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**Higher education in Ukraine in the context of
global and national challenges of the 21st century¹**

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Abstract

Education for sustainable business development is an important institution of the integration process of the knowledge economy. This situation also concerns Ukraine, which is currently experiencing particularly difficult times of its state formation.

This article investigates the state of the situation in the field of higher education in Ukraine, geopolitical, economic and other transformations of the 21 century.

Introduction

The Ukrainian society, even in the most difficult times in its history, has not lost faith in a better future. It has always aspired to be part of the European community and has grounds for that.

Ukraine possesses the most fertile black earth and numerous minerals. With the territory of 0.4% of the world's land area and number of inhabitants of 0.8% of the total world's population, it extracts 5% of the world's minerals and refined products (in particular, 14% – iron ore, 30% – manganese and 7% – coal (Brininstool, 2011). It is an aerospace state. Its aviation industry has a complete cycle of aircraft production. It can quickly convert the production of "Electron" TV sets into trams of the same brand, produce high quality skiing equipment (particularly of such famous brands as "Fisher", "Blitsard"). It occupies the ninth position in the world among the biggest weapon exporters (Ukraine is included into top, 2015). Our population has surprised the world with the volunteerism scale.

¹ Although this article is not the style normally published in *IJBE*, the editors determined that the information presented in this paper would be of interest to the international community of business educators.

At the same time, Ukraine is a leader on corruption. By the number of billionaires possessing the capital of doubtful origin, Ukraine is among the top countries in the world; ranking 11th in Europe and 27th in the world. The aggregate extent of their net assets equals the expenditure section volume of Ukraine's state budget. From the standpoint of business assessments, it could be positively perceived, if not for the incredibly low price of human labor (see Figure 1).

Figure1: Payment of labour: Location of Ukraine²

The countries of the EU and Ukraine (January 2015, EUR)

	The minimum wage, euro	Average wage, euro
Ukraine	36	135
Bulgaria	184	333
Romania	218	395
Litva	300	524
Czech Republic	332	702
Latvia	360	504
Slovakia	380	745
Estonia	390	735
Croatia	396	712
Poland	410	750
Portugal	589	805
Greece	683	704
Spain	756	1615
Slovenia	790	1000
Great Britain	1379	2101
France	1458	2449
Ireland	1462	2160
Germany	1473	2054
Belgium	1502	1940
Netherlands	1502	2136
Luxembourg	1923	3189

Now, against the background of high European aspirations of the Ukrainian society, it is important to know *"What do Europeans think of Ukraine?"* Social surveys show that there is no

² AVERAGE WAGE –UKRAINE - 135 Euro, THE MINIMUM WAGE –UKRAINE - 36 Euro. Average monthly wages and salaries per employee (June 2015 year) in educational activities – 158 \$.

Ukraine-phobia among EU citizens (Hetmanchuk, 2015). The doors of the European Union remain open to Ukrainians if the Ukrainians can overcome the most painful diseases like corruption, oligarchs' influence, and poverty. So, the aspiration of EU citizens and Ukrainians who are also demanding radical reforms coincide.

The Ukrainian society is well aware that *higher education* is a crucial factor in solving problems and in achieving the goals of millennium development. Therefore, it is important to identify the unique problems facing Ukraine in the field of higher education considering the country's development possibility of state and contemporary civilization changes.

The purpose of this article is to identify the main factors, restrictions, and improvement directions of institutional support for the development of higher education in Ukraine with regard to global and national challenges of the 21st century.

The research presented in this article is based on the principles of systematic and comparative analysis, as well as methods of statistics and sociology. The empirical base of the research is data of national and international statistics and special sociological surveys on the issues of economy and management of higher education in Ukraine.

Ukraine in the international rankings

Ukraine does not currently occupy the best position in the international rankings of economic freedom, ease of doing business, and global competitiveness. This is illustrated by Figure 2 (Doing Business, 2014; Global Innovation Index, 2014; Global Competitiveness Report, 2014-2015; Global Enabling Trade Report, 2014; Index of Economic Freedom, 2014; Human Development Index and its Components; 2014; Logistics performance index, 2014; Sustainable Society Index, 2014).



However, on the other hand, Ukraine occupies better position in the world rankings concerning human development, thanks to education.

Therefore, among the consideration in the complex political, social, and economic factors, which may affect the advancement of Ukraine's position in the international sustainability rankings through business, reforming of higher education institutions plays a special role, particularly in the area of business education.

Obviously, Ukraine will have its own way of educational business reforms. The historical context of the development of the state and its regions will play a prominent role.

So, in the 19th and 20th centuries in Ukraine quite a different culture of entrepreneurship was formed, and thus of business education environment as well. For example, in Western Ukraine the activity of the Metropolitan of the Ukrainian Greek Catholic Church, the ethnic Pole Andrii Sheptytskyi had a huge influence. With his support in Galicia immediately after the First World War, the active development of national and religious life (in full symbiosis of fundamental components of nation's support) began. In less than 10 years, Galicians became a real modern nation with their banks, schools, the Academy of Sciences (Shevchenko Scientific Society), the National Museum, developed agriculture and their own industry. The slogan "Buy Ukrainian Products" was practical only on condition of full self-providing of the nation with everything needed (Inzhuvatova, 2014).

In the 20th century the Ukrainian High School met the turbulent 1990s, the years of the "wild capitalism" having only five specialties ("Economic Cybernetics", "Planning and Organization of the Economy", "Accounting and Audit", "Automated Control Systems" and "Construction Economy") at economic faculties of the universities (the first and second level of higher education according to the International Classification System of Education of the UN).

Only with the development of Ukraine as an independent state in 1991 came the formation of the private ownership institute, development of small and medium business, and financial institutions.

During 1991-2015 in Ukraine (1997, 2006, 2007, 2010 and 2015) the list of specialties changed five times, under which specialist training was held in economics, entrepreneurship and management. As of 2014/2015 academic year in Ukraine a bachelor diploma of 16 training areas in the field of business education was obtained by 24.4% of all university students in Ukraine (see Table 1).

Table 1

Subject areas of business education in Ukraine (source: The list of disciplines and specialties, 2015; The list of disciplines and specialties, 2006; The list of disciplines and specialties, 1997)

Ukraine in the Soviet Union until 1991	Ukraine as an independent country until 2016	Ukraine as an independent country since 2016
<ul style="list-style-type: none"> • Economic Cybernetics • Planning and Organization of the Economy • Accounting and Audit • Automated Control Systems • Construction Economy 	<ul style="list-style-type: none"> • International Economic Relations • International Business • Economic Theory • International Economics • Business Economics • Personnel Management and Labor Economics • Applied Statistics • Marketing • Finance and Credit • Accounting and Audit • Commodity and Business Entrepreneurship • Management • Hotel and Restaurant Business • Tourism 	<ul style="list-style-type: none"> • Economics • International Economic Relations • Accounting and Taxation • Finance • Banking and Insurance • Management • Public Management and Administration • Marketing • Entrepreneurship, Trade and Exchange Activities • Hotel and Restaurant Business • Tourism

In April 2015 the Cabinet of Ministers of Ukraine approved a new draft on the list of disciplines and specialties, in which the number of the specialties at the "Bachelor" level are reduced from 160 to 100. In the business education area given the International Classification System of Education of the UN (ISCED) the number of specialties is going to be reduced from 16 to 10. The list is intended not only to harmonize Ukrainian educational classifications with international analogues, but also begin the process of developing new standards of higher education quality by defined specialties.

The approval of the new list of specialties has caused mixed reaction in the high school of Ukraine as it results in the resistance of the academic community that is not ready for reforms.

Analysis of the dynamics of the student number in Ukraine show, despite economic, socio-cultural and political problems, Ukrainians traditionally try to get higher education. The evidence of this is the international statistics on the educational level in the human development index by the method of UNDP. In 2014, just in terms of "Expected years of

schooling" Ukraine significantly improved its ranking in the evaluation of national human capital (see Table 2).

Table 2

Human Development Index in Ukraine and other countries (source: Human Development Report, 2014)

	Human Development Index		Its components			Population with at least some secondary education, (% ages 25 and older) (2005-2012 pp.)
	Ranks	Value	Life expectancy at birth	Expected years of schooling	Gross national income (GNI) per capita (2011 PPP \$)	
VERY HIGH HUMAN DEVELOPMENT						
United States	5	0,914	78,9	16,5	52,3	95,0
Germany	6	0,911	80,7	16,3	43,0	96,6
Poland	35	0,834	76,4	15,5	21,5	82,3
HIGH HUMAN DEVELOPMENT						
Russian Federation	57	0,778	68,0	14,0	22,6	90,9
Ukraine	83	0,734	68,5	15,1	8,2	93,5

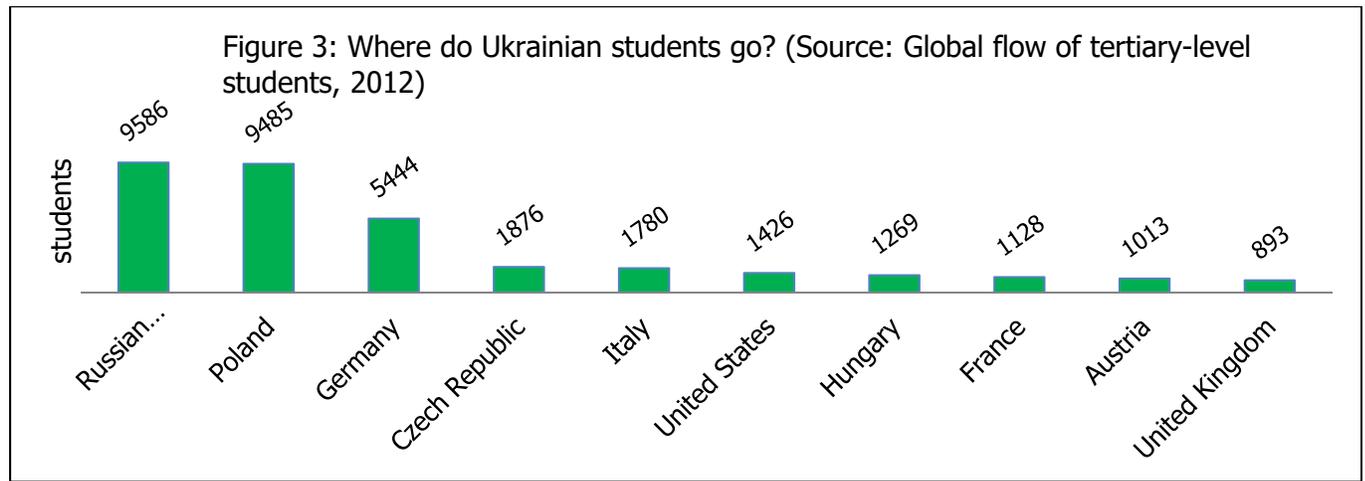
Key global and national trends in the development of higher education, including business education in particular

The modern development of higher education in Ukraine, and specifically business education, is stipulated by the influence of both traditional and new factors. Determent factors include globalization and increasing migration mobility of the population, regionalization of the public development, demographic situation, institutional changes in the country, etc. Let us examine them in detail.

1. Globalization and increasing migration mobility of the population

According to the dynamics of foreign educational migration, Ukraine today is among the twenty ten countries. According to the UN data, 62% of the import of higher education services

Ukraine, is provided by Ukrainian student migration to Poland, Germany and also to the Russian Federation (see Figure 3).



As for the internal mobility of students in Ukraine, unlike many European countries, it is not as common. According to the results of the survey of university students, which was carried out by the authors of the article in 2013 (Hrynkevych, O., 2013) in Lviv and Cherkasy (Non-probable sample included 120 students of Ivan Franko Lviv National University, "Lviv Polytechnic University", Bohdan Khmelnytskyi Cherkasy National University), only 32% of respondents expressed a desire to study in another region of Ukraine while 83% of students would like to study in another country of the world. On the basis of similar observations in Ukraine, and reasoning from the experience of forming political nations of Europe, German researchers Claudia Date and Uwe Date (Date, C & Date U, 2009) argue that "without mass student migration, which would become a bridge for communication between East and West, in Ukraine a national communicative community cannot grow from the regionally divided society".

2. Regionalization of the social development

Among the important factors of educational migration, which define its main directions in Ukraine and other countries, there is disproportional regional development. Factors impacting this development include opportunities for obtaining quality education, educational opportunities in others countries and regions of the world, employment problems in rural areas or depressed regions. It is important to note that the economic level of a country's development plays a significant, but not decisive, role in choosing the country of study.

This information is proved by the results of correlation analysis of interconnection between the share of foreign students in the countries of the world and the GDP indicator per capita. The correlation between the studied indicators is only 0.595 and shows an existing but

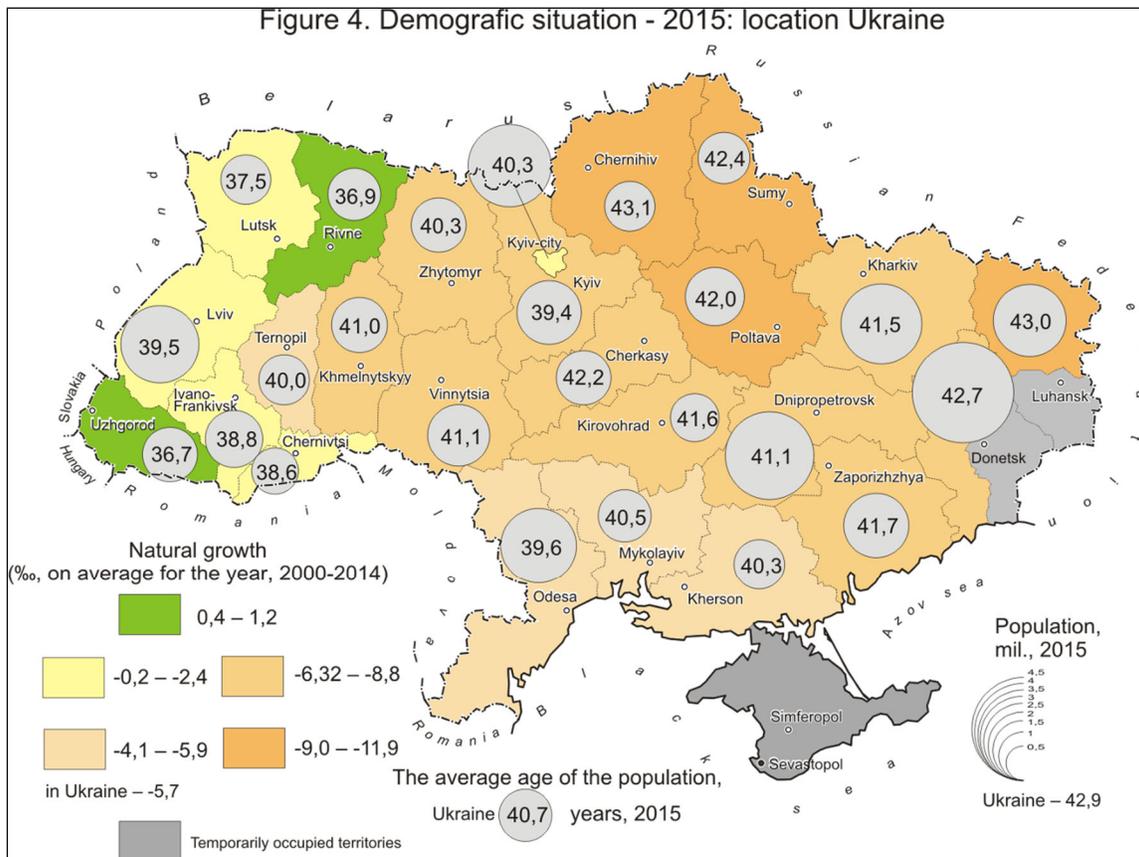
not very strong relationship. In general, the importance of the influence of the above mentioned factors of educational migration for every country has its own regional features.

Regarding prospect for business education in Ukraine in the context of regions it is important to consider first, the factor of specialization of the regional economy, and accordingly – future needs of regional labor markets; second, the factor of internally displaced persons (IDPs) due to the military events in the East of Ukraine.

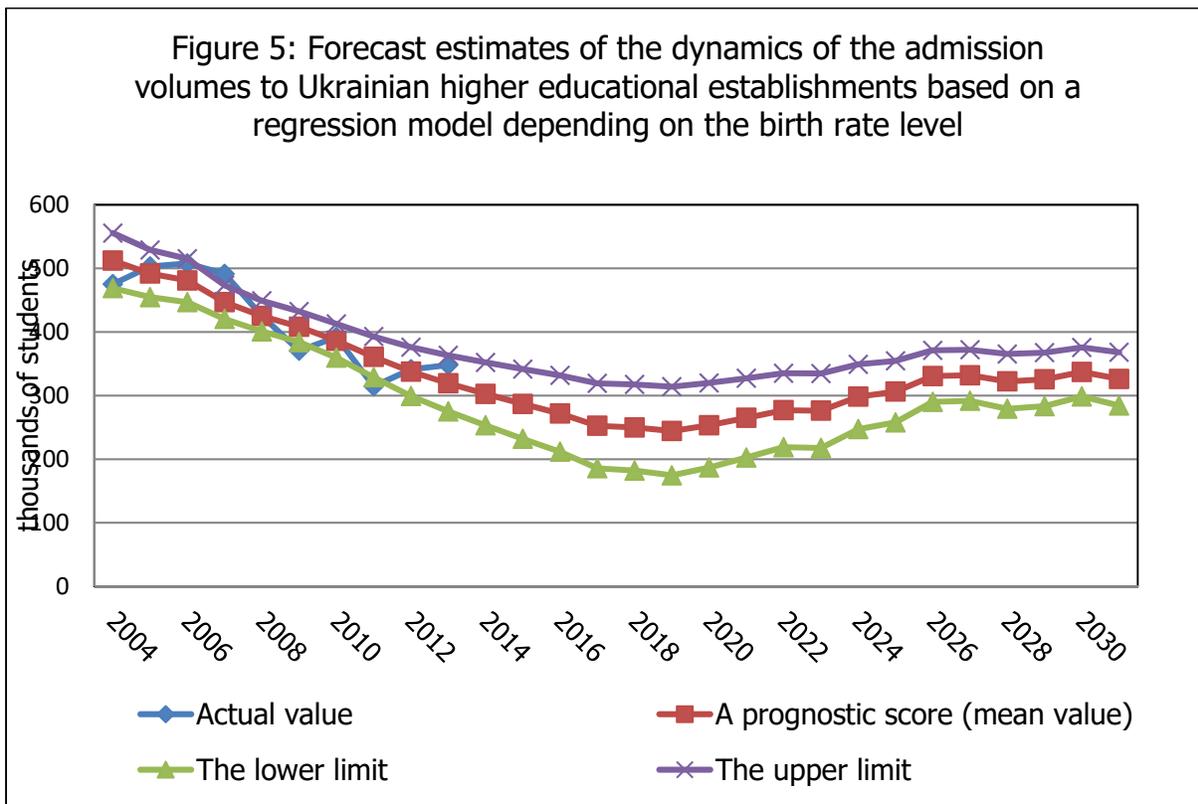
In the first case is an extremely acute problem of creating new jobs that meet the new trends of the labor market development, in the second one – the problems of labor retraining, obtaining additional or related professions among internally displaced persons.

3. Demographic situation

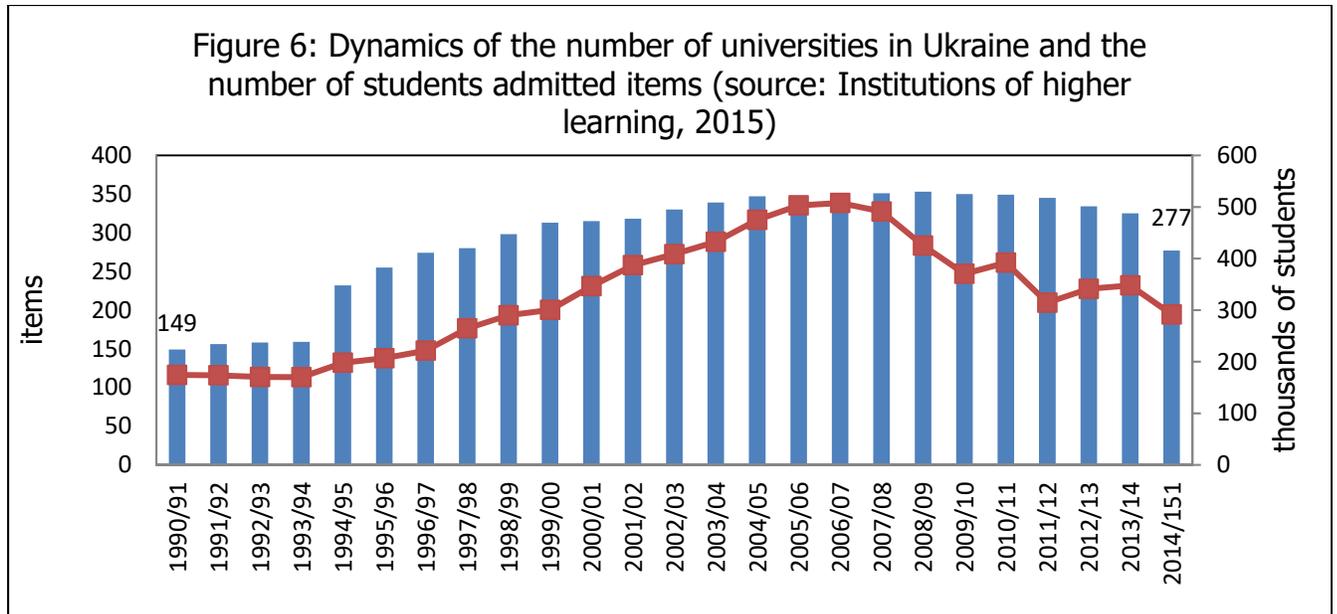
In Ukraine, this factor practically reflects temporary “collapse” of educational services market capacity due to the natural losses of Ukraine’s demographic potential. The decline in the birth rate since the early 1990s has led to the negative dynamics of the volumes of entering Ukrainian higher educational establishments since 2007 (see Figure 4).



The correlation coefficient between these indicators considering lag for the period of 2004-2014 amounted to 0.907. On the basis of the correlation-regression analysis the authors did a forecast of the dynamics of the admission volumes to Ukrainian higher educational establishments by 2031. The forecast estimates indicate an annual decrease in the number of students and saving the negative dynamics of this indicator by 2020 (See Figure 5).



The decrease in admission numbers in Ukraine universities is happening on the background of quite a high number of different types of establishments (see Figure 6), and, respectively, leads to more relevant problems of competitiveness management in higher education.



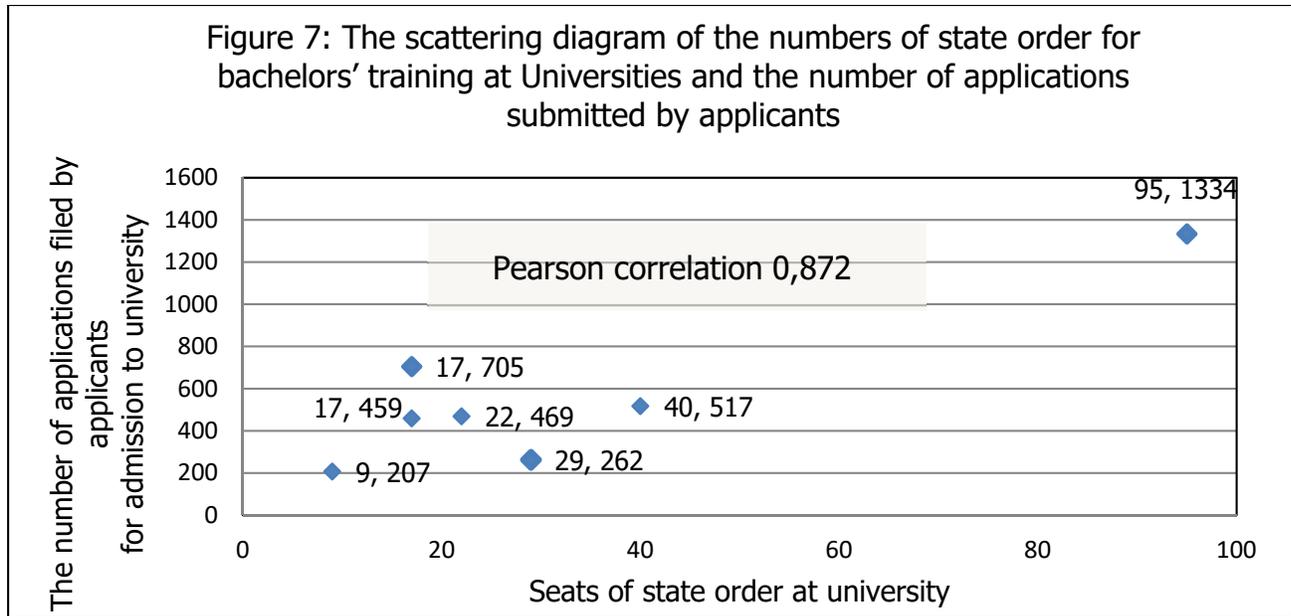
4. Institutional transformations in Ukraine

This factor is related to the introduction of the Law of Ukraine "On Higher Education" in the July of 2014. For the first time since the independence, the new Law declares in the preamble the importance of creating legal and organizational conditions of "increasing the cooperation of state authorities, business and higher education on the principles of universities' autonomy" (On Higher Education, 2014). The law provides a legal basis for the harmonization of educational activity in Ukraine with relevant international and European standards, gives more autonomy to universities, especially in determining the content of educational curricula, and provides their students with the opportunity of a real subject choice (not less than 25% of all educational credits).

Results of national surveys of the quality of higher education in Ukraine and graduate employability

In Ukraine, among the main institutional factors that affect the decision of young people in choosing the direction of further training include (a) the state order for specialist training, and (b) the national and international university rankings.

The statistical analysis of the relationship between the number of state orders for bachelors' training at Universities and the number of applications submitted by applicants (on the example of the specialty of "Management" in Lviv region) in 2014 showed that the correlation coefficient between these indicators was 0,872 (see Figure 7).



Source: own elaboration

This fact means that state institutions, especially the Ministry of Education and Science of Ukraine, has a significant impact on the regulation of supply and demand in the education services market.

As for the rankings of World University in 2015 (QS World University Rankings 2014/15), six Ukrainian universities were included into the list of the best universities in the world for the first time since the independence: Taras Shevchenko National University (421), N. V. Karazin Kharkiv National University (481), National Technical University of Ukraine "Kyiv Polytechnic Institute" (551), Sumy State University (651), National Technical University "Kharkiv Polytechnic Institute" and Donetsk National University (701).

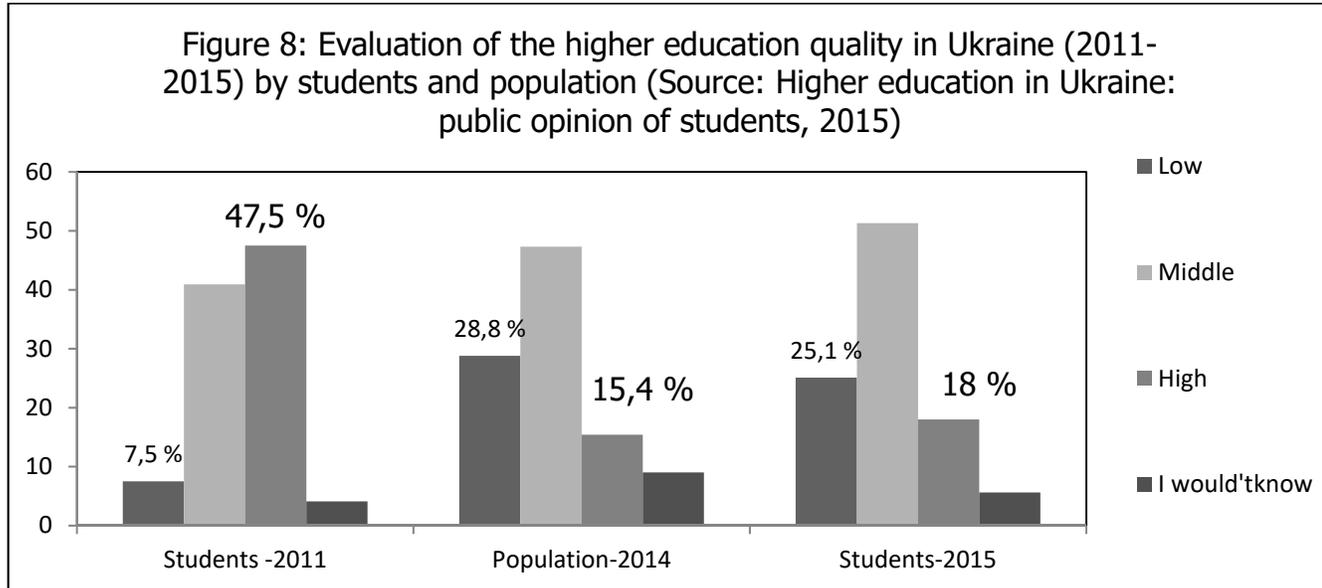
Thus, global and national factors of higher education development considered above pose new requirements for Ukraine to improve its quality and competitiveness.

We distribute main tools, which can improve the quality and competitiveness of higher education in Ukraine:

- Survey of the quality of higher education;
- Using of non-financial tools: creating new professional standards;
- Using of financial tools: cooperation with private companies;
- Survey of employment and unemployment of graduates.

First, monitoring of the quality of higher education. In March 2015, within the project "Reforming of Higher Education", which is funded by the International Renaissance Foundation,

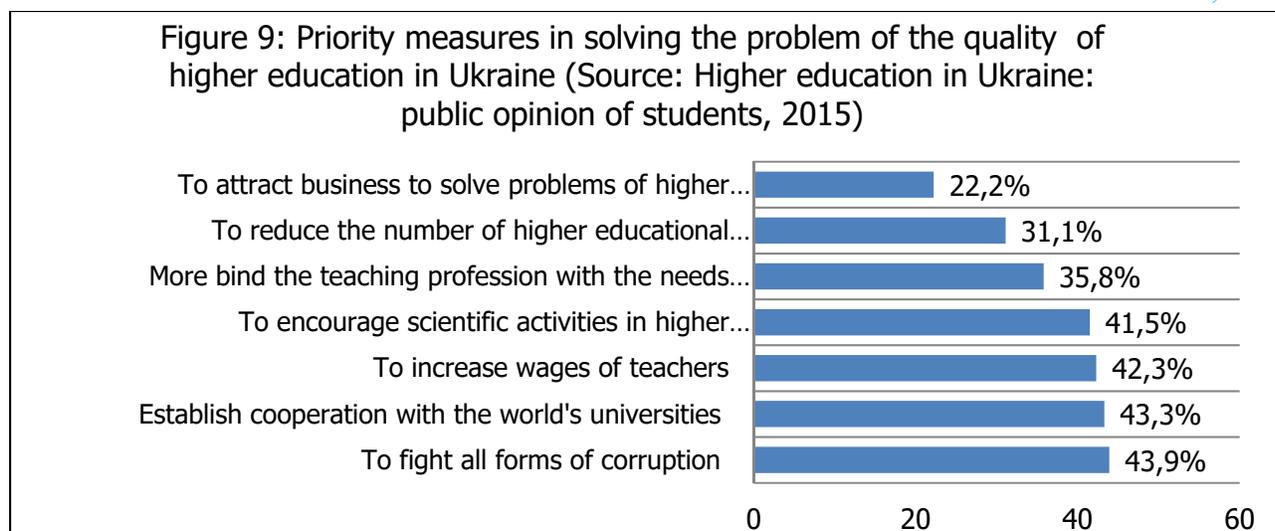
a nationwide survey of students about the quality of higher education was held. The results showed that Ukrainian students began demanding much concern for quality education they get. If in 2011 almost half of the respondents considered Ukrainian higher education of high quality, in 2015 their number decreased by more than two and a half times (see Figure 8).



According to a five-point scale, Ukrainian students who study in the area of business education evaluated the quality of education in this area at 3.2. Most students think that the most serious problems of higher education, which require urgent solution, are the following ones (Higher education in Ukraine: public opinion of students, 2015):

- non-recognition of diplomas of most domestic universities in the world (51%);
- teaching non-conformity with market requirements (41%);
- corruption of university teaching staff (39%);
- low quality education in Ukrainian universities compared with the global level (32%).

Second, non-financial instruments of improving the quality of higher business education. The analysis of priority measures to solve this problem in Ukraine (Figure 9) points to the need for the development and implementation of professional educational standards. For leading Ukrainian universities international cooperation with employers, business schools and public associations, in particular – International Society for Business Education (for the formation of a modern system of external evaluation of business education quality) is very important.



Third, financial instruments of improving the quality of higher business education. To form the national system of external evaluation of higher education in Ukraine is important for stimulating cooperation with private companies/businesses. The main financing agents in higher education of Ukraine are budget administrators (central and regional/local government institutions) and households (see Table 3).

Table 3

Expenses sharing on higher education in Ukraine according to the financing sources (Source: National Accounts of the Education in Ukraine, 2013)

	General expenses, mln. hrn.			General expenses structure, %		
	2007 p.	2010 p.	2013 p.	2007 p.	2010 p.	2013 p.
Total including by financing sources	12890,7	25097,3	30158,6	100,0	100,0	100,0
Central Government	11852,4	22854,3	27191,0	53,2	60,7	63,1
Regional budgets/Local authorities	1038,4	2243,0	2967,7	4,7	6,0	6,9
Private companies	326,5	490,6	437,2	1,5	1,3	1,0
Households	9052,1	12072,6	12505,1	40,6	32,1	29,0

The results of expenditures analysis in higher education show that the biggest share of expenditures in 2013 was in the state sector – 70.0%. The share of the private sector was 30.0%, of which only 1% was connected with the expenditures of private companies. Over the last six years, the situation in financing higher education has had a similar structure, the biggest specific weight of spending on higher education accounts for the public sector and households

The analysis of financing sources of higher education in Ukraine gives grounds to assert practical absence of direct influence on the development of this sector of the economy by private companies. In our opinion, this fact largely explains the problem of weak relationships between the content and organizational forms of obtaining higher education in Ukraine, including in the business area with its real needs.

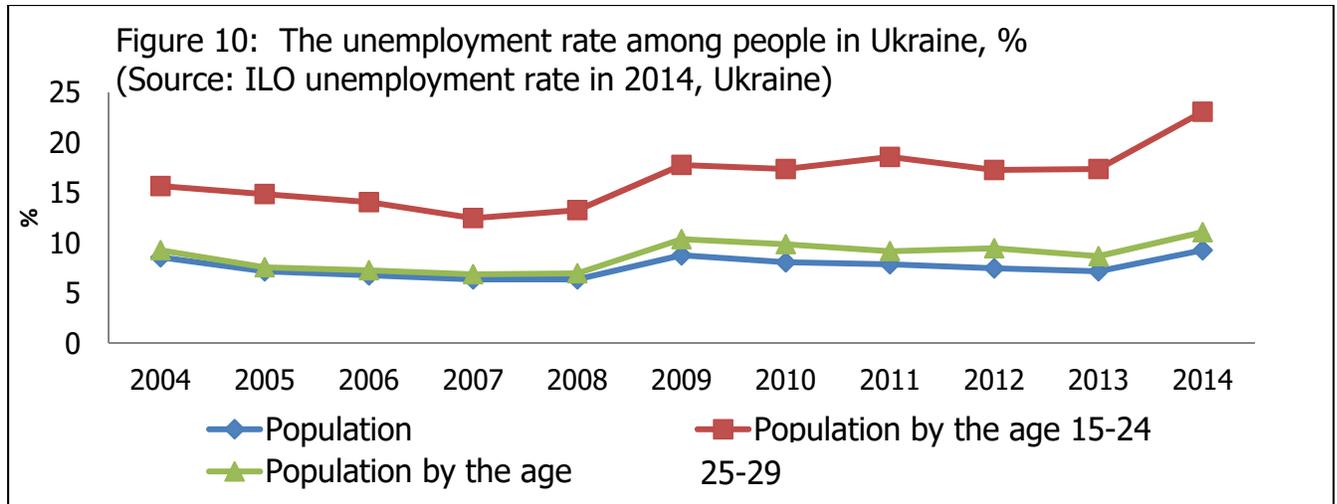
Low participation of private companies in financing higher education does not motivate business to a more responsible relationship with universities in the training and employment of graduates. This conclusion is confirmed by the results of a national survey of graduates and employers to study the experience and employment problems of university students. By the level of employment in the specialty graduates who have received business education have the worst indicator (total 46%). The overall employment indicator of graduates with a higher business education diploma in 2013 was 74% (The experience of university graduates' employment, 2013).

Fourth, marketing of higher business education. The vast majority of employers (55%-57%) believe that domestic universities produce economists and lawyers in excess (The experience of university graduates' employment, 2013). At the same time, representatives of universities and some employers noted that, despite the excess of graduates with economic and legal education in the labor market, to find a highly-qualified young employee of these specialties' can still be a daunting task.

According to 72% of the representatives of companies-employers, current graduates have overestimated:

- expectations on wages, 53%
- ideas of their ability, 51%
- career expectations, 31%
- expectations concerning working conditions, n/a.

In general, the problem of effective employment remains the most urgent among the young, as evidenced by the official statistics on the unemployment rate in Ukraine (see Figure 10).



The problem of effective employment and unemployment of the young is topical not only for Ukraine. According to Euro statistics data, in April 2014 the unemployment rate among young people under 25 years in the Euro area countries was 23.9%, ranging from 7.9% in Germany to 55.4% in Greece (Unemployment rate, 2014).

Conclusions

1. Modern Ukraine as a European state, despite the complexity of geopolitical, economic and other transformations, is demonstrating its commitment to European ideals and values of the education priority as a factor of society's sustainable development. The evidence of this European loyalty is the indicators of the educational level of the population, and also the expenditures of the Central Government and most Ukrainians on higher education.

2. The Dignity Revolution in Ukraine in 2013 accelerated transformation processes of all public institutions in the country, including higher education areas. Today Ukraine is doing everything possible to reintegrate into the European realm, from which it was forcibly ousted in the 17th century. The approval of the new Law of Ukraine "On Higher Education", a new classification of educational specialties' consistent with international standards (ISCED), the establishment of the National Agency for Quality Assurance in Higher Education, the National Employment Agency are key institutional factors that are designed to ensure the integration of the Ukrainian higher education into the European educational space.

3. The Ukrainian High School getting rid of inferiority complex declares improving the quality and competitiveness of Ukrainian higher education in the world educational space as its main goal. In this way, Ukraine has to overcome a huge number of obstacles. The inertia of educational organizations, insufficient activity of the academic community in defending their rights and freedoms, unwillingness of universities' administrative management in many cases to

implement European principles of academic freedom, autonomy, and therefore, responsibility for the results of educational activity are among the most significant ones.

4. One of the determining factors of implementation of national development tasks of business education in the context of sustainable development global goals is to strengthen the cooperation between public authorities, business, and higher education on the principles of universities' autonomy. In this context, the following steps are extremely important for Ukraine: increasing social responsibility of business at all stages of human capital formation; joint development of new standards in the business education area, identification of prospective staffing needs for the business sector of the economy; development and implementation of special certificate programs in business education for different categories of the consumers of educational services, including professors of Ukrainian universities.

The Ukrainian academic community, being aware of joint responsibility for the implementation of global goals of sustainable business development, needs special international support. We are interested primarily in the implementation of international projects of social responsibility of all social relations entities. One of these projects can be study and implementation of positive practices of the cooperation of universities, business, and government authorities in solving urgent problems of sustainable business development.

5. Further research can be carried out concerning the assessment of positive and negative consequences of the increase in the number of students' international education migration.

It is desirable to conduct a special survey of Ukrainian students getting higher education abroad (the USA, Canada, Great Britain, Germany, Austria, Poland, etc.) to determine effective teaching methods in the field of business education.

The issue of the development of international educational programs in the field of business education that can meet the educational needs of students, taking into account cultural differences in their countries of origin, still remains urgent.

References

Brininstool, M (2011). The Mineral Industry of Ukraine. U.S. Department of the Interior, U.S. Geological Survey. *Mineral Yearbook, Ukraine* (Advance Release). USGS: science for changing world. May 2013, pg. 47. Retrieved from <http://minerals.usgs.gov/minerals/pubs/country/2011/myb3-2011-up.pdf>

- Date, C. & Date, U. (2009). Occasional thoughts about the prospects of Ukrainian universities: provincialism in higher education prevents the formation of nation. Retrieved from http://nauka.in.ua/news/articles/article_detail/3916
- Fischer, R (2015). Average salary in European Union. *Economic Notes*, 9, 139. Retrieved from <http://www.reinifischer.com/average-salary-european-union-2015>
- Global flow of tertiary-level students (2012). Retrieved from <http://www.uis.unesco.org/Education/Pages/international-student-flow-viz.aspx>
- Global Innovation Index (2014): Country Ranking. Retrieved from <https://www.globalinnovationindex.org/content/page/data-analysis>
- Hetmanchuk, A. (2015). Presentation “What do Europeans think of Ukraine?”: Survey of the Institute of World Policy. Retrieved from <http://iwp.org.ua/ukr/public/1584.html>
- Higher education in Ukraine: public opinion of students (2015). Retrieved from <http://www.dif.org.ua/ua/publications/press-relizy/visha-osvita-v-ukraini-gromadska-dumka-studentiv-.htm>
- Hrynkevych, O. (2013). Освітня міграція в Україні та світі: інституційне середовище та напрями державного регулювання [Educational migration in Ukraine and the World: institutional environment and directions of state regulation]. Соціально-економічні проблеми сучасного періоду України. Територіальні міграційні системи: теорія і практика: [зб наук. пр.]/ НАН України. Ін-т регіональних досліджень; редкол.: В.С.Кравців (відп.ред.). – Львів, 2013. – Вип.3 (101), 254-265.
- Human Development Index and its Components (2014). Retrieved from <http://hdr.undp.org/en/content/table-1-human-development-index-and-its-components>
- Human Development Report (2014). Retrieved from <http://hdr.undp.org/en/content/human-development-report-2014>
- Index of Economic Freedom (2014): Graph The Data. Ukraine. Retrieved from <http://www.heritage.org/index/visualize>
- Inzhuvatova, C. (2014). Buy Ukrainian Products. *Ratusha*. Retrieved from [http://www.ratusha.lviv.ua/index.php?dn=ne"s&to=art&id=3726](http://www.ratusha.lviv.ua/index.php?dn=ne) (in Ukraine).
- Logistics performance index (2014): Efficiency of customs clearance process. Retrieved from <http://data.worldbank.org/indicator/LP.LPI.CUST.XQ>

- Monthly minimum wages - bi-annual data (2014): *Key figures on Europe, 2014 edition*/(Eurostat estimate (phased out)) - Luxembourg: Publications Office of the European Union, 2014 - p 78-80. Retrieved from <http://appsso.eurostat.ec.europa.eu/nui/show.do>
- Monthly minimum wages in Ukraine (2015): Financial Portal. Retrieved from <http://index.minfin.com.ua/index/salary>
- On Higher Education (2014): Law of Ukraine. № 1556-VII. Retrieved from <http://zakon1.rada.gov.ua/laws/show/1556-18>
- QS World University Rankings 2014/15: Ukraine. Retrieved from <http://www.topuniversities.com/university-rankings/world-university-rankings/2014#sorting=rank+region=+country>.
- Statistical Information of State Statistics Service of Ukraine. (2015). *Average salary in Ukraine*. Retrieved from <http://www.ukrstat.gov.ua>
- Statistical Information of State Statistics Service of Ukraine. *ILO unemployment rate in 2014, by sex, age group and place of residence*. Retrieved from <http://www.ukrstat.gov.ua>
- Statistical Information of State Statistics Service of Ukraine (2015). *Institutions of higher learning*. Retrieved from <http://www.ukrstat.gov.ua>
- State Statistics Service of Ukraine. *National Accounts of the Education in Ukraine in 2013* (2014). Statistical Bulletin. Retrieved from <http://www.ukrstat.gov.ua>.
- Sustainable Society Index (2014): Ranking all countries. Retrieved from <http://www.ssindex.com/results-2014/ranking-all-countries>.
- The Global Competitiveness Report (2014-2015): Competitiveness Rankings. Ukraine. Retrieved from <http://reports.weforum.org/global-competitiveness-report-2014-2015/rankings>
- The Global Enabling Trade Report (2014). Retrieved from http://www3.weforum.org/docs/WEF_GlobalEnablingTrade_Report_2014.pdf
- The experience of university graduates' employment: graduates' and employers' view (2013). Retrieved from <http://www.slideshare.net/bestuniverua/ss-27208268>
- The list of areas according to which experts in higher education institutions by the relevant educational level are trained (1997). Approved by the Cabinet of Ministers of Ukraine from May 24, 1997, № 507.

The list of areas according to which experts in higher education institutions by the educational level of the bachelor degree are trained (2006). Approved by the Cabinet of Ministers of Ukraine of 13 December 2006, № 17124.

The list of disciplines and specialties, according to which candidates of higher education are trained (2015). Approved by the Cabinet of Ministers of Ukraine of April 29, 2015, № 266.

Ukraine is included into top ten of the biggest weapon exporters (2015). *The report on the development of weapon export-import industry in the world during 2009-2014*. Stockholm International Peace Research Institute (SIPRI). Retrieved from http://www.bbc.com/ukrainian/politics/2015/03/150313_arms_transfers_database_vs

Understanding Regulations for Small and Medium-Size Enterprises. (2014). *Doing Business* Retrieved from <http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB14-Full-Report.pdf>

Unemployment rate by sex and age groups - annual average, %, 2014. Retrieved from <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>.