



HERB

Higher Education in Russia and Beyond

Women in Academia

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Dear colleagues,

This issue addresses the topic of women in academia. In terms of enrolment and participation in higher education, many countries have reached better gender balance in the past decades. At the same time, when it comes to academic employment and careers, the situation is far from symmetrical. In Russia, for example, the number of men and women at starting academic positions in HEIs is nearly equal (actually, women even outnumber men slightly), while at professorship level and the level of deans and higher leadership the share of women is much lower. Gender representation within the Russian Academy of Sciences is even less symmetrical: the share of female full members is below 10%.

The articles collected in this issue are very diverse in terms of geography: you will be able to read about the problems that exist in Russia, Croatia, Germany, Switzerland, Tajikistan. The authors bring up various important topics: from gender income disparities and their potential reasons to inequality of career opportunities at universities. A historical perspective is included too. We hope that this issue will help bring the essential topic of gender equality and equity to the attention of both policy makers and the wider academic community of different countries.

***‘Higher Education in Russia
and Beyond’ editorial team***



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What Numbers Show and Don't Show

Was the USSR Ahead of the US in Gender Equality in Science?

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Valentina Tereshkova's famous flight to space in 1963 became a striking symbol of the Soviet Union's commitment to gender equality, heralding that Soviet women were indeed on "equal footing with men to advance science, culture and the arts." Meanwhile, it took 20 more years for the first US woman, Sally Ride, to enter space in 1983.

Was Tereshkova's flight indicative of broader gender equality among Soviet scientists, with the US lagging behind? Or did the Chair of the Soviet Women's Committee Zoya Puhkova's words in 1988, that "there is a gap between the official policy of equality for women, and the reality, in which few keep pace with men in the working world" ring true in Soviet academe? [1]

The Soviet Union was ahead of other countries at the time on many key measures of gender equality, such as female labor force participation and representation among scientific researchers. However, when looking more closely at representation across scientific fields and in elite institutions like the Academy of Sciences, by other measures it appears the gender gaps in science and academia were large and on par with the United States. For example, based on my calculations, women made up only approximately 2% of members of the USSR Academy of Sciences in 1989. Another measure of gender gaps in science is differences in publication rates; social scientists have referred to this difference in publications of male and female researchers in the US as the "productivity puzzle". It was called a puzzle, since the lower publication rates of women scientists in the US could not be explained by reasons related to family or field-differences.

In order to more deeply to understand whether these gaps are indicative of other measurable gender gaps in the Soviet scientific system, and to assess whether and how far ahead the Soviet Union was from US, in my research, I have turned to data on scientific publications to estimate gender gaps in publications rates during Soviet times and transition, and to examine how these gaps compared to the US at the time. [2]

Measuring Gender Gaps in Publication Data

The challenge in studying gender gaps in publication rates is that it is difficult to identify gender directly from names on publications from databases like Web of Science or Scopus because only first initials are typically listed for an author. A recent large-scale report of gender differences in publishing by Elsevier, for example, describes these chal-

lenges of gender disambiguation when first names are not available. [3] Because of these challenges, the studies that exist tend to be based on surveys with either self-reported productivity measures or are from small samples of men and women from one or a few fields of science, where it was possible to infer gender. Much of the previously well-known research on this topic is based on US scientists, but evidence from other countries is emerging.

In my own research on Soviet scientists, I have used data from the Web of Science (WoS) and have inferred gender of the publishing scientist using Slavic naming conventions. While I cannot observe an individual's first name in the WoS publications, I can use the individual's surname to determine gender, which is a unique characteristic of Slavic names. [4]

Using a dataset of scientists who were publishing in top Soviet journals across several scientific fields, I estimate differences in men's and women's publication rates using two cross sections of the data from the Soviet era (1986-1988) and the post-Soviet transition period (1994-1996). The Soviet-era sample of 1986-1988 includes 17,215 scientists, of which almost 77% are men. By the 1994-1996 period, the sample becomes slightly more male (78%).

USSR and US "Productivity Puzzles"

Using these data, I estimate a raw gender gap in publication rates of 24% during Soviet times (a ratio of women's and men's publications of 0.76) and show that it increased slightly during the transition period to 27%. In both periods, the gap is larger than estimates from the US at the time. [5] The gender gap in citations was even larger, with women getting only 54% of the citations of men during Soviet times, and it widened a little to 53% during the transition.

The gap increased slightly in part because women experienced a greater fall in publications after the end of the USSR compared to men (women had a 9% greater fall in publications than men after USSR). The increase in the gaps during the transition period is consistent with studies of gender gaps in transition countries, which have documented how women fared worse than men in terms of wages and employment. However, it is notable that the 1990s were also a period of "feminization" of Russian universities, with the share of women working in higher education institutions increasing from 42% to over 50% from 1995 to 2000. How can the increase in the gender gap in publication rates be interpreted against the increased representation of women among university employees?

The publication data analyzed here includes only the cohorts of scientists who were actively publishing near the end of the Soviet period; thus, new entrants academia in the transition period are not included in the sample. If these newer cohorts had more equal publication rates, than the overall gender gaps in publishing would be lower. Official statistics on other measures of the representation of men and women in academia - such as the share of women supervising post-graduate students, which increased from 24% to 30% from 1995-2000 - suggests that while women were more represented in universities during this period,

the faculty involved in research activities was still predominantly male. [6] Thus, to better interpret these findings, further research is needed on the publication rates of men and women in the cohorts entering university faculty positions in the 1990s and differences in the primary responsibilities of female and male faculty entering universities during this time (administration or teaching vs. research). My analysis also points to dramatic differences in the distribution of men and women across scientific fields in the USSR. Women were much more likely to have published in Chemistry and the Life Sciences, and less likely to be in Astronomy, Mathematics and Physics. This pattern is similar to the US, where women's underrepresentation in science is primarily in the more math-intensive fields. [7] An important part of the story of the productivity gap in both Soviet times and during the transition period is likely this segregation across scientific fields. Life Science and Chemistry, where women were most prevalent, were the fields that had the greatest declines in productivity and in which individuals were the most likely to exit science.

Social scientists have referred to the difference in publications of male and female researchers in the US as the "productivity puzzle". It was called a puzzle, since the lower publication rates of women scientists in the US at the time could not be explained by reasons related to family or field-differences. My analysis of publication rates suggests that this "puzzle" also existed in the USSR, as a gap in publication rates appears to be significant, and field differences do not account for the gap. While I cannot account for family-related factors in the analysis, assuming that Soviet state support for working mothers was effective, then these factors should have been even less constraining in the Soviet Union.

In sum, my analysis of publication data shows that a gender publication gap existed in the USSR on par and even larger than in the US, despite the importance placed on gender equality and scientific achievement in the Soviet Union.

References and notes

- [1] As quoted in an article on the Communist Party Conference in the Guardian on July 4, 1988.
- [2] See Ganguli, I. (2017), "Did the Soviets Solve the "Productivity Puzzle"? Gender Differences in Science in the Soviet Union", University of Massachusetts Working Paper, for more information.
- [3] Gender in the Global Research Landscape Report, available at <https://www.elsevier.com/research-intelligence/resource-library/gender-report>.
- [4] I assign a gender based on whether the last name ends in a "-va", "-na" or "-ya", which typically indicate that the individual is a woman.
- [5] Estimates from the US around the same time period are 0.785 in 1988 and 0.759 in 1993. See Xie, Y., & Shauman, K. A. (1998). "Sex differences in research productivity: New evidence about an old puzzle." *American Sociological Review*, 847-870.

[6] Reports of the Federal State Statistics Service of the Russian Federation, such as Женщины и мужчины России, available at http://www.gks.ru/bgd/regl/B02_50/Main.htm.

[7] See discussion in Ceci, S., D. Ginther, S. Kahn, and W. Williams (2014). "Women in Academic Science: A Changing Landscape." *Psychological Science in the Public Interest* 15(3):75-141.

Russian Women in Academia: Bibliometrics

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In early 2015 researchers from Canada, USA and Russia published a paper on the bibliometric indicators of Soviet/Russian men and women [Paul-Hus et al., 2015]. That article described the evolution of the place of women in Russian science over 40 years, from 1973 till 2012. The text you are reading now is a summary of the paper's results and mainly presents its abridged version.

Data for the research [Paul-Hus A., Bouvier R.L., Ni C., Sugimoto C.R., Pislyakov V., & Larivière V. (2015). Forty years of gender disparities in Russian science: A historical bibliometric analysis. *Scientometrics*, 102(2), 1541-1553. DOI: 10.1007/s11192-014-1386-4. (<http://dx.doi.org/10.1007/s11192-014-1386-4>)] were taken from the Web of Science database (Thomson Scientific, now Clarivate Analytics). As Russian social sciences and humanities are poorly represented in the database, only STM (science-technology-medicine) disciplines were considered. In total, more than 1 million documents with at least one Russian institutional address were analyzed.

There are no gender tags in bibliometric databases, so gender was assigned to authors by gender-specific suffixes (for example, -ov, -in, -ev, -ky, -kii, -kiy, -yi, -ny for men or -ova, -ina, -eva, -aia and -aya for women). The analysis of male and female researchers' relative contribution to published papers was based on the proportion of papers published by authors of each gender for whom gender could be assigned. The number of papers was calculated by fractional counting where each author is given 1/x count of the authorship, x representing the number of authors for which gender was identified on the given paper.

Output

Figure 1 shows that women's proportion of fractionalized authorships is lower than that of men in all disciplines except Psychology. Areas in which Russia has been historically very prominent – such as Mathematics, Physics, and Engineering & Technology – are male-dominated. In these

disciplines, women represent less than 20% of fractionalized authorships. The global proportion of female scientific output ranges between 20% and 30% of fractionalized authorships for the 1973–2012 period. This proportion slightly decreased after the fall of the USSR in 1991. From 2008 onwards, there is a stabilization of women's share of authorship in all disciplines except Psychology.

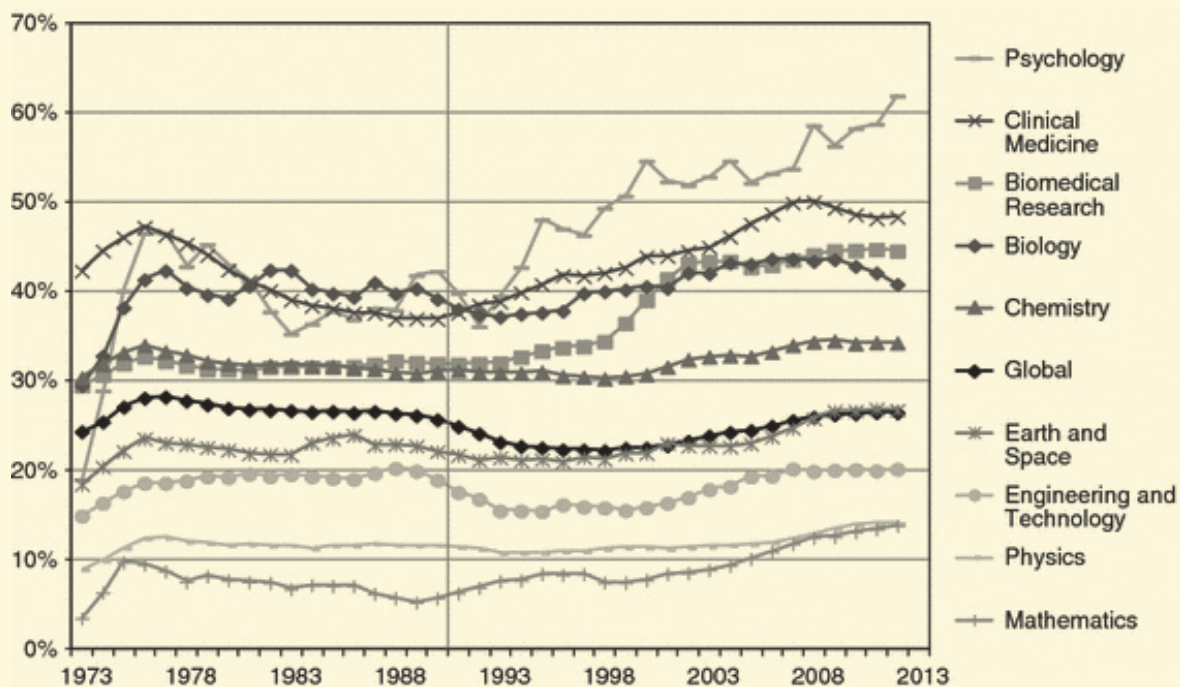


Figure 1. Women's fractionalized authorships, by discipline, 1973–2012 (3-year moving average).

As for Psychology, which appears to be the most gender-equal discipline in Russia, one of the explanations for this result may be that a majority of Russian psychology papers in WoS are published in two Russian journals.

Additional investigation demonstrated that women publish in Russian journals and in Russian language proportionally more often than men (Fig. 2).

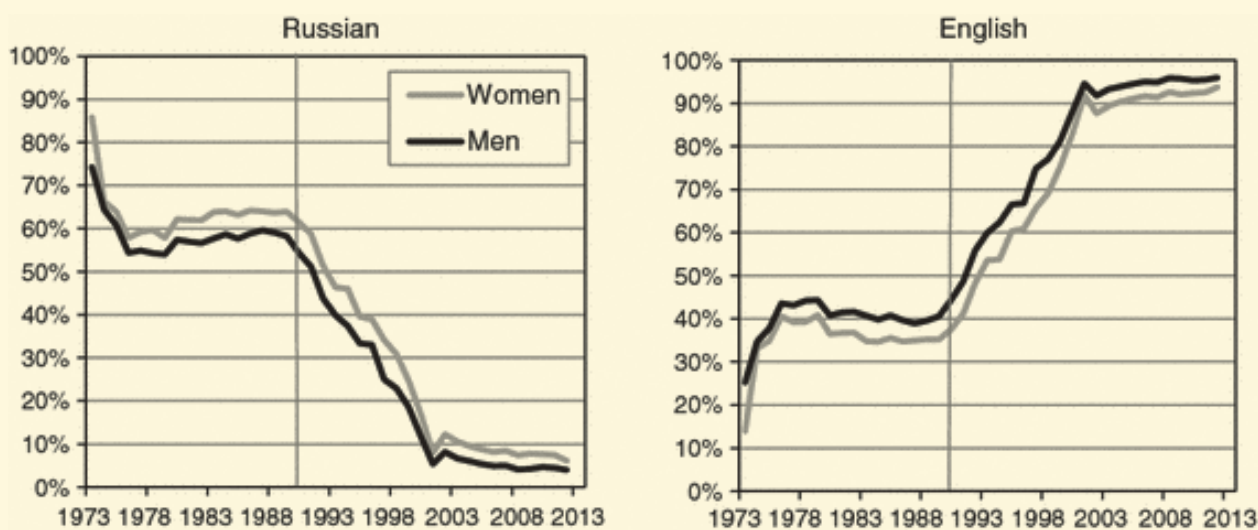


Figure 2. Proportion of papers written in Russian and in English, by gender of the first author, 1973–2012.

Productivity, i.e., the number of papers per researcher, was also assessed for men and women for the 2008–2012 period. The result was that women were less productive than men in all disciplines. On average, a woman publishes 30% fewer papers than a man. However, in Physics, in Engineering & Technology, and in Clinical Medicine, the productivity gap is less important. Productivity gap between women and men is largest in Chemistry, Biomedical Research and Mathematics.

How often do women become first author of the papers they contribute to? To answer this question additional analysis was done. It showed that in modern Russia, there is a perfect equality in this aspect: the proportion of papers first-authored by women is the same as the total share of papers with women among authors. Women more often become first authors in Chemistry and Biomedical sciences, less often in Engineering & Technology.

Collaboration

For collaboration, the proportion of papers resulting from national collaborations compared with those that were the result of international collaborations was analysed for each gender.

International collaboration was virtually nonexistent before 1991. Only the fall of the USSR provided an opening of the Soviet scientific community to the rest of world. Still, even now domestic collaboration remains the principal type for both genders.

However, there is a striking difference. While women lead in national type of collaboration, men are more involved

into international partnerships. This difference is evident and can be traced during all the 1973–2012 time period, especially after 1991. For some years the gap reaches 15% for domestic collaboration and about 8% for international. It may be said that men are more present on the international arena while women, in their turn, are more relatively active on the national scene.

Scientific Impact

Finally, the scientific impact of male and female researchers was compared using the average of relative citations (ARC). ARC provides field-normalized citation rates, thus allowing the comparison of data between different specializations that have otherwise different citation practices. More specifically, the number of citations received by a given paper is divided by the average number of citations received by articles in the same discipline published that year. ARC greater than 1 indicates that an article is cited above the world average for the same field, and an ARC below 1 means that it is cited below the world average.

Figure 3 shows the 1973 to 2012 evolution of the relative scientific impact of Russian papers according to the gender of the first author. It shows that despite important variations in the overall impact of Russian papers, the difference between the scientific impact of men and women remains relatively stable throughout the period, except after the fall of the Soviet Union in 1991, where it seems to widen (this increasing difference can be attributed to the lesser propensity of women to publish in English).

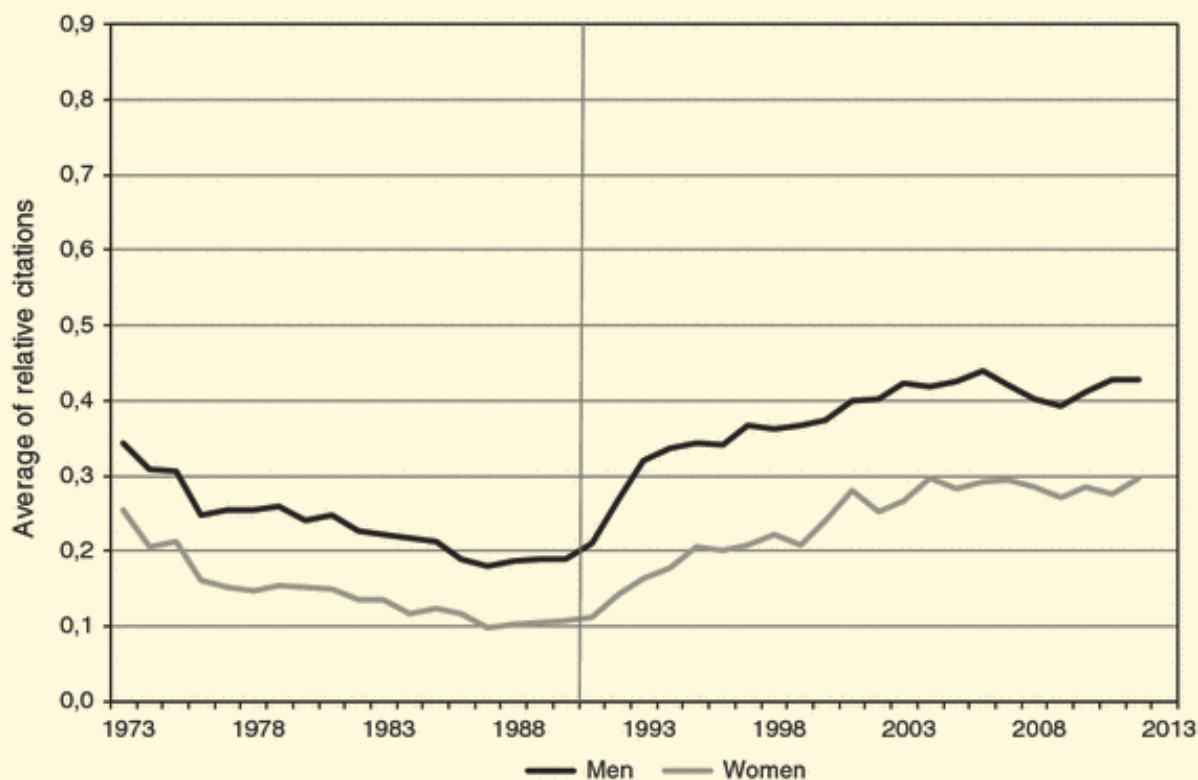


Figure 3. Average of relative citations (ARC) of Russian papers, by gender of the first author, 1973–2012.

The extent of the gender gap in terms of impact varies greatly by discipline. The largest difference is in Physics (where women never surpass men in ARC), in Mathematics and, after 2000, in Biomedical Research. Psychology is again the most gender-balanced discipline with similar impact for male and female papers. Furthermore, after 1991, women's impact increased to reach that of men.

To conclude, the authors of [Paul-Hus et al., 2015] have shown that women remain underrepresented in Russian science (STM disciplines) in terms of the number of papers, international collaboration and citation score. The question of whether it is their deliberate choice or some kind of abuse, the so-called 'glass ceiling,' remains open and cannot be answered by means of pure bibliometric research. Finally, it must be stressed that the patterns presented in the paper are not Russia-specific. As demonstrated in another recent study [Larivière et al., 2013], gender disparities in science are still widespread across the world. Over the 2008–2012 period, men accounted for more than 70% of fractionalized authorship worldwide, which approximately coincides with the results for Russia.

References

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Gender Wage Gap in the Russian Academia

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Introduction

Gender wage gap exists in many countries, which is proven both by researchers and international organizations (OECD, International Labor Organization, World Bank, etc.) in their reports. Gender wage gap can be observed not only in the private sector but in the public sector too, in-

cluding higher education. Is there discrimination against women on the labor market? Why do men get higher salaries? Is this a result of discrimination or are there other factors that can explain gender wage gap to a great degree?

Discrimination, Segregation or Self-Selection?

The discrimination theory proponents use special terms: sticky floor and glass ceiling. Sticky floor is used point to such an employment pattern at early career stages when men progress up the career ladder and earn more than women, who experience difficulties with rising above entry-level. Glass ceiling describes unacknowledged barriers to advancement in a profession that prevent women from obtaining upper-level positions which become available for men only, while women keep bumping into a 'glass ceiling' or 'glass walls.'

Those who use other arguments to explain inequality point out that gender wage gap is to a large extent tied to cross-sectoral differences: horizontal segregation does exist (some professions are traditionally considered to be more 'manly,' while others – more 'womanly'), and the 'manly' occupations tend to be better paid. Segregation can also be caused by self-selection on behalf of women who may choose certain professions according to their personal preferences. Moreover, gender inequality can be related to non-pecuniary job characteristics (risk level, health hazards, etc.).

Gender specialization effect influence gender wage gap too: men increase their labor supply while women often focus on family obligations and domestic labor. As a result, there are disparities in job experience, and women's employment record is interrupted during maternity leave, which affects the difference between a man's and a woman's remuneration. Many employers actually expect women to focus on family and to take maternity leave, so they are less likely to employ women and if they do, they offer relatively lower salaries compared to what men get. Some researchers analyze gender inequality through the prism of human capital theory. They argue that women underinvest in their own human capital because they are aware of potential discrimination and of the need to boost their professional profile.

Gender Wage Gap at Higher Education Institutions

International research indicates that there is gender wage gap in the academia: men's salaries are, on average, 15-30% higher than women's. In other words, there are gender disparities within the same sector though gender inequality exists to a large extent due to cross-sectoral differences in remuneration. One of the peculiarities of wage setting at universities is that these organizations aren't aimed at maximizing profit

In Russia, as well as in some other countries, public HEIs prevail over private ones, and universities are highly hierarchical structures with extensive bureaucracy, where re-

muneration is tied to rank, title, position, etc. Therefore, it is reasonable to expect that gender gap pay among faculty is primarily caused by differences in rank and academic degree.

Data and Methodology

Our research is based on the Monitoring of Education Markets and Organizations 2006-2016 data. We excluded part-time faculty and those employed at private HEIs from the sample (because of a drastically different approach to wage setting). The final sample included over 10,000 respondents (60% of them female, 40% male). This gender distribution remained stable throughout the observation period. Salary was measured as one's combined earnings for teaching and administrative work at a given HEI. Our calculations were based on real wages normalized for the prices as of January 1st, 2017.

Our empirical research was based on the existing methodology used in gender gap pay research: first, men's and women's wage dynamics is compared to calculate the gender gap pay index. Similar calculations are performed for hourly wages. After that we run OLS-regression based on Mincer wage equation for each year and for the total sample, which helps us to consider various characteristics that help explain wage disparities between men and women, and calculate the wage 'premium' for each gender. In the end, we ran the Oaxaca-Blinder decomposition for the wage gap to determine what share of the gap is defined by observable factors and what share cannot be explained otherwise and may therefore be attributed to discrimination.

Faculty Wage Dynamics and Gender Wage Gap at Russian HEIs

Faculty wage dynamics analysis reveals opposite trends: in 2006-2013, faculty's real wage grew from 20,000 to 28,600 rubles per month (currently about 345 and 495 USD respectively), while in 2013 it began to decline and reached 24,000 rubles (415 USD) in 2016. The wage gap between men and women was highly unstable and varied from 5% to 27%. On average, male faculty earned 16.3% more in 2006-2016 than their female colleagues. If one looks at the trend line, one can notice an insignificant increase in the gender wage gap in the Russian academia.

The gap was highest in the post-crisis recovery growth period (2010-2013) and lowest in the crisis years (2008 and 2014). One can assume that in prosperous years wage 'surplus' is re-distributed among men, while in an adverse economic situation this 'premium' disappears, thus improving gender equality.

There were no significant differences in labor supply: both men and women do on average 33 hours of teaching and administrative work per week. Considering hourly wages, the same trends are observed though they are smooth: the wage gap in terms of hourly rate varies from 12% to 22%. Men's average hourly wage exceeded that of women by 18%. On the whole, gender wage gap at

HEIs in Russia is below national average: according to the Federal State Statistics Service data, in the past five years women's average salary amounted to only 70% of men's average salary.

Why Men Get Wage 'Premium'

Comparing averages partially confirms the idea that gender wage gap in the academia, namely that fact that on average men get a wage 'premium' of 16-18%, is explained by gender distribution in terms of position and seniority, academic degree, and professional experience (total and in teaching).

In general, 14% of male faculty have the Doctor of Sciences degree (equivalent to Habilitation) and 51% have the Candidate of Sciences degree (equivalent to PhD) versus just 6% and 45% among female faculty respectively, while academic degree actually yields substantial wage 'premium.' Men are more often employed in higher positions (such as full professor, associate professor or senior research fellow) than women (40% vs 27%). Deans, vice-deans, and (vice-)chairs of departments are more likely to be male too. Women usually work as assistant professors, lecturers or assistants. In total, men have on average 25.6 years of work experience while women only 20. Men's average experience in teaching is also longer (21 years) than women's (18 years).

The results were confirmed via the Mincer equation-based empirical estimation of wage determinants with the logarithm of real wage used as dependent variable, and gender, position, academic degree, individual faculty's socio-demographic characteristics and labor market conditions as control variables. Controlled for position, academic degree and work experience, men's wage 'premium' over women decreases to 8%. We also observed job seniority premium and diminishing returns to the length of service. Also, faculty working in Moscow earn 20-25% more than those working in other regions. There is no 'premium' for the English language proficiency.

The Oaxaca-Blinder wage gap decomposition for the total sample showed that 94% of it can be attributed to differences in position, work experience and academic degree. Such factors as seniority, academic degree (Doctor of Sciences or Candidate of Sciences) contribute most to explaining the wage gap. So, 'glass ceiling' does exist on the Russian domestic labor markets, which means that men are more likely to defend a dissertation and to reach higher positions within academic hierarchy, while women settle for mid- and entry-level positions (such as lecturer or assistant professor). Even though our study helped to identify major gender wage gap determinants, the question why men climb up the university hierarchy faster than women remains important for further research.

Conclusion

Our analysis has confirmed the existence of gender wage gap in the Russian academia: on average, male faculty members earn 16-18% more than their female colleagues.

Similar results are valid for the comparison of hourly wages. Nevertheless, gender wage gap in the academia in Russia is below national average. Controlled for position, academic degree and work experience, men's wage 'premium' over women decreases to 8%. The main reasons for the wage gap are gender differences in position and seniority, the fact that men are more likely to have an academic degree and on average have longer work experience (both total and in teaching) than women. The problem of 'glass ceiling' does exist at Russian HEIs: it is more difficult for women to raise higher in the academic hierarchy, though this might partially be due to self-selection.

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Gender and Income Disparities Among Russian Academic CEOs

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This paper presents results of a short survey of gender balance and income disparities among directors of the institutes of Russian Academy of Sciences (RAS) and rectors of state universities based on their income declarations for the year 2016. I observe severe disproportion of sexes among these groups of CEOs. Also, female directors of RAS institutes have much lower income and are much more often put on temporary contracts. The situation in universities is somewhat better, although there are no women among the 20 top-earning rectors of the surveyed HEI.

Corruption thrives in Russia, and this is precisely what allows us to take a closer look at the most privileged and influential caste of Russian academic personnel. As a part of governmental fight with corruption all RAS institutes' heads and university rectors are all obliged to provide yearly data on their own income and that of their spouses. This information is then openly published by the authorities.

I have downloaded this salary data for all CEOs of HEIs and research institutes that report either to the Ministry of Education and Science (MES), Ministry of Health (MH, manages state medical universities) or Federal Agency for Scientific Organizations (FASO, manages the institutes of Russian Academy of Sciences) for the year 2016. I did not survey CEOs of the third ministry most important in terms of HEIs – Ministry of Culture – because of a very specific, non-research intensive nature of its institutions.

Strangely, despite the regulations, either a substantial number of rectors of MES HEIs did not provide this information, or MES did not publish it. Thus I consider the samples of FASO (N=627) and MH (N=45) to be close to the general population of corresponding CEOs, and the sample of MES (N=209) to be somewhat representative of the general population, hoping that this sample is random and there are no additional gender or income distortions.

After some necessary data cleaning, I manually added the sex of each top manager, mostly using their given and family names, with additional web searching where necessary. I also coded temporary/permanent contract status using position prefixes 'acting [CEO]' stated in all three sources. My set of parameters for each CEO also included yearly income, marital status and spouse's income (where applicable). It should be noted that it is also possible to extract data on the existence of underage children, ownership and net area of real estate, and ownership and models of cars but I have not used this information. Simple descriptive statistics clearly shows that women are underrepresented and – in case of FASO – underpaid and much more frequently put on temporary contracts than men.

The first thing that strikes the eye is the share of women CEOs, which I present along with the broader official statistics for the whole population of researchers collected by Russian Federal State Statistics Service.

Notably, this drastically disproportionate share of women among top managers is at odds with the data for lower-lever personnel. The higher the role, the lower the share of women (Fig. 1), although Russia is not unique in this respect. In fact, in 2013 there were only 17% of female vice-chancellors in the UK but the figure had risen to 22% by 2016 (Jarboe 2016). In the USA it is ca. 28% or even more (Bichsel and McChesney 2017, also see <http://www.aceacps.org/women-presidents/>), and the numbers are steadily rising. Daniel J. Cook of the American Council of Education wrote in 2012: 'In 1986 just 10 percent of college presidents were women. Today, 26 percent of institutional leaders are female.' Data for other nations is mostly scarce and outdated. For example, in mainland China there were only 4.5% of women among HEI leaders in the previous decade (Zhao and Jones 2017).

Sadly, we do not have yearly data for the share of women among academic CEOs for Russia but national data for researchers with PhDs for 2013-2015 shows very modest growth of the share of women, if any.

What is unique for our dataset is the distinction between temporary contracts and permanent contracts. This reveals an unusual figure: 43.8% of women CEOs of FASO institutes are on temporary contracts, compared to 21.2% of men. For MES universities this figure is roughly equal for both sexes (21.1% men, 23.6% women), and in MH-governed universities this figure is 15.9% for men and zero for women.

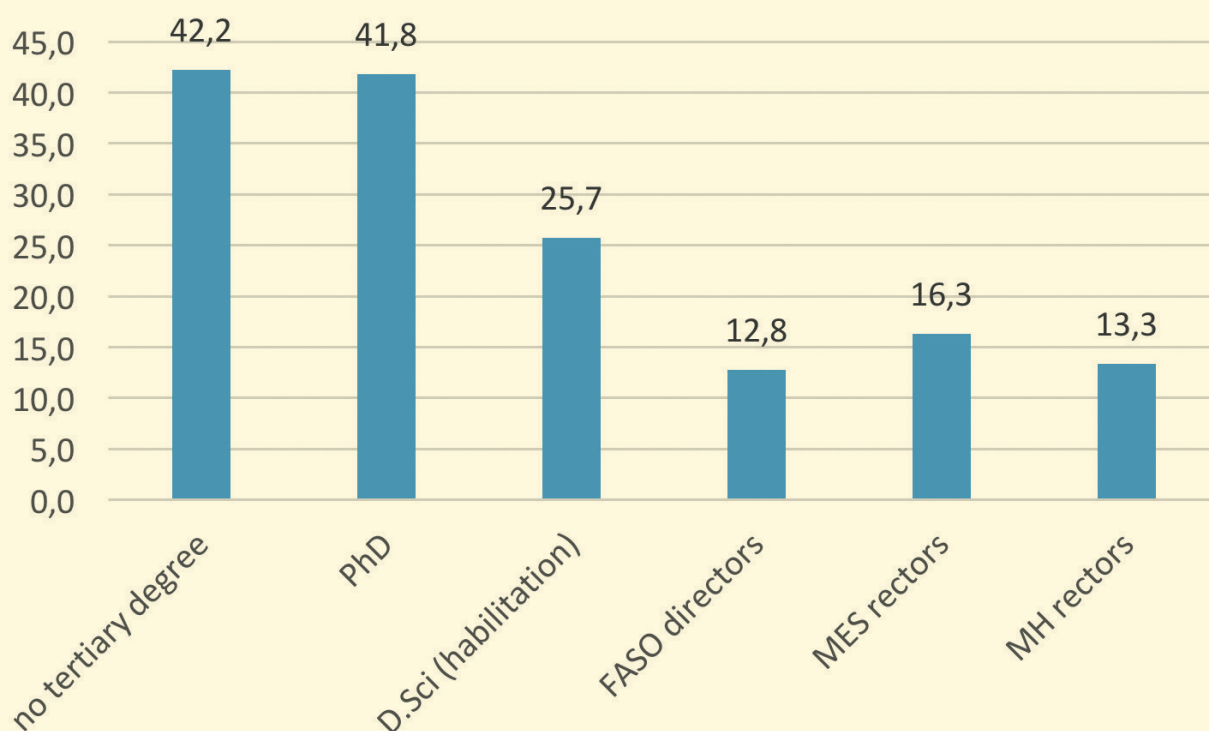


Figure 1. % of women among various groups of researchers and academic CEOs. Data for the first three bars is for 2015 (most recent year available) and is calculated using 'Indikatory Nauki 2017' factbook. Data for the other bars is for 2016.

One possible explanation could, in fact, be rather encouraging: FASO is undergoing reforms and elderly directors are routinely being phased out, so perhaps at least a part of these 43.8% women are those who step into their shoes? Exploratory survey of some women CEOs' CVs shows that it could be the case. But this would mean that before the reforms the share of women CEOs in FASO was even lower than now and substantially lower than in HEIs. Another explanation could be that the institutes headed by temporary directors are destined for reorganization, and this reorganization is especially imminent for smaller institutes of the former Academy of Agricultural Sciences, which represent 49% of all the FASO institutes headed by women.

On the whole, women tend to lead smaller, less prominent FASO institutes and for some notable exceptions like Institute of Cytology or Institute of Chemical Physics, temporary female directors were already replaced by men in 2017 (these changes are not reflected in statistics presented here).

Speaking of HEIs, there is also an interesting detail hinting that the situation is now better than it was one or two decades ago. There is a special honorary position of university president in many Russian universities. It was introduced by MES a couple of years ago to help prominent elderly rectors step down from managerial duties and give way to younger generations. Of the current 39 presidents, also included in the MES data, only one is female.

Finally, let us get down to the science of making money. The first thing that needs to be mentioned is that here we deal with total income, not salary, so my results cannot be directly compared with the data for other countries. Overall results are shown in Fig. 2.

Although there is much variance among surveyed CEOs, women's median income is lower both for MES- and MH-governed universities and for research organizations of FASO. For the latter, however, this disparity is much more pronounced, with female CEOs' median yearly income being just 66.9% of that of male CEOs, while for MES & MH HEIs it amounts to 89.2%. This figure is close to the gender gap in the 2016 salaries of UK vice-chancellors (94.6% according to the recent Times Higher Education VC Pay Survey).

But even for MES & MH universities there are zero women among the top 20 CEOs with the highest income, and only five in top-50, which does not correspond to UK salary data. Amongst top-20 FASO directors by income there is one woman, although it should be noted that until recent years the prominent research institute that she heads was directed by her father, who is still active and powerful. I have also looked specifically at temporary CEOs within FASO. The situation is the same: only 22% of the highest-paid half of these directors are women. Also worth noting is that the median income of unmarried women among surveyed CEOs is slightly higher than that of married, while for men there is no difference.

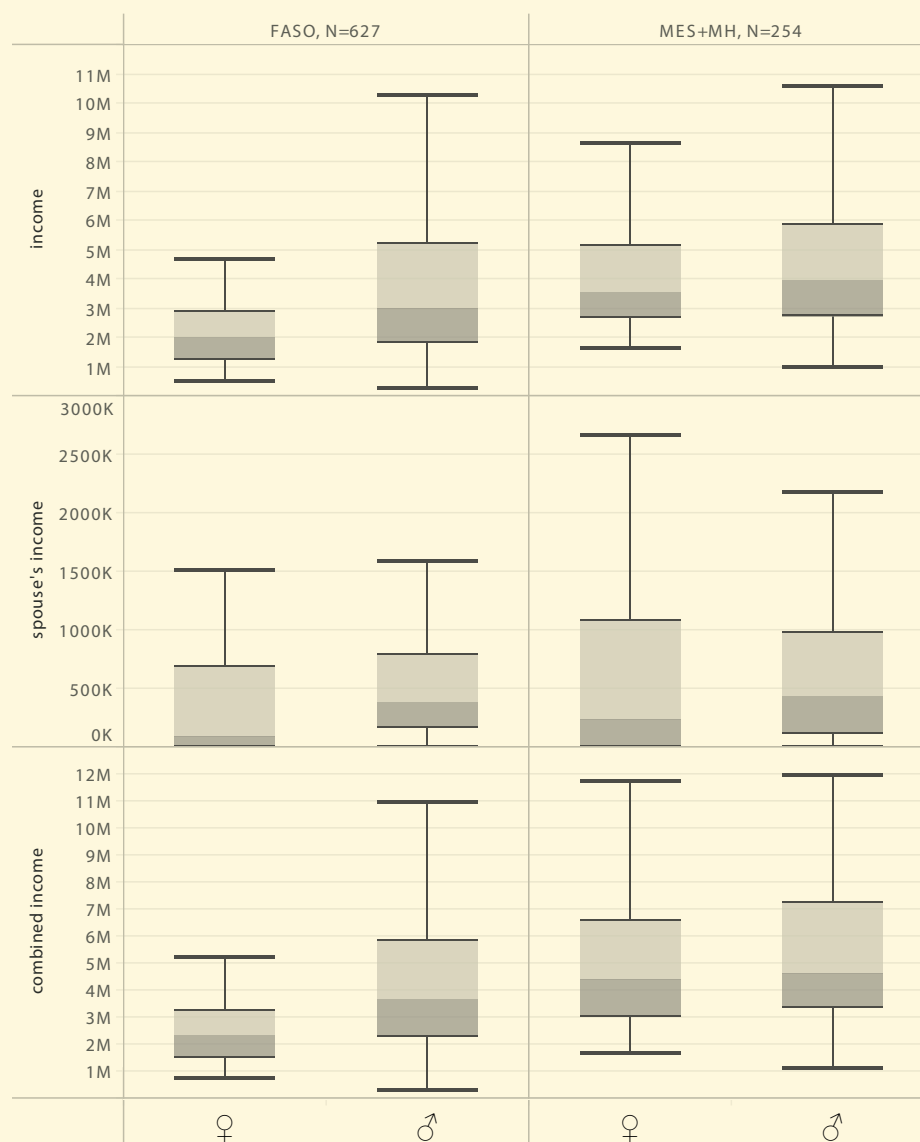


Figure 2. Distribution of academic CEOs, their spouses' and combined income by sex and governing body, 2016. Whiskers extend to data within 1.5 times the interquartile range.

I will not delve into the fundamental causes of such severe disparity that clearly hinders our growth as a diverse, modern and healthy nation. Clearly there are many decent candidates for leading positions among female faculty of the universities and research institutes, which are not promoted for various reasons. But let us finish on the good note: while FASO is headed by a male, the heads of both MES and MH are women, and Olga Vasilyeva is the first female minister of science and education since the October revolution.

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Career Paths of Women in Science: Women's Perception of STEM in Russia and Germany

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Science, technology, engineering and mathematics (STEM) is a field in academia which traditionally attracts more boys than girls as students; it is often perceived as more appropriate for a male career than for female. It can be seen in the way people talk about the ideal of a successful scientist, which mostly emphasizes the qualities that are traditionally perceived as male, such as confidence, decisiveness, and ability to take risks. Such reasoning can be a starting point for discrimination and inequality in STEM, therefore it is important to see how these attitudes are perceived by women work in in the field and how they are affected by them.

The main question is what gendered professional identities women in STEM construct in the Russian and German contexts as a strategy for a successful academic career.

The results are based on 12 in-depth interviews with women who hold faculty positions in STEM disciplines at the Karl Eberhard University of Tübingen (Germany) and Higher School of Economics (Moscow). To understand identity constructions, it was important to look at how women respond to the context by shaping their views on success and then by constructing identities based on those views.

Russia and Germany differ in terms of their equality index, legislative policies and work environment in the field. Tübingen University has apparently embraced the trend towards entrepreneurial university model, which emphasizes the importance of individual achievement, the ability to sell one's work and of being competitive. HSE is one of the Russian universities which are gradually moving towards the same competitive, entrepreneurial model in order to gain a prominent position in global rankings and to fit into international discourse but are still influenced by professional and communal needs values inherited from the Soviet times.

Work Environment Creates Contexts for Group-oriented or Individualistic Identity Construction

Set of meanings that define who a person is in terms of their roles, group or category memberships or individuals – an identity (Stets et al., 2016) – is connected with person-

al experience and could be linked with perceptions of the field, stereotypes, working environment and nuanced by understanding the view on success, important professional qualities and role of family.

Russian participants develop identity as part of a collectivistic perspective of the work environment; it is gendered even if women might not see it that way. Identity is closely related to collective values and norms, and our research participants do not see themselves as individualistic scientists with an entrepreneurial approach to building a career. Focus on the value of one's work and on being useful to others is perceived as important in the academia as most of the interviewees talked a lot about being helpful and feeling valuable as their main ambition. They define themselves as part of the group or through other people; they talk about being mothers, daughters. There is separation of identities, identity as a woman or mother is the main one, while scientific, professional identity is separated and seen as a job.

In Germany most of the participants define themselves primarily as professional researchers; their identity is more holistic, seen as an important part of women's lives and related to the individualistic, research-oriented career path, which is dominant in the entrepreneurial work environment. Being a mother is not considered as success because identity lies mainly in the professional field, while family defines just a part of one's identity. Most of the respondents did not bring this up in the interview until asked directly about children and work-life balance. Discussing the qualities that are believed to be important for success, the interviewees brought up the ideas that scientists had to be strong, persistent, and self-confident.

Two Ways to Adapt in STEM: Blending In and Challenging

Having analyzed the ways the interviewees talked about the differences between males and females in the work environment and the way women perceive their field and status-quo in the academia in general, I inductively discovered the strategies of blending in and challenging as the ideal types used by women to deal with the sphere. The way women choose to behave at work on a daily basis is linked to their career strategies and views on success, which are different in individualistic or group-oriented environments.

In Russia, blending in can be seen as being as strong as males and trying to adopt 'male' patterns and behavior in an attempt to be accepted in the male-dominated environment (and construct their behaviour on that basis). The strategy implies perceiving the field as less gendered and more neutral, merit-based, and accepting certain traditional feminine roles suggested by society, such as teaching and administrating.

Blending in in Germany means that women either accept the norms connected to the feminine qualities in the field, or they perceive the 'traditionally masculine' qualities as neutral. Some of the participants explained that it meant doing one's job well and not really trying to claim that

leadership positions are the only important and valuable one's. From the German perspective, qualities that are important for scientists – such as strength and toughness – are perceived as neutral, so those who choose blend in are believed to perceive field as gendered, discussing gender power balance and issues.

Most of the German participants discuss problems and concerns related to male power in the STEM and try to challenge it with their own views on female leadership as a successful strategy. The strategy of challenging is chosen by those who are convinced that women can be good leaders and attempt to challenge and transform the current norms and rules which do give women enough room to be successful leaders. Women claim that they have all the qualities that are important for pursuing a career in the academia and for being leaders. I did not observe the challenging strategy in this form in the Russian context.

How Do Identity and Career Strategy Work Together?

In Germany universities provide institutional support, e.g. equal opportunities committees, parental leaves, day-care and financial support; women discuss the problems that exist in the field, which men are aware of too. Even though few respondents claimed they had never faced discrimination themselves, all of them share a view of the STEM field as gender-imbalanced and still favoring men. Attempts to challenge the current state of affairs are seen in the actions of gender opportunities committees, in local faculty initiatives, in the talks and the reflexivity that women have about the current situation. Attaching importance to both identities encourages women to challenge existing norms as they want to succeed in all spheres of life.

In Russia institutional support in that form is less present and awareness about discrimination issues is quite low. Few women are aware of the problematic aspects of male behavior, such as paternalistic comments, stereotypes and jokes about women in science, expectations from women to take care of the lab, etc. The interviewees in Russia assume teaching roles and claim to have successful careers. It can be seen as an avoidance strategy when women try to fill vacant positions by taking 'acceptable' positions in a gendered, male-oriented field, e.g. teaching positions. They adjust to the field by accepting its traditions but at the same time not turning away from their feminine identity or transforming their qualities. This helps them keep both identities separated and not conflicting.

The main difference between Russian and German participants is that some 'feminine' qualities are seen as good but in Russia, they confine women to a 'subordinate' (though not necessarily perceived as such) roles while cooperating with male leaders, while in Germany, 'feminine' 'soft' skills can be beneficial in leadership positions both for men and women.

To understand what a woman has to take into account and how that can help fit in, it is important to look at the career strategies women pursue, meanings they attach to mem-

bership in the academia and norms they see as dominant. My findings showed that the way women adjust — through positioning themselves in the academic discourse and by choosing certain professional identities and strategies for working in STEM — is closely related to the perceptions of a specific country context.

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Academic Career Challenges for Women in Switzerland

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If Professor Pleischner from the popular Russian TV show about Soviet intelligence activities in Nazi Germany, Seventeen Moments of Spring (1973), had really been in Bern during the 1940s, he would not have found Blumenstrasse because such street never existed in the Swiss capital. If this story had taken place today, Professor Pleischner would have rather been very surprised to find Tumarkinweg, a street named after a Russian woman, Anna Tumarkin. Who is Anna Tumarkin, and why is Switzerland so proud of her?

Anna Esther Tumarkin, or Anna Pavlovna Tumarkina (1875–1951), become the first female professor in Switzerland, and in all of Europe, in 1909 when she joined the faculty of the University of Bern. In addition to her major contributions to philosophy, her field of study, Tumarkin was actively engaged in the women's movement in Switzerland and beyond. Gustav Emil Mueller (1898–1987), her student and later professor of philosophy at the University of Oklahoma (USA), argued that, "Anna Tumarkin is the precious gift that vast Russia has bequeathed tiny Switzerland."

While the name of Anna Tumarkin has entered into history as the first female professor, her countrywoman, Nadezhda Prokofyevna Suslova (1843–1918), made her name as the first women in Switzerland to complete a doctorate in 1867 at the University of Zurich. Suslova, a daughter of former serfs (!), was the first ever female physician to hold a PhD. Indeed, the impact of Russians on the academic careers — including higher education — of women in Switzerland is more than significant. Swiss universities in Bern

and Zurich, together with the university in Paris, were the first universities in Europe to accept female candidates. It was one of the main reasons why many ambitious Russians studied in Switzerland. At the University of Zurich, for example, in the winter of 1872, about 30% of all the students enrolled were from Czarist Russia and the majority of them were women. In some disciplines, especially in medicine, women even outnumbered men. This “Russinenflut,” or “flood of Russians” provoked several protests among some Swiss students and faculty who doubted the qualifications of incoming students from Russia and demanded more favours for domestic students. The imperial government was also worried about the high number of students going to Switzerland. Its main concern was rather the uncontrolled political views of young people and the establishment of a strong opposition. On 2 June 1873, Alexander II (1818–1881) issued an ukaz banning the hiring of employees who had received their higher education in Zurich. The ukaz was aimed only at female students and graduates, however, and applied to almost 25% of the students enrolled at the University of Zurich.

In spite of this early progress in terms of equal opportunities in enrollment for both genders, Switzerland still has a long way to go toward full equality in other gender-related issues in the academia. Recent statistics show that the percentage of women earning bachelor's degrees has overtaken men – 53% vs 47%. On the PhD level, however, the number of women slightly declines – 43% women vs 57% men receiving PhDs. While this number is low in the European context (where women account for 47% of degree recipients on average), it is a very positive trend for Switzerland: in 2004, only 37% of all new PhDs were women. Nevertheless, the number of women receiving full-time professorships is significantly lower: only 19%, on average. In some disciplines, like economics, medicine and engineering, this indicator falls further down. Women are also underrepresented among university leaders (only 18%) and university consuls (23%). Experts often name two reasons for this trend: the family obligations that many female scholars might have, and their ability to understand and apply the informal rules for making an academic career.

It might be a challenge to combine family obligations and an academic career. It is important to mention that the role of women in Swiss society is rather traditional. The fact that women first got the right to vote in Switzerland only in 1971 — with one canton, Appenzell Innerrhoden, granting women the right to vote only in 1990 — shows how conservative this country is in terms of gender equality. Another late but very important decision was the introduction of a 14-week maternity leave in 2005. The structure and opening hours of pre-schools and elementary schools are established with the assumption that at least one family member — typically the mother — is available and, if working, then often part-time. Moreover, some employers might consider women with families to be immobile due the partner's career, making them less desirable as potential employees.

It might be difficult for women to enter, remain and rise within the academia. A career in the academia offers al-

most no tenure-track options and/or other opportunities to start as a young faculty member and to be promoted within the same institution. An academic career also often means temporary contracts with a permanent position only available at the level of full-time professorship. Vacant positions are always announced and presentations of all invited candidates are open to the public but decisions made by assessment committees might not always be transparent. Some members of assessment committees might support people they already know from elsewhere — a position that some might consider to be a normal collegial gesture, while others may judge as favoritism. Some members of the committee might favor candidate A, while others candidate B, and the job offer might be made to candidate C — a decision that some might call a compromise but others an internal intrigue. Some committee members might not favor bright, extraordinary candidates in order not to be overshadowed by their fame when they become colleagues. Moreover, hiring committees are not always trained or experienced in assessing international candidates and/or candidates from other disciplines. While these rules of the game apply for both genders, women suffer more from the lack of influential networks ready to advocate for them and share information on how the system works.

A Gender Perspective on Local and Cosmopolitan Identities in Academia

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Background

Research on gender differences in academic staff indicates that female academics display more international career orientations than their male counterparts (Halvorsen 2002, Archer 2008). Drawing on Gouldner's local and cosmopolitan identities (1957) this paper analyses gender differences in academic staff of Croatia, Poland and Romania.

Analytical framework

Locals are academic staff loyal to their institutions, where they remain throughout their careers and achieve leadership positions. They seek acknowledgement from local constituencies and do not specifically pursue international peers' recognition. Cosmopolitans are academic staff committed to the ideals of the academic profession, they constantly train to update their expertise and move between institutions and countries.

According to a power perspective women perceive themselves as cosmopolitan out of necessity, as they find difficult to progress in their career within the same university

and where power relations have been traditionally male dominated. This would become even truer in those scientific disciplines where women are a minority, such as natural sciences or engineering.

A logic of appropriateness (March and Olsen 2011) see women pursue less instrumental career pathways favouring the development of knowledge and expertise instead of ascending organizational ranks (Nokkala et al 2017). Female academics consider appropriate the requirement for mobility and intellectual exposure to other higher education institutions and systems.

National and institutional characteristics: women move away from more traditional cultures towards more progressive countries where they can better develop their own ambitions.

Analysis

This study draws on around 170 interviews conducted with academics in Croatia, Poland and Romania. The respondents have been categorized according to gender (male, female), academic position (junior, senior), and disciplinary field (from Agriculture to Social and Behavioural sciences). All interviews followed the same guidelines, which included questions on career perspectives, mobility and internationalization (Fumasoli et al 2015).

Contrary to other European countries, Croatian, Polish and Romanian higher education systems are characterized by a formal, centrally organized system of academic careers, which in principle allows individuals to plan their progression from junior to professorial title in the same university. This said, the requirement for international publications, conference attendance and partnership in research with EU countries has become increasingly important in the definition of the criteria for promotion.

Croatia: female academics appear to be less concerned by formal and bureaucratic rules for career advancement, hence they stress individual effort to get and update professional training in the English language, in teaching and research, as well as in leadership and team work (HR4/HR5/HR6/HR19). Male academics tend to highlight the key role of their university and its regulations in promotions (HR1/2/3/25) and are willing to comply with such demands even if they do not agree (HR19). While male academics acknowledge that EU membership is pushing Croatian higher education towards internationalization, they state it is irrelevant for their career, given that promotion mechanisms are locally implemented (HR32).

Poland is described as an inward-looking hierarchical system where bureaucratic criteria are misaligned with academic work. Criteria for career progression are defined centrally by the ministry, but local – departmental – adaptation plays a central role in promotions. The habilitation, mandatory degree for senior positions, is awarded by internal departmental committees. Female researchers do recognize that local embedding is key for progression: “good mentors are priceless” (PL6/26) “avoiding conflicts at all costs” in order to conduct one’s own research (PL9).

However, different understandings of academic careers can be detected: men tend to be cynical, instrumental and willing to play the game without changing it, they describe international experiences as means to build social capital and “get respect” within one’s own university (PL23). Women display a more idealized vision of academia (“wisdom and scholarship” PL16) and use strategies to shield themselves from university power struggles.

Romanian female respondents from all disciplines display high dedication to the teaching profession and its ethics, along with a focus on training for the job. Self-development and self-determination in pursuing an international dimension of their academic activities has value in itself, as well as in order to progress to higher ranks (RO5/6/7/35). Equally, women already in senior positions push themselves to constant development in their teaching and research by benchmarking European prestigious universities and by using their private money to attend international conferences (RO18/35/37). As a female junior academic in engineering said: “academic career development is based on continuous access to information and scientific research” (RO53) thus showing commitment to the profession rather than to the university of affiliation.

Discussion

The findings show that in the three countries gender affects an idealistic/normative perspective towards the profession (observed in female academics) and an instrumental approach towards the employing university (detected in male academics). Several female respondents characterise mobility as a tool to “pursue one’s curiosity”, “to build further their expertise and knowledge base”, “to gain insights in one’s field”, “to become acquainted with different practices”. For male respondents, the instrumental angle is more explicit: they acknowledge mobility if required for career purposes and they see it as a necessary evil, which means it should be as limited as possible.

Gouldner’s conceptualization of local and cosmopolitan organizational roles is relevant to uncover differences in how the academic profession is understood by male and female academics. While these findings cannot be considered representative or conclusive, they point to a fruitful analytical framework to further our understanding of the academic profession, the social roles academic can play therein, and how differences in men and women academic identities can be investigated.

When it comes to shed light on how gender influences academic identities, we can see that women tend to perceive themselves more cosmopolitan than men, by displaying a professional orientation towards constant improvement and intrinsic satisfaction, as well as openness towards international experiences. This doesn’t mean that women overlook gender inequalities in academia, but they construct their discourse on successful academic careers with a more explicit reference to ideals of science and scholarship. On the other hand, men tend to rationalize more the pursuit of organizational power as a mean to achieve career success.

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Gender and Croatian Higher Education: Advances and Silences

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The question of whether 'gender' is a valid category has been a source of rifts between conservative and progressive political and civil society actors in Croatia. The most recent disagreement has been over whether Croatia should ratify the Council of Europe's Convention on Preventing and Combating Violence Against Women and Domestic Violence, popularly known as the Istanbul Convention. The concept of gender, rejected by conservative currents, is integral to this document. In a policy environment such as Croatia's, where conservative voices currently dominate, it comes as no surprise that gender mainstreaming, as a strategy aimed at achieving gender equality through policy, is marginal. In this brief article, I illustrate this marginalization through selected examples of Croatian policy documents. I also highlight the gender dimension of decision-making in Croatian higher education, as well as the marginalization of feminist knowledge in Croatian university programs, whilst paying tribute to positive advances in the representation of women in Croatian academia.

How Do Higher Education Policies Fail Women?

Although gender mainstreaming, with its focus on gender representation, has been criticized for deradicalizing the feminist project (Charlesworth 2005), it is worth recognizing that it nevertheless encapsulates a worthy aspiration to gender equality. In the Croatian higher education context, this aspiration is spelled out in Croatia's National Policy for Gender Equality 2011-2015 with reference to the increased representation of women in managerial positions and a gender-balanced student body across academic fields. Unfortunately, this latter aspiration seems to be confined to the policy document in question. On the one hand, there has not been a sequel to the National Policy for Gender Equality that would ensure continuity in higher education priorities from a gender perspective and on the other, there has been no synergy between this policy document and Croatia's latest educational strategy, entitled *The New Colors of Knowledge*, which was passed by parliament in 2014. Indeed, the new strategy makes no mention of activities that are directed at achieving a more gender inclusive higher education system. The fact that Croatia's key policy document for higher education makes no mention of any priorities related to gender equality, even though there is a strong focus in the document on the importance of the traditionally male-dominated STEM areas, highlights how policy can silence gender-related injustices.

Women in Croatian Higher Education in Numbers

The numerical representation of women in higher education is, of course, a narrow lens through which to evaluate the position of women in academia: it reduces the conversation about higher education and gender to the male/female binary, overlooking the complex and important question of intersectionality and the differences between women along age, class and ethnic lines. It also misses the gender dynamics of institutional culture, such as misogyny. However, such numbers do give the reader one angle on the gender inclusiveness of the system.

On the level of student numbers, as in most other European countries, female higher education students now outnumber males. According to the data for the 2016/2017 academic year, women comprise 56.7% of the student body (Croatian Bureau of Statistics 2017a). What this figure disguises is differences in the gender composition of the student body by certain areas of study. An illustration: whereas men (75%) make up the significant majority of postgraduate students in engineering, women (85.7%) form the majority in the humanities (Croatian Bureau of Statistics 2017b).

In terms of the gender ratio among academic staff, in 2016/2017 there was a total of 16,625 academic staff members at Croatian higher education institutions, of which 48.7% were women (Croatian Bureau of Statistics 2017c). These numbers suggest a favorable gender ratio and indicate a steady increase in women academics over

the last decade: women comprised 41.2% of all academics in 2006/2007 (Croatian Bureau of Statistics 2007). A closer examination of the gender dimension of academic ranks shows that whereas women and men are fairly equally represented at the levels of assistant (48.7% women) and associate professor (45.5%), a smaller proportion of women (34%) have full professorship (Croatian Bureau of Statistics 2017c). However, in terms of the latter, positive trends can again be observed: in 2006/2007 only 21.6% of full professors, 34% of associate professors and 38% of assistant professors were women (Croatian Bureau of Statistics 2007). The picture is less sanguine, however, when it comes to the gender dimension of university governance: out of 8 public universities in Croatia, only two are headed by women chancellors. Interestingly, the youngest public university in Croatia, founded in 2015, has an all-male governance structure: the university chancellor, as well as his five vice-chancellors are men. Finally, since the country's independence from Yugoslavia in 1990, the Croatian higher education system has been governed by 16 ministers, of which only two have been women.

Gender in the Curriculum

The focus of the previous section was on the representation of women at different levels of academic life in Croatia. However, as Morley (2010) has observed, equal representation and gender equality are not synonymous. A different way of thinking through the gender dimension of higher education is to explore the place of women/gender studies content in university curricula. Until very recently, the many attempts at institutionalizing women's studies in Croatia always failed. However, as of March 2016, the University of Rijeka has a Centre for Women's Studies, which aims to bring together academics, artists and civil society representatives working on gender, feminism and sexuality. More generally, research conducted in 2016 and 2017 at Croatia's biggest university by the civil society organisation the Centre for Women's Studies has shown that there are very few courses dealing with women/gender studies and that these are most often optional. Such results suggest that this is a silenced field of inquiry in mainstream university curricula. This can be explained by conservative university policies but also the broader policy obsession with valuing knowledge for the neoliberal labor market, which privileges more scientific and technical disciplines—the very fields that remain overwhelmingly male in composition.

To sum up, women are gaining ground in the Croatian higher education system: the majority of students are women and there have been advances in the proportion of women in higher academic ranks. However, women leaders are few and feminist knowledge production is largely invisible in official curricula. There is therefore reason for both cautious optimism and scepticism. Although women are undoubtedly more equally represented than in the past, we must not allow this parity to distract attention from struggles for inclusion in less quantifiable realms.

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Female Faculty's Perspectives on the Status of Women in Tajikistan Universities

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Over the past three decades the economic and social position of women in Tajikistan has significantly eroded, bringing substantial challenges to access to education. Moreover, women now earn significantly less than men, face greater unemployment and more often become subject to domestic violence and trafficking. Much of this deterioration is a result of the economic and financial crises following the collapse of the Soviet Union. The prolonged civil war of 1992–1997, higher level of poverty, and re-emergence of patriarchal traditions and early marriages have negatively affected women in the country. The break-up of the Soviet Union has also challenged female participation in education. During the 1990s, Tajikistan experienced tremendous decrease in enrolment at all levels of education due to increased costs of schooling, low state subsidies and decline in family incomes.

The demographic and cultural marginalization of women here has negatively impacted university teaching opportu-

nities and the status of women faculty members. Currently, only two of the country's 38 universities have female rectors even though about 40% of the faculty members are women. Only one-quarter of female teachers have an advanced academic degree (kandidat nauk) and merely 17% have the highest professional degree of doctor nauk.

We have conducted a study that was particularly focused on how current economic and cultural trends affect women faculty and their perceived possibilities in the country. We attempted to demonstrate how such conditions affect the current lived experience of Tajik women faculty members: what do female faculty members think of their profession today? How do they cope with the challenges they face in their professional lives? Our study is based on semi-structured interviews with 23 women faculty members working at the four largest universities located in the capital of Tajikistan, Dushanbe. The respondents represented both science and humanities and varied in rank from junior and senior positions (Assistent, Starshii Prepodavatel', Dotsent, and Professor [equivalent to Teaching Assistant, Assistant Professor, Associate Professor, and Full Professor respectively – translator's note])[1].

Challenges of Higher Education Affecting Women Faculty

Secondary and higher education systems across the former USSR experienced structural challenges after 1991. All state universities and institutes were affected by sharp declines in funding, deteriorating educational quality, underdeveloped curricula and weaknesses in the establishment of transparent financial mechanisms. Throughout the 1990s and 2000s, higher education institutions also lost much of their former prestige, and the lack of earning power of the professoriate has particularly affected women's upward social mobility. Low salaries for university faculty have also seriously impacted quality-of-life indicators over the past 25 years. Most of the remaining faculty members must work more than one job to survive, which means that many are underprepared, overworked, or both. University faculty in Tajikistan today, including women, often work in two or more institutions and/or take other part-time jobs to survive. The economic challenges facing higher education, according to the participants of the study, is one of the reasons for the diminishing status of women faculty as the academic profession has lost its prestige overall. The lack of leadership positions held by women was another concern among our interviewees. A contributing factor is that most of them do not pursue terminal academic degrees, which would allow promotion to leadership positions inside the university. A major barrier to obtaining higher academic decrees is that before 2014, Tajikistan had no independent dissertation committees to award such degrees. All faculty members had to travel abroad to defend their dissertations, which made doctoral studies in particular extremely cumbersome and expensive. With little assurance that an advanced degree is possible, women often don't even give it a shot. Female faculty noted that when they had to choose between spending money on research or children, they usually chose the latter.

'Glass Ceiling', Culture, and Local Traditions in Academia

In order to respond to gender inequalities in the country, the government has attempted to improve gender balance in schools and universities by appointing more women to leadership positions, such as chairs, deans and vice-rectors. But most of our interviewees claimed that it was still very hard to get higher positions in universities with real academic mandate. Efforts under the National Strategies for Promoting Women's Rights in Tajikistan only lead to women being appointed to leadership positions dealing with student life, emphasizing roles in society that are traditionally seen as 'women's.' They argued that the only top position a female faculty member could get would be something like deputy dean for 'moral upbringing' (zamestitel' dekana po vospitatel'noy rabote) and never a top administrative or research position with real power or influence. They believed that patriarchal attitudes in the society would never allow systemic breaching of the 'glass ceiling.'

The interviewees also often expressed concerns about gender inequality accelerating in secondary and higher education in Tajikistan. Many were appalled that so many young women did not even finish the nine years of secondary school as required by law. Then, those who do get enrolled at universities get married and are not able to complete their studies. Tajikistan has adopted numerous formal gender-equity policies that would seem to be aiding fuller participation of girls and women in higher education; however, the underlying economic, social and cultural conditions of the country still significantly and negatively affect their opportunities.

Motivation and Job Satisfaction

Despite all the challenges women faculty face in their professional and personal lives, many were satisfied with their jobs and would choose the profession again if given a chance to live their lives over. Many of the women we interviewed were thus highly motivated by teaching and academic values such as love for their discipline, learning and pursuit of knowledge. According to our interviewees, university administration does not require faculty members to be at the work place all day. They agreed that a university career allowed them to combine professional work and family responsibilities, although many complained that university culture prohibited their obtaining respectable leadership positions. Flexible office hours seemingly allow our respondents to have enough time and energy to take care of their families. Most of them were satisfied with their academic niches despite the challenges of low remuneration, unsatisfying working conditions, and scant opportunities for professional development. However, almost all of the interviewees reported feeling intrinsic rewards and personal fulfilment in being university faculty members. For them, a university career in Tajikistan is a practical compromise for negotiating their status as educators and navigating local culture and traditions.

Reference

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What Numbers Show and Don't Show

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Official Information

Empowerment of women and gender equality in all spheres, including the academia, are officially declared among Kazakhstan's top policy priorities. This is primarily due to the fact that these issues attract international attention and are reflected in the numerous human rights documents and frameworks for action that Kazakhstan has joined.

Official reports state that Kazakhstan has already achieved much in women's capacity-building and in creating equal employment opportunities for women and men in business, politics, public administration; that a comprehensive institutional system for gender, family and population policy has emerged; that a solid legal framework has been developed. According to the annual World Economic Forum Global Gender Gap Report, Kazakhstan ranks rather high in terms of women's opportunities in the economic, political and other spheres.

Some Statistics

Equal and equitable representation of women and men at all levels of academic work is an important aspect of gender symmetry. Numbers help understand the real situation in the academia nowadays.

According to the National Educational System Report, feminization of the academic profession at all levels is very notable in Kazakhstan. For example, women make nearly two-thirds (63%) of all faculty in higher and post-graduate education. Such overbalance starts among students already: as of the beginning of the 2015/2016 academic year, 55.9% of all undergraduate, 61.2% of master's and 60.9% of post-graduates students in Kazakhstan were female.

Despite the overall domination of women among faculty, the share of those holding professorship title is higher among men (65.5%).

UNESCO data suggest that women constitute a minority in the academic world though Central Asia has a relatively high (44%) share of female researchers. The situation in Ka-

zakhstan is even more optimistic than the regional average: women and men are nearly equally represented in research.

At the 'Doctor of Sciences' level [higher doctoral degree equivalent to Habilitation — translator's note], however, the share of women is much lower and amounts to 30.6%. At higher levels the gender gap is even bigger. There are only 15 female members (8.5%) out of the total of 175 at the National Academy of Sciences of the Republic of Kazakhstan.

Gender asymmetry at leadership positions in education and science is an issue all across the globe. Horizontal and vertical segregation exists too, and so do stereotypes, gender-based bias and gender pay gap.

Only 16 (14.4%) of all Kazakh higher education institutions are headed by women, while the other 95 (85.6%) — by men. Though most of the people employed in education are women, their average salary is 92.4% of men's average salary, while female faculty and researchers actually get as little as 59.5% of what their male colleagues earn.

Social Stereotypes

The above-mentioned figures show that despite relatively equal starting conditions, women's career development slows down or even stops at post-PhD level. Why are women underrepresented at higher academic positions? What are the reasons for the 'glass ceiling' that effectively prevents women from rising beyond a certain level in the career hierarchy?

There are some traditional answers: for example, that the notion of gender equality clashes with the patriarchal norms of private life or that there is a conflict between family interests and career concerns, which explains the slow career development of young female academics because the start of their career coincides with the period of finding a partner and childbearing. However, other factors play a role too, including implicit institutional limitations, and academic and social models that favor gender and social stereotypes.

For example, female faculty have to do unpaid educational work or community service at the expense of their own teaching or research responsibilities much more often than men. Such imbalance aggravates the problem of gender inequality, which manifests itself in gender pay gap and delayed professional development.

Another reason lies with the fact that family and friends traditionally encourage women to primarily choose 'safe' and 'womanly' disciplines, such as humanities, social sciences or medical sciences. In such a situation the current strategy for resource allocation in science actually operates against women because the most well-financed spheres are such 'unwomanly' disciplines as engineering, agriculture and new technologies. This can be proven by the ratios of research grants distributed by the Kazakhstan Ministry of Education and Science. The 2015–2017 call for applications resulted in 32.6% of all available funds allocated for Rational Use of Natural Resources and Raw Material Processing, 12.1% — for Power Industry and Mechanical Engineering, 11.3% — for Information and Telecommuni-

cations Technologies, 22% — for Life Sciences, 22% — for National Intellectual Potential.

The effects of such a policy, which is actually reasonable for a commodity-driven economy with underdeveloped industry, include lack of status value and low salaries in humanities and social sciences, where female researchers prevail.

These are just a few factors that make part of a whole complex of barriers limiting women's participation at the highest levels of academic achievement and management. 'Female lecturer' is a very common model and according to wide-spread stereotypes, women perform this role well, especially since due to standardization in education lower- and mid-tier employees enjoy low levels of responsibility. Moreover, female employees usually have male managers, who control and steer the situation. As already mentioned, the 'female researcher' model is common in non-strategic disciplines with limited funding but rather rare for state-prioritized research areas, where women are not only few but also kept at lower positions. As a result, women's influence on social, public and family issues is limited. Both barriers and stereotypes evolve in the society, so in order to change the situation and to achieve real gender symmetry the climate around gender policy and its mechanisms need to change too.

In December 2016, Kazakhstan adopted the Concept for Family and Gender Policy in Kazakhstan 2030, which articulates the principles of fighting discrimination and gender asymmetry in social life and public administration, eradicating gender stereotypes and developing gender awareness in the society. This document proves that the government acknowledges the existence of these problems, so there is hope that it will make certain efforts to change the situation.

Conclusion

One cannot deny the fact that there is gender imbalance in the sphere of science and education in Kazakhstan; its existence is reflected in statistics. Even though formally there are no restrictions for women, there are implicit gender stereotypes that prescribe such an allotment of high-status positions which is unfavorable for women.

Gender inequality and asymmetry developed over a long period of time, and the government should not be the only structure to blame for the current situation. As data above suggest, the society shows lack of trust in women, their abilities and their professional efficiency. Therefore, it is public opinion that needs to be changed. It is important to understand that such changes don't happen 'top-down' solely in response to various governmental documents. Individual and collective consciousness needs to transform at individual level, at the level of academic structures and at the level of public opinion. Such transformations should be promoted in the media, via educational programs and by influential leaders. Only long-term coordinated endeavor and dedicated efforts on behalf of the active parts of Kazakh society will help gradually change the situation; maybe it will even have happened by 2030.

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About HERB

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