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HUMAN CAPITAL: BELARUS' TERTIARY EDUCATION IN A COMPARATIVE PERSPECTIVE

Vladimir Dunaev

Summary

This study is part of the project *Human Capital as a Source of Competitiveness and Modernization*. Its purpose is to come closer to an objective assessment of the Belarusian system of higher education in a cross-country perspective based on a series of comparative parameters and indicators, and, building on its findings, evaluate the quality of human capital reproduced by the national education system. This study and the rest of the 'human capital' cycle studies will underlie BISS's policy paper comprising direct recommendations for the government. This survey analyzes such comparative parameters as i) educational attainment indicators, including those broken down by the levels of the education system and specialization; ii) architecture of the system of education; iii) expenditure on education; iv) internationalization of education, including export of educational services and balance of student mobility.

Main conclusions:

1. Belarus's educational policy is out of balance, wherefore tertiary school fails to provide the adequate quality of education while covering impressive numbers of the population with higher education programs.

2. When drawing a comparison between the status and development trends of higher education in Belarus and OECD countries, we see, on the one hand, identical trends towards an overall increase in educational attainment of the population and availability of higher education:

   - Increasing number of people with tertiary education.
   - Outrunning growth in the share of the population with the ISCED 5A level of education (mostly theoretically-based) and stabilization or reduction in the share of the population with the ISCED 5B level of education (practically-oriented).
   - Feminization of tertiary education.
   - Similar practice of job assignments based on majors.
   - Shortage of students enrolled in engineer training programs because of their insufficient feminization.

3. On the other hand, the following profound differences of the Belarusian higher education system from the OECD countries' tertiary education system should be emphasized:

   - The architecture of the Belarusian system of education has retained perceptible rudiments of the higher school system dating from the industrial age, which compromise the quality of personnel training.
   - The second stage of tertiary education (e.g. Master's programs) amid mechanical reductions in traditional long training cycles to attain first cycle Bachelor's degrees.
   - Inefficient development of third cycle programs (PhD programs and doctorates) as far as both the number of students and quality of training are concerned.
   - Insufficient availability of higher education programs for older categories of citizens and the underprivileged.
   - Disparities in the main trends of the financing of higher school. As opposed to the trend towards an increase in spending on education, specifically, tertiary education, in developed

nations, Belarus has showed a decrease in education financing as a proportion of GDP both in general and of ISCED 5B level programs in particular; the broad availability of tertiary education in Belarus has brought Belarusian higher school to neither a reform of the educational architecture and technologies nor multichannel financing patterns based on equal social partnership.

- Expenditure per student in Belarus is almost ten times below the average expenditure per student in OECD countries; one of the reasons behind this gap being the insufficient financing of the system of tertiary education.

4. The analysis of student mobility processes (including international mobility) indicates a progressive reduction in the prestige of Belarusian higher school internally.

Introduction

The Education Index published in 2010[1] for 182 countries of the world formally placed Belarus in the leading group of nations by the level of education. Global rank twenty-six gave the authorities and official experts enough reason to announce that the Belarusian educational system needs no changes. The Education Index is part of the Human Development Index (HDI), calculated by United Nations experts. The Index measures a country's achievements in improving the literacy of the adult population and increasing the rate of enrolment in primary, secondary and tertiary educational institutions. The adult literacy rate accounts for two-thirds weighting and the combined primary, secondary, and tertiary gross enrolment ratio accounts for the remaining one-third weighting.

At first sight, not only UN indicators designed to evaluate the approximation of developing nations to universal primary education, but also the findings of the most recent Belarusian population census showed positive educational attainment dynamics[2]. At least 90% of the Belarusians aged 15+ have higher, secondary or basic education, whereas the share of those having the lowest possible literacy level shrank 2.3 times in the period between the two censuses. The share of persons holding higher university certificates increased by 5 percentage points from 1999 to 2009 to 19% from 14%. Belarus is still behind the leading nations by enrolment in higher education; however, it has matched Spain, Hungary and Poland and outpaced a number of developed nations, including France, Italy, and Japan. The demand for tertiary education in Belarus has reached a level, where the number of first-year university students exceeds that of graduates of secondary schools of the same year.

However, to have the real evaluation of the system of higher education in Belarus we must compare its parameters with the indicators of higher school in the world's most developed nations, especially the Organization for Economic Cooperation and Development (OECD) with its 34 Member States accounting for 60% of world GDP. The OECD, alongside UNESCO, is one of the world's most authoritative organizations publishing educational statistics of its members and some of the G20 countries that are not OECD members.

Unfortunately, an adequate comparison of tertiary education development indicators in Belarus and OECD countries is a major challenge. The indicators used by Belstat national statistical service and statistical measures used by the OECD are markedly different. UNESCO reports, on the other hand, provide some relevant data on Belarusian education compiled based on internationally recognized methods. However, the information submitted for such reports by the relevant Belarusian agencies is not always complete and reliable. There is a limited set of indicators in UNESCO reports that can be employed to compare the status of Belarusian education with the development indicators of higher school in OECD countries. Nevertheless, we can try and compare the trends that have been recently observed in the Belarusian system of tertiary education and the educational systems of developed nations.

The analysis is based on education statistics grouped in accordance with systemic international parameters. The sources of such data are

- annual Global Education Digest (GED) published by the UNESCO Institute for Statistics (UIS);
- materials of the Organization for Economic Cooperation and Development (annual education reports for OECD Member States and partners: Education at a Glance – OECD Indicators);
- data presented by Belstat and the Education Ministry of Belarus.

To compare education statistics submitted by various nations, the International Standard Classification of Education (ISCED), approved by the UNESCO General Conference in November 1997, is used. The ISCED-1997 classification proposes a methodology for converting national educational programs into internationally comparable set of categories to identify stages of education. Below are the characteristics of ISCED levels and correspondent equivalents of the Belarusian system of education.

[1] http://www.belta.by/ru/infographica?id=582, http://en.wikipedia.org/wiki/Education_Index.

[2] http://www.belta.by/ru/all_news/society/Uroven-gramotnosti-vzroslogo-naselenija-v-Belarusi-priblizhaetsja-k-100_i_571500.html.

Characteristics of ISCED levels of education

ISCED-1997 level	**Equivalent in the Belarusian system of education**
ISCED 0 – Pre-primary education Initial stage of organized instruction, designed primarily to introduce very young children to a school-type environment.	Pre-primary education
ISCED 1 – Primary education Normally designed to give a basic education in reading, writing and mathematics.	I level — primary education (I – IV grades)
ISCED 2 – Lower secondary education It builds upon the learning outcomes from primary education, usually on a more subject-oriented pattern; higher qualified teaching staff.	II level — basic education (V – IX grades)
ISCED 3 – Upper secondary education Completes secondary education in most OECD countries. Teachers have a higher qualification in some subjects than at the ISCED 2 level.	III level — secondary education (X – XI grades, night schools –X – XII grades, night classes – X – XII grades).
ISCED 4 – Post-secondary non-tertiary education Programs that straddle the boundary between upper- and post-secondary education from an international point of view. ISCED level 4 programs serve to broaden the knowledge of participants who have already completed a program at level 3. Students are normally older than ISCED 3 students.	Vocational education
ISCED 5 – First state of tertiary education Tertiary programs having an educational content more advanced than those offered at ISCED levels 3 and 4. These programs are divided into Level 5A and 5B, the latter being more practically-oriented / occupationally-specific than the former. Level 5A programs are largely theoretically-based and are intended to provide sufficient qualifications for gaining entry into advanced research programs and professions with high skills requirements.	Secondary specialized education Higher professional education
ISCED 6 – Second stage of tertiary education Advanced research programs leading to the award of an academic degree. These programs are therefore devoted to advanced study of certain disciplines and original independent research.	Postgraduate education, PhD programs, doctorates

The educational policy of any country aims at balancing the three key parameters of the education system: availability, quality and costs. The availability of education is most obvious in the educational attainment of the population.

Educational attainment indicators

The level of educational attainment has been growing in OECD countries[3]. The number of holders of tertiary education diplomas (ISCED 5 and 6) increased from 1997 to 2010 in the age group 25-64 to 31% from 21%. This change is especially obvious when comparing educational attainment in two age groups divided by a 30-year gap: young people aged between 25 and 34 showed the proportion of holders of tertiary education certificates at 38%, whereas for the group of 55-64-year-olds the figure stood at 23%. Based on the university enrolment data (ISCED 5A level), OECD expects up to 62% of contemporary young people to receive higher education throughout their lives. Of them 49% will be enrolled at universities before they turn 25. The expected enrolment rate for tertiary education programs among females is 25% higher than among males. Of the total number of young people, 2.8% will opt for ISCED 6 level programs (PhD programs and doctorates). Although doctorates are quite scarce (only 2% of all tertiary education graduates), their numbers have been consistently growing at 5% annually during the last decade. In 2000, 1% of the total number of young people was enrolled in doctorates, which compares to 1.6% in 2010.

The comparison of educational attainment in OECD and Belarusian statistics is further complicated by the fact that Belarus does not calculate essential forecast indicators based on the analysis of the synthetic cohort, such as the expected enrolment or graduation rates. For instance, the enrolment indicator is a share of the age cohort that is expected to go to university during its lifetime. The same holds for the graduation rate. Furthermore, Belstat reports educational attainment in age categories different from those accepted in OECD reports. These factors, alongside some others, make comparisons of OECD data with Belarusian official statistics a quite challenging task. Nevertheless, some of the trends can be compared.

Belarus has been showing the same trends towards an increase in the level of educational attainment as OECD countries. According to UNESCO reports, the so-called general registration rate, or the share of people with tertiary education in the corresponding age group, increased to 77% in 2009 from 51% in 1999. Just as in OECD, feminization of higher education increased. GPT parity index increased to 1.44 from 1.3 during that period, meaning that the share of males and females with ISCED 5 and 6 levels of education stood at 44% and 58% of the relevant age groups, whereas in 2009 the gap expanded even more in favor of females, with shares standing at 63% and 91%, respectively[4].

The distribution patterns of educational attainment in Belarus and OECD countries shows a similar trend towards the outrunning growth in the share of the population with the ISCED 5A level of education and stabilization or reduction in the share of the population with the ISCED 5B level of education. According to UNESCO data, the pattern was as follows for Belarus: 5A—72%, 5B—27%, and 6—1%. These proportions remain[5]. The comparison of the 1999 and 2009 census findings demonstrates a trend towards a relative stabilization in the proportion of people with secondary specialized education (ISCED 5B) in the Belarusian workforce: 27% in 1999 and 31.1% in 2009, whereas the share of the population with higher education increased at a faster pace (16.4% in 1999 and 21.1% in 2009). This trend, coinciding with the general tendency for upgrading educational attainment in OECD countries, is especially conspicuous if the findings of the censuses are recalculated based on age intervals methods adopted for OECD reports. In the age group 55-64, those with ISCED 5A (higher) education account for about a third of the people with ISCED 5 education (14.4% and 43.15%, respectively), whereas in the age group 25-34, the share of people with higher education accounts for almost half of those with ISCED 5 level of education (29.81% and 60.65%, respectively)[6]. Educational attainment indicators in Belarus look even more impressive than the average for OECD. The share of people with higher education in the comparable age interval 25-64 is 23.84% on average in Belarus (21.33% among males and 25% among females). However, despite its high indicators, Belarus is still markedly behind the leading nations, such as the U.S., Norway and Israel, where the share of the population with higher education exceeds 30%.

[3] http://www.oecd.org/edu/EAG%202012_e-book_EN_200912.pdf

[4] http://resourcecentre.savethechildren.se/content/library/documents/global-education-digest-2011- comparing-education-statistics-across-world

[5] http://edu.gov.by/ru/main.aspx?guid=18201

[6] Population census 2009. Educational attainment of the population of the Republic of Belarus. Volume 4. National Statistics Committee of the Republic of Belarus, 2011. p. 80

The breakdown by the fields of education is virtually the same for Belarus and OECD nations. UNESCO data allow applying the international classification of fields of education to the Belarusian system of education[7]. Of the total number of graduates of ISCED 5 and 6 level programs, 41% were trained in social science, business and law, 26% in science and technology, 12% in manufacturing, 5% in humanities and arts, 8% in agriculture, 4% in health and welfare and 4% in services.

Just as OECD countries, Belarus is faced with the challenge of the shortage of engineers in the national economy and lack of sufficient motivation for young people to enroll in this field of education. One of the reasons for this, as in the OECD, is the slow growth in the share of females in engineering training programs amid general feminization of higher education. The share of female enrolment in such programs in OECD countries in 2010 amounted to 27%, which is almost the same as the share of females trained in the same field in Belarus, at 28%[8]. However, there are quite important parameters of the Belarusian education system that indicate profound differences from higher school of the OECD. This pertains primarily to the architecture of higher education. Many of the new phenomena in the system of tertiary education of OECD countries are connected with the Bologna process.

Although the Bologna declaration was not signed by all of the OECD Member States, the influence of the Bologna process is strong even beyond the European higher education area.
Based on the Education at a Glance for 2012 data, 39% of students will graduate with the first academic degree, often referred to as a Bachelor's degree. Various OECD countries have various lengths of such programs, normally ranging from three to four years. However, there is a trend towards a rapid phasedown of longer-cycle training programs, such as five-year specialist training programs, a legacy of the 19th century university system. Belarus has also embarked on a reduction in its specialist training programs to four years; so far, more than a quarter of such programs have been shortened, and in 2012/13, many more programs will be involved in this campaign. This harmonization of the architecture of higher education would be welcome if it were augmented by arrangements to promote full-scale second stage programs (Master's programs). However, compared to 15% of students in OECD countries attaining Master's degrees, based on 2010 statistics, in Belarus, only 1.15% of students are enrolled in second cycle programs[9], according to data by the Education Ministry. The short first cycle of tertiary education and the absence of real opportunities for receiving a second academic degree may indicate a serious reduction in the quality of professional training in the system of higher education in Belarus.

Another distinction of the Belarusian system of higher education from the system of tertiary school in OECD countries is the insufficient development of third cycle programs (PhD programs and doctorates). The agenda of the Bologna process for this decade envisions efforts to increase the contribution of tertiary education in the formation of a *Europe of knowledge*, which calls for a major expansion in the training of specialists with advanced research qualifications. Third cycle training programs in OECD countries account for 2% of all ISCED 5 and 6 level graduates. Based on 2010 patterns of graduation, 1.6% of young people, on average among OECD countries, will graduate from ISCED 6 (advanced research) programs. In Belarus, only 1% of higher school students are enrolled in postgraduate programs. According to the Education Ministry, 4,725 people were enrolled in postgraduate programs (including military programs) in the 119 Belarusian organizations that have such programs, of them 2,730 people (57.8%) were enrolled full-time, and 1,995 (42.2%) were enrolled part-time. The 37 organizations of the country offering doctoral programs trained 98 doctoral students[10]. The share of postgraduate students and doctoral candidates in Belarus is twice as low as the average for OECD countries. The low effectiveness of postgraduate programs lowers the significance of the programs of this cycle, as only 3.2% of postgraduate students complete training and attain degrees.

Another trend observed in OECD countries is the increase in the number of university students of older age, which is attributed to the new philosophy of higher education—education throughout

[7] http://resourcecentre.savethechildren.se/content/library/documents/global-education-digest-2011- comparing-education-statistics-across-world

[8] Higher educational institutions of the Republic of Belarus. Statistical catalogue. 2009/10 academic year, Minsk, 2009, p. 6

[9] Higher educational institutions of the Republic of Belarus. Statistical catalogue. 2011/12 academic year, Minsk, 2012, p. 78

[10] http://edu.gov.by/ru/main.aspx?guid=18201

the entire life. One of the aspects of this new approach is to facilitate attainment of high quality tertiary education by all population groups with no exception. *Agenda 2020*, which identifies the strategy for the promotion of the European higher education area (the Bologna process), envisages the elaboration of special arrangements in each country to support the most vulnerable population groups and provide guaranteed access to and attainment of education at every stage. This strategy not only involves those who earlier missed their chance to attain tertiary education into higher education programs, but also, importantly, modifies the attitude to the value of work experience accumulated before enrolment at university. According to Education at a Glance for 2012, 20% of the students enrolled in tertiary education programs in OECD countries in 2010 were 26 years of age and older[11]. Belarus phases down the scale of extramural training citing its low effectiveness, thus preventing older citizens from accessing higher education. According to the Education Ministry, in 2010, only 13% of students enrolled in tertiary education programs were 26 years of age or older[12]. However, prior to 2012, an increase in the number of older students in Belarusian higher educational institutions was observed. Nevertheless, that process was slow and low on the priority list of the education authorities. A reduction in extramural education programs may have a negative impact on the access to education for older generations, because the increase in the number of older students was mostly by way of enrolment in extramural education courses.

If the increase in the share of graduates of tertiary education programs indicates improvements in the quality of human capital, this trend cannot but have an impact on per-capita incomes, at least that is how it should be. Belarusian social scientists enthusiastically quote the originators of the theory of human capital, who proved its key role in the post-industrial development of economies, growth in per-capita GDP and improvements in living standards. They eagerly refer to the findings of World Bank surveys, which indicate that the quality of human capital accounts for 64% of economic advancement in transit economies and that 40% of GDP is generated because of the development of an effective education system and that USD1 of spending on education pays off USD3-6. It is not clear, though, why a country with such a well-educated population still lags behind Botswana by per-capita GDP. Why is Belarus, one of the world's leading nations by the average educational attainment, has rank 84 in the world by per-capita GDP, which is ten times less than that reported by the world leader[13]? We could attribute the giant gap to the absence of economic freedom and unfavorable business environment, but even in the post-Soviet nations with a better business climate return on education fails to correspond to its maturity indicators. Russian and Ukrainian scholars insist that in a cross-country perspective, their societies demonstrate somewhat abnormal economic inefficiency of human capital, i.e. an atypical combination of high educational attainment and relatively low per-capita incomes. What proved astonishingly successful in the modernization of production and increase in national welfare in Sweden, Finland and Ireland, fails to work in post-Soviet economies. Does this suggest that economic laws are inapplicable in this region? Or maybe the reason is the anachronistic system of education that is incapable of effectively addressing modern challenges? To evaluate the quality of education and return on educational attainment we cannot make use of the standard indicators applied in OECD countries. Belarus does not conduct PISA (Programme for International Student Assessment) tests and has no evaluations of return on investments in education using NPV. OECD reports calculate these indicators for both personal and public return on investments in education, and both monetary and non-monetary return is calculated. Belarus does not provide sufficient information to evaluate the contribution of higher education to GDP growth and social consequences of educational attainment. Calculation methodology for these indicators is constantly improved in OECD surveys, and they could be of use to clarify the reasons behind the economic inefficiency of higher education in Belarus. So far, only two indicators are available to indirectly evaluate the quality of education: expenditure on education and international appeal of Belarusian tertiary school.

[11] http://www.oecd.org/edu/EAG%202012_e-book_EN_200912.pdf
[12] Higher educational institutions of the Republic of Belarus. Statistical catalogue. 2011/12 academic year, Minsk, 2012, p. 126, 130, 200, 202
[13] http://iformatsiya.ru/tabl/897-vvp-na-dushu-naseleniya-po-pps-2011.html

Expenditure on education

International statistics regards expenditure on education as one of the main indicators of the degree of development of the national system of education. The quality of education depends largely on how much a state spends on its support. In order to see how much Belarus's aspirations to a privileged status in the rankings of international educational systems correspond to the real situation we should compare the behavior of expenditure on higher school in Belarus and the main trends in spending on tertiary education in OECD countries.

Education at a Glance for 2012 points to an increase in investment in education of all levels in all of the OECD countries by an average of 36% between 2000 and 2009. In these countries, tertiary education (ISCED 5 and 6) accounts for about a quarter of expenditure on educational institutions, or 1.6% of GDP, on average. Some countries, including the U.S., Canada and Korea, spend from 2.4% to 2.6% of their GDP on tertiary education. The European Union has set itself a task to increase financing of tertiary education alone to an average 2% of GDP. About 30% of all investments come from private sources. OECD countries spend, on average, USD13,728 per student, or 42% of per-capita income[14].

Belarusian education is falling victim to educational policy aimed to minimize state spending on education. Article 53 of the Law on Education that was in effect prior to September 2011, envisaged spending of at least 10% of GDP on education. However, actual budget financing never reached that limit. Moreover, the share of GDP spent on education fell during the last decade. In 2002, it reached 6.6% of GDP, and then kept falling to 6.4% in 2003, 6.1% in 2004, 6.4% in 2005, 6.1% in 2006, 5.8% in 2007, and 5.8% of GDP in 2008[15]. Expenditure on education was cut by 21% in 2009, a year hit by the crisis. In 2010, despite election pledges, spending on education rose to only 5.1% of GDP, and one year later, it amounted to 5.2% of GDP[16]. It appears that Belarus showed a trend opposite to that observed in OECD countries, where spending on education consistently increased, and budget support for education was cut by more than 20%. President Lukashenka promised at the 3rd All-Belarusian People's Assembly back in 2006 that financing of education would amount to the originally planned 10% of GDP by 2010; but in 2011, the expenditure standard was crossed out of the Education Code. The Finance Ministry makes no secret that there are plans to further reduce spending on the social sector, citing the need to increase the efficiency of expenditure on both education and healthcare. Indeed, the outdated system of long cycles in higher education is an objective obstacle to cost optimization. However, a simple reduction in the number of years spent at university, which is the strategy adopted by the Education Ministry, will only affect the quality of personnel training, unless a major reform of curricula is put in place. The same adverse impact on the quality of education will be produced by efforts to mechanically increase the teacher-student ratio to 1:15 or 1:20, which is now standard at European universities, from 1:10 currently in Belarus. Without a reform of the teaching load structure and teaching methods, the economic impact of this initiative will be depreciated by a significant reduction in the quality of education and increasing social tensions caused by the shrinking teaching staffs. So far reductions in state financing of education have not been accompanied by relevant educational reforms, i.e. financial burden has been passed on to the population.

This trend has been especially conspicuous in higher school. It is due to fee-based education that the number of students in Belarus increased to 430,000 in the 2011/12 academic year from 189,000 in the 1989/90 academic year. More than two-thirds of Belarusian students currently pay for their education. OECD countries have various approached towards the participation of students and their families in the payment for education. Tertiary education is provided free of charge in eight OECD countries. In the other countries, fees vary depending on the country, major and type of educational institution, which makes it hard to compare Belarusian practice with the situation in OECD countries. However, the data submitted by a third of OECD countries for the Education at a Glance report shed light on the level of fees. According to the report, the average annual payment for tertiary education in those countries amounts to USD1,500. To compare: the National Statistics Committee reported the average university fee at 487,400

[14] http://www.oecd.org/edu/EAG%202012_e-book_EN_200912.pdf
[15] http://www.parliament.gov.by/images/page16/4obosnovanie_kodeks3sessija2.pdf
[16] http://news.tut.by/society/271802.html

Belarusian rubles[17] a month for the 2012/13 academic year, which totals USD600 a year. However, whereas expenditure per student in OECD countries totals, on average, USD13,728, in Belarus, the figure stands at only USD1,957[18]. The indicator is calculated on a PPP basis; therefore, the figures are comparable.

Apparently, the gap is too large to have no impact whatsoever on the quality of education. Belarusian higher school has demonstrated impressive quantitative indicators of enrolment in higher education programs, but it paid the price of a remarkable erosion of academic standards and reduction in the quality of personnel training. Global university rankings definitively prove that the achievements of the leading institutions are invariably connected with the level of expenditure per student. Cheap education cannot be of top quality. There is another indicator available in international reports that attests to the gap between the quality of education in Belarus and OECD countries—state expenditure per student as percent of per-capita GDP, standing at 15% in Belarus[19] and an average 42% in OECD countries[20].

Expenditure on tertiary education as a share of GDP has been consistently falling during the last few years. Judging by the data submitted by the Belarusian Education Ministry to UNESCO, expenditure on higher education fell to 0.7% of GDP in 2009 from 1.1% in 2007[21]. This trend runs counter to the tendencies towards an increase in the share of GDP spent on ISCED 5 and 6 students in OECD countries.

[17] http://finance.tut.by/news314211.htm

[18] http://resourcecentre.savethechildren.se/content/library/documents/global-education-digest-2011-comparing-education-statistics-across-world

[19] http://resourcecentre.savethechildren.se/content/library/documents/global-education-digest-2011-comparing-education-statistics-across-world

[20] http://www.oecd.org/edu/EAG%202012_e-book_EN_200912.pdf

[21] http://www.uis.unesco.org/Education/GED%20Documents%20C/GED_2009_EN_web_FINAL3.pdf, http://resourcecentre.savethechildren.se/content/library/documents/global-education-digest-2011-comparing-education-statistics-across-world

Internationalization of higher education

In December 2006, the Education Ministry adopted an action plan to promote export of educational services for 2007-2010. The program was designed to increase export of educational services to USD20 million annually by 2010, which required a 20% annual increase in the number of foreign students coming to Belarusian universities. Those plans did not envisage any reform of the Belarusian system of higher education, though, and the growth in the number of foreign students was supposed to be attained exclusively by way of heavily advertising Belarusian tertiary school abroad. In the 2005/06 academic year, as many as 6,391 foreign students were enrolled at Belarusian higher educational institutions; the figure fell to 5,778 students in the following year. Since the 2006/07 academic year, the number of foreign students in Belarus has been growing: there were 5,393 students in 2008/09, 7,543 students in 2009/10, 8,705 students in 2010/11 and 10,700 students in 2011/12[22]. Student mobility is considered to be an important indicator of the quality of the national system of higher education. As a rule, OECD countries receive more foreign students than they send abroad. In 2010, these countries received 2.9 times more foreign students than they sent their nationals to study abroad. Ninety-three percent of the OECD students enrolled at foreign educational institutions as a rule choose those in other OECD countries. The balance of student mobility differs for various OECD countries; however, net positive mobility (difference between the number of students received and the number of students sent abroad) is normally considered to indicate success of national tertiary school. Another indicator of the high quality of education in OECD countries is that more foreign students are interested in ISCED 6 programs (PhD programs and doctorates) compared to the numbers coming for lower level tertiary educational programs. Intake of students pursuing higher level programs contributes to the strengthening of the scientific potential of the receiving country and future recruitment of highly-skilled immigrants[23].

In order to assess the level of internationalization of Belarusian higher school we need to specify the base for comparison. Belarus inherited a well-developed system of inbound student mobility. In the middle of the 20th century, import of foreign students became an important instrument of the Cold War and policy of the Soviet expansionism into the Third World. Soviet Russia for the first time received students from Turkey, Persia, Afghanistan and Mongolia in the early 1920s. In 1921, Communist University of the Toilers of the East was established, a special educational institution for foreign students that trained representatives of 44 nations. However, it was as late as the 1950 that the number of foreign students in Soviet universities started growing at very high rates. By the time the USSR collapsed, the number of foreign students in Soviet universities had been more than twenty times as high as in 1950. According to official statistics, the number of foreign students went up from 5,900 in 1950 to 126,500 in 1990[24]. Their share in the total number of students was estimated at 10.8%. However, according to some experts' estimates, the real number of foreign students had reached 180,000 (not including cadets of military schools), or 15% of the total number of tertiary students in the USSR[25]. It is a very high rate of inbound mobility even for the most developed nations.

The BSSR universities were not extremely appealing to foreign students, and internationalization rate was below the average for the USSR. It reached its peak in the 1988/89 academic year, when the officially reported number of foreign students reached 6,800, or 3.8% of the total number of students in the BSSR[26]. The actual internationalization rate could have been higher, given the number of foreign cadets of military schools. Furthermore, the officially recorded number of foreign students did not include young people coming from the other USSR republics (who were added to lists of foreigners after the USSR ceased to exist). By 2006, the rate of inbound student mobility in Belarus had fallen to the miserable 1.4%. Determined attempts to increase the rate of inbound mobility followed; however, the level of internationalization attained back in the Soviet times is nowhere near. The figure is currently estimated at 2.4%; however, the increase in the number of foreign students in Belarusian universities does not indicate improvements in the quality of education and the degree of its attractiveness to foreigners.

[22] Catalogue of the Ministry of Education "Higher Educational Institutions of the Republic of Belarus 2011-2012, Minsk, 2012, p. 171
[23] http://www.oecd.org/edu/EAG%202012_e-book_EN_200912.pdf
[24] Training of specialists for foreign countries in Russia: status and promotion. Materials for the sixth session of the Interdepartmental Commission for International Partnership in Education (part 1), Moscow, 1999, p. 29
[25] http://demoscope.ru/weekly/2003/097/analit03.php
[26] Vetokhin,S. Higher Education in Belarus. Minsk, 2001, p. 91

Turkmenistan has provided a significant share of foreign students trained in Belarus in the last few years, topping the list of countries sending their students to Belarus. This academic year, of 10,700 foreign students trained in Belarus, Turkmenistan nationals account for 47%, or 5,055 students[27]. It is symptomatic that only five Turkmen students graduated from Belarusian higher educational institutions in 2011/12. This surge in student mobility from that Central Asian country has obvious political reasons. After President Lukashenka visited Ashgabat in 2010, Belarus was granted a large quota on enrolment of Turkmen students. Of the 4,000 Turkmen sent abroad for tertiary education programs, more than 1,500 are enrolled in Belarusian institutions. The country that destroyed both the systems of secondary and higher education under President Niyazov is still incapable of providing the minimum knowledge and skills of prospective university students. The situation often cannot be rectified during their enrolment at Belarusian universities, but poor students are not expelled for political and economic reasons. Its quality of higher education already compromised, Belarusian tertiary school sees its status even more undermined by the increasing number of Turkmen students. Russia and China rank second and third by the number of students sent to Belarusian higher educational institutions, with 1,858 and 1,285 students, respectively.

The State program for the development of higher education for 2011-2015 aims at trebling the number of foreign students in Belarusian universities. Belarus hopes that what it refers to as export of educational services will result in USD186.71 million in revenues during the five years in question. The serious increase in the number of foreign students by 2015 will be based on traditional marketing strategies rather than much needed modernization of higher education.

The balance of inbound and outbound student mobility is a more important indicator for the evaluation of the quality of the national system of higher education than the number of incoming foreign students alone. Unlike OECD countries, Belarus has net negative balance, meaning that more students leave to study abroad than come to study in Belarus. Although there are certain difficulties in applying the UNESCO student mobility statistics to Belarus, these figures are among the few sets of data that Belarus submits for international reports. Because there is inconsistency in the classification of the stages of education, the findings of international surveys pertaining to ISCED 5 go beyond the framework of the Belarusian higher education pattern. International statistics covers both university education and what Belarus categorizes as 'secondary specialized education' into this group. In some international reports, ISCED 5A (higher education) and 5B (secondary specialized education) are distinguished; however, mobility statistics does not discriminate between these two stages. At the same time, it is true that in Belarus, the contribution of secondary specialized education to student mobility is insignificant; therefore, UNESCO data can be interpreted as an indicator of the international attractiveness and quality of Belarusian tertiary school.

The most recent UNESCO report for the year 2011 covers mobility flows in 2009. International statistics shows that in 2009, 30,396 Belarusian citizens were enrolled in ISCED 5 level programs abroad (21,972 students in Russia, 2,074 students in Poland, 1,948 students in Lithuania, 1,755 students in Germany and 514 students in France). Based on the UNESCO methodology, this number makes up 5.2% of all Belarusian ISCED 5 students and 4% of the relevant age cohort. Student mobility showed a deficit in 2009, which does not contribute to the popularity of the Belarusian system of education. In 2009, net mobility (inbound minus outbound) amounted to minus 24,334 people (net flow ratio of minus 4.2%). This is an alarming symptom for the Belarusian system of higher education, which traditionally advertizes its high quality of training. Developed nations with attractive tertiary education systems, as a rule, have a student mobility surplus.

Even more alarming is the comparison of the net flow of mobile students with the year 2004. According to a UNESCO report, net flow ratio was at minus 1.6% then, and over the following five years the deficit expanded more than 2.5 times[28].

[27] Catalogue of the Ministry of Education "Higher Educational Institutions of the Republic of Belarus 2011-2012, Minsk, 2012, p. 170

[28] http://resourcecentre.savethechildren.se/content/library/documents/global-education-digest-2011-comparing-education-statistics-across-world

If further analyzed, the data provided by the Belarusian Education Ministry for the report prove that the situation is much worse than it appears from the UNESCO report. The figures submitted by the Belarusians characterize only the system of tertiary education, which does not correspond to ISCED 5, and given the fact that the data on outbound mobility also characterize mostly the tertiary education segment, the balance of these two types of mobility can be even more dismal for Belarus. If the special nature of Belarusian statistics is factored in the UNESCO calculations, we will get net flow of mobile students as low as minus 5.7%.

The situation looks like a mass exodus of Belarusian tertiary students from the national higher school, which aspires to leading positions globally. It is indicative that the surge in outbound mobility coincided in time with the turn of state educational policy towards self-isolation of Belarusian higher education and restoration of the Soviet higher school model. This policy was designed to restrain student mobility, but caused a boomerang effect of the mass flight of Belarusian students abroad. Furthermore, the system of barriers introduced by the Belarusian authorities (refusal to harmonize the architecture of higher education in compliance with the Bologna model and non-recognition of degrees attained in foreign institutions as part of exchange programs) only encouraged the Belarusians enrolled in foreign universities not to return to Belarus.

The legal regulation of student exchange programs in this country also fails to contribute to civilized exchange schemes. Instruction No.125 of the Education Ministry dated 27 December 2005 obliged all students wishing to go abroad even for a few days to seek authorization signed personally by the minister. In December 2011, amendments to the Law On Countering Human Trafficking (Article 17.2) entitled rectors of universities to issue such permits. The very fact that academic rights are regulated by the law on suppression of trafficking in persons demonstratively puts academic mobility next to a criminal offence. Because such trip permits are politically motivated and the procedure for applying for and receiving authorization is quite bulky and complicated, young people prefer leaving without completing legal procedures at home, so the Education Ministry fails to register a considerable part of outbound student mobility. The National Report submitted to the Bologna Committee in November 2011 mentions only 119 Belarusian students officially enrolled in tertiary education programs abroad[29].

Instead of following the example of other countries and employing outbound mobility to build up the quality of human capital, the Belarusian authorities have turned the blind eye to the exodus of young people from the country. Until recently, the country had no mobility program whatsoever for the Belarusian students wishing to study abroad. In 2011, the government announced that starting 2012 it would support up to 50 students annually in the framework of the state mobility program in accordance with resolution No.1617 of the Council of Ministers of 30 November 2011. This is obviously not enough to reshape mobility processes in the country. Besides, the program mostly targets Master's and PhD students and disregards the largest group of 2-4-year students.

Unlike the Belarusian national mobility program, international student mobility initiatives focus primarily on 2-3-year students (with a 4-year training cycle at the first stage), making separate groups for Master's students and PhD students, for whom the approach may be different from that applied to first cycle student mobility programs. The Belarusian state student exchange program does not envisage support for full educational cycles, which are especially popular in many CIS countries. The authorities are obviously uninterested in actual internationalization of higher education, which is clear from the comparison with foreign programs promoting Belarusian student mobility. In the 2010/11 academic year, 149 Belarusian students were enrolled in the Polish Kalinowski Scholarship Program alone, thrice as many as the Belarusian government is ready to support every year. It is only natural that the late half-measures of the Belarusian Education Ministry to regain control of the situation have been quite ineffective so far.

Formally the situation with the enrolment of foreign students in the Belarusian ISCED 6 programs (PhD students) looks more positive. Such programs are more popular compared to ISCED 5 programs, which corresponds to the trend observed in OECD countries. According to Belstat, in 2011, as many as 4,968 PhD students were enrolled in various ISCED 6 programs in Belarus, of them 230 foreign students, or 4.6% of the total number. The figure went up to 4.6% from 2.7%

[29] http://edubelarus.info/uploads/ehea/anketa_Belarus_rus.pdf

during the last five years[30]. Most of the foreign PhD students come from China, Iran, Iraq and Libya.

Foreign post-graduate students in Belarus, by country

Country	Students	%
China	56	24.3
Iran	49	21.3
Iraq	45	19.6
Libya	27	11.7
Nigeria	8	3.5
Lebanon	5	2.2
Vietnam	5	2.2
Sudan	3	1.3
Syria	5	2.2
Turkey	3	1.3
Venezuela	3	1.3
Yemen	5	2.2
Other	16	7.0

We should not overestimate the attractiveness of Belarusian tertiary education programs of this level, though.

First of all, the inbound mobility rate, at 4.6%, is still very far from the degree of attractiveness of such programs in developed countries, where the 10% ratio is considered a good level, but sector leaders have it twice as high.

Second, the sectoral structure of the PhD programs selected by foreign students indicates that they prefer the humanities and social sciences (56.5% of the total number of foreigners), and it is not the sector where Belarus has serious achievements; therefore, the quality of training cannot be superb.

The findings of the analysis of student mobility processes in Belarus do not confirm that the quality of Belarusian tertiary school is internationally recognized. Moreover, outbound mobility indicates the progressive reduction in the prestige of the national higher education system among national students.

[30] Statistical digest "On the operation of postgraduate schools and doctorates in the Republic of Belarus in 2011." Minsk, National Statistical Committee, 2012

Conclusions

The analysis of the Belarusian higher education system in the cross-country perspective allows assessing education policy in our country better than national official statistics does.

Based on indirect characteristics of the quality of Belarusian higher school available in international statistics we can assume that Belarusian tertiary school has attained impressive higher education enrolment rates, albeit at the cost of at least as impressive erosion of academic standards and deterioration of specialist training quality

Belarus continues to use outdated educational strategies to address contemporary problems. Mass availability of tertiary education has resulted in neither the reform of the educational architecture nor effective multichannel financing schemes based on equal social partnership.

Belarusian tertiary school is a victim of the misbalanced state education policy. The authorities have long been setting the system of education an impossible task to ensure improvements in the quality of higher education while increasing the enrolment rate and availability of higher education and cutting state expenditure.

The deterioration of the demographic situation calls for adjustments to this strategy, as there is no hope that the number of students paying fees for higher education will keep increasing extensively. This growth in the number of fee-paying students has long helped offset shortages of budget funding. At the same time, the system of higher education is either not modernized, or its reform comes too late.

In the cross-country perspective, it becomes obvious that this strategy runs counter to the main trends in higher education observed in developed countries, where the shift towards mass tertiary education is taking place amid consistently growing expenditure on higher education.

Being faced with the shortage of internal resources to finance higher education, the authorities are trying to make up for the deficit by way of boosting internationalization of higher education. However, without modernization, there is no way internationalization efforts will suffice to lead Belarusian tertiary school out of the deadlock.

Without effectively addressing the problem of quality of education, Belarus will be unable to ensure inflows of foreign students.