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UKRAINIAN HIGHER EDUCATION IN TIME OF WAR AND EU INTEGRATION ASPIRATIONS: GREAT LOSSES OR GREAT OPPORTUNITIES FOR CHANGE?

Abstract. Following the onset of the full-scale Russian aggression, the Ukrainian higher education system has encountered numerous challenges: educational institutions and infrastructure were damaged or destroyed during the war, a decrease in funding of education and science, relocation of participants of the educational process abroad, which has led to a significant loss of students and teaching staff by Ukrainian universities. Based on a survey among Ukrainian academic teachers, factors that hold back Ukraine's EU integration aspirations, i.e. the shadow sector and pathologies of the higher education system, are characterized. The results of the analysis identify recommendations for integration into the European Higher Education Area and increasing the competitiveness of Ukrainian universities: improvement of the institutional environment, harmonization of Ukrainian legislative acts on higher education and science with EU legislation, consolidation of universities, increasing the level of academic integrity.

Keywords: consequences of the war, EU integration aspirations, European Higher Education Area, survey among academic teachers, universities

1. Introduction

The process of integration of the Ukrainian higher education system into the European Higher Education Area (EHEA) has a long history, primarily related not only to the integration aspirations, but also to the gradual adaptation of the Ukrainian legislation to EU regulations. The primary responsibility for aligning Ukraine's higher education and science legislation with that of the European Union rests with the Ministry of Education and Science of Ukraine and the National Agency for Quality Assurance in Higher Education. In order to implement Ukraine's European integration commitments, such legal acts have been adopted, among others: Law of Ukraine "On Higher Education" (2014), "On the Ratification of the Agreement between Ukraine and the European Union on the Participation of Ukraine in the European Union Framework Program for Scientific Research and Innovation 'Horizon 2020'" (2015), "On scientific and technological activities" (2015).

Despite the significant losses and damages caused by the war, in 2022 the Russian Federation's military aggression also opened a new window of opportunity to accelerate Ukraine's integration into the EU. On June 23, 2022, The European Council granted Ukraine a candidate for EU membership status and noted the high level of sectoral integration of Ukrainian education and science. The European Commission's Opinion on Ukraine's application for membership of the European Union (European commission 2022) emphasized that, despite the sizable government spending in the sector (5.7% of GDP in 2021) and a ratio of gross enrolment in tertiary education of above 80%, the curricula and overall quality could be better aligned with the labour market needs. The expenditure on research and development, which is mostly concentrated in the public sector and had been declining over the previous ten years to the level of below 0.5% in 2020, remained insufficient to heighten human capital in a sustainable way. According to Verkhovna Rada Committee on Education, Science and Innovation 2022, as of July 2022, 318 out of 355 higher education standards had been processed for Ukraine's integration into the EHEA.

In discussing the systemic changes that have taken place in higher education and science in recent years, the following ones are particularly worth noting: the establishment of the National Council for the Development of Science and Technology, the establishment of competitive grant funding of science through the National Research Fund, the active cooperation of Ukrainian scientists with European colleagues within the framework of the Horizon-2020, Horizon Europe, Euratom, EUREKA, COST associations, etc. In addition, as part of the implementation of the Roadmap for the Integration of the Scientific and Innovation System of Ukraine into the European Research Area (Ministry of Education and Science of Ukraine, 2022a), the following priority areas of activity have been identified: improving the system of scientific and technological activities in institutions and universities in accordance with EU practices, ensuring a sustainable increase in the funding of the National Research Fund, developing and implementing a new system of remuneration for researchers, approving the State Program for the Development of Research Infrastructure and taking steps to join Ukrainian organizations to the European Research Infrastructure Consortia (ERIC), approving the concept of state policy on the development of e-infrastructures, and completing the preparation of draft laws on innovative activities and infrastructure.

Concepts to reduce the number of HEIs are also under discussion. In March 2022, the Union of Rectors (the Working Group of the Union of Rectors of Ukraine on Preparation of the Law "On Ensuring Competitiveness of Ukrainian Universities") proposed a draft law on a new network of state universities, transformation of some of them into municipal units and privatization of universities. In order to improve the financial condition and to increase the competitiveness of Ukrainian universities, the Strategy for the Development of Higher Education in Ukraine for 2022-2032 (Cabinet of Ministers of Ukraine 2022a) has been adopted and is

being implemented, which includes the issue of Ukraine's integration into the EHEA. The Strategy provides a detailed roadmap for the reconstruction and continuation of the higher education system reforms in the war and the post-war periods. The implementation of the tasks set forth in the Strategy will help to limit the devastating effects of the full-scale invasion of the Russian Federation. The measures proposed in this Strategy (Cabinet of Ministers of Ukraine 2022a) address such problems as: insufficient funding, inefficient management and use of resources, a low level of social responsibility, failure to ensure equality and autonomy of universities, lack of openness of universities, limited capacity to produce useful intellectual products, prevention of corruption and academic dishonesty, support for fair admission process and objective assessment of learning outcomes, a low level of access to higher education due to its non-compliance with European quality standards, the state of infrastructure and educational space, the European integration aspirations, which are not always supported by the desire to harmonize structures, scientific cooperation and the borrowing of the best practices, the creation of working and studying conditions for foreigners, uncompetitive salaries and working conditions of university teachers and others. In addition, the Operational Plan for the implementation of this Strategy in 2022-2024 was approved (Cabinet of Ministers of Ukraine 2022b).

The processes of integration of the Ukrainian educational system with the EU are currently taking place not only at the level of interstate interaction, but also as interactions between the academic communities of EU countries and Ukraine, due to the fact that some Ukrainian teachers and students, fleeing the war in Ukraine, have taken up jobs, scientific internships or studies at EU universities. This has caused a significant increase in research interest in Ukraine's social and economic problems, including those related to the education sector. The acceleration of European integration after the Russian invasion of Ukraine and the development of projects for its post-war reconstruction have also received research interest in the social, economic, cultural, and political life of this country. Under the conditions of today's migration crisis, a question also arises – can Ukrainian universities withstand the competition with universities from the EU countries, which have much better financing and a greater access to additional funding for research, as well as a level of academic integrity? Is the current stage of sector consolidation just the beginning of a massive exit of Ukrainian universities from the educational services market?

Consequently, the purpose of the paper is to analyse the challenges and losses caused by the Russian Federation's military aggression, the current problems in the higher education sector in Ukraine, and the prospects for its integration into the EHEA. Based on an analysis of theoretical and empirical studies, three hypotheses have been formulated for verification in this study:

- the destruction of educational infrastructure and a significant reduction in higher education funding during the war, coupled with the migration of students and academic staff abroad, will lead to long-term challenges for the Ukrainian higher education system. To substantiate this assertion, the losses of the higher education system caused by the war and the budget expenditures on higher education will be analysed;
- the integration into the EHEA is hindered not only by the institutional factors related, for instance, to the harmonization of national legislation with the EU norms, but also by the pathologies in the higher education system: such as a low level of academic integrity, a non-transparent system of selecting academic teachers for positions, corruption, the corporate culture at universities that is not focused on efficiency, etc. To prove this, a survey among Ukrainian academic teachers will be conducted;
- the challenges posed by the full-scale Russian military aggression have a significant impact on the Ukrainian higher education system, and these challenges create unique opportunities for systemic reforms, institutional strengthening, and accelerated integration into the EHEA. This hypothesis is grounded in the premise that fast transformative changes, such as: legislative harmonization, institutional consolidation, and enhanced academic integrity, can increase the competitiveness and resilience of Ukrainian universities amidst the war and post-war recovery efforts.

Taking into account the fact that a comprehensive analysis of the current state of the higher education system in Ukraine in the conditions of war is a complex task, the paper uses such research methods as: a survey among Ukrainian academic teachers (closed and open-ended, single and multiple choice questions) with the focus on issues such as: funding, academic integrity and systemic inefficiencies; literature and document review (analysis of the relevant Ukrainian and EU legislative acts, reports of the Ministry of Education and Science of Ukraine, the National Agency for Quality Assurance in Higher Education, EU institutions on the issues of integration into the EHEA and statistical data that describe the losses of the Ukrainian higher education system during the war).

2. Reconstruction or reduction in higher education funding?

The consequences of the war have unfortunately taken a heavy toll on the higher education system, with some higher education institutions in Ukraine now damaged or destroyed. To capture the consequences of Russian aggression, the Ministry of Education and Science of Ukraine has launched an interactive map of destroyed and damaged educational institutions, which includes all Ukrainian educational institutions, not only universities. The interactive map provides an opportunity

to show the situation in this area and identify the premises for a serious crisis in education, the consequences of which will be felt long after the war. Unfortunately, in 2023, the number of damaged and destroyed educational facilities is on the increase (Figure 1).

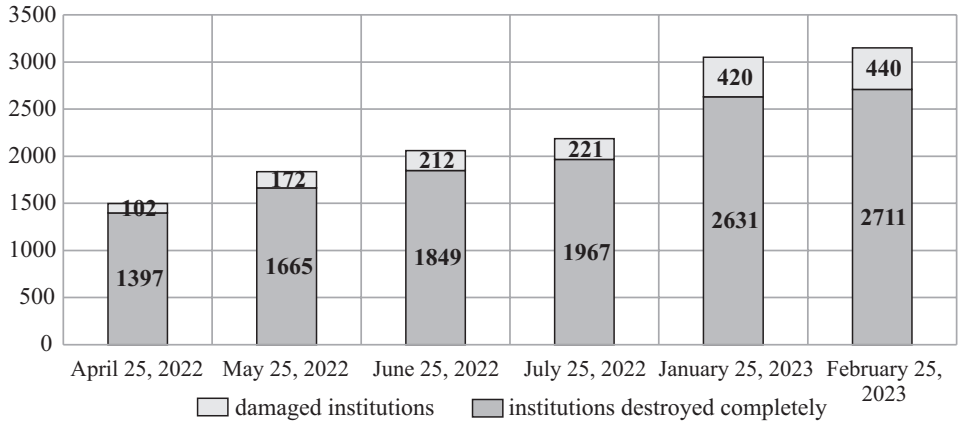


Fig. 1. The numbers of institutions in Ukraine which suffered bombing and shelling during the war
Source: prepared by the author, based on data from the Ministry of Education and Science of Ukraine (2022b)

The scale of damage to higher education institutions is characterized by the following figures: as of June 2022, 43 institutions of higher education were damaged in the conditions of constant shelling and bombardment of various regions of Ukraine, 5 of them were completely destroyed. As of January 25, 2023 – 59 were damaged and 9 of them were completely destroyed. The universities in the Kharkiv region suffered the most (1 destroyed, 23 damaged); Donetsk (3 destroyed, 9 damaged); and the Mykolaiv region (5 – damaged).

Rebuilding the educational institutions will need large investments. The cost of losses to schools, colleges and universities estimated in April 2022 already amounts more than $5 billion. The total losses from the war could be at least $1 trillion (The Times Higher Education World University Rankings 2022). In May 2022, a global initiative to support Ukraine against the Russian aggression – the online fundraising platform United 24 (United 24 2022) – was launched, and the first meetings of working groups established under the National Council for the Reconstruction of Ukraine from the Aftermath of the War began (Ukraine's Integrated Executive Portal 2022).

Characterizing the current situation in the higher education system in Ukraine, it is also worth noting that, in response to the challenges of the full-scale war, in march 2022, the Ministry of Education and Science of Ukraine, together with the Ministry of Finance, restructured part of the loan from the International Bank

for the Reconstruction and Development in the amount of 100 million USD. These funds will be used for social payments: salaries, pensions, scholarships, etc. (Ministry of Education and Science of Ukraine 2022c). In 2022, there was also a significant reduction in state spending on education and science. In 2023, the funding was 14.8 % less than in 2021 (Table 1).

Table 1. State budget expenditures on education and science in Ukraine in 2021-2023 (in billion EUR)

Indicator	2021	2022	2022 (after the sequestration)	2023	Change 2023/2021	
					+/–	%
State budget expenditures on education and science, among them:	1.099	1.204	0.980	0.936	–0.163	–14.8%
Student training by institutions of higher and professional pre-higher education	0.792	0.818	0.736	0.662	–0.130	–16.4%
Academic scholarship payments	0.122	0.151	0.135	0.124	0.002	1.4%
Ensuring the activities of the National Research Fund, grant support for scientific research and technological (experimental) research	0.068	0.074	0.044	0.059	–0.009	–13.6%

Source: prepared by the author, based on data from the Ministry of Education and Science of Ukraine (2022d)

Financial losses and destruction are increasing with each day of the war, and for a long time to come, even after the end of the war, educational institutions will have on the agenda not only the reconstruction of the material and technical base, but also the quota of students. The decline in the number of students is related to the migration of a significant number of the Ukrainian youth to the EU who will have a possibility of continuing their studies at EU universities under various programs of assistance to Ukrainian students.

During the war, a significant number of academic teachers also left Ukraine. Some of them have found jobs or internships under programs of support Ukrainian scientists in continuing their research. The consequences of such migration processes can be extremely negative for the Ukrainian economy, but for the EU countries, attracting young, highly skilled professionals will contribute to their economic development.

3. Factors that hold back Ukrainian EU integration aspirations

Noting the efforts in the harmonization of Ukrainian legislation and the implementation of changes for faster integration into the EHEA, it is also worth paying attention to certain aspects that have been holding back these processes. Ukraine is a country with the highest level of corruption in Europe, it ranks 116th in terms of corruption among 180 countries (Transparency International Corruption perceptions index 2022). The most corrupt spheres in Ukraine are: the state power, the law enforcement system, education and health care (Shevchenko 2019). Various aspects of corruption at Ukrainian universities are discussed in details in Osipian (2017). In Ukraine, academic teachers face such problems as: low salaries, bureaucracy and economic instability, which are strongly reflected in the already difficult situation in the education system, which also does not care about the emotional state, or making important functions of education formal (Mukhitov | Shaukenova | Kabul et al. 2022).

Analysing the reasons that lead to a much lower level of effectiveness of the Ukrainian education system than it could be, it is worth paying attention, first of all, to the fact that the problem is not only in the so-called "Soviet legacy" and the management staff of universities, whose vast majority were established in the traditions of that system. A bigger problem is that the current education system mostly replicates the same management approaches as before, its ineffective style and even destructive phenomena that can be attributed to the shadow sector of higher education.

In order to characterize the problems and pathologies of the higher education system and to identify the issues of the shadow sector of education that need to be solved to expand opportunities for the appearance of Ukrainian higher education institutions in the European market of educational services, on February 9-15, 2023, a survey among Ukrainian academic teachers was conducted. 148 respondents participated in this survey. Their socio-demographic characteristics are as follows: gender: female – 66.9%, 33.1% – male; age: 21-30 years old – 3.4%, 31-40 years old – 32.4%, 41-50 years old – 40.5%, 51-60 years old – 16.2%, 61-70 years old – 6.8%, 71 years old and above – 0.7%; work experience at universities: less than 3 years – 4.7%, 3-10 years – 16.2%, 10-20 years – 39.9%, over 20 years – 39.2%; academic degree: PhD – 68.9%, habilitated doctor – 19.6%, no degree – 11.5%. Certainly, it is worth considering survey limitations, such as: the sample size and limited demographic details about the participants, but it was quite difficult to conduct a larger survey during wartime. In addition, there were many questions in the survey that required anonymity (for example, questions about academic dishonesty and corruption).

Analysing the problems of Ukraine's higher education system, it is important to note that the vast majority of the respondents pointed to the low level of academic teachers' salaries and an inefficient system of financing research (Figure 2).

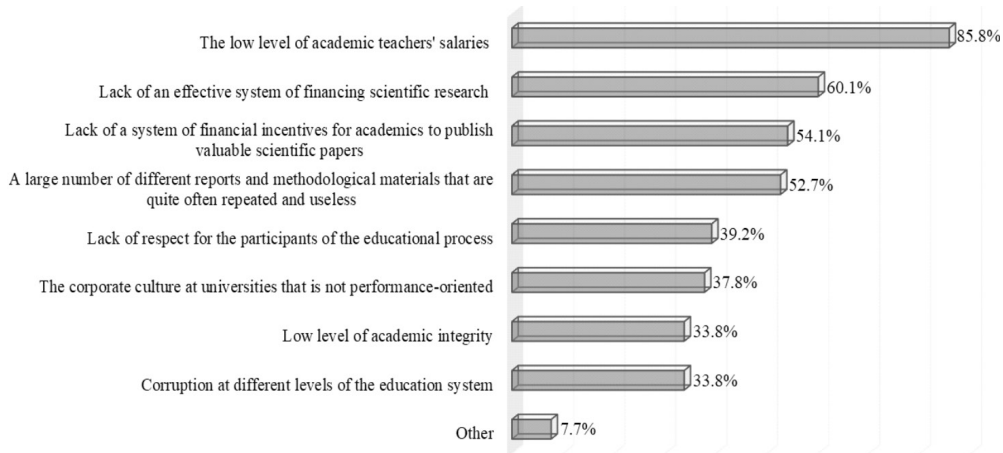


Fig. 2. Problems of the Ukrainian higher education system that need to be addressed first (multiple-choice question)
Source: survey results. $N = 148$

According to the results of the survey, the European integration for Ukrainian higher education is primarily inhibited by such factors (multiple-choice question):

1) "Factories" of doctoral and habilitation theses – a large number of scientific works (not only for the academic degrees, but also scientific articles) are written on commission (59.5%). When the educational services market was growing, for many academics the defence of a doctoral thesis was necessary for further career advancement, including obtaining the title of associate professor. In Ukraine, the demand for degrees was also quite high in the public sector, where there is also a system of surcharges for degrees, as well as in higher education.
2) Violations of the rules of academic integrity by students and academic teachers (54.7%). The current situation regarding the problem of academic integrity, according to the results of the survey, was caused primarily by such reasons: students' reluctance and indifference to learning (39.2%), the insufficient judgment of academic dishonesty in the academic community (29.1%), the formal approach to these issues by the Ministry of Education and Science (20.3%), the lack of relevant legislative and university documents with questions to screen academic dishonesty (2.7%), other (8.7%). Students' academic honesty is another important issue that was taken into account in this survey. According to its results, academics indicate that instances

of detecting academic plagiarism in students' works occur quite often: "I observe this as a supervisor of bachelor's and/or master's theses every year" (33.8%), "I observed this during the previous defences of bachelor's and/or master's theses as a reviewer every year" (11.5%), "There were only individual cases in the past" (25.7%), "I have heard from colleagues in the department/university about such situations" (10.8%), "I did not have to deal with this phenomenon" (11.5%), "Other" (6.7%). The "Other" responses also pointed to cases of detecting academic plagiarism in all types of students' works – in tests, term papers, theses for conferences, articles, etc. In most cases where academic plagiarism was detected in students' works, an appropriate action was taken: "The student's work was sent for verification and paid rechecking for plagiarism with special software (Unicheck, StrikePlagiarism or others)" (54.1%), "The head of the department was informed of the detection of academic plagiarism and appropriate actions were taken" (17.6%), "The head of the department was informed of the detection of academic plagiarism and no action was taken (the matter was resolved "unofficially")" (4.1%), "No action was taken" (6.1%), "There were no cases of plagiarism" (10.7%), "Other" (7.4%). According to the respondents, it is also important not only to detect, but also to prevent cases of plagiarism by explaining the rules of qualifying work to students early on.

3) Unhealthy relationships in teams and the contemptuous attitude of department heads towards academic teachers (42.6%). A destructive corporate culture is unfortunately characteristic of Ukrainian universities. An example of this practice is the management style, in which the head of a department forces employees to follow their orders under the constant threat of dismissal. This creates unhealthy relationships within the team. At Ukrainian universities, there is also a non-transparent system of selecting academic teachers for positions. The practice of financial or other types of incentives for department heads when hiring employees is quite common. In this aspect, a person's "suitability" is usually assessed primarily not for the university, but for the department head. The benefits do not necessarily have to be monetary in nature, but can also include favourable connections in the business sphere, and it can also be the employee's willingness to participate in various "grey activities" at the university.
4) The system of unofficial payments for defending doctoral and habilitation theses (37.2%). Unfortunately, there are systems of unofficial payments before the thesis defence (to the chairman and secretary of the council, reviewers, other university employees who deal with these issues) in the stationary Scientific Councils of various universities (defences before them took place until 2021) and in the Individual Councils (after 2021). To get the recommendation of the Chair before the defence of the thesis at the

Council, depending on the approach of the head of the department, unofficial payments are also needed, but they are much smaller than before a defence before the Council.

5) Bribery (31.1%). In another survey question, most of the respondents remarked that they know about cases of bribery and it is a significant problem in Ukrainian higher education. The responses about bribery said: «Yes, this phenomenon unfortunately exists» (31.1%), «I will not answer this question» (23.0%), «No, at my university all matters are dealt with fairly» (22.3%), «I have heard about it from colleagues in the department/university» (21.6%), «Other» (2.0%). It was also pointed out that if one treats corruption not only as monetary benefits, there are many other varieties of it at universities. The majority of the respondents also know about cases of corruption in the Ministry of Education and Science of Ukraine: "Yes, I know from colleagues, social media and other unofficial sources" (32.4%), "Yes, I have personally dealt with it" (6.1%), "I cannot answer this question" (35.1%), "No" (25.7%), "Other" (0.7%).

   Nevertheless, compared to other aspects of Ukraine's shadow sector of higher education, the greatest success has been achieved in overcoming the practice of charging students unofficial fees for passing exams or eliminating other types of academic arrears. In these matters, compared to 2000 or even 2010, there is a considerable progress. Bribery has become less widespread. This has been influenced not only by the implementation of a hotline and other anti-corruption measures at the institutional level by the Ministry of Education and Science's, but also by the increased level of awareness among students and a better understanding of their rights. At the same time, there has been a reduction in the demand for university educational services, which is related to demographic factors.

6) Other (14.7%). According to the results of the survey, other factors holding back the European integration for Ukrainian higher education are: bureaucracy, the additional burden of unpaid hours on academics, low levels of practical skills, and poor English language skills.

4. Conclusion

The conducted analysis and the results of the survey among academic teachers highlight notable shortcomings in the Ukrainian higher education system. As a result of the survey, the following opportunities to improve the state of the higher education system have also been determined: increasing the salaries of university teachers; implementing institutional changes, reforming higher education (greater autonomy of universities, including financial, changing the accreditation system for educational

programs, reducing bureaucratic procedures); improving the quality of teaching and research activities (strengthening the practical orientation of education and developing cooperation with various stakeholders, developing the Ukrainian system of scientific scholarship for improving the quality of scientific research). In conclusion, it is worth noting that, in order to overcome the shortcomings in the Ukrainian higher education system and strengthen its competitiveness in the context of the EU integration, it is necessary to: improve the institutional environment of higher education (ensure systemic changes in the policies of the Ministry of Education and Science of Ukraine and providing more autonomy to universities, increasing access of Ukrainian scientists to grants and joining European research networks); conduct the further harmonization of Ukrainian legislative acts on higher education and science with those in the European Union, increasing the competitiveness of the national educational system due to the consolidation of universities (uniting universities in the regions and forming powerful educational brands in international rankings and the EHEA); use the contemporary crisis as an opportunity to rebuild a more efficient higher education system through a series of institutional changes (effective implementation of the opportunities to rebuild universities, changes in their governance system based on academic integrity, and strengthening their social responsibility); increase the level of academic integrity of the higher education system (gradual changes in the university management system, reduce pathologies and the share of the "grey sector").

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