Can High-Stakes Entrance Exams Explain Why Fewer Women Study STEM Fields?

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Extended Abstract

Introduction

Nonnegligible component of the documented gender wage gaps in favor of men can be accounted for by the persistent gender differences in the probability of pursuing careers in typically highly paid STEM occupations. The share of women enrolling in, graduating from, and working in STEM fields remains low. This fact contrasts with the gradual convergence of women's and men's performance in various other areas, including mathematical skills at school and overall college enrollment, as observed over recent decades. This paper contributes to our understanding of this puzzle by asking whether high-stakes entrance exams to STEM fields at college may account for part of the STEM gender gap.

The gender gap in mathematics among 15-year-olds has narrowed in many countries and has disappeared or reversed in some (OECD, 2020). The secular increase in women's enrollment in postsecondary education continues. More women now enroll in college than men in almost all OECD countries, but they sort predominantly into female-dominated fields (OECD, 2021). Why are there still substantially fewer women who enroll in, study, graduate from, and work in STEM fields than men?

Previous research has identified several leaks in the STEM pipeline (Speer 2003), which starts at elementary school with relative gender balance in math skills (OECD, 2020) and ends with much lower proportions of women in STEM occupations. Within the pipeline, the transition from high school to college is considered one of the crucial leaky joints (Speer, 2023), with a much lower share of women choosing to study STEM fields than men. While there was an increase in women's college enrollment in particular STEM fields observed in some countries, it has been documented that these women are less likely to finish their studies (Isphording and Qendrai, 2019; Astorne-Figari and Speer 2018), to continue in graduate school and /or to search for and find jobs in STEM occupations (Jiang 2021) than men. Women who enter STEM positions are less likely to stay in the field (Delaney and Devereux 2022).

Given the documented gender balance in math skills at the level of elementary school, the literature has mostly discussed the "nurture" factors that may explain why women drop out of the STEM pipeline, suggesting that it is the environment in a broad sense that diverts women from STEM fields, rather than the innate mathematical skills ("natural ability"). The most frequently discussed explanations (as

reviewed in Kahn and Ginter, 2017) point out gender differences in other characteristics, such as risk aversion, ability to perform under competitive pressure, or family-life-related preferences. These may be also shaped by gender stereotypes (in the family or at school) or social norms. The impact of a male-dominated environment, gender role models, and class characteristics have also been studied as factors contributing to the inertia of the gender STEM gap (Griffith, 2014; Gaule and Piacentini, 2018; Griffith and Main, 2019).

In this paper, we focus on the transition from high school to college. For the college major choice system in the US, Speer (2023) documents (lack of) preparedness for STEM at the end of high school as an important factor that diverts women from choosing STEM majors during college. The institutional setup of the tertiary education system in our analysis, however, differs from the college major choice in the US studied in the literature so far. In the Czech Republic, like in many other European countries, high school graduates choose their major at the time of applying to college. Namely, they submit applications to STEM (or other) fields taught at different educational institutions and typically have to pass highly competitive entrance exams right after high school graduation. The need to choose the major before entering college and the highly competitive entrance exam thus impose a further burden on potential STEM field applicants that is likely to have differential effects on women and men.

Either in the STEM fields or in other gender gaps contexts, women have been documented to be more risk averse (Niederle a Vesterlund, 2010), have less self-confidence and worse math-self-efficacy (Saltiel, 2023), dislike competition, be more vulnerable to stress and perform worse under competitive pressure than men (Gneezy, Niederle and Rutschini, 2003; Arenas and Calsamiglia, 2022). Jurajda and Munich (2011) document the last fact using data on the performance of women versus men at college entrance exams in the Czech environment and show that women perform significantly worse in the exams in highly competitive programs than men with equal skills.

Given these documented gender differences in personal traits and non-cognitive skills, we expect Czech female high school graduates, who could have otherwise pursued STEM careers, to be less likely to apply to, be accepted, and eventually enroll in STEM fields because of the highly competitive entrance exams than comparable male high school graduates. To test our conjecture, we exploit the institutional changes in the entrance exam policy of the most prestigious STEM field education institution in the country, the Mathematics and Physics Faculty of the Charles University (MFF) over the first two decades of the 21st century. In particular, we are going to evaluate the impact of the existence of entrance exams - the abolition and subsequent reintroduction of entrance exams at individual STEM field programs (Mathematics, Physics, and Computer Science) at MFF in 2008, 2011, and 2016 on women's participation and performance in these fields.

Data

We will use data from the Charles University Student Information System (SIS) for the Faculty of Mathematics and Physics of the Charles University (MFF UK) for the years 2006 to 2023. The data allows us to track the study progress of each enrolled student through the whole program at the individual level. In the SIS database, we observe the age, gender, and country of origin of each student. Furthermore, for each student and each study semester, we observe which courses she enrolled in and

completed (including information on ECTS credits[1]), the grades obtained, information on scholarships awarded (including social scholarships), and whether they live on campus.

In addition, we also use data from the Uchazec database, which includes individual data on all applications to tertiary education in the Czech Republic since 2003. The data comprises applications, admissions (including mode of admission: no entry exam, successful entry exam, etc.), and enrolment for all individuals who applied to at least one tertiary education institution. The data also contain information on age, gender, and high school ID for each applicant, as well as information on the study fields and schools to which the candidate is applying and the result of the application process.

Institutional Setting and Descriptive Statistics

To answer our research question, we exploit changes in the enrollment policy at the most prestigious STEM college in the Czech Republic, the Faculty of Mathematics and Physics of the Charles University (MFF UK). Namely, we focus on the abolition and reintroduction of the entrance exams in Mathematics, Physics, and Computer Science programs.

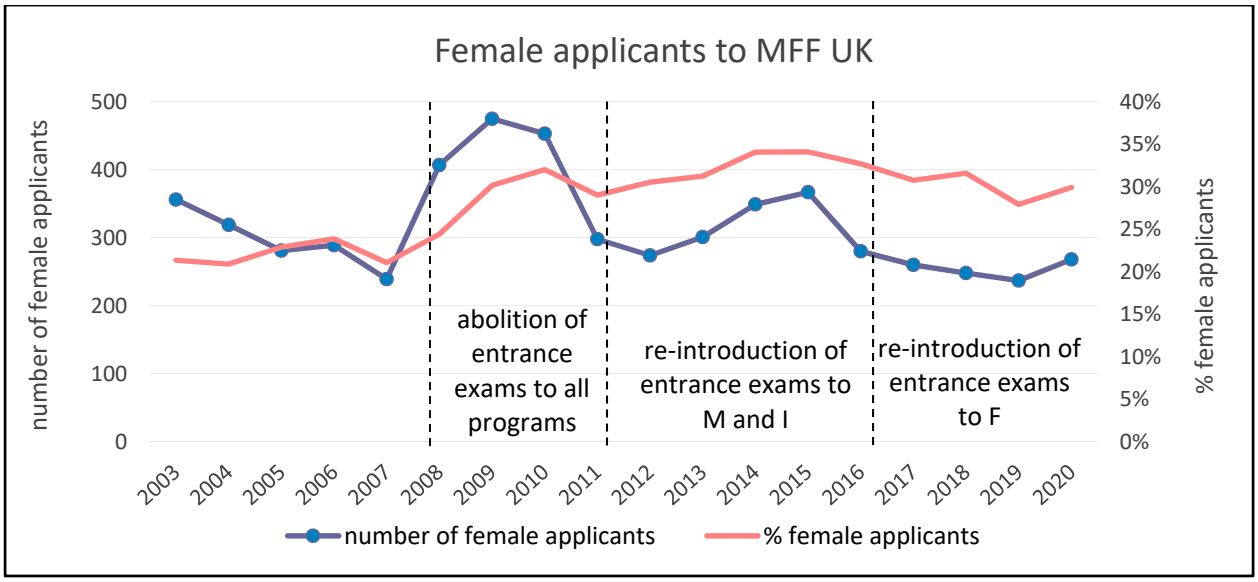
Entrance exams to all three programs were abolished in 2008. The exams were then re-introduced in 2011, but only for Mathematics and Computer Science. The Physics major continued on without entrance exams until 2016 when the entrance exam was also reintroduced in Physics.

Note that all three programs offered a waiver of their entrance exams (when in place) based on merit or successful participation in high school competitions: the mathematical Olympiads.

All these changes, according to the Uchazec data, were immediately reflected in the number of applications, including female applicants, and the number of students enrolled, including female enrollees. The data show that, especially in the first period, 2008-2011 (when the entrance exam was abolished in all disciplines), the proportion of women among those who applied and also among those enrolled increased (Figures 1 and 2).

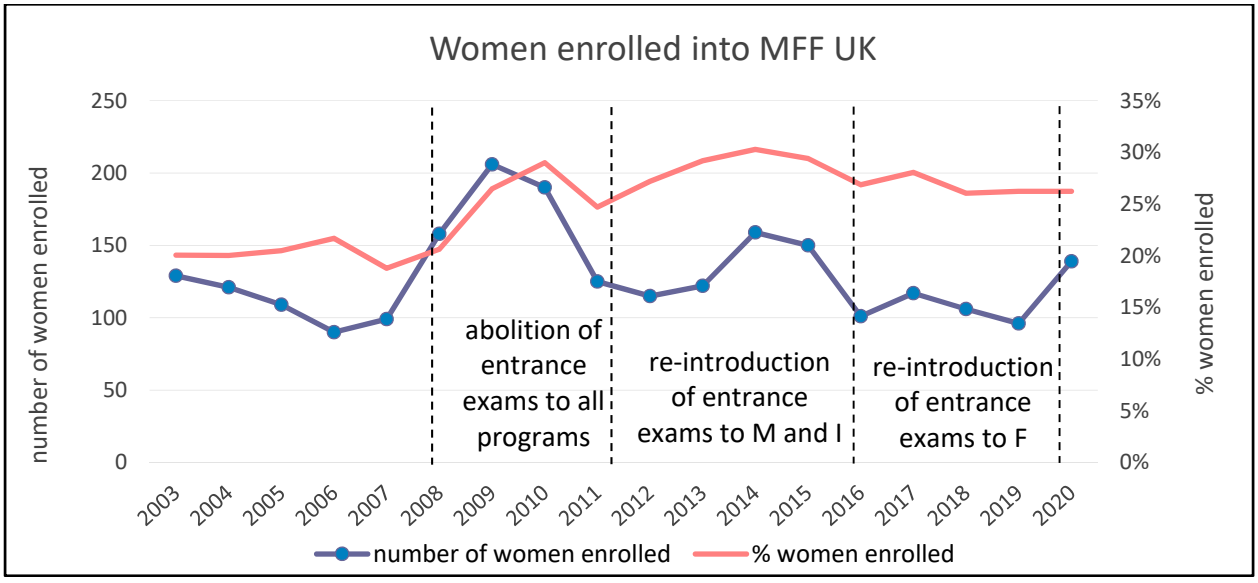
[1] European Universities share a common course intensity measure, the credit worth. Each course is worth a specific number of credits, depending on its difficulty and time intensity. When receiving a passing grade in a subject, a student earns the designated number of credits.

Figure 1: Female Applicants to MFF UK



Source: Own compilation using the Uchazec data.

Figure 2: Women Enrolled into MFF UK



Source: Own compilation using the Uchazec data.

Empirical Strategy

The general question we ask is whether high-stakes entrance exams to STEM study programs at college can explain women's underrepresentation in STEM fields. Could there be more women who would apply, enroll, and successfully graduate in the absence of these exams?

In order to answer this question, we explore the variation in entry conditions created by the cancelation and re-introduction of entrance exams into Mathematics, Physics, and Computer Science programs at MFF UK on students' academic performance, persistence, on-time graduation, and subsequent studies. This allows us to apply before-after and difference-in-differences analyses.

We start by exploring the time variation in the existence of entrance exams and compare the average outcomes of cohorts of men and women enrolling before and after the policy changes. To account for a potentially different pool of admitted applicants, we use first-semester grades in compulsory subjects as a proxy for the ability rank of students.

The first study semester is quite standardized within each study field. Students are expected to take several compulsory subjects, which can be complemented by a few optional subjects to achieve a total of 30 ECTS points. The compulsory subjects prepare students for further course of study and often serve as a filter, an indicator of whether a student is capable of studying the given field. This is why we argue that first-semester grades can be used as a proxy for field-related ability.

First-semester grades are observed only for students who enroll, they cannot be used to compare the pool of applicants across years. For the latter purpose, we turn to the Uchazec database, which includes information about each applicant's high school and whether an applicant has successfully participated in a nationwide high school subject-related Olympiad.

The across-cohorts analysis will be conducted using a simple before-after setup or using an event-study approach, as specified in equation (1).

$$y_i = \alpha_0 + \sum_{s=-3}^{s=T} \alpha_s I(start_i = R + s) + \beta \cdot firstGPA_i + Z_i \Lambda + v_i, \quad (1)$$

where y_{it} is the outcome variable (indicator for graduating on time, an indicator for entering the master-level program, etc.) for student i, $firstGPA_i$ is the average grade obtained by student i during his/her first study semester, and X_{it} is a vector of other individual characteristics (age, gender). We denote the academic year when entry conditions were changed as R; then, $R + s$ is the distance (in years) from the change. $start_i$ is the academic year when student i enrolled in the program. Thus, coefficient α_s measures the average difference in outcomes between the cohort enrolling s years since the change and the reference cohort, which is the last pre-difference cohort ($s = -1$).

The before-after analysis might be misleading if, in parallel to entry conditions change, other structural changes happen at the analyzed faculty or within the affected cohorts of young adults. This is why we further turn to the standard difference-in-differences approach, leveraging the fact that, at most times, entrance exams were canceled or introduced for a subset of study fields at MFF UK. For example, in the years 2012-2015, there were entrance exams to the fields of Mathematics and Computer Science but not to the field of Physics. Since 2016, all study fields required an entrance exam. This makes it possible to use

Mathematics or Computer Science (or both) as a control group when analyzing the effect of re-introducing entrance exams to the field of Physics. The related equation is defined as follows:

$$y_{it} = \beta_0 + \beta_1 Affected_field_{it} + \beta_2 AfterR_{it} + \beta_3 Affected_field_{it} \cdot AfterR_{it} + X_{it}\Gamma + \varepsilon_{it}, \quad (2)$$

where y_{it} is the outcome variable (indicator for graduating on time, an indicator for entering the master-level program, etc.) for individual i enrolled in the academic year t. $Affected_field_{it}$ is equal to one if student i is enrolled in the field where entry conditions were changed. For example, when studying the re-introduction of entrance exams to Physics in 2016, $Affected_field_{it}$ is equal to one for students enrolled in Physics. $AfterR_{it}$ is equal to one for students who enrolled after the change in entry conditions. When studying the re-introduction of entrance exams to Physics in 2016, $AfterR_{it}$ is equal to one for students enrolled in the fall of 2016 or later. Finally, X_{it} is a vector of individual characteristics (age, gender, first-semester GPA), and ε_{it} is the error term.

The important identifying assumption here is that the change in entry conditions to one field of study does not affect the composition of students in other study fields or their performance during the study process.

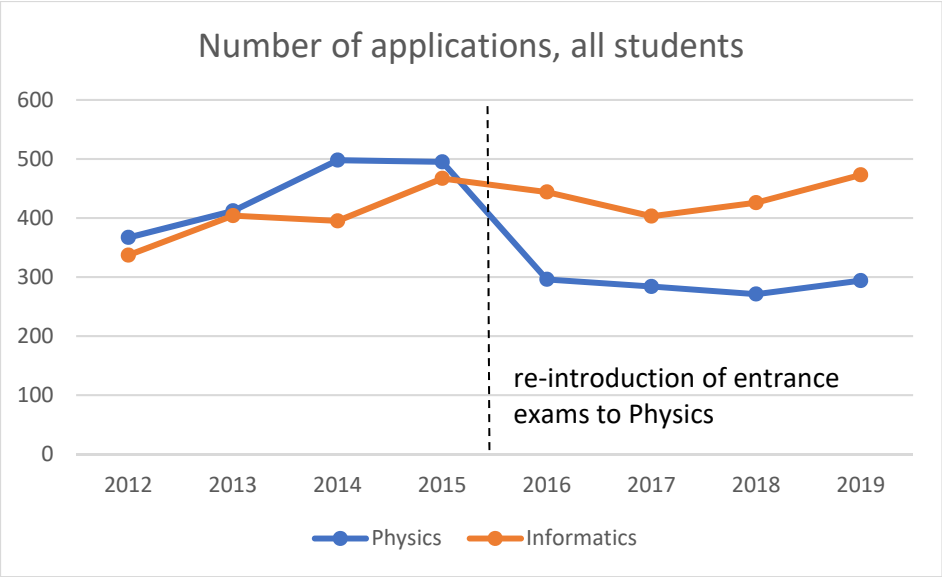
Preliminary Results using the Introduction of the Entrance Exam in Physics in 2016

We are still waiting to get access to the data covering all the institutional changes in the entrance exam policy as described above. We do, however, already have access to the most recent data that covers the last institutional change, a re-introduction of the entrance exam in the field of Physics in 2016. In particular, we observe each semester's GPA and graduation timing for students enrolled in MFF UK between 2014 and 2019.

We discuss below the first descriptive statistics and the DiD results concerning this institutional change, using Computer Science as a control group (one of the other STEM subjects that shows the most similar pre-trends). We show the impact on the number of applications by gender using official statistics from the annual reports on MFF website https://www.mff.cuni.cz/cs/studenti/vseobecne-informace-a-dokumenty/zpravy-o-prijimacim-rizeni. We then inspect impact on enrollment and student performance using the MFF data and estimate a DID model for the probability of graduating within 3 and 4 years. As we currently use the field of Computer Science as the control group for our DID estimates, we present the official statistics on applications (also by gender) and on enrollment (not available by gender in the official reports) for both fields, Physics and Computer Science.

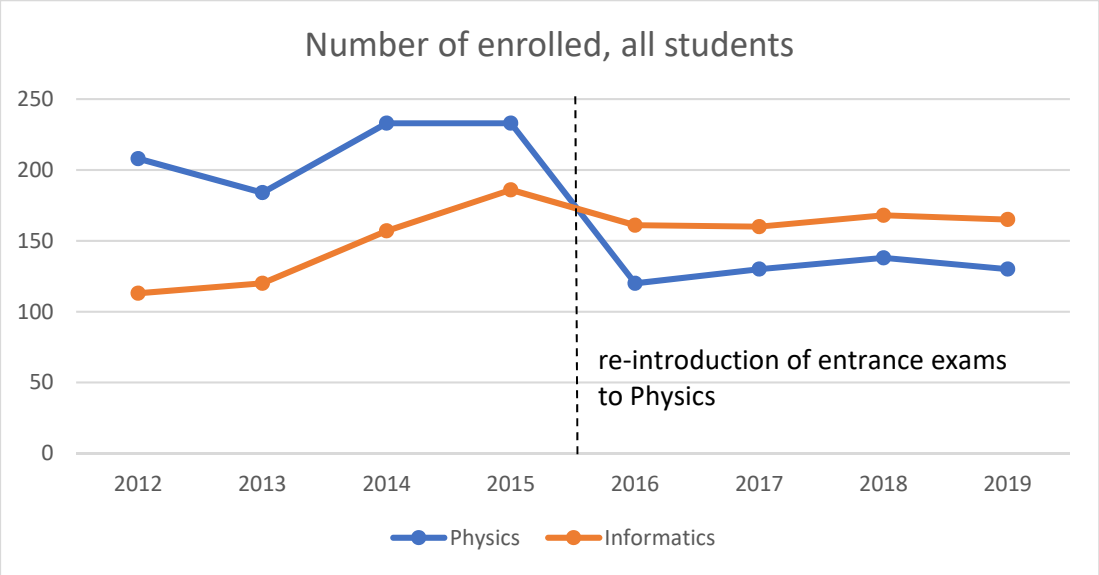
Prior to 2016, there was no entrance exam into the field of Physics, while there were entrance exams into Mathematics and Computer Science. In 2016, the entrance exam was also introduced in the field of Physics. Figures 3 and 4 show a considerable drop in both the number of applications and the number of students enrolled in Physics after the re-introduction of the entrance exam, while the number of applications and enrollees for Computer Science exhibits just a little over-time variation. Moreover, the ranking regarding the preferences for these two fields has reversed, as studying Computer Science became more attractive than Physics after 2016.

Figure 3: Applications to Physics and Computer Science, MFF UK



Source: Official statistics available at MFF UK (https://www.mff.cuni.cz/cs/studenti/vseobecne-informace-a-dokumenty/zpravy-o-prijimacim-rizeni)

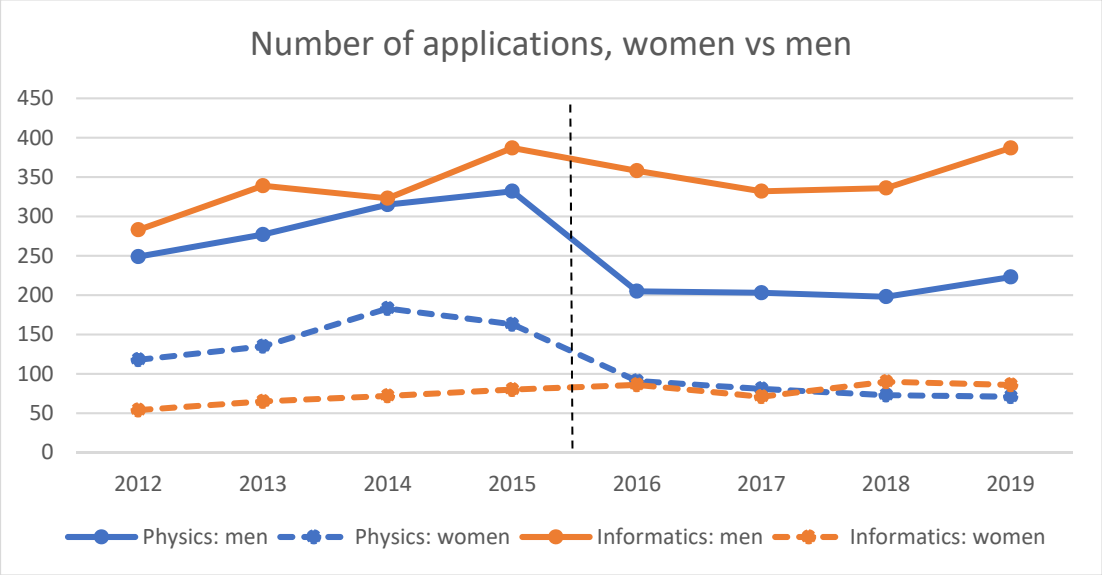
Figure 4: Enrollment to Physics and Computer Science



Source: Official statistics available at MFF UK (https://www.mff.cuni.cz/cs/studenti/vseobecne-informace-a-dokumenty/zpravy-o-prijimacim-rizeni)

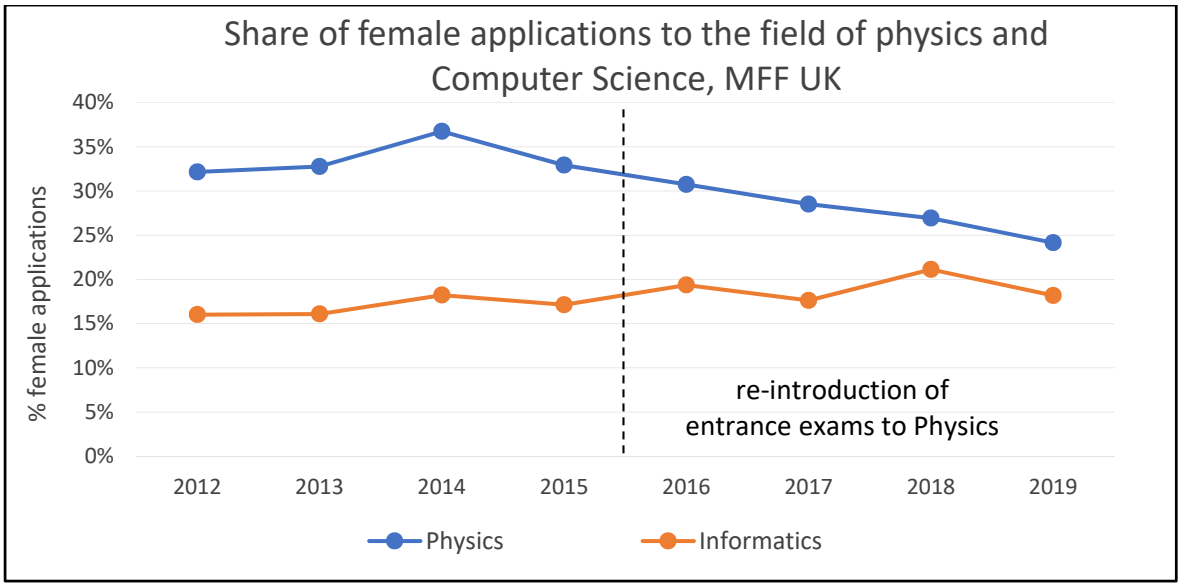
Has the entrance exam scarred away female applicants more than male applicants? Figures 5 and 6 seem to be consistent with the evidence documented by previous research that women dislike high-stakes, highly competitive exams more than men. While the absolute number by which the applications fell for men exceeds that for women, the percentage decrease for women was larger than for men, given the persistently lower number of female applications to the field. The share of women among applicants into the field of Physics, therefore, fell from 33 to 31 % in 2016 and further decreased in the subsequent years, whereas the share of women applications to Computer Science slightly increased (Figure 6).

Figure 5: Applications to Physics and Computer Science by Gender



Source: Official statistics available at MFF UK (https://www.mff.cuni.cz/cs/studenti/vseobecne-informace-a-dokumenty/zpravy-o-prijimacim-rizeni)

Figure 6: Women who Applied to Study Physics and Computer Science

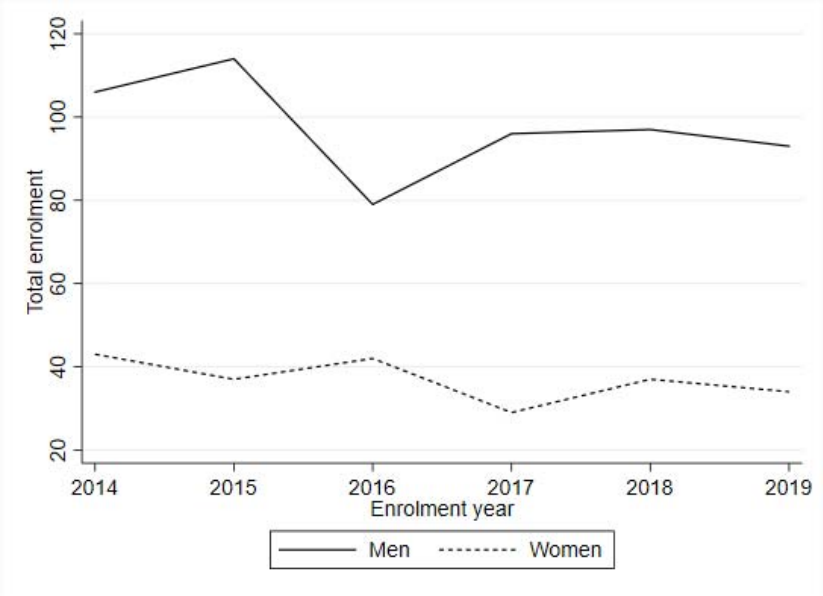


Source: Official statistics available at MFF UK (https://www.mff.cuni.cz/cs/studenti/vseobecne-informace-a-dokumenty/zpravy-o-prijimacim-rizeni)

We know that the total number of applications to Physics dropped after the re-introduction of the entrance exam and that the percentual decrease was larger for women. We also know from the official statistics that the total enrollment in Physics fell. It would be natural to expect that enrollment of women in Physics has also fallen, to at least some extent as that of men. However, Figure 7 shows that while there was a substantial decrease in enrollment of men, consistent with the sharp drop in their applications, the enrollment of women into Physics shows a barely discernible decline in the long run and, actually, a slight increase in 2016.

We provide one possible interpretation of an increase in female enrollment after the introduction of the entrance exam, which is consistent with previous literature but cannot be verified in our data at this point. Given that women seem to be less able to realistically self-assess their math skills (Saltiel, 2023) and have higher tendency to underestimate their capabilities in general, passing the entrance exam may serve as a confirmation of their academic preparedness and reassurance of their choice to study Physics. As a consequence, some women that might have applied before 2016 and would have ended up not enrolling due to lack of confidence in their ability to succeed in the program, may have decided to enroll after observing their scores and ranking from the entrance exam, once it was reintroduced.

Figure 7: Total enrollment into Physics, by gender



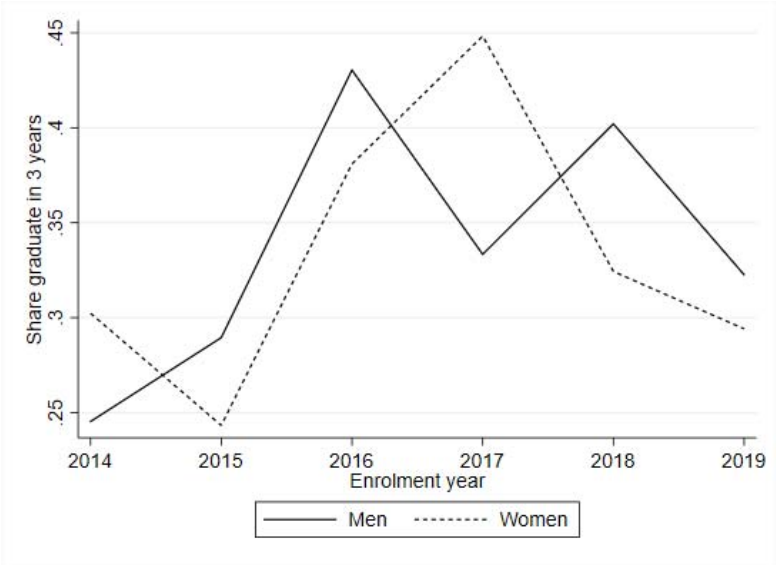
Source: Own compilation based on the SIS data. Enrollment is measured as the number of students who are observed in the Fall semester of the respective academic year.

Based on the application and enrollment data, it seems that the cohort of men who enroll in Physics after the re-introduction of the entrance exam is smaller and more selective than it was before. As for women, the 2016 enrollment cohort is actually somewhat larger than earlier cohorts, and there is not much change in the size of the female cohorts during the following years. Assuming there is ability sorting into enrollment, smaller male cohorts should perform better than those enrolling prior to 2016, but the impact on the average performance of women is unclear. At the same time, the entrance exam can help better select the most gifted applicants and also, as mentioned above, increase the chance that less confident high-ability students end up enrolling (provided they have applied and took the exam).

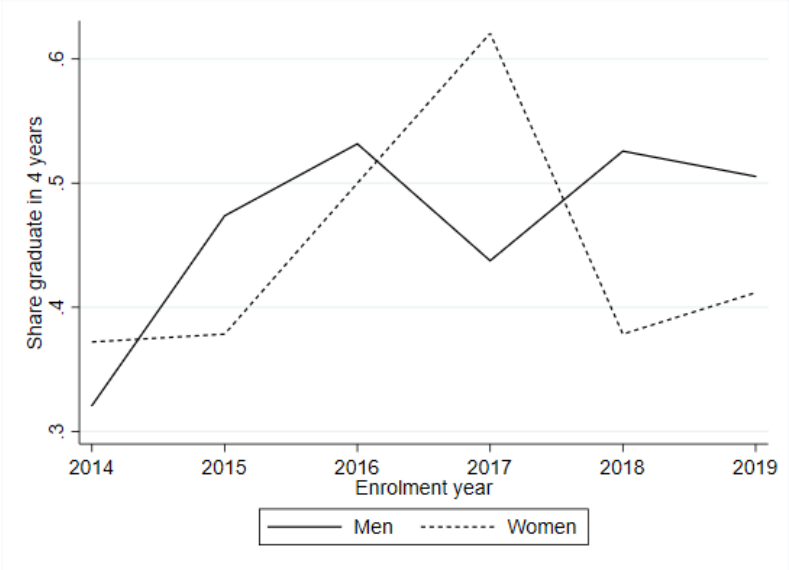
To shed more light on these potential forces, we next focus on the relative performance of the cohorts who enroll before and after 2016, in particular the probability of graduating within 3 and 4 years. Figure 11 shows that the cohorts of students of Physics enrolled after the introduction of the entrance exam performed better in terms of completion than the earlier cohorts. The probability of graduating within 3 years went up by over 10 p.p. for both men and women between the enrollment cohorts of 2015 and 2016. The probability of graduation within 4 years follows a similar pattern, especially for women. Note that the graduation rates of the cohorts enrolled in 2017 and onwards are already affected by the COVID-19 pandemics.

Figure 11: Share of all enrolled in Physics who graduated within 3 or 4 academic years

Panel A: Graduation within three academic years



Panel B: Graduation within four academic years



Note: Figures report the share of the given enrollment cohort that graduates within three years (the official length of the bachelor program at MFF UK) or within four years (the maximum length of study that is free of charge).

To compare the outcomes of Physics students enrolled after the introduction of the entrance exam to the outcomes of unaffected students, we present results of a simple difference-in-difference analysis in which the comparison group consists of the students of Computer Science (see Equation 2). There was an entrance exam in Computer Science both before and after 2016, and the number of applicants and the number of enrolled students for this field stayed more-less constant throughout the analyzed period. Visual inspection of Figures 3, 4, and 5 suggests that both the number of applicants and the number of enrolled students in Physics evolved in more or less parallel to Computer Science prior to 2016 change.

Table 1 reports the estimates coming from Equation (2) with the dependent variable being an indicator of graduating within three years (left part) or four years (right part). Recall that the official length of a bachelor program at MFF UK is three years, but students can prolong their study process to four years without paying any tuition. Every semester beyond four years of study is subject to a fee. Columns (1) and (6) report the results for the full sample of students enrolled between 2014 and 2019, columns (2)-(3) and (7)-(8) report results for two ability subgroups, while columns (4)-(5) and (9)-(10) report results by gender.

Students in our sample are divided into low- and high-ability groups based on their first semester GPA. As mentioned in the Empirical Strategy section, first-semester subjects prepare students for further course of study and often serve an indicator of whether a student is capable of studying the given field. This is why we argue that first-semester grades can be used as a proxy for field-related ability. We use observations from before the change in entrance exam conditions to extract the median GPA of first-semester students in each field of study. Each student is then classified as low-skilled (high-skilled) if his/her first-semester GPA is lower than (higher or equal than) the pre-change median, irrespective of enrollment year. This assures that we use a constant reference level that is not affected by changes in the pool of enrolled students.

The results for the full sample indicate that students in the field of Physics are, in general, somewhat more likely to graduate within 3 or 4 years than students in Computer Science and that women are more likely to graduate on time than men. Heterogeneity by ability, as proxied by the first-semester GPA, suggests that it is the low-ability students who are more likely to graduate in Physics, but high-ability students are more likely to graduate in the field of Computer Science compared to similar students in Physics. We also see that it is the higher-ability women who are more likely to graduate than high-ability men, with no gender differences among the low-ability students.

Our DID estimate suggests that the cohorts that enrolled in Physics after the 2016 entrance exam introduction have a 12.7 p.p. higher probability of graduating within 3 years and 10.4 p.p. within 4 years. The cohorts selected based on the entrance exams thus performed better than the cohorts enrolled before the entrance exam was re-introduced. Interestingly, the estimate is similar for low-ability and high-ability students, with a greater impact on graduation within 3 years for high-ability students and on graduation within 4 years for low-ability students. When we estimate the model separately by gender, we see that while the effect is positive for both groups, the size of the impact on women is less than half of that on men for the completion within 3 years, and about three quarters for the completion within 4 years. This seems consistent with the fact that male cohorts seem more highly selected (given the drop in both male applications and enrollment after 2016) than women (given a slight rise or no change in enrollment despite the drop in applications after 2016).

Table 1: The effect of re-introducing the entrance exam on graduation rates in Physics.

	Graduate in 3 years					Graduate in 4 years				
	All	Low ability	High ability	Female	Male	All	Low ability	High ability	Female	Male
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Physics	0.082***	0.282***	-0.047***	0.126***	0.076***	0.068***	0.295***	-0.076***	0.071***	0.068***
	(0.012)	(0.015)	(0.014)	(0.023)	(0.013)	(0.012)	(0.015)	(0.013)	(0.021)	(0.012)
2016 and after	-0.050***	-0.057***	-0.080***	0.015	-0.062***	0.037***	-0.002	0.018*	0.067***	0.031***
	(0.008)	(0.013)	(0.011)	(0.022)	(0.009)	(0.008)	(0.013)	(0.010)	(0.020)	(0.009)
Treatment effect (interaction)	0.127***	0.133***	0.157***	0.062**	0.138***	0.104***	0.143***	0.124***	0.075***	0.110***
	(0.013)	(0.016)	(0.015)	(0.025)	(0.014)	(0.013)	(0.016)	(0.014)	(0.023)	(0.014)
Female	0.013**	0.003	0.050***			0.009	0.008	0.034***		
	(0.006)	(0.007)	(0.007)			(0.006)	(0.007)	(0.006)		
_cons	0.374***	0.176***	0.492***	0.333***	0.383***	0.542***	0.315***	0.679***	0.542***	0.544***
	(0.008)	(0.012)	(0.010)	(0.021)	(0.008)	(0.008)	(0.012)	(0.009)	(0.019)	(0.008)
N	39422	23191	31653	19492	35352	39422	23191	31653	19492	35352
R^2	0.038	0.147	0.013	0.023	0.040	0.030	0.166	0.009	0.025	0.033

Note: Table reports point estimates (standard errors in parentheses) of beta coefficients from equation (2) with an indicator of graduating within three (four) years as the dependent variable in the left (right) part of the table. The treated group consists of students enrolled in Physics; the control group consists of students enrolled in Computer Science. A positive coefficient indicates a higher probability of graduating. Columns (1) and (2) correspond to all full-time students enrolled in Physics or Computer Science between 2014 and 2019. Column (2)/(7) is the subsample of (1)/(6) with first-semester GPA being below the corresponding study program's long-run pre-2016 median; column (3)/(8) is the subsample of (1)/(6) with first-semester GPA being above the study program's long-run pre-2016 median. Further columns report the results by gender. $^{*}\ p < 0.1$, $^{**}\ p < 0.05$, $^{***}\ p < 0.01$

Table 2: The relative effect of re-introducing the entrance exam on graduation rates in Physics.

	Graduate in 3 years			Graduate in 4 years		
	All	Low avg	High avg	All	Low avg	High avg
	(1)	(2)	(3)	(4)	(5)	(6)
2016 and after	0.086***	0.178***	0.047***	0.145***	0.242***	0.102***
	(0.013)	(0.020)	(0.015)	(0.011)	(0.021)	(0.012)
Female	0.041*	0.050	0.058**	-0.003	0.028	0.000
	(0.022)	(0.033)	(0.027)	(0.020)	(0.036)	(0.021)
Female x After	-0.036	-0.167***	0.008	-0.011	-0.050	-0.015
	(0.024)	(0.037)	(0.029)	(0.021)	(0.039)	(0.023)
_cons	0.448***	0.184***	0.586***	0.613***	0.353***	0.750***
	(0.012)	(0.018)	(0.014)	(0.010)	(0.019)	(0.011)
N	15422	5563	9859	15422	5563	9859
R^2	0.004	0.022	0.005	0.014	0.029	0.010

Note: Table reports point estimates (standard errors in parentheses) of a simple before-after analysis of the entrance exam introduction, allowing the effect to vary by gender. An indicator of graduating within three (four) years is used as the dependent variable in the left (right) part of the table. A positive coefficient indicates a higher probability of graduating. Columns (1) and (4) correspond to all full-time students who enrolled in Physics between 2014 and 2019, Columns (2)/(5) are the subsample of (1)/(4) with first-semester GPA being below the corresponding study program's pre-2016 median; columns (3)/(6) are the subsample of (1)/(4) with first-semester GPA being above the study program's pre-2016 median. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In order to further explore the differential impact by gender within the field of Physics (irrespective of any changes that could have affected students of Informatics), we estimate a simple before-after analysis of the entrance exam introduction, allowing the effect to vary by gender. Table 2 confirms the differential effect of the re-introduction of the entrance exam on low-ability women and low-ability men in terms of college completion within 3 years. Previously provided evidence on the higher graduation rates among the cohorts who enrolled after the reintroduction of the exam, as well as the estimates in the first row of Table 2 suggest that the effect is positive. The estimates of the interaction of the main effect with female dummy confirm that the positive effect was lower for women than for men, which also corresponds to the differential changes in the size of the cohorts by gender after the reintroduction of the exam, already discussed above.

Limitations of preliminary results and the next steps

Note that the preliminary results are based on a short span of the most recent data that we have access to. This is why we focus only on the re-introduction of the entrance exam in Physics in 2016 and not the earlier changes. The preliminary analysis is, however, subject to several limitations. We currently observe only two enrollment cohorts (2014 and 2015) in the before period. After gaining access to the full dataset, we will be able to analyze a much longer time span.

Evaluating the institutional change in entrance exams in Physics in 2016 has two other caveats. First, during their studies, the more recent cohorts in the after period were additionally affected by the COVID-19 pandemic. Related research by Pertold-Gebicka (2024) suggests that the performance of the 2017 cohort, which was hit by COVID-19 in their last semester, was not affected. However, later cohorts did respond to the pandemic. Second, Physics is the smallest field at MFF UK. Evaluating the earlier institutional changes for larger fields, as proposed earlier, will not suffer from these two drawbacks. We expect to get access to the data and have the first results ready by the end of October.

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