

HERB



Higher Education in Russia and Beyond

Doctoral Education at the Crossroads

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Dear colleagues,

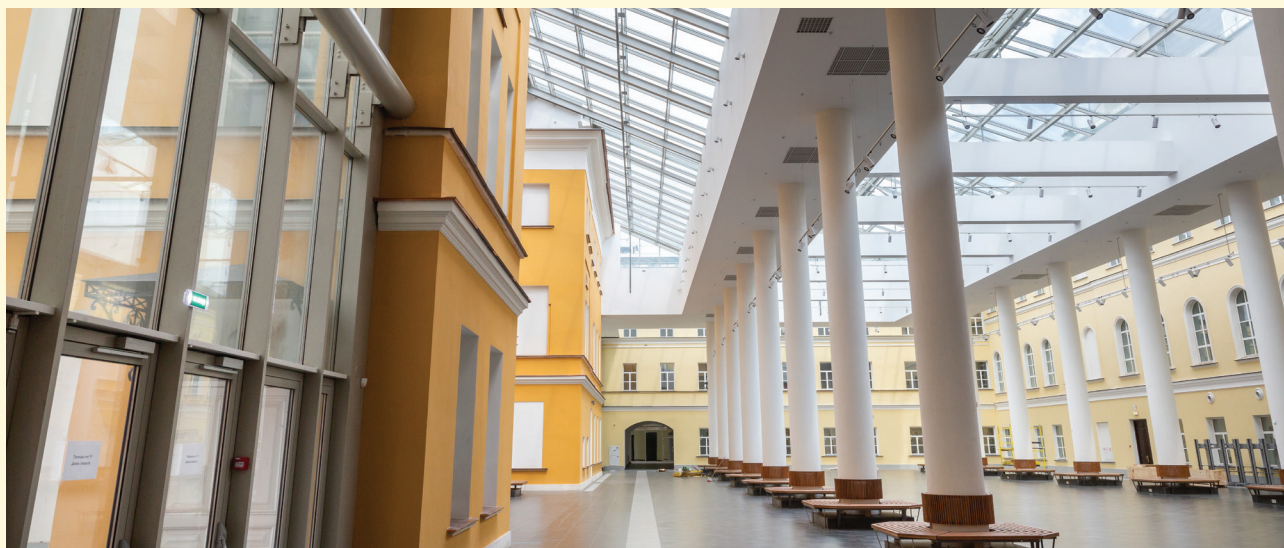
Highly skilled graduates are considered as a necessary condition for innovation, technological development, and economic growth. It is no surprise that the number of doctoral students is growing worldwide. However, doctoral education faces many challenges: the increasing number of alternatives to an academic career for PhD graduates, the changing expectations of doctoral training, non-competitive entry level salaries in academia, and the high attrition rate. In addition to these, Eastern European and Post-Soviet countries have to deal with excessive state regulation, the underfunding of science and research, constant regulatory changes, etc.

In 2016, an issue of HERB was dedicated to the challenges of the organization and reform of doctoral education (issue 3(9)). In this issue, four years later, we want to give an update and show what has changed during this period. You will learn how doctoral education has changed over the past few years in different countries, what reforms have been implemented and what effects they have had, what the historical roots of the current state of doctoral education are and how doctoral studies have evolved. The articles cover wide range of doctoral education stakeholders—from those who plan to enter doctoral programs to those who got their degree many years ago.

We truly hope that you will enjoy this collection of articles.

Guest editor Saule Bekova

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National Research University Higher School of Economics

National Research University Higher School of Economics is the largest center of socio-economic studies and one of the top-ranked higher education institutions in Eastern Europe. The University efficiently carries out fundamental and applied research projects in such fields as computer science, management, sociology, political science, philosophy, international relations, mathematics, Oriental studies, and journalism, which all come together on grounds of basic principles of modern economics. HSE professors and researchers contribute to the elaboration of social and economic reforms in Russia as experts. The University transmits up-to-date economic knowledge to the government, business community and civil society through system analysis and complex interdisciplinary research. Higher School of Economics incorporates

97 research centers and 32 international laboratories, which are involved in fundamental and applied research. Higher education studies are one of the University's key priorities. According to recent QS World University Ranking, HSE is now among the top 150 universities in the subject of "Education". This research field consolidates intellectual efforts of several research groups, whose work fully complies highest world standards. Experts in economics, sociology, psychology and management from Russia and other countries work together on comparative projects. The main research spheres include: analysis of global and Russian higher education system development, transformation of the academic profession, effective contract in higher education, developing educational standards and HEI evaluation models, etc.

Center for Institutional Studies

The Center for Institutional Studies (CInSt) is one of HSE University's research centers. It focuses on fundamental and applied interdisciplinary research in the field of institutional analysis of the economics and sociology of science and higher education. CInSt is integrated into international higher education research networks and cooperates with foreign experts through joint comparative projects that cover the issues of higher education development and education policy. As part of our long-term cooperation with the Boston College Center for International Higher Education, CInSt has taken up the publication of the Russian version of the "International Higher Education" newsletter.

One of the main research areas of CInSt is the study of applicant and student strategies related to higher education and the link between education and the labour market. Our studies analyze the issues that applicants face during the admission process, the factors of student

success during their studies at universities, the issue of student employment and combining of study and work. We also study the expected and actual returns to education and labour market outcomes of university graduates depending on educational factors and strategies of school-to-work transition with particular attention to gender issues. Research on university graduates is conducted in collaboration with other research centers, including The Laboratory for Labour Market Studies at HSE University, Center for Research in Higher Education Policies of the University of Porto, and Ghent University.

The results of the research are published in leading educational journals, such as Higher Education, Higher Education Quarterly, Urban Education, International Journal of Educational Development, European Journal of Education, Journal of Education and Work, Journal of Higher and Further Education, Tertiary Education and Management and other outlets.

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What is the proportion of Russian PhD students defending their theses and continuing their academic careers?

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The training of researchers and teachers for higher education has always been considered a goal of Russian PhD programs. The clearly oriented role of this institution in the 20th century was supported by organizational and economic mechanisms that determined the goal and content of PhD programs, and the forms and conditions for preparing PhD students for an academic degree and their subsequent research or teaching work. However, over the past two to three decades, PhD programs in developed countries have been transformed significantly. A significant proportion of PhD program graduates find a job outside academia and it causes rising concerns regarding the implementation of doctoral programs main mission — training staff for science and higher education. In academic journals, there are some alarmist judgments about the growing dysfunctionality of Russian PhD programs. However, the discourse is rather organizational-political than research since most expert judgments are not supported by reliable empirical data or research results.

In Russia, the state of PhD programs can be judged by the annual statistical reports of higher educational institutions. The approved set of indicators characterizes the structure of admission, number of students and graduates in various areas of training (including thesis defense). However, the current statistics do not reflect the actual outcomes and effectiveness of PhD programs. The proportion of graduates defending their thesis is the only performance indicator. However, the majority of Russian PhD students do not manage to complete their thesis during the period established by the state (3 years for the humanities, 4 years for science and engineering). Many of them continue to work on their theses after their graduation. Unfortunately, thesis defended after finishing their PhD programs are not reflected in state statistics, which significantly complicates the assessment of the effectiveness of Russian PhD programs.

The key questions in this context are:

1. What proportion of Russian PhD students are awarded a PhD?
2. What is the actual thesis defense rate and how long does it take to prepare a thesis?
3. What proportion of PhDs pursuing an academic career after graduation?
4. Are there any differences between research fields in time to degree and in retaining PhDs in academia?

To answer these questions, we conducted a cross-sectional study of the scientific productivity of doctoral students from several leading Russian universities.

Methodology

Quantitative data on the thesis defense, scientific publications, patents and other outcomes of doctoral students from nine Russian universities were analyzed. The sample was formed based on lists of PhD students who completed their studies in 2013 (N = 1178). Seven universities from the sample have the status of a National Research University, five are participants in the "5-100" Program. Doctoral students in science, engineering, the humanities are represented in approximately equal shares.

To identify graduates who stayed in Academia, a three-year "publication window" was selected: from 2016 to 2018. This made it possible to cut off their publication activity during the PhD. Those who defended the thesis, published research articles and had other outcomes during this period were considered as an academic staff [1].

Thesis defense

Approximately 90% of PhDs get their degree no later than during the first two years after graduation. It is about 41% of all graduates from the studied cohort of doctoral students. 45% of graduates defend their thesis during 5 years after their graduation, which is almost double the percentage of graduates who got their degree during the normative period of study.

According to our estimates, the average time to degree is around five years. A "fast defense" most often occurs among those specializing in chemistry, politics, economics, linguistics, and history. These students work on a thesis usually no more than three to four years. The longest time to degree (over six - seven years) is typical for law, ICT, physics and math.

There are no statistically significant differences in the performance indicators and the rates of thesis defense between full-time and part-time doctoral students. However, such differences were identified between students with different conditions for financing PhD studies: for state-funded students, the defense rate for the five years period was almost twice higher than for fee-paying students (50% vs 28%). The low performance of this category is largely caused by the biases of the selection system when it comes to the fee-paying students. The lowered entry barriers for admission to fee-paying students lead to the recruitment of applicants who often do not have the necessary level of academic and research training, a scientific background on the topic of their thesis or internal motivation. This negatively affects learning outcomes and their work on a thesis.

Our data on the proportion of PhD students defending their theses, at first glance, are similar to the data of the US and the EU ($\approx 50\%$ and $\approx 66\%$, respectively) [2, 3]. However, our estimates do not take into account those who withdrew before graduation (the share of defenses was calculated from the number of graduates). If we adjust the calculations for dropouts during the training, the percentage of defenses within five years after graduation decreases to 29%. This is significantly lower than in most European countries and the US.

Remaining in academia

Another important indicator of PhD programs effectiveness is the proportion of graduates that stay in Academia. In our sample, 40% of graduates continue their work in Universities and scientific institutions and this share is more than two times higher among graduates who were state funded (52% vs 24% among fee-paying students).

According to our data, the number of PhD's who stay in Academia is 63%, which is close to the average for the EU [3]. As for the field differences, about 70% of PhDs in natural and technical sciences and less than 50% of PhDs in the humanities remain in Academia.

An important parameter characterizing the employment of PhDs is the proportion of those working at the university they graduated from. The proportion of such graduates is 75% regardless of the discipline or type of university. A high level of inbreeding can lead to negative consequences, it fosters conservatism and often has a negative impact on the Universities development.

Conclusion

Based on our calculations we can see that no more than 18% of the total number of those enrolled in doctoral programs end up getting the degree and working at universities. With the decline in the number of graduates and PhDs, it must be admitted that Russian PhD programs are not fulfilling their goal of training staff for the academy. This conclusion is confirmed by the growing lag between Russia and leading countries in the share of PhDs in the total population, and by negative changes in the age structure of Russian researchers, namely, a decrease in the proportion of researchers in middle age groups.

The data indicate that successful PhD graduates are characterized by a willingness to work in the academic sphere. Russian young people are going into research, but, apparently, not for long. It seems that the main task of state policy for training academic staff should be focused not only on attracting young people but also on finding effective mechanisms to retain middle-aged researchers. However, this task goes beyond the scope of PhD training.

References and notes

[1] A detailed description of the method and data is given in: Bednyi, B.I., Mironos, A.A., Rybakov, N.V. (2019). How Russian Doctoral Education Fulfills Its Main Mission: Scientometric Assessments (Article 2). Vysshee obrazovanie

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[2] Auriol, L., Misu, M., Freeman, R.A (2013) Careers of Doctorate Holders: Analysis of Labour Market and Mobility Indicators. OECD Science, Technology and Industry Working Papers. OECD Publishing. 2013. 61 p. Retrieved from: <https://www.oecd-ilibrary.org/docserver/5k43nxgs289w-en.pdf?expires=1562137661&id=id&acname=guest&checksum=7963D579A9E9958F8EB3AEC8A05F5842>

[3] Hasgall, A., Saenen, B., Borrell-Damian, L. (2019) Doctoral education in Europe today: approaches and institutional structures. European University Association, Council for Doctoral Education, University Gent. 35 p. Retrieved from: <https://eua.eu/downloads/publications/online%20eua%20cde%20survey%2016.01.2019.pdf>

Plagiarism on the academic periphery

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Serious flaws in academic integrity in Russia are publicly acknowledged and widely discussed by the academic community, state officials, and the public. Special attention has been devoted to academic misconduct in the writing of dissertations. Numerous examples of plagiarized dissertations include not only exceptional cases such as political and public figures, but also academics. An academic degree is the key qualification for a university appointment, promotion, and pay scales. For many universities, it is not the quality of the dissertation but the qualification per se that makes the difference. As a result, dissertations are perceived as a formal barrier. Facing this barrier does not necessarily require putting much effort into producing an academic text of high quality. Instead, many choose to rely on ghostwriters in their quest for a doctorate, or steal others' texts [1].

Academic plagiarism across research fields

However, the focus on Russian dissertations in general hides the variance inside the national academic community. Is there any difference in how often scientists from dif-

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