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Academia in Ukraine in Times of War: Understanding the Status-Quo, Challenges, and Support Needs

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Academia in Ukraine in Times of War: Understanding the Status-Quo, Challenges, and Support Needs

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Foreword

Free and functional science and higher education systems are among the vital elements and foundations of modern, pluralistic and democratic states and civil societies. With the support of the German Federal Foreign Office, the Science at Risk Emergency Office is therefore supporting hundreds of Ukrainian scientists and students every year for the third year in a row in order to counter the dramatic consequences of the Russian war of aggression for Ukrainian science and academic freedom – through financial support as well as conferences, language courses, methodological training and other funding formats. The results of the annual 2024 monitoring report can be seen as a direct component of these support measures, as only through in-depth knowledge of both the nature and history of the still young Ukrainian science and higher education system and the actual effects of the ongoing Russian aggression can a sustainable and effective basis be laid for future funding and support programmes of all kinds.

Dr. Philipp Christoph Schmädeke,
Director SCIENCE AT RISK Emergency Office

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Executive Summary

The SCIENCE AT RISK Monitoring Report takes stock of the state of Ukraine's higher education and science (HE&S) system and academic freedom in the country, as well as the challenges facing the system and Ukrainian scholars in the context of Russia's full-scale war against Ukraine.

The first part of the report examines the evolution of the Ukrainian academic system since the 1990s, identifying four distinct development phases (1-4). The report also engages with data from the Academic Freedom Index (AFI) to illustrate the dynamics of academic freedom in Ukraine, analysed according to its five dimensions: freedom to research and teach; freedom of academic exchange and dissemination; campus integrity; institutional autonomy and freedom of academic and cultural expression.

1) During the **formative phase (1991-2005),** the legal and organizational foundations for an independent Ukrainian HE&S system were created; the country's educational and science landscape was liberalised. Liberalisation brought about an increase in all aspects of academic freedom. As Ukraine began to integrate into the Bologna system, academic exchange improved significantly.

2) The next phase **(2005-2014)** encompasses the **turbulent period** in Ukrainian politics and its relations with the West and Russia. While Ukraine continued its advancement towards the Bologna system under the Presidency of Viktor Yushchenko, academic freedom came under pressure when Yanukovych took power in 2010. The positive trend in almost all academic freedom dimensions of the years prior was interrupted.

3) During the **post-Euromaidan development phase (2014-2021)**, academic freedom in Ukraine first experienced a decline due to the challenges posed by Russia's aggression in Crimea and Donbas to the Ukrainian higher education system. Later, liberal reforms contributed to a rapid recovery of almost all dimensions of academic freedom. Ukrainian higher education institutions (HEIs) gained more institutional autonomy.

4) The start of the **war phase, with Russia's full-scale invasion of Ukraine on 24 February 2022**, manifested the downward trend of academic freedom in Ukraine. Freedom of academic and cultural expression showed the greatest decline in the midst of the war, especially due to the rise of self-censorship on sensitive war-related issues. The increasing role of the executive has had a negative effect on the institutional autonomy of Ukrainian HEIs.

In the development of its higher education system, Ukraine has been able to ensure the **positive dynamics of academic freedom**, in anticipation of the setbacks following Russia's aggression. The **institutional autonomy** of Ukrainian HEIs, i.e. their ability to make decisions about their internal management, finance and administration, remained **the lowest** among other aspects of academic freedom. The lack of institutional autonomy poses a serious challenge to the academic system in Ukraine, which remains highly centralised.

The first part of this report identifies **three major institutional-level problems in Ukraine's HE&S system**, which are rooted in the broader challenge of the post-Soviet transition, namely

(i) Underfunding and inefficient use of resources. The reported underfunding of Ukraine's HE&S sector results from the combination of inefficient use of funds and the lack of private funding. Both issues are closely linked to the lack of institutional autonomy of universities and the lack of institutional memory of higher education management in a liberal socio-economic system. The sector is still highly dependent on national regulations and state funding.

(ii) Division between research and teaching, which means that teaching staff lack the time and motivation to engage in research and to base their teaching on research results, due to a heavy teaching load and an imperfect incentive system.

(iii) "Brain drain" is a long-standing problem in Ukraine, manifested in the high number of academics who either leave Ukraine to continue their research careers abroad or change their field of work due to low incomes in the academic sector. This challenge has been massively exacerbated by the full-scale Russian invasion of Ukraine. The current and projected decline in the number of university graduates in Ukraine (from 640,000 in 2008 to 360,000 in 2023) explains the need to reorganize the higher education landscape, which will further reduce the number of university staff.

The second part of the report presents the results of the original survey on the wartime needs and challenges of Ukrainian academics. With **1,720 respondents from 12 regions**, the survey examines the impact of the war on academic productivity, gathers information on the wartime experiences of academics, and focuses on the assistance provided by international organisations and universities. The results of the survey underline that the war has taken a heavy toll on Ukrainian academics, with a significant **44.4%** of them expressing **feelings of depression**. **5.1%** of respondents reported having served in the **Ukrainian Armed Forces**. The proportion of academics whose **family members have suffered significantly** as a result of the war, either through death or serious injury, is **25.9%**. The **academic productivity** of Ukrainian scientists **decreased significantly in 2022**, with publication output falling by 10%, participation in conferences in Ukraine and abroad

falling by 20% and 28% respectively, and the number of applications submitted and funded for national and international research grants falling sharply. Although the **recovery in 2023 and 2024** demonstrated the remarkable resilience of Ukrainian academics, the need for targeted and accessible support remains, as the following survey results show:

(i) Increased need for financial support. In 2024, 36% of respondents reported the need for financial support (versus 26% in 2022).

(ii) Need for stronger outreach. 59% of respondents indicate to be unaware of the available support options from the international community.

(iii) Barriers to accessing support programmes. Over 55% of respondents referred to language barriers and the lack of necessary qualifications (e.g., publications in international journals) as significant obstacles to their participation in international support programmes. This data implies the need for developing more inclusive support mechanisms with capacity-building elements aimed at tackling these specific barriers.

(iv) Demand for variegated support. When asked about their needs, over a third of respondents (32%) supported the creation of individual needs-based support programmes for researchers; 30.5% emphasize the need for support attached to universities or faculties, while 21.2% and 18.6% of respondents call for residential and non-residential fellowships, respectively.

This analysis of the wartime needs and preferences of Ukrainian scholars thus points to the demand for variegated, accessible and widely communicated financial support measures, ideally coupled with mental health and professional support opportunities. Given the structural challenges in Ukrainian academia, such individual support measures should be combined with international support aimed at increasing the efficiency of funding for education and science, strengthening links between academic research and teaching, and creating incentives for Ukrainian scholars to remain in Ukraine.

Introduction

Russia's full-scale invasion of Ukraine in 2022 has had serious consequences for Ukrainian higher education and science. It has exacerbated the structural challenges that became endemic to the country's academic system in the midst of the post-Soviet transition and exacerbated the problems caused by Russia's annexation of Crimea and its proxy occupation of parts of eastern Ukraine in 2014.

The scale of destruction and human suffering, caused by Russia's full-scale invasion and the ongoing war against Ukraine, is far greater than previous instances of aggression. As of September 2024, Russia is reported to have damaged or destroyed 2,509 educational institutions, including 141 higher education institutions (HEIs), severely hampering the functioning of the sector.[1] The war has also taken a heavy toll on Ukrainian scholars. Many have been displaced,[2] and an estimated 1,500 scholars are on the frontline,[3] leading to a significant reduction in academic staff. Tragically, several scholars have lost their lives defending their country.[4] Many academics have left Ukraine to seek safety for themselves and their families, and to continue working in their professional fields.[5]

Against this background, the SCIENCE AT RISK Monitoring Report seeks to develop a better understanding of both the structural challenges currently facing Ukraine's academic system and the impacts of the war on Ukrainian scholars. The first part of the report highlights the longevity of funding efficiency, the research-teaching relationship and brain drain issues in Ukraine's academic system, with a particular focus on war-related developments and government policies in these areas.

Focusing on the evolution of Ukraine's higher education and science system since the 1990s, the report discusses the origins and manifestations of such challenges

1 "Russia destroys or damages over 2500 educational institutions in Ukraine", Ukrinform, September 20, 2024. https://www.ukrinform.net/rubric-society/3907564-russia-destroys-or-damages-over-2500-educational-institutions-in-ukraine-since-invasion.html (accessed 20.10.2024).

2 In particular, the survey conducted within the SCIENCE AT RISK Monitoring Report 2023 demonstrated that over 25% of scholars were forced to change their residence due to the war. See Yevstiunina, Yuliia, Folhina, Tetiana, and Schmädeke, Philipp Christoph, "SCIENCE AT RISK Monitoring Report "Ukraine 2022-2023: Threats to science and higher education after the full-scale Russian invasion". Science at Risk Emergency Office by akno e.V, November 2023. https://science-at-risk.org/wp-content/uploads/2024/01/SAR-Monitoring-Report_Ukraine-Dec-2023.pdf (accessed 20.10.2024).

3 Analysis of war damage to the Ukrainian science sector and its consequences. UNESCO, 2024. https://unesdoc.unesco.org/ark:/48223/pf0000388803 (accessed 31.10.2024).

4 Kudina, Mariia, "Ukraine at War: Remembering Ukrainian students killed by Russian aggression", Tufts Daily, March 28, 2024. https://www.tuftsdaily.com/article/2024/03/ukraine-at-war-remembering-ukrainian-students-killed-by-russian-aggression (accessed 31.10.2024).

5 Carl, Noah, "Ukraine's brain drain is 17 times worse than Russia's", UnHeard, March 3, 2023, https://unherd.com/newsroom/ukraines-brain-drain-is-17-times-worse-than-russias/; Levy, Adam. "How to keep Ukraine's research hopes alive", Nature, April 28, 2023. https://www.nature.com/articles/d41586-023-01395-1 (accessed 31.10.2024).

and addresses the state of academic freedom in Ukraine. The report uses data from the Academic Freedom Index (AFI). The AFI is a collaboration between the V-DEM Institute (University of Gothenburg, Sweden) and the Friedrich-Alexander-Universität Erlangen-Nürnberg (Germany) that aims to assess the de facto levels of academic freedom across 179 countries and territories. Its assessment is based on five indicators, namely (i) freedom to research and teach; (ii) freedom of academic exchange and dissemination; (iii) institutional autonomy; (iv) campus integrity; and (v) freedom of academic and cultural expression.

Partly relying on the findings, presented in the first part of the report, the second part offers a nuanced understanding of the multifaceted impacts the war had on the Ukrainian academic community. Based on the survey with 1,720 Ukrainian scholars from twelve regions in various parts of the country, it offers a detailed assessment of the current state of Ukrainian academia and scholars' needs. Integrating the system- and individual-level perspectives, the study offers actionable data that can guide the development of targeted support programmes, help to mitigate the immediate impacts of the war and lay the groundwork for long-term recovery and resilience in the academic sector. The concluding part of the report thus integrates recommendations for international donors as to the development of needs-based support programmes for Ukrainian scholars and the country's higher education and science system.

Part 1

Structural Challenges of the Ukrainian Academic System

by Maryna Rabinovych

Development of Science and Higher Education in Ukraine since the 1990s

The 1990s were a difficult but formative time for all post-Soviet countries as they struggled to find their way after the collapse of the USSR. Ukraine, with its constitution adopted in 1996, went through an intense period of state-building and transition in the 1990s. Many peculiarities of its education and science system can be explained by the developments of this decade. The study will therefore focus on the following four phases of science and higher education development in Ukraine from the 1990s to the present.

Data from the Academic Freedom Index (AFI) are used throughout the analysis.[6] Figure 1 shows developments in Ukraine across all dimensions of the AFI during each of the four development phases.

Formative Phase. 1991-2005. The Ukrainian authorities laid the legal and organizational foundations for an independent education and science system. Ukraine inherited an extensive network of higher education institutions (HEIs) and scientific institutions from the USSR, and the main task of the authorities was to optimise it for operation under the democratic system. New legislation (e.g., Laws of Ukraine "On Education" (1991) and "On Science and Scientific Activities" (1991)) contributed to solving the main challenges of the period, such as de-ideologisation of the education and science system and laying the foundations for university autonomy. An important milestone was the resumption of the activities of the Kyiv-Mohyla Academy as one of the oldest and most important academic centres in Ukraine (1992). The Academy has also played a central role in the development of Ukrainian language and culture programmes, which were virtually non-existent during the Soviet period, when Russian language and culture dominated the academic landscape. The liberalisation of the educational landscape led to the creation of numerous private universities and (despite quality concerns)[7] contributed to an increase in freedom to research and teach and institutional autonomy, the indicator of which almost tripled during this phase (Fig. 1). Ukraine's movement towards the Bologna process in the late 1990s[8] and the development of international exchange programmes for Ukrainians contributed to the increase in the indicator for academic exchange and dissemination (Fig. 1).

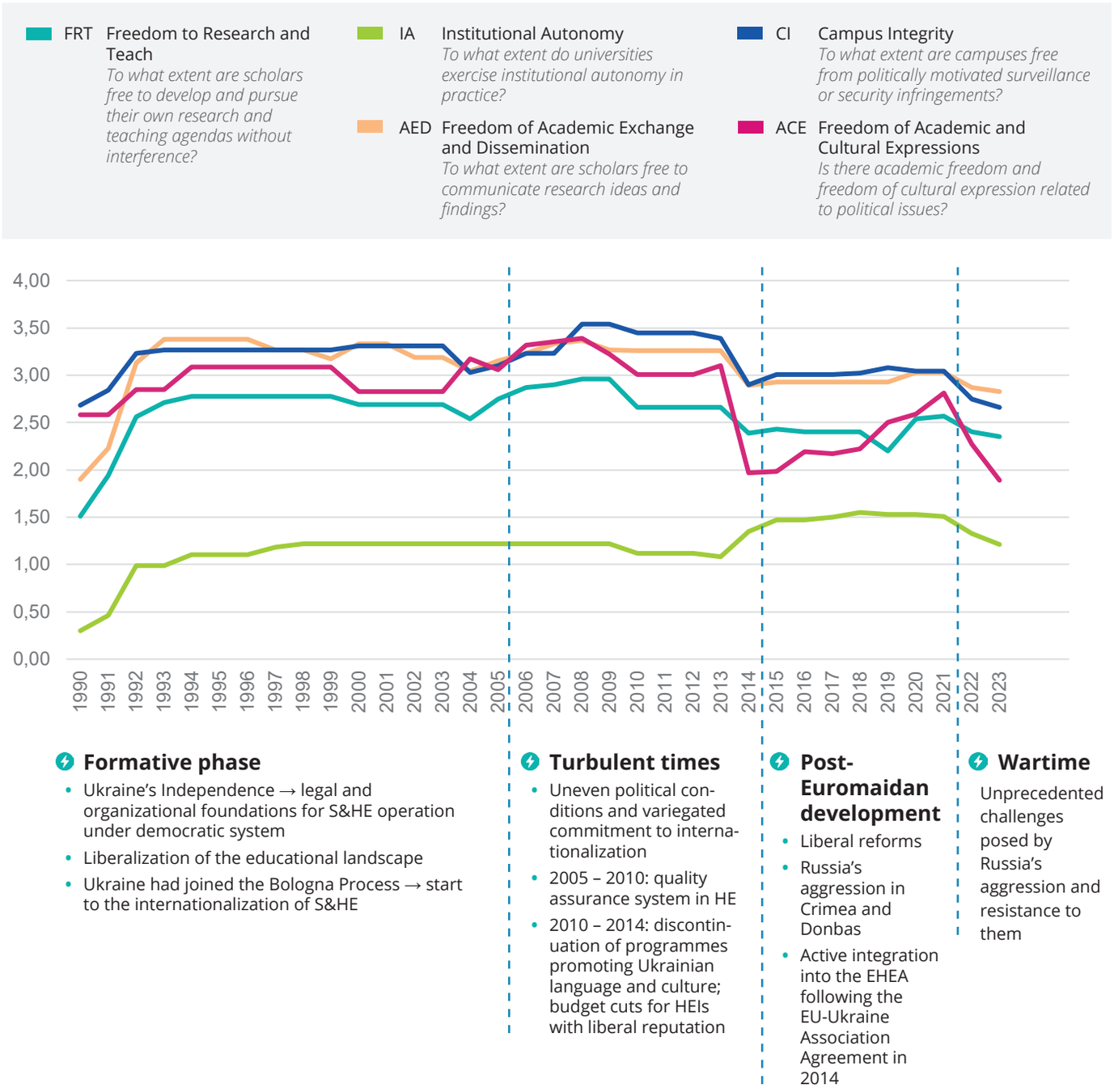
6 Friedrich-Alexander University, V-DEM Institute, "Academic Freedom Index," https://academic-freedom-index.net/ (accessed 24.10.2024).

7 Strazhnikova, Iryna, "The system of higher education in Ukraine during the first years of independence," Молодий вчений [Young Scholar,] No 12.1/40 (2016): 539-542. http://lib.pnu.edu.ua:8080/bitstream/123456789/2711/1/%D0%A1%D0%B8%D1%81%D1%82%D0%B5%D0%BC%D0%B0%20%D0%BE%D1%81%D0%B2%D1%96%D1%82%D0%B8.pdf (accessed 31.10.2024).

8 Nikolaeva, Sofiya, "The Bologna Process in Ukraine: The Decade Anniversary," General and Professional Education 4 (2015): 66-74. http://genproedu.com/paper/2015-04/full_066-074.pdf (accessed 29.10.2024).

Figure 1. Academic Freedom Index scores 1990 – 2023 and development periods of Ukraine's science and higher education

AFI system of measurement:
0-4 on each dimension, where 0 –completely restricted and 4 – fully free.



Turbulent Times. 2005-2014. This phase covers the turbulent period in Ukrainian politics and Ukraine's relations with the West and Russia. Between 2005 and 2010, the then President of Ukraine, Viktor Yushchenko, worked to advance Ukraine's European and Euro-Atlantic agenda, and Ukraine's education system moved towards the Bologna Process. An important milestone in this process was the transfer from university entrance exams to an all-Ukrainian independent testing system in 2010, which marked the beginning of the formation of a quality assurance system in Ukrainian

higher education. However, "academic freedom has come under pressure since Yanukovych took power" the same year.[9] Many programmes aimed to promote the Ukrainian language and culture were curtailed and budgets for HEIs with a liberal reputation were cut.[10] Ukraine experienced a decline in the dimension of academic and cultural expression dimension and in the freedom to research and teach (Fig. 1).

Post-Euromaidan development. 2014-2021. The Euromaidan revolution of 2013/14 and the beginning of Russia's aggression against Ukraine in Crimea and Donbas manifested the (re)beginning of pro-European and liberal reforms. The signing of the EU-Ukraine Association Agreement in 2014 (and its entry into force in 2017) also gave an impetus to such reforms. In the first years after the Euromaidan there was even a downward trend in the freedom of research and teaching. This can be explained by the politicisation of higher education in Ukraine due to Russia's aggression in Crimea and Donbas, and the rise of the phenomenon of self-censorship, especially in history research and teaching.[11] The new regulations on academic, organizational and financial autonomy have only partially contributed to changing the centralised system of university governance, with the lack of institutional readiness being a major challenge. The COVID-19 pandemic does not seem to have had a significant impact on academic freedom in Ukraine, with similar scores between 2019 and the two pandemic years of 2020 and 2021. In a nutshell, prior to the full-scale war, Ukraine scored higher on all dimensions than in 2014, despite the challenges associated with Russian aggression since 2014.

Wartime. 24 February 2022 – ongoing. Russia's full-scale invasion of Ukraine created enormous challenges for Ukraine's education and science, and negatively affected various aspects of academic freedom. Similar to 2014, the Ukrainian government had to relocate many universities from the occupied territories. Compared to 2014, 2022 is marked by a much larger wave of students and scholars seeking protection and opportunities to continue their studies and research abroad, mostly in Europe and the US.

The AFI shows a downward trend in all dimensions (Fig. 1). The decline in academic exchange and dissemination can be attributed to the lack of mobility and academic exchange within Ukraine and the martial law that prohibits most male students and academics from leaving Ukraine and prevents them from participating in exchange programmes. The reduced dimension of academic and cultural expression can be explained by the resurgence of self-censorship, especially regarding sensitive issues such as mobilisation or peace negotiations with Russia. Both the academic

9 UNHCR, Refworld. "Freedom in the World 2014 – Ukraine," https://www.refworld.org/reference/annualreport/freehou/2014/en/96750 (accessed 31.10.2024).

10 Ibid.

11 Malyarenko, Tetyana, "Universities under fire in Ukraine's war," Index on Censorship. 44/2 (2015): 14-17. DOI: 10.1177/0306422015591422.

exchange and dissemination and the academic and cultural expression dimensions of academic freedom are impacted by the ban on cooperation between Ukrainian institutions with their counterparts from Russia and Belarus.[12] The Ministry of Education specifies several forms of responsibility for Ukrainian scholars who have co-authored Scopus- and Web of Science-listed articles with counterparts affiliated with Russian and Belarusian institutions and those created by Russia in the occupied territories of Ukraine, namely:

- The termination of state funding for studies whose registration numbers were mentioned in such publications.
- Prohibiting the authors of such studies from participating in the state competition for research funding in the next calls.
- Disqualification of the authors concerned from any expert or advisory functions in the system of the Ministry of Education of Ukraine.[13]

In practice, even cooperation with Russian and Belarusian scholars affiliated to Western institutions can be problematic for Ukrainian scholars based in Ukraine and abroad due to peer pressure. Sometimes this pressure is linked to ethical concerns about European universities' and funding agencies' supporting of not only Ukrainian but also Russian and Belarusian scholars in the light of Russia's war against Ukraine.[14] More generally, such concerns stem from the Ukrainian government's opposition to the Western narrative of "Putin's war" and its framing of the Russian population as supporting the war.[15] Formal and informal pressure on scholars in connection to their academic collaborations may also have affected Ukraine's score on campus integrity (Fig. 1).

Finally, the war and the increased role of the executive in all areas of governance negatively affected Ukraine's 'institutional autonomy' scores (Fig. 1). Relevant war-related challenges include the reduction in the capacity of higher education and research institutions due to the displacement of their staff or their participation in military actions, the relocation of higher education institutions from occupied territories, and plans to merge higher education institutions. At the same time, the Ministry of Education of Ukraine took several steps in 2024 to support Ukrainian academics by reducing teaching loads and providing new funding opportunities.

12 Verkhovna Rada of Ukraine, Law of Ukraine, "On the suspension of the Agreement between the government of Ukraine and the Government of the Russian Federation on scientific-technical collaboration," 2219-IX, June 19, 2022. https://zakon.rada.gov.ua/laws/show/2299-20#Text (accessed 31.10.2024).

13 Ministry of Education of Ukraine, Letter from the Ministry of Education of Ukraine No 1/2017-24 "On the need to stop any kind of scientific cooperation with the Russian Federation and the Republic of Belarus," Osvita.ua, February 6, 2024, https://osvita.ua/legislation/Vishya_osvita/91375/ (accessed 31.10.2024).

14 Rybiy, Olena, "How European universities provide support to Russians in the name of solidarity with Ukraine," Vox Ukraine, April 21, 2022. https://voxukraine.org/en/how-european-universities-provide-support-to-russians-in-the-name-of-solidarity-with-ukraine (accessed 31.10.2024).

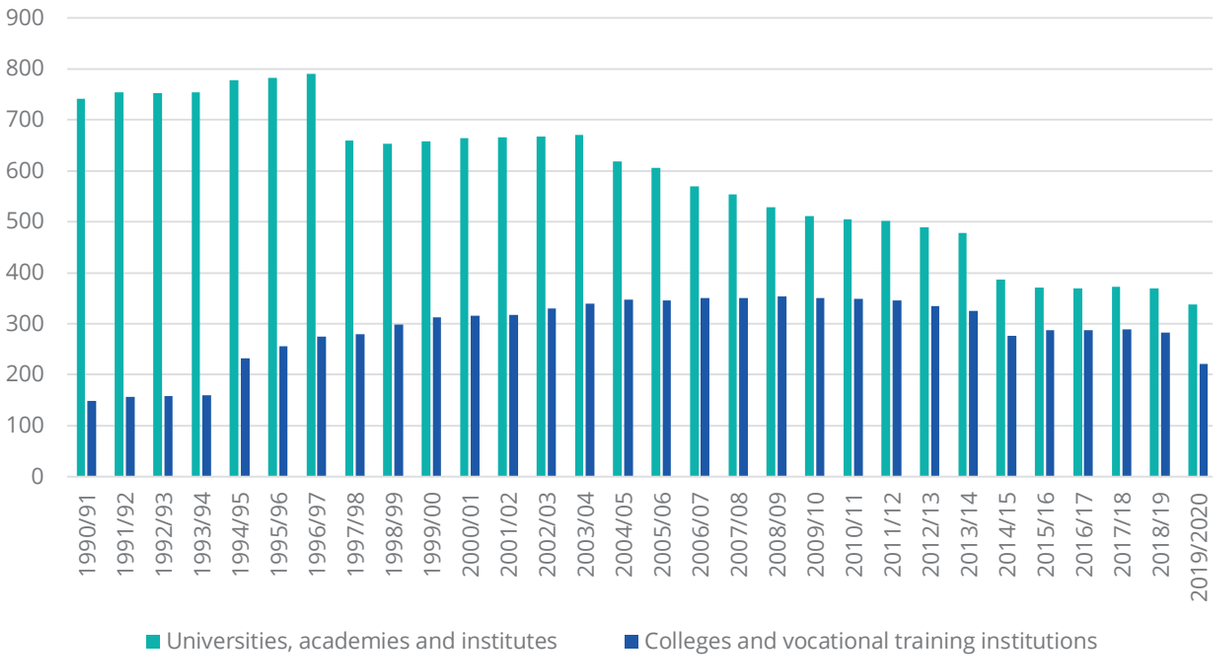
15 Ibid.

The war created unprecedented challenges to academic freedom in Ukraine, leading to a decrease in Ukrainian AFI positions. Yet, the uneven dynamics of the analyzed period also point to opportunities for improvement, provided that the governance of higher education in Ukraine remains agile, lasting academic partnerships with foreign institutions are created, and meaningful discourses about the war and post-war Ukraine are formed and internalized.

Ukraine's Demographic Development and its Influence on the Higher Education System

Higher education has traditionally had a high social value in Ukraine[16]. In the 2020/2021 academic year, there were 386 HEIs in Ukraine, which represents a dramatic decrease compared to the 1990s and 2000s (Fig. 2).[17] The number of HEIs further decreased to 347 in 2022/2023 and 314 in 2023/2024. The overall decrease can be explained by the numerous higher education reforms in the researched period and Russia's occupation of the Ukrainian territory. The decrease in the midst of the war is due to the fact that wartime statistics do not include HEIs in the occupied territories or those where military action is ongoing.

Figure 2. Number of HEIs in Ukraine, 1990/1991-2019/2020



16 Showcased by a high ratio of students to general population: slightly over 2.4% prior to the war compared to the EU-wide figure of 0.6% in 2021 (European Commission, "Education and Training Monitor 2023: Higher Education," https://education.ec.europa.eu/about-eea/education-and-training-monitor (accessed 31.10.2024).

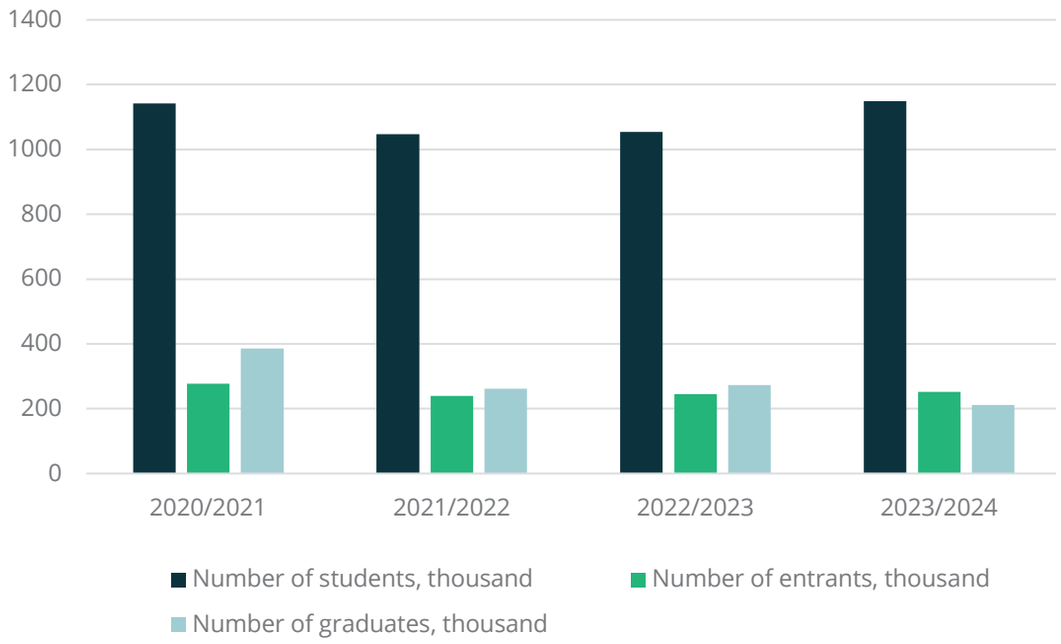
17 Statistical Service of Ukraine, "Higher and professional pre-higher education in Ukraine," 2024. https://ukrstat.gov.ua/operativ/operativ2021/osv/vush_osv/arh_vuz_20_u.html (accessed 31.10.2024).

The Ministry of Education of Ukraine plans to reorganize the university network, so that the number of universities does not exceed 100.[18] This reorganization aims to tackle the current and prospective demographic developments, rather than the impact of the war. Between 2008 and 2023, the number of high school graduates' population in Ukraine decreased from 640 000 to 360 000.[19] By 2033, this number is expected to decrease to 300,000, and this figure considers high school graduates from occupied territories, so, in fact, the number may turn out to be even lower.[20]

The number of students did not change significantly during the war. The Ministry of Education of Ukraine has noted an increase in the number of male applicants for all courses of study,[21] most likely explained by the fact that the law on mobilisation provides for the referral of university students from conscription to military service. However, the number of graduates has been steadily decreasing (Fig. 3), as many students are forced to abandon their studies in order to earn a living or to join the military as volunteers. Following the Russian invasion of Ukraine, the number of Ukrainian students studying abroad reached 85,251, with Poland and Russia being the largest receiving countries.[22] The war also led to a decline in the number of foreign students (51,676 in 2023, almost 30,000 fewer than before the beginning of the full-scale invasion).[23]

Figure 3. Number of students at Ukrainian HEIs, 2020/2021 – 2023/2024[24]

Source: Statistical Service of Ukraine



18 Poya, Anastasiia, "Demography is disappointing: In the Ministry of Education, there are plans to reduce the number of universities to 100," Pravda LIFE, January 15, 2024. https://life.pravda.com.ua/society/2024/01/15/258842/

19 Ibid.

20 Ibid.

21 Perun, Vira, "Ministry of Education of Ukraine notes a large number of men who decided to enter master and PhD studies," May 31, Lb.ua. https://lb.ua/society/2024/05/31/616375_minosviti_fiksuie_veliku_kilkist.html

22 Education.fair, "Market report Ukraine", https://www.educationfair.net/market-reports/europe/ukraine/

23 Osvita.ua, "The number of foreign students in Ukraine reduced by one third," March 12, 2023, https://osvita.ua/vnz/89100/

24 Statistical Service of Ukraine (2024). See fn 17.

Negative demographic trends are therefore a major challenge for Ukraine's HEIs and scientific institutions. However, they can also contribute to the quality of education and research by facilitating competition among these institutions.

Apart from HEIs, scientific research in Ukraine is carried out by scientific institutions, most of which belong to the state sector (61%)[25] or represent municipal or private enterprises. The National Academy of Sciences is the largest and most important state-owned non-profit scientific institution in Ukraine.[26] Between 2018 and 2022, this sector also experienced a strong decline dynamic of 42% (from 950 in 2018 to 557 in 2022). This decline can be attributed to demographic and economic challenges, including those caused by the COVID-19 pandemic and geopolitical tensions with Russia, e.g., the outflow of foreign investment.[27]

25 Ministry of Education of Ukraine, "Scientific and scientific-technical activities in Ukraine in 2022," https://mon.gov.ua/storage/app/media/nauka/2023/07/25/Nauk-analit.dopov.Naukova.ta.nauk-tekhn.diyaln.v.Ukr.2022-25.07.2023.pdf (accessed 31.10.2024).

26 Ibid, Art. 17.

27 International Monetary Fund, "COVID-19 and the war in Ukraine," 2022, https://www.imf.org/external/pubs/ft/ar/2022/in-focus/covid-19/ (accessed 3.10.2024).

Major Challenges of Ukraine's Higher Education and Science System

Underfunded or Inefficient?

Data on the financing of Ukrainian universities reveal a contradiction between the reported underfunding of the sector[28] and a relatively high median ratio of public budget expenditure on higher education to GDP. In Ukraine, this ratio equals or even exceeds the same indicator in many countries, including EU member states (e.g., 1.1% in Estonia, 1.4% in Finland in 2020).[29]

This comparison makes it plausible to argue that, in addition to the gradual devaluation of the Ukrainian currency, the Hryvnia (UAH), the reported underfunding of the sector is due to a combination of inefficient use of funds and a lack of private funding. These phenomena are rooted in the Soviet legacy of higher education regulations and the challenge of implementing financial autonomy for universities. Under the USSR and in Ukraine's early years of independence, universities were completely dependent on national regulations and state funding. Given the lack of institutional memory, the development of all aspects of autonomy is reported to be a challenge for both regulatory bodies and universities themselves. Financial autonomy is problematic, in particular the right of public universities to borrow, to own buildings or to freely set prices for educational services.[30] In addition, the inefficiency of funding leads to a lack of research infrastructure. For example, Ukrainian institutions chronically lack the funds to purchase access to databases of scientific articles and software, and to finance conference attendance for staff (if funds are not provided by international projects).

This challenge remains, but slightly positive changes occurred due to (i) the creation of a clear, competitive methodology for the distribution of funds among universities in 2024 (Table 1); (ii) the budget reform and the creation of education subvention (i.e. a flexible, target-oriented budget support instrument in the field of education,

28 See, e.g., Deryugina, Tatyana, and Kolyma, Margaryta. "Time to Save Higher Education in Ukraine is Running Out," Vox Ukraine, August 31, 2022. https://voxukraine.org/en/time-to-save-higher-education-in-ukraine-is-running-out (accessed 20.10.2024).

29 Statista, "Expenditure on higher education as a share of GDP in selected countries worldwide in 2020, by source of funding," https://www.statista.com/statistics/707557/higher-education-spending-share-gdp/ (accessed 31.10.2024).

30 Panych, Olena, "University autonomy in the context of Ukrainian legislation and practices," Civic initiatives portal, July 25, 2019. http://education-ua.org/ua/component/content/article/12-articles/1348-universitetska-avtonomiya-v-konteksti-ukrajinskogo-zakonodavstva-i-praktiki?fbclid=IwAR1KXTJkiWI1VbzOk7BQj-urpblXrbLhJg7x31Kx7UN_Vv796ZX7strlKNo (accessed 31.10.2024).

launched in 2024); (iii) the launch of the National Research Foundation of Ukraine in 2018; and (iv) internationalisation. In 2024, expenses for all levels of education rose by almost 22% (compared to 2023), and new subventions were launched, e.g., to support the fund for the development of higher and professional pre-higher education.[31] Even with an expected inflation rate of around 5% in 2024, this rise can be considered significant.

Table 1. Criteria for the distribution of state funds among universities

Number of students	Especially those whose study places are budget-funded
Scientific activity	The amount of money (per employee) that the university earnt as a result of providing scientific consultation services or got in the form of research grants
Internationalisation	Rankings in international ratings and/or participation in Erasmus+ projects
Employment	Percentage of alumni in employment
Regional coefficient	Aimed at supporting the most vulnerable universities, especially those located on the frontline

The main sources of funding available to higher education institutions include budget funding, international and national R&D projects, and the provision of educational services to students whose studies are not funded by the state budget. In 2023, only 37% of university places in Ukraine will be funded by the state, while 63% of students will finance their studies themselves or through family support or loans.[32] To help more students, the Ministry of Education plans to introduce a system of state grants combined with low-interest loans and self-financing.[33]

In contrast to the share of expenses for higher education, the ratio of expenses on science to GDP in Ukraine is traditionally lower than in other European countries (0.5% of GDP in 2020, compared to 1.32% in Poland and the median of 2.1% in the EU).[34] Such underfunding caused strong "brain drain": while in 2010 the National Academy of Sciences employed 3122 scholars under the age of 35, including 1431 PhD-holders, in 2020 these figures had almost halved to 1625 scholars and

31 "Education Budget 2024: the rise of expenses for main directions," Osvita.ua, 2024, https://osvita.ua/news/90417/#google_vignette (accessed 31.10.2024).

32 Voloshyn, Mariya, "How many students in 2023 used state-funded places at universities, and how many had contracts?," 24. Osvita, December 12, 2023. https://24tv.ua/education/vstupna-kampaniya-2023-skilki-studentiv-vstupili-byudzhet-skilki_n2451053 (accessed 31.10.2024).

33 Tunik-Friz, Volodymyr, "The number of universities will be reduced two times, and students will compete for money: new "market" rules for higher education," Economic Pravda, May 2, 2024. https://www.epravda.com.ua/publications/2024/05/2/713153/ (accessed 31.10.2024).

34 Feya, Oleg, "За обрієм. Beyond the horizon: what happens to Ukrainian science in ten years?." Tyzhden, August 21, 2021. https://tyzhden.ua/za-obriiem-shcho-bude-z-naukoiu-v-ukraini-cherez-desiat-rokiv/ (accessed 31.10.2024).

976 PhD-holders, respectively.[35] Despite the ongoing war, the funding for science was increased by 20% in 2024.[36] Priority areas include applied research based on the needs of ministries and key state services, support for young scholars, and the evolution of performance-based research funding, aimed at facilitating competition across universities and scientific institutions. This increase in spending does not reflect a stabilisation of the military and financial situation in Ukraine, but rather aims to harness Ukraine's potential to use research-based solutions in defence and future reconstruction, to support scientists who have stayed in Ukraine and to create incentives for those who have left to return.[37]

Research versus Teaching

The strong separation between research and teaching, inherited from the Soviet era, and the primary function of HEIs as teaching institutions has had a strong impact on the quality of research conducted in Ukraine. Ukrainian universities tend to perform poorly in international ratings. In 2024, 11 Ukrainian universities made it into the Britain's Quacquarelli Symonds (QS) rating, which ranks over 1500 universities worldwide based on an examination of academic production by scholars and reviews by academics and employers.[38] Yet none of the included universities ranked higher than 700. 15 Ukrainian universities are listed in the 2024 Times Higher Education Rating, with Sumy State University leading the way (#401-500) followed by Lviv Polytechnic University (#601-800), and Kharkiv National University of Radioelectronics (#1001-1200).[39]

In addition to the strong separation between research and teaching per se, the relatively low position of Ukrainian HEIs in international rankings can be explained by other remnants of the post-Soviet legacy. First, scholars often lack capacity to apply for funding and engage in research activities due to a heavy teaching load and the involvement in various administrative tasks. Recently, the Verkhovna Rada of Ukraine addressed this challenge by adopting legislation that reduces the obligatory teaching load.[40] Second, Ukrainian scholars, especially those who were educated in the USSR, are likely to lack experience of international exchange and cooperation due to a lack of English language skills. Finally, while Ukrainian scholars lack funded research time, yet

35 Ibid.

36 "Budget expenses on science grew by 20% in the budget 2024: Ministry of Education named three main directions," Ukrinform, November 9, https://www.ukrinform.ua/rubric-society/3784800-vidatki-na-nauku-v-budzeti2024-zrosli-na-20-u-mon-nazvali-tri-osnovni-napramki.html (accessed 31.10.2024).

37 Ibid.

38 "11 Ukrainian universities named in 2024 QS World Rankings, but none higher than #700 – Who made the cut?" NV.ua, June 6, 2024. https://english.nv.ua/nation/ranking-of-the-world-s-universities-which-ukrainian-universities-are-on-the-list-50424872.html (accessed 31.10.2024).

39 "15 українських університетів у світовому рейтингу 2024," [15 Ukrainian universities at the world rating 2024,] Education.ua, October 17, 2023. https://www.education.ua/news/2023/10/17/15-ukrainskykh-universytetiv-u-svitovomu-reitynhu-2024/ (accessed 31.10.2024).

40 Ministry of Higher Education of Ukraine, "Decrease in teaching obligations for staff and de-bureucratization of the Ministry: Results from the seating of the Verkhovna Rada," Uriadovyi Portal, June 6, https://www.kmu.gov.ua/news/zmenshennia-navchalnoho-navantazhennia-na-vykladachiv-i-debiurokratyzatsiia-mon-rezultaty-zasidannia-vru (accessed 31.10.2024).

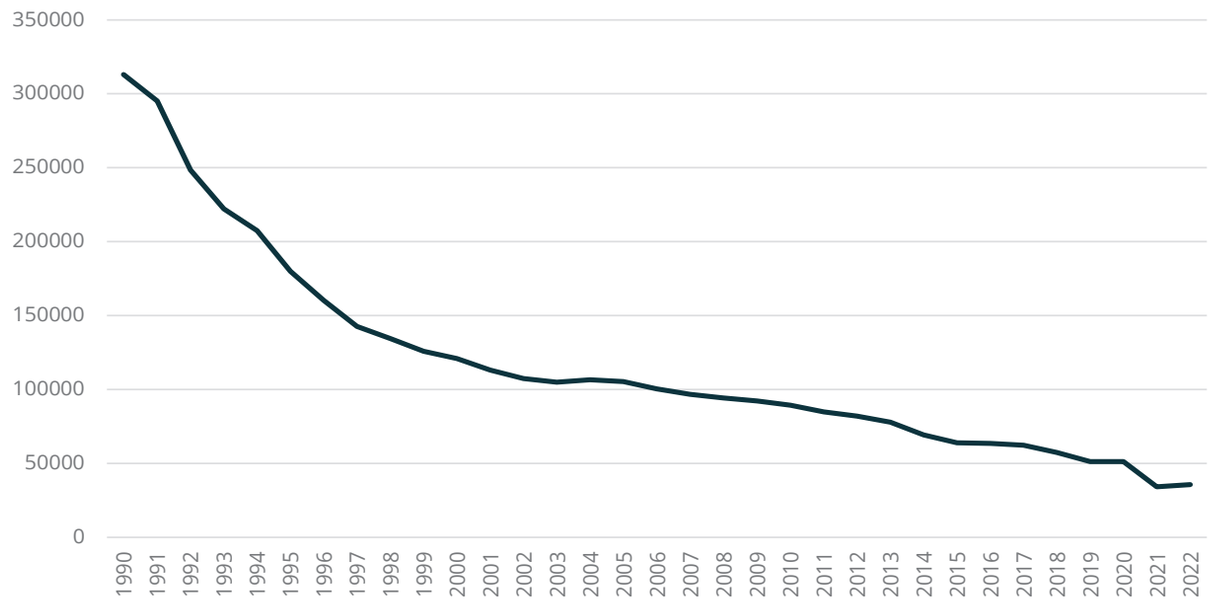
publishing is important for positive research evaluation, predatory publishing services with no or very formal peer review[41] are popular among Ukrainian scholars. As the evidence from humanities and arts research shows, the publication patterns of scholars affiliated to Ukrainian institutions exhibit dynamics comparable to those of other developing lower-middle income economies, with a gradual increase in the number of Scopus-listed papers. However, the share of publications in top-quartile sources and the citation rate are lower compared to other countries in the same group.[42]

"Brain Drain" Challenge

"Brain drain" is another challenge for Ukrainian science and higher education. Low salaries for academic staff, coupled with high teaching and administrative workloads, encourage scholars to either leave academia for better paid jobs within Ukraine or to move abroad. Many also choose to combine part-time academic work with work for international development agencies, NGOs and the private sector. Between 1991 and 2018, the number of academic staff tripled,[43] falling from 295,010 to 88,100. It will continue to shrink between 2018 and 2021, reaching a low of 35,700 registered researchers in 2022 (Fig. 4).

The war contributed to the pre-existing "brain drain," with around 18.5% of Ukrainian

Figure 4. Number of academic staff employed in Ukraine between 1990–2022



41 Cocea, Madalena, "Central and eastern Europe bites back at predatory publishers," Science Business, May 24, 2024, https://sciencebusiness.net/news/open-science/central-and-eastern-europe-bites-back-predatory-publishers (accessed 31.10.2024).

42 Nazarovets, Serhii, and Mrygold, Olena, "Ukrainian arts and humanities research in Scopus: a bibliometric analysis," Emerald Publishing Ltd, August 15, 2023. DOI 10.1108/LHT-05-2023-0180.

43 State Statistical Service of Ukraine, "Scientific staff and number of organizations," 2024. https://ukrstat.gov.ua/operativ/operativ2005/ni/ind_rik/ind_u/2002.html (accessed 31.10.2024).

scientists reported to have left the country by December 2022.[44] Survey data suggests that "the most research-active Ukrainian scientists were among the most likely to leave the country".[45] As men aged between 18 and 60 are generally not allowed to leave Ukraine due to the law on mobilisation, this mainly concerns female scientists. There are no precise statistics on the destination countries offered by displaced Ukrainian scientists; given the short to medium-term nature of the support programmes to which they have access, they may also be inclined to change their country of residence.

Since the beginning of the full-scale invasion, links to the international community through fellowships for academic staff, student mobility programmes, and other forms of partnership "have offered a lifeline to many Ukrainian institutions".[46] Since support for outgoing mobility has aggravated the "brain drain," international donors currently emphasize support for scholars who reside in Ukraine and lasting institutional partnership with Ukrainian HEIs.[47]

In a nutshell, the agility of Ukraine's higher education and science system and its ability to withstand the war will, *inter alia*, depend on the extent to which the country manages to address the systemic issues, discussed above, namely the inefficiency of funding, the separation of research and teaching, and the "brain drain".

44 De Rassenfosse, Gaetan, Murovana, Tetiana, Uhlbach, Wolf Hendrik, "The effects of war on Ukrainian research," Humanities and Social Sciences Communications 10 (2023). https://doi.org/10.1057/s4159 (accessed 31.10.2024).

45 Ibid.

46 Seumenicht, Oksana, "Ukrainian higher education has preserved, but strategic integrational collaboration is key to its post-war future," European University Association, February 20, 2024. https://www.eua.eu/our-work/expert-voices/ukrainian-higher-education-has-persevered-but-strategic-international-collaboration-is-key-to-its-post-war-future.html (accessed 31.10.2024).

47 Ibid.

Part 2

The Impact of Russia's War Against Ukraine on Ukrainian Academics

by Iuliia Iashchenko

Objectives and Methodology

This part of the report aims to provide an in-depth insight into the challenges facing Ukrainian academics in the midst of the war and their evolving needs. This real-time assessment will be used as a basis for suggesting individual- and institution-level measures to support Ukrainian academia.

To achieve these objectives, we have adopted a mixed-methods approach, combining quantitative and qualitative data collection. The primary data collection tool is a comprehensive online survey that was distributed to Ukrainian scholars in **May-September 2024**, designed to gather information on their experiences, challenges, and perceptions since the beginning of the full-scale Russian invasion of Ukraine. The survey consisted of **70 questions**, divided in **five blocks** covering the following aspects:

Blocks 1 and 2 collect basic demographic information about respondents. Understanding the distribution of respondents by gender, age, academic discipline, and geographical location is crucial for analysing how different groups have been affected.

Block 3 examines the impact of the war on academic productivity and professional achievements, such as conference participation, publications, fellowships, and research grants.

Block 4 collects information on the physical destruction and displacement experienced by academic institutions and individuals.

Block 5 focuses on the assistance provided by international organisations and universities. By identifying assistance received and unmet needs, this block aims to guide future aid efforts.

The survey focusses mainly on twelve regions: Odesa, Dnipropetrovsk, Chernihiv, Kharkiv, Kyiv, Rivne, Zaporizhzhya, Lviv, Zakarpattia, Vinnytsia, Sumy, Ivano-Frankivsk. The SCIENCE AT RISK Emergency Office was able to offer small grants to scholars in each of these regions to involve them in the dissemination of the survey. The choice of these regions allows us to assess the experiences of scientists who are directly confronted with the horrors of war in the regions near or on the front line, and to analyse the changes in academic life in the central or western regions, which are in the safe line but are becoming host regions for displaced academics.

By ensuring complete anonymity and refraining from collecting any personal information, we aimed to encourage participants to openly share their real thoughts and problems.

The data collected from the survey was processed using advanced IT tools and mathematical methods.

Responses to open-ended questions were analyzed using topic modelling and content analysis techniques. Secondary data sources included reports from the Ministry of Education of Ukraine, the Kyiv School of Economics, the World Bank, UNESCO, UNICEF, and the United Nations, which provided contextual information on the broader impact of the war on academia in Ukraine.

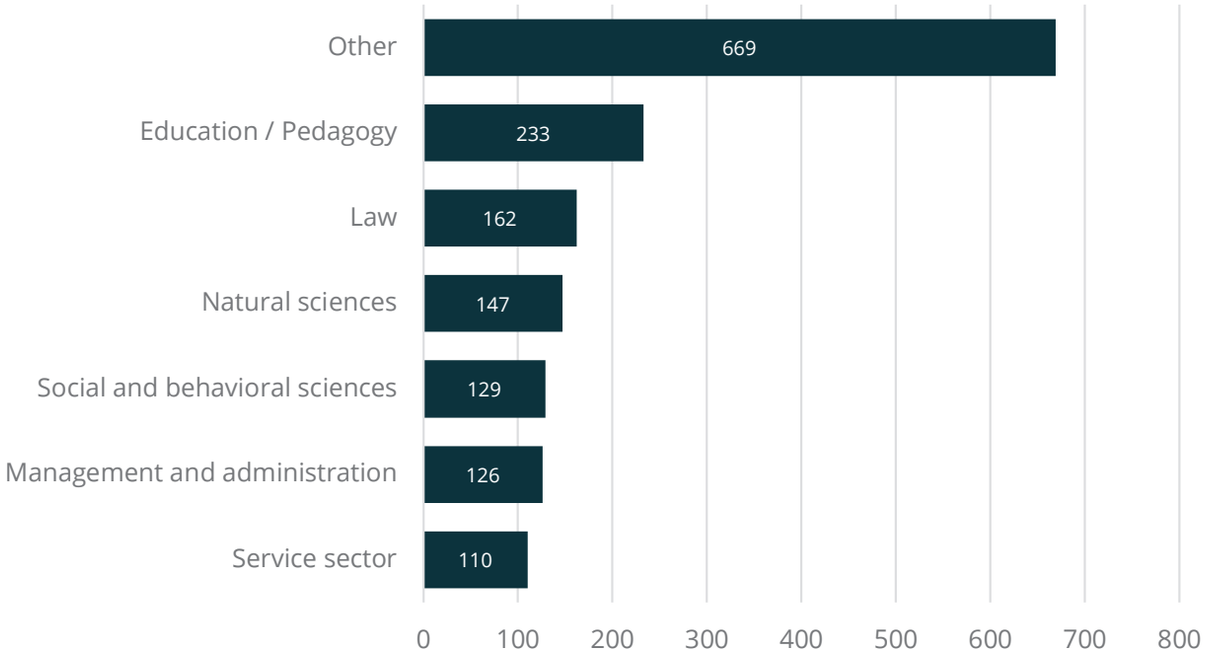
Understanding the Profile of Respondents: Academic Perspectives in Wartime Ukraine Blocks 1 and 2

The age distribution of the 1,720 respondents reveals a preponderance of individuals between the ages of 36 to 60, representing 55.2% of the sample. This suggests a wealth of professional experience and maturity, which may play a crucial role in shaping their coping strategies. Younger participants under the age of 35 account for 36.7%, suggesting a significant presence of young academics who potentially face different challenges in their academic pursuits.

The vast majority of respondents hold an academic degree (74.4%). Of the remaining 25.6%, the majority of respondents are aged between 18 and 35 years, thus representing a group of early career scholars who are in the process of completing their doctoral studies.

The academic background of the respondents reveals a significant concentration in fields related to education, social sciences, and humanities (Fig. 5).

Figure 5. Scientific field of the survey's respondents



The gender composition of the sample shows a significant majority of **women (61.9%)** compared to **men (38.1%)**. As the survey was conducted exclusively among academics currently residing in Ukraine, it demonstrates that a high number of women who are eligible to leave the country have stayed.

More than half of the respondents reported having to change their place of residence, mainly due to concerns related to family safety. Almost **58%** of respondents have **changed their place of residence** since the outbreak of the full-scale invasion.

The survey results underline the pervasive impact of the war on the personal lives of Ukrainian scholars. **5.1%** of respondents reported to **having served in the Ukrainian armed forces.** The proportion of scholars whose **family members have suffered significantly** as a result of the war, either through death or serious injury, comprises **25.9%** (an increase from 20% in 2023, according to the survey results of the 2023 SCIENCE AT RISK Monitoring Report).[48]

Academic Performance Before and After the Beginning of the Full-Scale Invasion

Block 3

The following analyses the academic productivity and professional achievements of Ukrainian scientists, assessing the number of publications, conference participation and research funding obtained by the survey participants in 2021-2024. These indicators provide a measurable way to assess the academic performance of scientists.[49] The results are contextualised within the broader framework of post-Soviet academic systems, providing insight into the long-term impact of systemic issues on scholarly activity.

Publication Activity

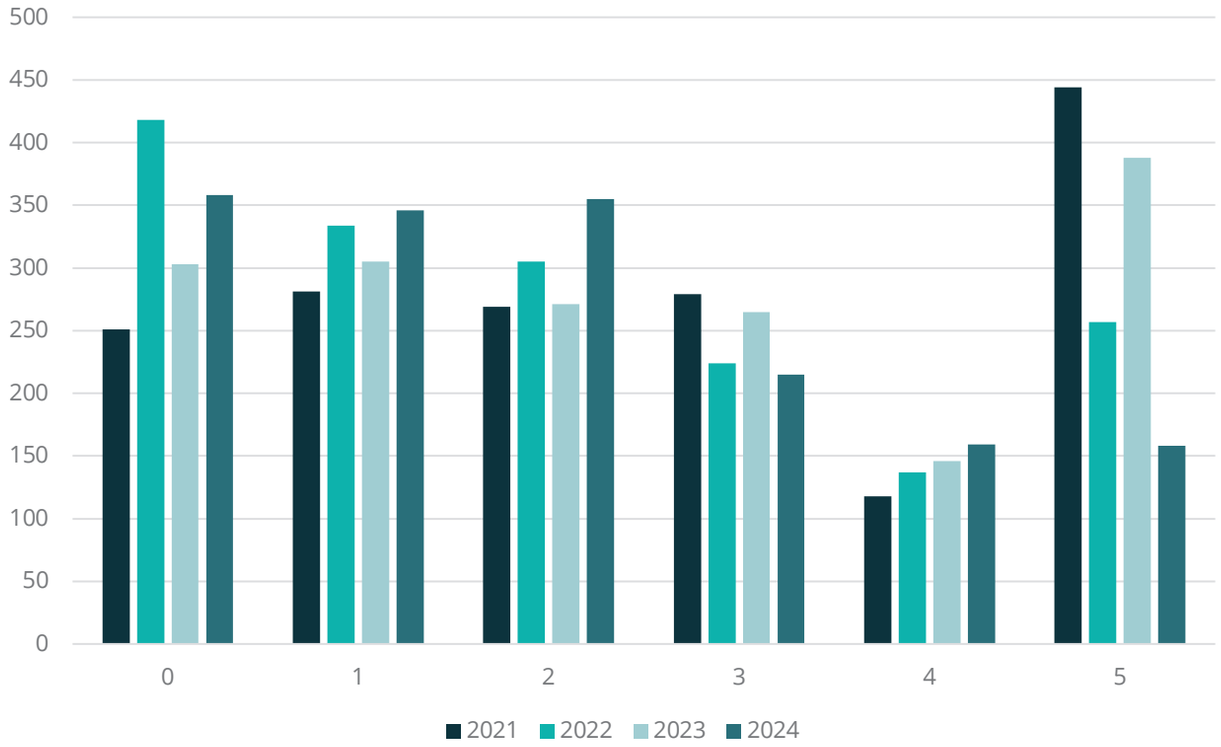
Prior to the full-scale invasion, **86%** of scholars said they contributed to academic discourse by publishing their research results. **After the beginning of Russia's full-scale invasion of Ukraine**, this figure fell to **76%**. The survey data show a greater decline in the total publication output of advanced scholars (25.5%) compared to the 21.6% decline experienced by younger researchers.

48 SCIENCE AT RISK Monitoring Report "Ukraine 2022-2023: Threats to science and higher education after the full-scale Russian invasion". See fn 2.

49 See QS Quacquarelli Symonds. (2023). QS World University Rankings: Methodology. Retrieved from https://www.topuniversities.com/qs-world-university-rankings/methodology (accessed 18.9.2024); Times Higher Education. (2023). World University Rankings: Methodology. Retrieved from https://www.timeshighereducation.com/world-university-rankings/methodology (accessed 18.9.2024).

The data for **2023** show a **recovery**, with **83%** of respondents able to publish their academic work. The results for the first nine months of **2024** (data collection ended in September 2024) may indicate a continuation of the **recovery trend** by the end of the year, with a similar level of publication expected for the remaining months. As of **September 2024**, **80%** of scholars reported that they had published academic papers this year (Fig. 6).

Figure 6. Number of publications by Ukrainian scholars, 2021-2024 (until September 2024)

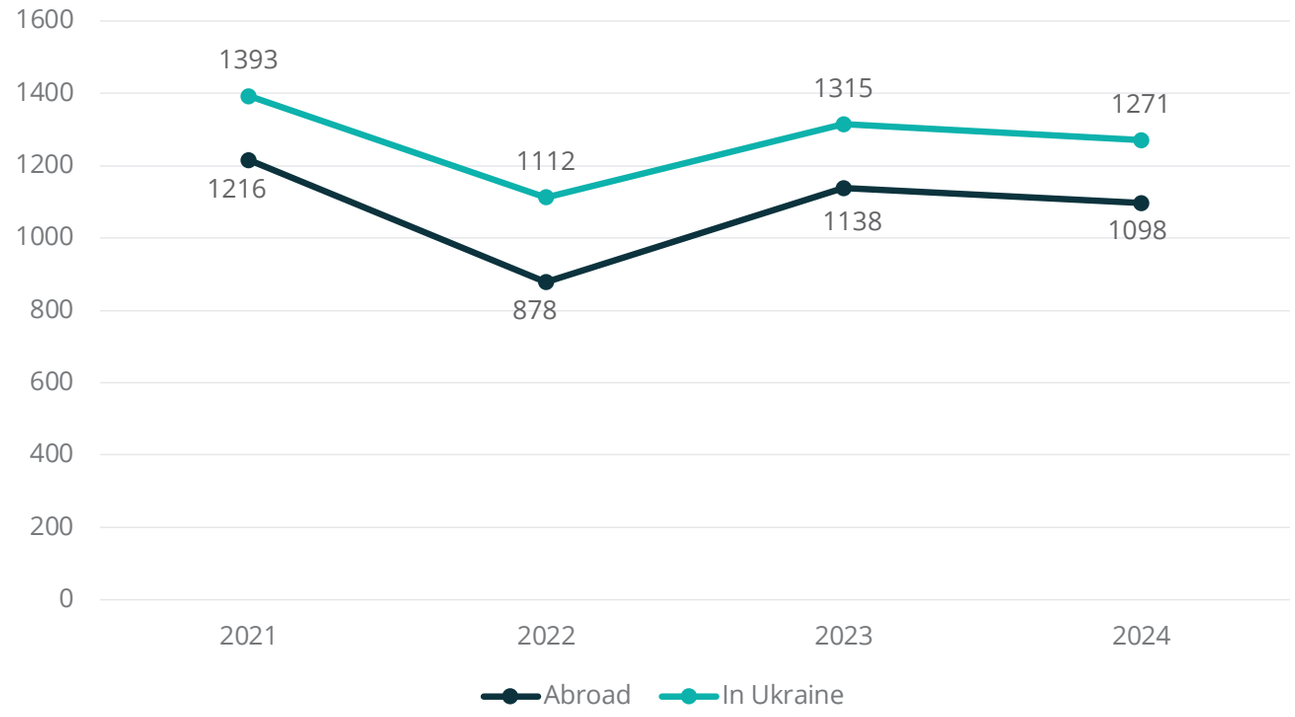


Given the hardships of the war, the survey data highlights the resilience of Ukrainian scholars to further disseminate their research results.

Academic Events in Ukraine and Abroad

In **2022**, the participation of Ukrainian researchers in academic events **decreased significantly** compared to 2021: **by 20% for national conferences and by 28% for international conferences** (Fig. 7). The number of researchers who reported that they had not participated in any academic event increased sharply, reaching 34% for conferences in Ukraine (compared to 14% in 2021) and 50% for events abroad (compared to 18% in 2021). In **2023, the situation stabilised**, with participation levels almost reaching levels before 2022. As data collection ended in September **2024**, the results for that year suggest a **further recovery**, with an increase in the number of events attended by the end of the year (Fig. 7). These data reveal the resilience of the Ukrainian scientific community, which quickly resumed its participation in academic forums.

Figure 7. Academic events in Ukraine and abroad attended by Ukrainian scholars, 2021-2024

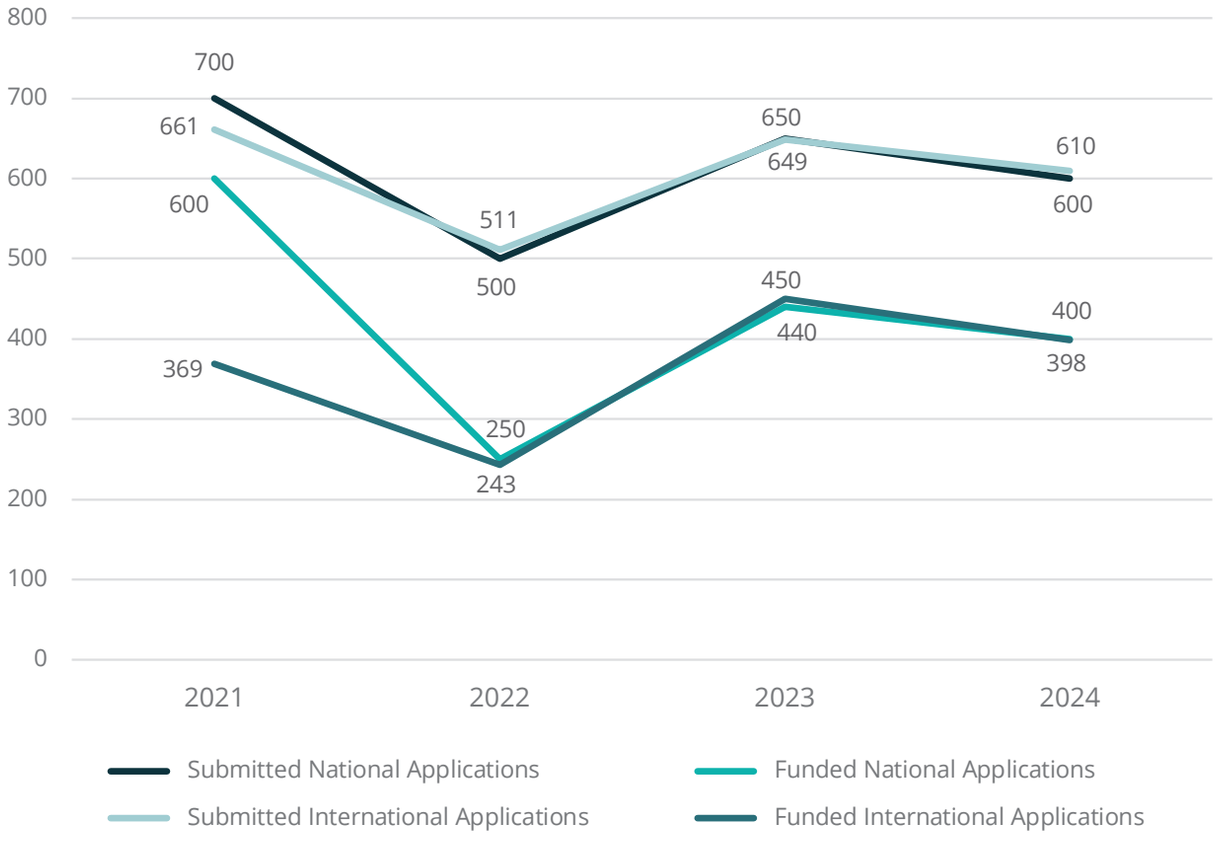


The relatively high number of scholars who reported that they have not participated in any academic events (14% for conferences in Ukraine and 18% abroad) in 2021 highlights the systemic problems of the Ukrainian system of science and higher education, such as financial constraints on individual researchers and their institutions, lack of language skills, as well as the post-Soviet tradition of strictly separating research and teaching, as described in the previous part of this report.

International and National Research Grants

The war strongly impacted both the availability of funding at the national level and the capacity of scholars to apply. In **2022**, there was a **sharp decline** in both submitted and funded applications for both **national and international research grants** (Fig. 8). **2023** saw a **recovery**. The data for **2024** (available until September 2024) suggest a **continuing recovery** trend.

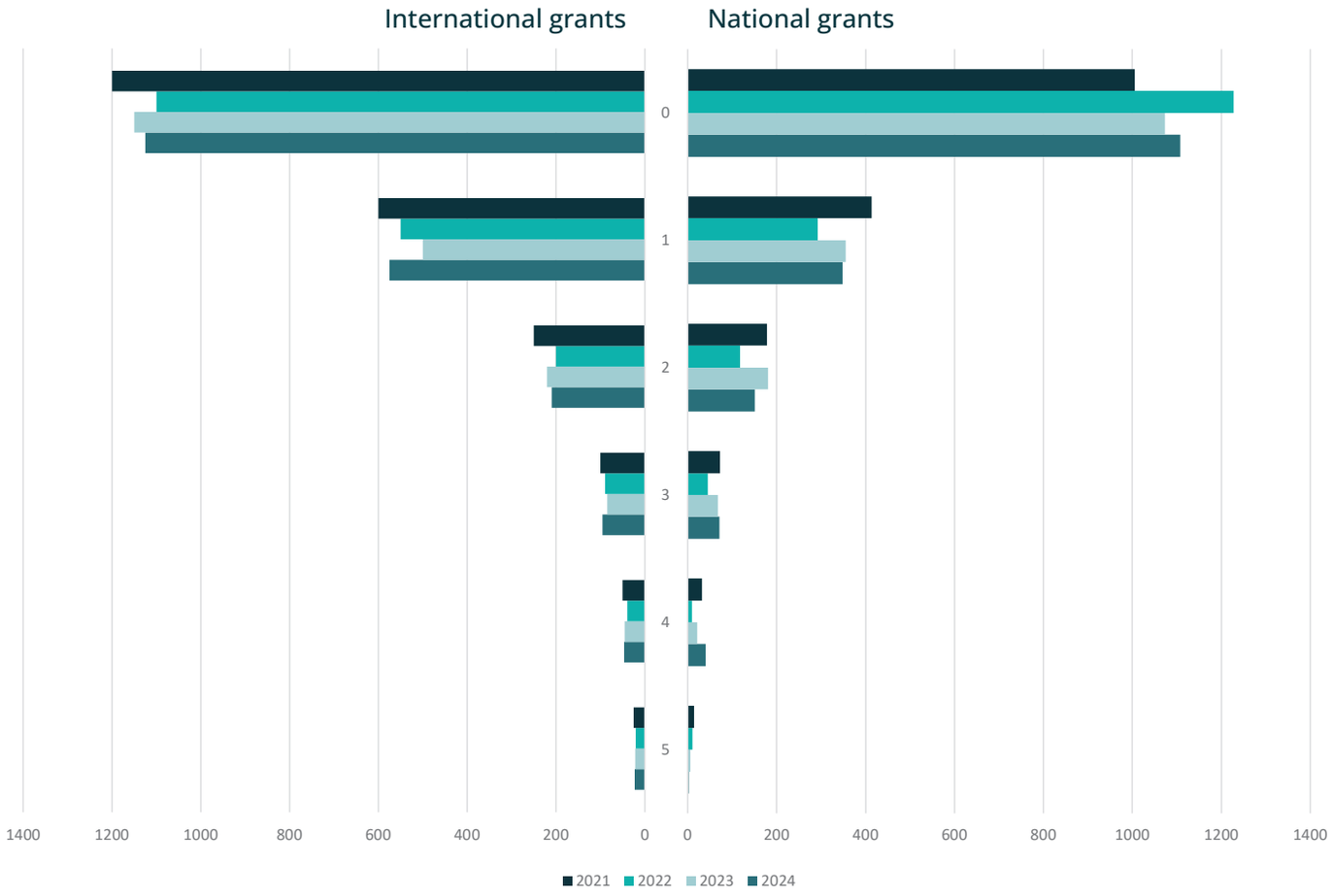
Figure 8. National and international research grant applications and funding, 2021-2024



Since the outbreak of the full-scale invasion, the number of respondents who did not submit applications for national research funding increased, reaching 71% (Fig. 9). Even before the full-scale invasion, a high percentage of scholars did not submit any applications – nearly 58% for national and approximately 70% for international

research funding (Fig. 9). This may, again, be a consequence of the aforementioned separation between research and teaching, which is characteristic of many post-Soviet HE&S systems.

Figure 9. Number of applications for national and international research grants in 2021-2024



With regards to obtaining international research funding, survey respondents reported that it is very difficult (34%), difficult (40%), or even impossible (18%) for them, revealing an inaccessibility of international grants to most of the studied scholars. At the same time, over 60% of scholars assert that access to international funds is critically important for the advancement of their research.

On average, 32% of respondents report submitting 1-2 applications for research funding per year in 2021-2024 (except in 2022, where the average was 25%). About half of them (or 16% of all survey's respondents) receive research funding annually. There has been a positive shift in the last two years, with around 60% of research proposals being funded, compared to 43% in 2021-2022. This is probably due to international funding programmes specifically targeting Ukrainian researchers, which did not exist before the full-scale invasion. At the national level, it is due to a gradual return to a more stable funding environment, which provided a basis for maintaining the research capacity of scholars during the war.

In short, after a significant decline in all indicators of academic output in 2022, Ukrainian academia shows a remarkable ability to adapt to the harsh conditions of war, almost reaching the level before 2022 of academic productivity by 2024.

Physical Damage of Academic Facilities and Displacement Block 4

Since February 2022, approximately one in five higher education and research institutions in Ukraine have suffered physical damage on various levels; several universities have been completely destroyed.[50] The estimated damages to Ukraine's overall infrastructure reached $138 billion, with education accounting for 5-6% of this total (over $8 billion).[51]

Among our respondents, **38%** reported that their institutions were affected by military action, experiencing **minor to heavy damage**. Out of those 35%, 84 respondents reported critical damage to their institutions, i.e. damage that severely affected their functionality.

When asked about their desire to move to a safer place, **64%** of respondents were **unwilling to change their place of residence**. Only **16,5%** indicated a preference for **moving to a safer region (4,5%) or going abroad (12%)**. The majority of respondents cited family obligations (62.2%) as the reason for not moving, other reasons include economic motifs (28%), safety concerns (21.7%), and health issues (5.3%).

With the outbreak of full-scale war in 2022, several universities were relocated to safer areas of Ukraine. Among our respondents, **20%** were affected by the **displacement of their home institution**. Most of them (85%) did not follow their institution, while only 4.5% individuals indicated that they had moved. The decision not to follow their universities was motivated by the need to stay with family and care for family members (50%), financial difficulties (39%), or legal reasons (17%).

Moving to a new location poses many challenges for scholars. Among those who followed the relocation of their home institution, 40% reported **financial problems,** 34.5% challenges in finding adequate **accommodation** in their new locations, 24% difficulties in **transporting their families** to the new location. 24% reported a significant change in their **workload** (with a reduction of total teaching hours), in addition, 20% of respondents reported problems in **accessing their workplace** or laboratories needed for their research. 5.5% of respondents reported the **complete loss of their job** or contract.

50 A joint study conducted by the World Bank, the Ukrainian government, the European Union, and the United Nations. See: https://www.universityworldnews.com/post.php?story=20240301072602780 (accessed 1.9.2024).

51 Kyiv School of Economics, 2023. https://kse.ua/about-the-school/news/the-total-amount-of-damage-caused-to-ukraines-infrastructure-due-to-the-war-has-increased-to-almost-138-billion/ (accessed 1.11.2024).

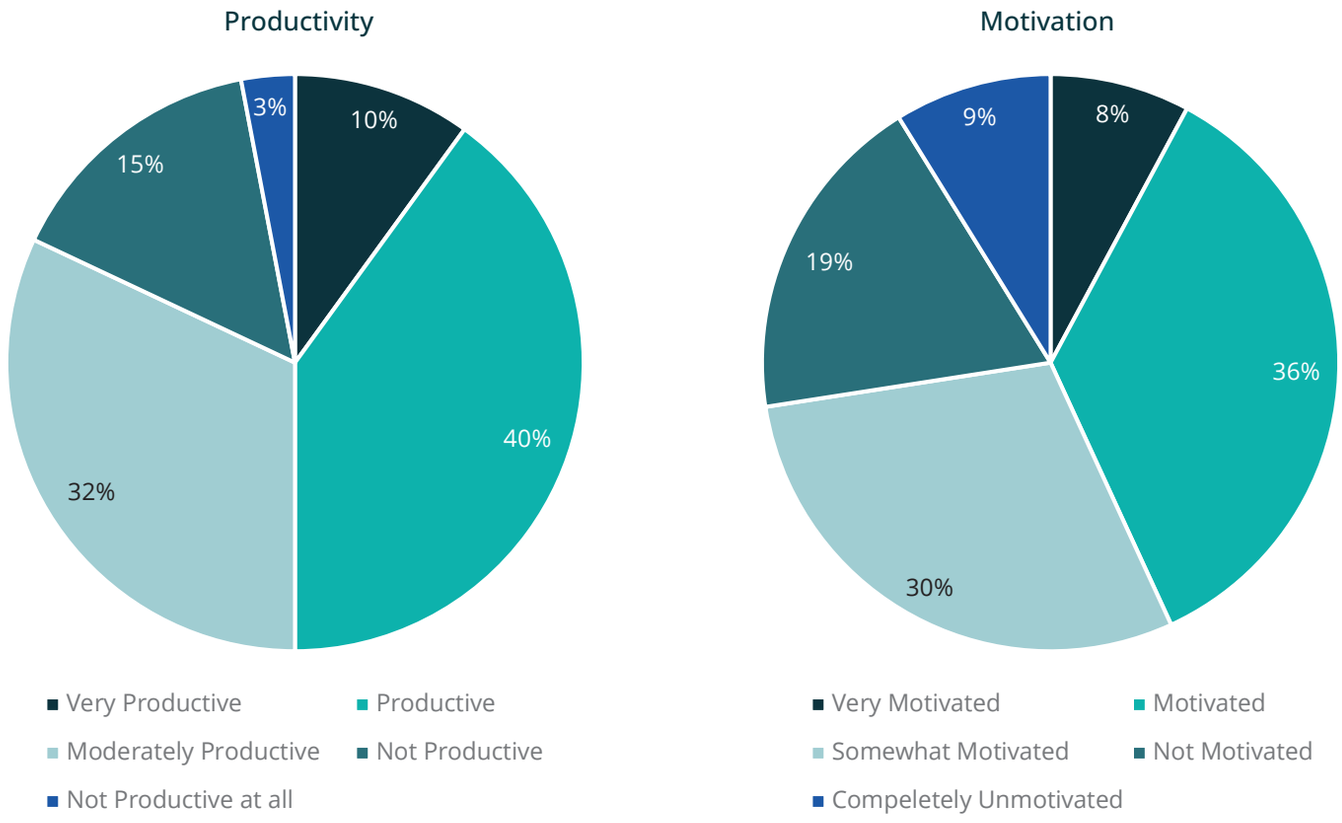
Mental Health and Professional Development

The mental health of all Ukrainians has been profoundly affected by Russia's full-scale invasion, creating a pervasive sense of insecurity and sending the number of people with symptoms of post-traumatic stress disorder, depression and burnout soaring.[52]

Our survey data underlines the psychological toll of the war, with a significant proportion of respondents struggling with mental health issues. Of the 1,662 respondents, a significant **44.4%** expressed feelings of **depression**. Some **6.6%** reported needing professional **psychological help**, suggesting an urgent need for mental health support within the community. A significant **49%** reported **feeling well**.

Nevertheless, the majority of respondents (**74%**) assess themselves as **more or less motivated**, while **26%** indicate **no motivation** to engage in scientific research (Fig. 10). The individual assessment of **professional productivity** reveals that 50% of respondents are productive (40%) or very productive (10%), while responses of the other 50% range from being moderately productive (32%) to not productive (15%) and not productive at all (3%) (Fig. 10).

Figure 10. Respondents' assessment of their productivity and motivation



52 Ukraine faces mental health crisis as country braces for third winter of attacks by Russia, ITV News, 29.9.2024. https://www.itv.com/news/2024-09-29/ukraine-faces-mental-health-crisis-as-third-winter-of-fighting-nears (accessed 24.10.2024).

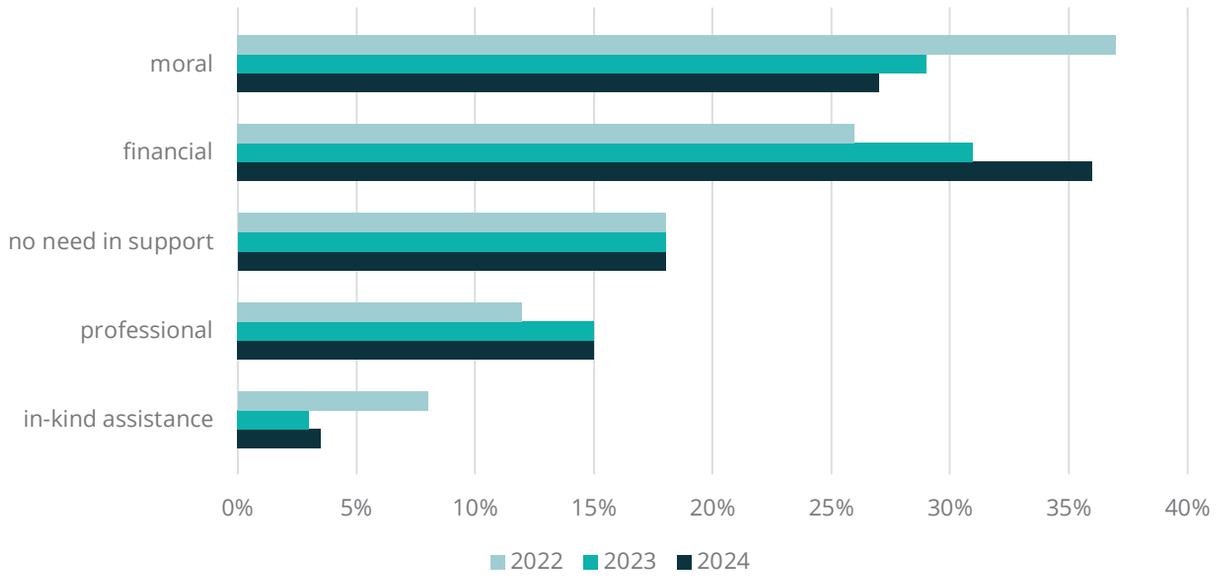
Evolving Support Needs of Ukrainian Scholars

Block 5

By consulting directly with Ukrainian scholars, it is possible to identify their most pressing needs and ensure effective and meaningful support in times of crisis. This approach empowers those affected by placing their voices at the centre of the decision-making process. Figure 11 presents data on the types of support needed by respondents in 2022-2024.

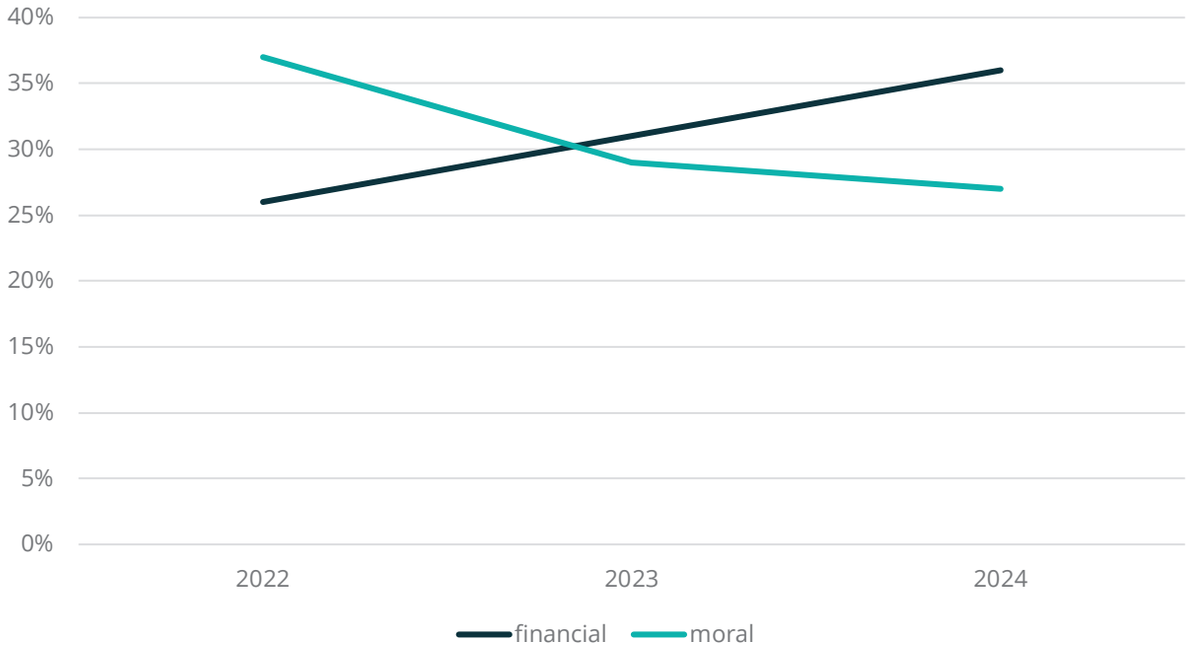
The demand for **moral support** was highest in **2022**, with **37%** requesting it. It then gradually declined to the current **27%.** The need for **financial support** shows the opposite dynamic. Starting from **26%** of respondents in **2022**, there is a gradual increase to **36%** in **2024** (Fig. 11, Fig. 12).[53] This shift suggests that scientists may develop coping mechanisms over time to deal with the initial shock of a full-scale Russian invasion of their country. At the same time, after more than two and a half years of war, an impoverishment of the academic community can be observed due to the depletion of personal savings, increased prices and reduced incomes.

Figure 11. Support needed by Ukrainian scholars, 2022-2024



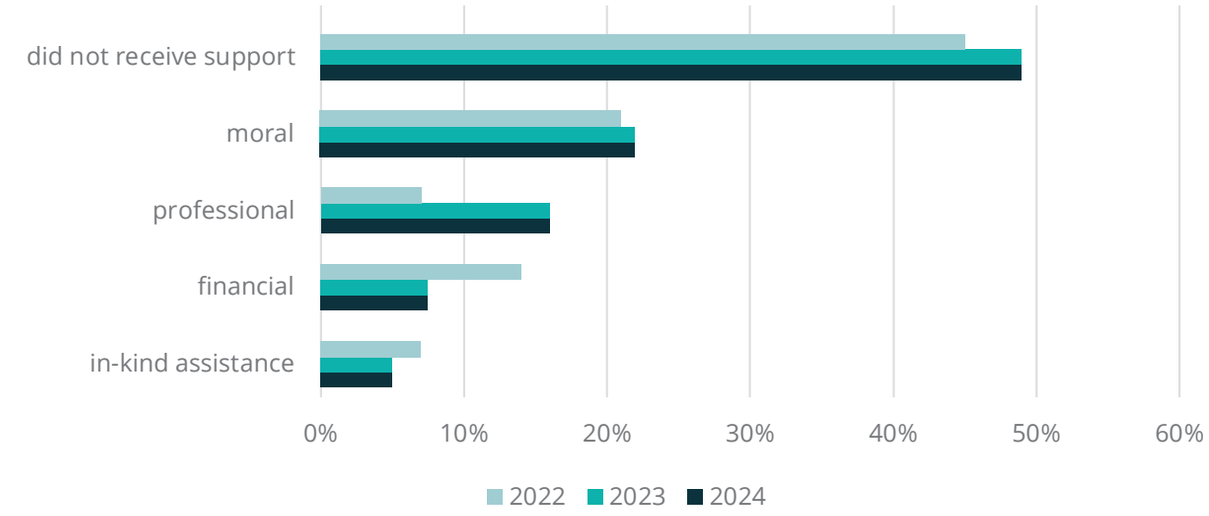
53 Both trends are also reflected in the SCIENCE AT RISK Monitoring Report "Ukraine 2022-2023: Threats to science and higher education after the full-scale Russian invasion". See fn 2.

Figure 12. Need for moral and financial support, 2022-2024



The results of the survey highlight a stark **contrast between demand and the actual support received**. Around **50%** of respondents said they had received no support, while only **18%** claimed they did not require help. Despite a notable demand for financial aid in 2024 (36%), only 8% reported that they received such support (Fig. 13).

Figure 13. Support received by Ukrainian scholars, 2022-2024



International Support

The majority of our respondents **(71%) missed the opportunity to apply for international support** (Fig. 14). On average, only 25-30% of individuals submitted one or more applications in 2022-2024. This numbers are similar to those illustrating applications for international research grants, as described previously.

There has been a slight increase in the number of applications submitted, but a decrease in the number of applications approved (Fig. 15). These results highlight a significant gap between the needs of scholars and their engagement with available support mechanisms, as well as the increasing difficulties in securing support.

Figure 14. Number of applications for support from international organisations, 2022-2024

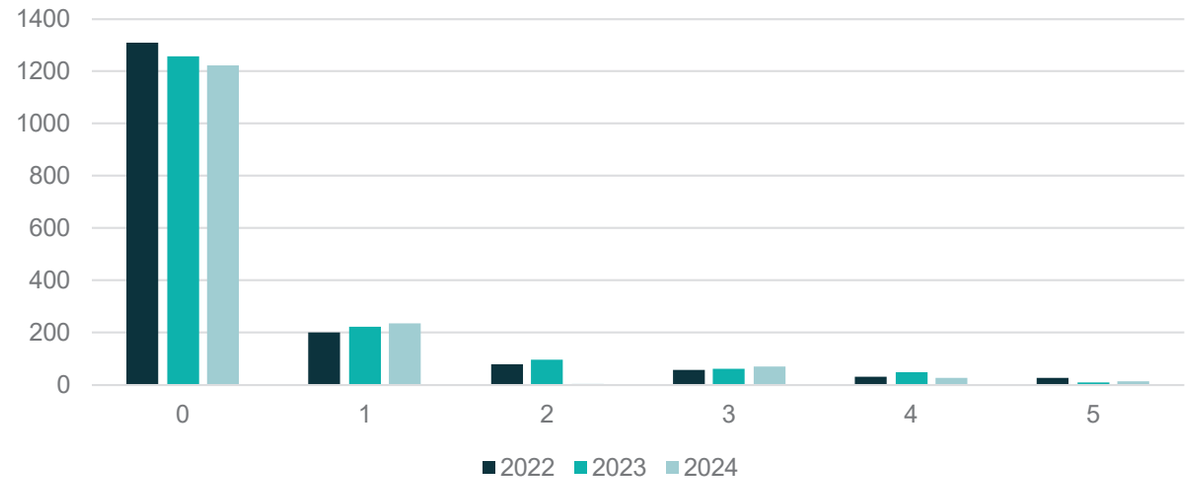
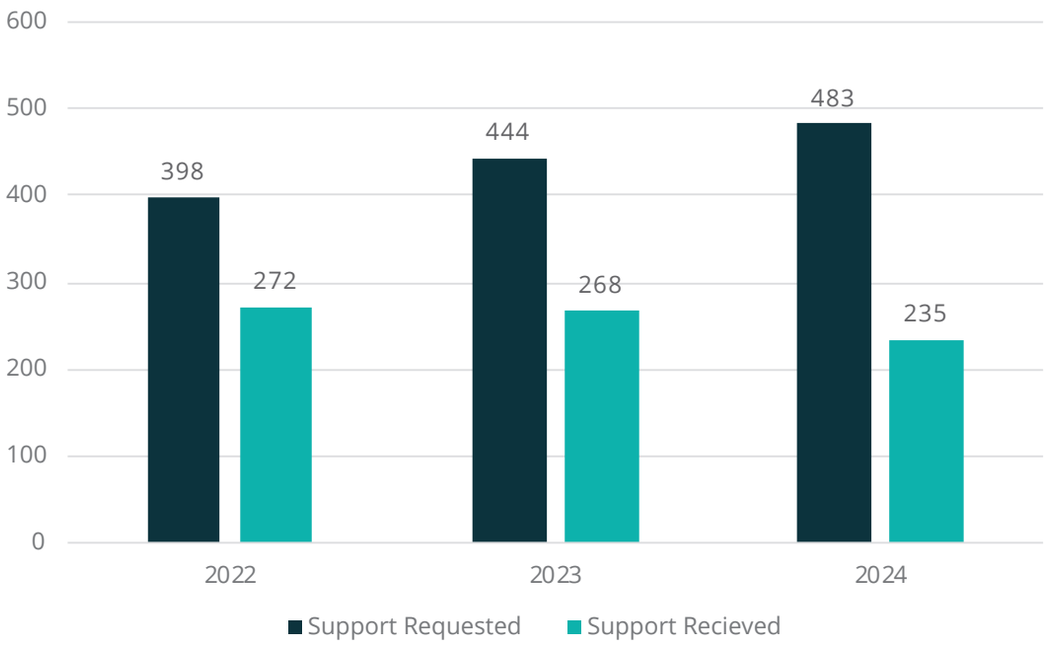


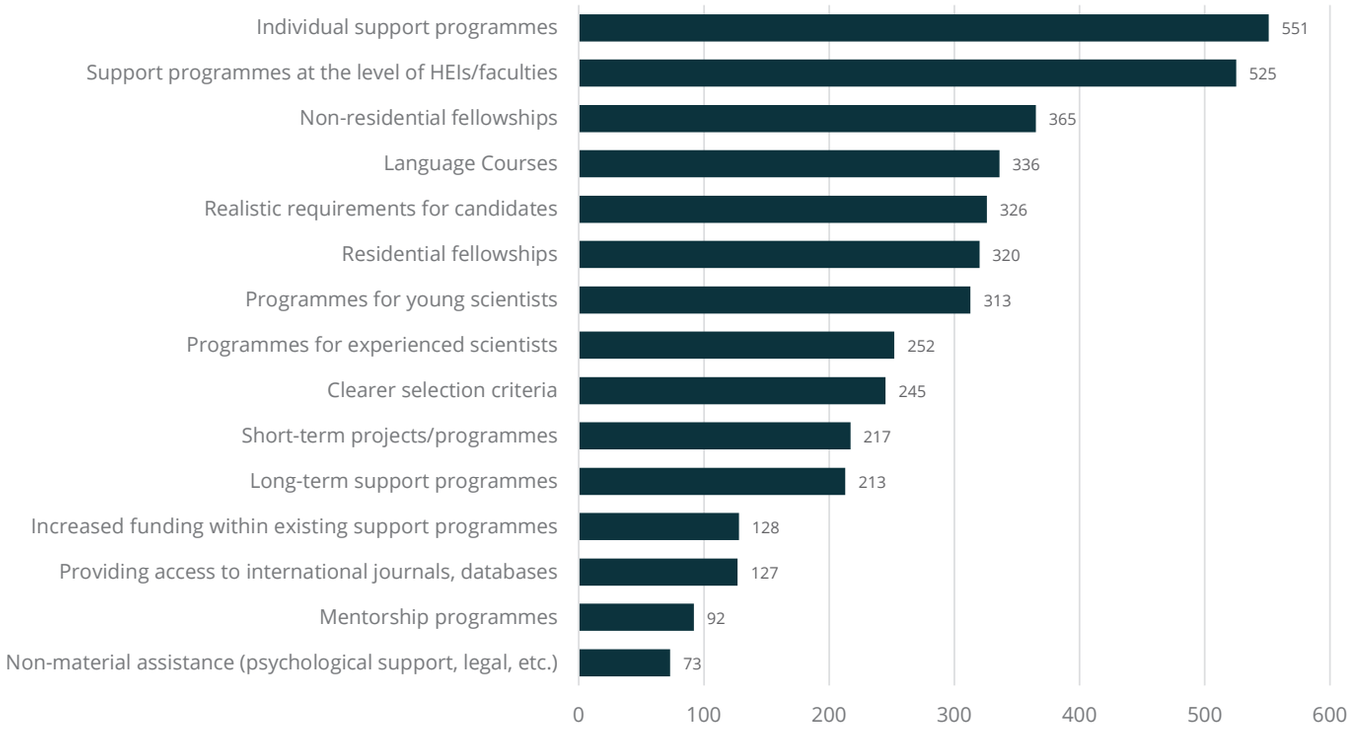
Figure 15. Requested and received support from international organisations, 2022-2024



The results also raise critical questions about the barriers that prevent scholars from seeking support. In addition to the high barriers of the application process (e.g. insufficient qualifications, lack of language skills), common barriers include the need to care for family members and the inability to leave the country. Another reason is a lack of information about the opportunities available. **59%** of our respondents are **not aware of international support programmes**. Only about 20% of respondents were able/willing to name international organisations that offer support to Ukrainian academics. Of these, over 50% mentioned well-known institutions such as Erasmus+, Horizon Europe and DAAD, and over 15% mentioned various universities in the EU and the US that offer scholarships or other forms of support. The reliance on recognized (and very contested) options suggests that many scholars may not have access to more localized or lesser-known resources that could be of great benefit to them.

The following final section of the survey aimed to gather recommendations on how international support could better meet the needs of Ukrainian researchers. Of the 1,720 respondents, over 95% made some **recommendations**, which are presented in Figure 16. Over a third of respondents (32%) supported the creation of individualised, needs-based support programmes for researchers; 30.5% emphasised the need for support linked to universities or faculties, while 21.2% and 18.6% of respondents called for residential and non-residential fellowships respectively.

Figure 16. Recommendations of Ukrainian scholars on how international support could better meet their needs



Our findings underlined the ongoing need to adapt support mechanisms and ensure that they are responsive to real needs. International organisations should address the identified gaps in awareness of their programmes and accessibility (reducing barriers to applications), while providing resources to build skills (e.g., language courses) and offering more diverse and inclusive support options, both in-country and abroad. International support should also take into account factors such as family circumstances during the war. In addition to well-established support mechanisms, small grants and low-threshold support as well as quick and non-bureaucratic procedures could be good solutions.

Conclusion

The analysis confirms that the Russia's full-scale invasion had serious negative consequences for Ukrainian academia, exacerbating existing institution-level challenges faced by the HE&S system and hampering both its immediate functionality and long-term resilience. Although Ukraine's HE&S system managed to stay operational amidst the invasion, and some universities, such as the Kyiv School of Economics, even increased their student intake, system-level international support is needed to improve the management of Ukraine's higher education and science system and ensure academic freedom. This applies in particular to support for the institutional autonomy of universities, which emerges as the most challenging aspect of the Academic Freedom Index's assessment of academic freedom in Ukraine.

The low level of institutional autonomy is directly related to three major challenges at the institutional level of the Ukrainian education and science system: underfunding and inefficient use of resources, a strong divide between research and teaching, and brain drain. It is shown that all these issues are rooted in the broader challenge of post-Soviet transition. Multiple attempts at reform have been made to address them at different points in time. Russia's annexation of Crimea, proxy occupation of parts of eastern Ukraine and full-scale invasion have seriously undermined these efforts. In the context of the full-scale invasion, the occupation of Ukrainian territory, the physical destruction of many university facilities, and the displacement of scholars and students exacerbated pre-existing problems at the institutional level. Negative demographic developments because of the war, occupation and displacement, and high costs of military action make officials reconsider the university network and search for new ways to increase the efficiency of funding. Though legislative measures have been taken to improve the connection between research and teaching, the various negative effects of the war and displacement make it difficult to assess their effectiveness; a minimum of 10% of teaching staff at Ukrainian universities for example report not being engaged in any research activities.[54] Due to security concerns, many scholars still choose to leave Ukraine, notwithstanding the reform efforts in the field and the opportunity to dedicate more time to research. The brain drain issue thus greatly undermines Ukraine's HE&S system.

As the survey results show, the war moreover has had a profound negative impact at the individual level. During the first year of the full-scale invasion, Ukrainian scholars experienced a sharp decline in academic productivity, with a 10% reduction in publica-

54 Based on the survey results.

tion output, a reduction in Ukrainian scholars' participation in academic events (20% for national events and 28% for international events, respectively) difficulties in obtaining funding. The emotional toll of death and injury to family members, ongoing security concerns and displacement, as well as the physical destruction of academic infrastructure, has severely hampered the ability of scholars to continue their work. Despite some recovery in academic output in 2023 and 2024, demonstrating the remarkable resilience of Ukrainian academics, the security, financial and emotional pressures of the war continue to have a negative impact on their professional and personal lives.

The survey also reveals worrying gaps in international support, with around 50% of respondents reporting that they had not received any assistance from international organisations. 59% mentioned the lack of awareness about available support programmes, and over 55% referred to significant barriers in access to funding, including language difficulties and restrictive eligibility criteria, e.g., the presence of publications in international journals. Male scholars have encountered additional challenges due to mobility restrictions that limit their ability to seek opportunities abroad. These findings point to the need for international organisations to improve the outreach of their programmes, and to provide more inclusive and accessible support mechanisms. Such mechanisms would benefit from capacity-building components aimed at addressing the identified barriers to Ukrainian scholars' access to international funding, such as language courses and training in international publishing and funding acquisition strategies. While some Ukrainian scholars would be willing to benefit from international fellowships, the survey results highlight the need for in-country support options, as many scholars are either unable or unwilling to relocate abroad due to legal restrictions or family obligations.

In particular, such support measures at the individual level should be combined with support at institutional level, e.g., to help higher education and science institutions adjust to demographic changes and to increase the efficiency of funding. Technical assistance is needed to monitor the practical implementation of legislative norms aimed at optimising the university system and bridging the separation between research and teaching. Research funding and individual support for researchers living in Ukraine and affiliated to Ukrainian universities and scientific institutions is needed to at least partially offset the challenge of brain drain and to provide incentives for researchers to remain in Ukraine.

The results of the survey make it clear that without more targeted and accessible international support – particularly in the areas of financial aid, professional development, and mental health – the academic sector will struggle to fully recover. It is therefore imperative that international organisations adapt their support strategies to address gaps in awareness and accessibility, while providing both in-country opportunities and scholarships abroad. Only through sustained and coordinated efforts can the foundations of Ukrainian academia be preserved and strengthened, ensuring its critical role in the country's recovery and future development.

Table of Figures

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