Soviet period is the narrowing of the gap between these regions and the national averages. In 1989, the education index in the Gomel region (the most developed area of the Belarusian borderlands) was 18% below the average performance of the Byelorussian Soviet Socialist Republic. Twenty years later, the

Table 1 The changes in the proportion of university graduates in the two countries and their regions, %

	1959	1989	2002 for RF, 1999 for RB	2010 for RF, 2009 for RB
Russian Federation (RF)	1.93	8.64	13.12	19.28
Moscow	9.02	21.72	26.56	36.24
Bryansk region	0.97	6.05	10.27	15.75
Smolensk region	1.18	6.84	11.74	16.67
Pskov region	0.97	6.48	10.93	15.67
Republic of Belarus (RB)	1.19	8.31	11.28	16.10
Vitebsk region	0.94	6.81	9.62	13.87
Gomel region	1.00	6.83	9.00	13.58
Mogilev region	1.03	6.66	8.99	13.31

Source RSAE (1959, 1989), National Statistical Committee of the Republic of Belarus (2011)

performance of the Vitebsk region (the most advanced border territory at the time) was only 14% below the national average. Even greater "convergence" is being observed in the Russian Federation. In 1989, the performance of the Smolensk region in terms of education was 21% below the average across the Russian Soviet Federative Socialist Republic. In 2010, the region was only 14% below the national average. The gap between the Russian regions and Moscow narrowed sharply. In 2010, the Smolensk region had 2.17 times fewer universities, the Bryansk region 2.3 times, and the Pskov region 2.32 times graduates than Moscow. In 1989, these figures were 3.18, 3.59, and 3.35 times respectively (Katrovskii 2013).

The proportion of university graduates in different bordering regions of Russia and Belarus depends both on the level of local universities' development and the regional socio-economic development. A key measure of university development is engagement in higher education, i.e. the proportion of students in total population. Since this is a relative measure, it ensures a reliable comparison of regions with different population numbers (Table 2).

The academic year 2015/16 witnessed a significant reduction in both the absolute and relative measures of engagement in higher education across the bordering regions of Russia and Belarus. The number of students per 10,000 people was only 69.7% of the level of 2010/11 in the Smolensk region, 64.4% in the Pskov region, and 72.2% in the Bryansk region. A slightly less dramatic decrease was observed in Belarus (67.3% in the Gomel region, 75.8% in the Mogilev region, and 89.2% in the Vitebsk region). In 2016, the Belarusian border regions (285) outperformed the Russian border regions in terms of engagement in higher education. The best performing areas are the Vitebsk and Mogilev regions, whereas the Pskov and the Gomel are ranked at the bottom. At the same time, the annual decrease in the rate of engagement in higher education by 8–12% over the past five years can be explained by the rapid development of higher education in the previous years rather than by a crisis or a loss of interest in obtaining an education.

All the Russian regions have improved their position in the Education Index in the past ten years. However, in 2014 (when this indicator was last calculated), the Bryansk (0.923) and the Pskov (0.923) regions deviated from the national average

Table 2 The changes in the proportion of students in total population in the two countries and their regions, 2005–2015

	The number of students per 10,000 population			
Academic year	2005/06	2010/11	2012/13	2015/16
Russian Federation	493	497	424	325
Central Federal District	569	597	479	372
Bryansk region	345	443	387	282
Smolensk region	404	499	424	273
Moscow	1097	1106	786	616
Northwestern Federal District	534	530	451	335
Pskov region	324	382	327	222
Kaliningrad region	428	446	398	280
Saint Petersburg	910	935	759	580
Republic of Belarus	398	467	453	354
Vitebsk region	261	342	375	305
Gomel region	352	394	373	265
Mogilev region	358	377	365	286

Sources National Statistical Committee of the Republic of Belarus (2017), Federal State Statistics Service (2016a)

(0.933) and the average across the Central and the Northwestern Federal Districts. The gap between the performance of these two regions and that of Moscow, St. Petersburg, and the Kursk and the Orel regions was even more considerable.

The bordering regions of Russia and Belarus need a new policy on education and innovations. Projects aimed at developing and putting into practice the latest research advancements in various sectors of the economy must receive public support. This, in turn, requires the restructuring of higher education and the creation of universities capable of providing high-quality education. The absence of top-ranking universities in the border regions precludes innovative development.

In 2016, the proportion of innovative companies was rather low in the Russian regions bordering on Belarus. This proportion was as low as 5.9% in the Smolensk region, 6.7% in the Bryansk region and 8.0% in the Pskov region. The national average was 8.8%, whereas the proportion of innovative companies reached 9.8% in the Central and 8.9% in the Northwestern federal districts. In Moscow, this proportion was 18.0%, in St. Petersburg 16.8% (Federal State Statistics Service 2016b)

This disparity is largely due to the poor development of higher education in the Russian regions bordering on Belarus. At the same time, the improvement of the higher education systems in the bordering regions of Russia and Belarus cannot be regarded as the ultimate goal. The modernisation of higher and secondary vocational education should take into account the current and projected sectoral and spatial structure of the economy. Moreover, modernisation should be accompanied by the emergence of new local high-tech companies, which will create jobs for the graduates. Otherwise, the graduates will have to move to other regions where labour markets offer better employment opportunities for highly skilled professionals. The

Russian border region may adopt the Smart Specialisation approach, which was developed as part of the Europe 2020 strategy for innovative development across the European Union. This approach suggests the simultaneous development of higher education, high-tech industries and the regions' unique innovation sector (Aralica and Bačić 2017).

Higher education is an important driver of regional development. Thus, it is necessary to pursue a policy aimed at supporting regional universities. Moreover, support for regional higher education institutions may help to reduce the inequality in living standards, to prevent the metropolitan universities from draining the periphery of the best applicants, and to provide Russian regions with skilled labour. Regional support makes it possible for the local universities to become major research centres and drivers of innovative development. This has taken place since 2016.

Since most Russian regions specialise in industrial production, agriculture, or services, the regional universities should train specialists in the relevant fields.

The universities focusing on the training of teachers, economists, or lawyers cannot be granted the status of "universities promoting regional innovation" (this status and associated funding have been given to Russian higher education institutions since 2016). However, these universities can become the core around which regional universities will grow by merging with technical universities or their branches. A "university promoting regional innovation" should ensure the innovative development of the regional economy in the present and the future. The desired result is not a mechanical merger of several universities but rather the careful selection of study programmes and research project. This is especially true for the bordering regions of Russia and Belarus where the universities that evolved from pedagogical institutes serve as centres for sciences, the humanities, research, and public education.

The problem of innovative development of the Russian regions bordering Belarus is exacerbated by the fact that the metropolitan national research universities, charged with developing technological breakthroughs increasing the competitiveness of the Russian economy, are geographically remote from the main regions where the graduates will probably seek employment. One cannot expect the graduates of metropolitan universities to move to the border regions. Moreover, the cleavage between the centre and the periphery also complicates the economic modernisation of the border regions. Highly developed capital cities attract the most qualified human resources from the periphery. In 2015, per capita income in the Smolensk region was estimated at 40% of that in Moscow and at 63% of that in Saint Petersburg. These proportions reached 40 and 63% in the Bryansk region and 36 and 56% in the Pskov region (Federal State Statistics Service 2016a). Against this background, most graduates of the regional universities plan to move to the metropolitan regions. The loss of human capital to out-migration necessitates both the dramatic modernisation of the entire system of education and training and profound changes in the regional social policy. To an extent, one can agree with Richard Florida who wrote: "Government has its most important and legitimate role to play in establishing the enabling framework for a new era of shared prosperity,

and it squanders precious resources that could support such future-oriented, prosperity-boosting efforts when it chooses to bail out old industries, breath life back into outmoded institutions, or place Band-Aids on problems". (Florida 2012)

Conclusion

Today, the bordering regions of Russia and Belarus lag behind their counterparts in education, which complicates innovative development, poses an obstacle to the overcoming of the periphery states, and has a negative effect on the investment climate. The economy modernisation of the bordering regions of Russia and Belarus is impossible without profound changes in the education system.

One of the architects of the Emancipation Reform of 1861, Yakov A. Soloviev, contemplated the prospects and problems of the transformation of the Smolensk Province's economy in his article "The Present and the Future of the Smolensk Province", which was published 160 years. In particular, he wrote: "What do we want for the Smolensk Province? The same thing as for all of Russia—railways, schools and the right public opinion: everything else will come by itself" (Soloviev 1857). Just like 160 years ago, successful modernisation of the bordering regions of Russia and Belarus requires a better infrastructure (particularly, the upgrading of the transport system), top-ranking universities, and institutional transformations. Only through such changes will the bordering regions of Russia and Belarus enter the ranks of the most developed regions of the Eurasian Economic Union.

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