Appendix
Selecting In or Selection Out?
Gender gaps and political methodology in Europe

Appendix A. Methods Training Survey 2018

Consent to Participate in Research Study

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Ethics approval number: 2018.4.5

Purpose: You are invited to take part in a research study with the objective of identifying the state of methods training in Political Science PhD programs from across Europe, including the types of methods and software postgraduate students most commonly learn and employ. This effort is supported by the European Political Science Association (EPSA) and is aligned with current efforts in the profession (in Europe and abroad) to better track the professional development of PhD students.

Benefits: At the end of the survey, you may choose to be entered into a lottery for one €50 Amazon gift card. While you may not receive any direct benefits for your participation in the study, your answers will help us better understand the current state of Political Science methods training across Europe. This, in turn, may strengthen training practices and lead to improved access to training opportunities.

Risks and requirements: Participating in the study requires you to answer socio-demographic questions, as well as questions about your postgraduate methods training. The entire survey takes approximately 10 minutes to complete. Participating in this study is completely voluntary and anonymous. This means that you have the right to decide not to answer any survey questions and can withdraw from the study at any time without penalty. Even if you decide to complete the survey until the end, you may change your mind and ask that your responses be destroyed. There are no direct risks in participating in this survey. Some people are uncomfortable sharing personal information online.

Data Protection: The researchers have taken steps to minimize the risks of this study. It is unlikely that anyone outside the study team will gain access to your data or will discover that you participated in this study. A numeric code will be attached to sample responses preventing third parties from tracking your results back to you. We plan to publish the results of this study. The publication will not include any information that could be used to identify you. There are some reasons why people other than the researchers may need to see the information you provided as part of the study. This includes organizations responsible for overseeing that the research has been done safely and properly, including the University of xxxx or government research offices. These organizations are bound by the

same regulations and normal requirements for the storage and protection of data and personal information as the principal investigators.

Contact: If you have a concern about any aspect of this project, please contact our research team at gatto@ipz.uzh.ch.

<u>By indicating that you agree with this document, you are stating that you understand the conditions we specify and agreeing to be part of the study. You can also save this page, in case you need to refer to it in the future.</u>

○ Yes, I understand the conditions and agree to participate. (1)

○ No, I do not agree to participate. (2)

End of Block: Consent

Start of Block: Survey questions

Q68 Country and University
Country (1)
University (2)

▼ Austria (1) ... United Kingdom ~ University of York (262)

Q21 If your country and/or university are not listed, please specify them below.

○ Country (1) _____

○ University (2) _____

Q1 Main Sub-field

○ Comparative Politics (1)

○ Political Behavior (14)

○ Political Methodology (9)

○ Political Theory (8)

○ International Relations (11)

○ Public Policy/Administration (12)

○ Other (13)

Q77 If other, please specify discipline and department below.

○ Discipline (1) _____

○ Department (2) _____

Q5 Current position/title

○ Master's student (1)

○ PhD student (2)

○ Post-doc/Research fellow (3)

○ Assistant Professor (4)

○ Associate Professor (5)

○ Professor (6)

Q24 For how long have you held this position?

○ Less than 1 year (1)

○ More than 1 year (2)

○ More than 2 years (3)

○ More than 3 years (4)

○ More than 4 years (5)

○ More than 5 years (6)

Q9 Career plans

○ Academic (1)

○ Non-academic (2)

○ Do not know (4)

Q8 Age

○ Under 18 (11)

○ 18 - 24 (12)

○ 25 - 34 (13)

○ 35 - 44 (14)

○ 45 - 54 (15)

○ 55 or more (16)

○ Prefer not to say (17)

Q70 Gender

○ Female (1)

○ Male (2)

○ Non-binary (3)

○ Prefer not to say (4)

Q35 Ethnic/cultural background

○ White (e.g., European, Canadian, American) (1)

○ Black/African/Caribbean (2)

○ Central / East Asian (3)

○ South / Southeast Asian (4)

○ North African, Middle Eastern, Turkish (5)

○ Hispanic/Latino (6)

○ Aboriginal (7)

○ Prefer not to say (8)

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Q42 Which of the below topics have you previously covered in coursework? (Please, mark all that apply).

- [ ] Descriptive statistics (35)

- [ ] Linear regressions (1)

- [ ] Multivariate regressions (18)

- [ ] Binomial regressions (33)

- [ ] Time series (3)

- [ ] Panel data (4)

- [ ] Experimental research (5)

- [ ] Survey design (6)

- [ ] Text/content analysis (7)

- [ ] Formal theory (8)

- [ ] Bayesian statistics (9)

- [ ] Data visualisation (10)

- [ ] Multilevel modelling (11)

- [ ] Archival research (12)

- [ ] Causal inference (13)

- [ ] Elite interviews (14)

- [ ] Agent-based modeling (15)

- [ ] Machine learning (36)

- [ ] Process tracing (37)

- [ ] Maximum likelihood estimation (38)

- [ ] Survival analysis (39)

☐   Other or None (40)

Q34 If "other," please specify below.

_____

Q46 Previously, you stated that you have covered the topics below. Which of the methods below have you employed in your research?

	Employed (49)	Never employed (50)
Descriptive statistics (x35)	○	○
Linear regressions (x1)	○	○
Multivariate regressions (x18)	○	○
Binomial regressions (x33)	○	○
Time series (x3)	○	○
Panel data (x4)	○	○
Experimental research (x5)	○	○
Survey design (x6)	○	○
Text/content analysis (x7)	○	○
Formal theory (x8)	○	○
Bayesian statistics (x9)	○	○
Data visualisation (x10)	○	○
Multilevel modelling (x11)	○	○
Archival research (x12)	○	○
Causal inference (x13)	○	○
Elite interviews (x14)	○	○
Agent-based modeling (x15)	○	○
Machine learning (x36)	○	○
Process tracing (x37)	○	○
Maximum likelihood estimation (x38)	○	○
Survival analysis (x39)	○	○
Other or None (x40)	○	○

Q44 Again, considering the topics you have previously covered in coursework: how would you describe your level of comfort in employing each method?

	Very uncomfortable (49)	Somewhat uncomfortable (50)	Neither comfortable nor uncomfortable (51)	Somewhat comfortable (52)	Very comfortable (53)
Descriptive statistics (x35)	○	○	○	○	○
Linear regressions (x1)	○	○	○	○	○
Multivariate regressions (x18)	○	○	○	○	○
Binomial regressions (x33)	○	○	○	○	○
Time series (x3)	○	○	○	○	○
Panel data (x4)	○	○	○	○	○
Experimental research (x5)	○	○	○	○	○
Survey design (x6)	○	○	○	○	○
Text/content analysis (x7)	○	○	○	○	○
Formal theory (x8)	○	○	○	○	○
Bayesian statistics (x9)	○	○	○	○	○
Data visualisation (x10)	○	○	○	○	○
Multilevel modelling (x11)	○	○	○	○	○
Archival research (x12)	○	○	○	○	○
Causal inference (x13)	○	○	○	○	○
Elite interviews (x14)	○	○	○	○	○

Agent-based modeling (x15)	○	○	○	○	○
Machine learning (x36)	○	○	○	○	○
Process tracing (x37)	○	○	○	○	○
Maximum likelihood estimation (x38)	○	○	○	○	○
Survival analysis (x39)	○	○	○	○	○
Other or None (x40)	○	○	○	○	○

Carry Forward Unselected Choices from "Which of the below topics have you previously covered in coursework? (Please, mark all that apply)."

Q45 Previously, you stated that you have not covered any of the topics below in your coursework. Which ones (if any) would you be interested in learning?

☐ Descriptive statistics (1)

☐ Linear regressions (2)

☐ Multivariate regressions (3)

☐ Binomial regressions (4)

☐ Time series (5)

☐ Panel data (6)

☐ Experimental research (7)

☐ Survey design (8)

☐ Text/content analysis (9)

☐ Formal theory (10)

☐ Bayesian statistics (11)

☐ Data visualisation (12)

☐ Multilevel modelling (13)

☐ Archival research (14)

☐ Causal inference (15)

☐ Elite interviews (16)

☐ Agent-based modeling (17)

☐ Machine learning (18)

☐ Process tracing (19)

☐ Maximum likelihood estimation (20)

☐ Survival analysis (21)

☐   Other or None (22)

Q32 How would you describe your level of knowledge of the below programming languages/software?

	Not knowledgeable (17)	Slightly knowledgeable (18)	Moderately knowledgeable (19)	Very knowledgeable (20)
R (2)	○	○	○	○
STATA (1)	○	○	○	○
SPSS (3)	○	○	○	○
SAS (4)	○	○	○	○
Python (5)	○	○	○	○
C++ (6)	○	○	○	○
Java (7)	○	○	○	○

Q72 From your perception, what is the importance of being knowledgeable in qualitative and quantitative methods for your career opportunities/progression?

	Not at all important			Moderately important			Extremely important		
	0	1	2	3	4	5	6	7	8	9	10
Qualitative methods ()										
Quantitative methods ()										

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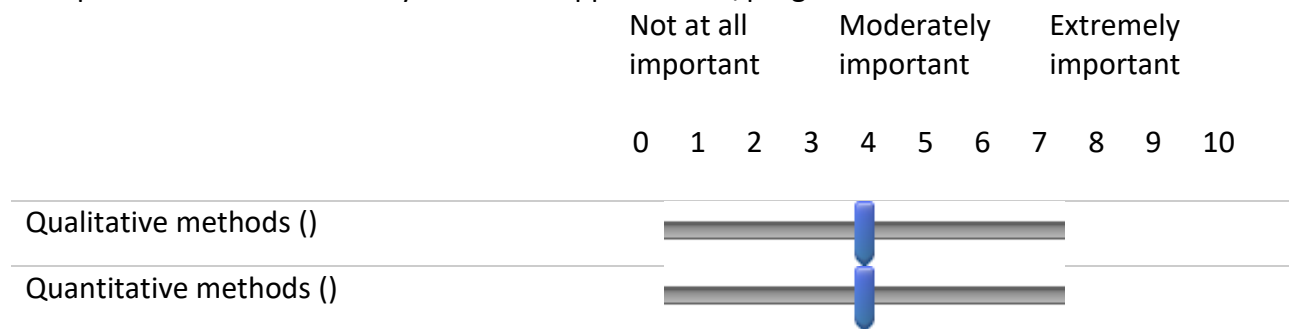
Q49 In the department where you are pursuing your PhD, are students required to complete a mandatory methods training program (or participate in specific courses)?

○ Yes, a mandatory training program in **both** quantitative/computational methods **and** qualitative methods (4)

○ Yes, a mandatory training program in **quantitative/computational** methods **only** (5)

○ Yes, a mandatory training program in **qualitative** methods **only** (6)

○ Yes, a mandatory training program with **optional** courses in quantitative/computational methods **and/or** qualitative methods (1)

○ No mandatory methods training program but courses available to those who wish to complete training (2)

○ No methods courses offered to PhD students (3)

Q75 To what extent would you agree that the training completed in the department where you are pursuing your PhD has prepared you to conduct individual research using **quantitative and/or computational** methods?

○ Strongly agree (13)

○ Somewhat agree (14)

○ Neither agree nor disagree (15)

○ Somewhat disagree (16)

○ Strongly disagree (17)

Q74 To what extent would you agree that the training completed in the department where you are pursuing your PhD has prepared you to conduct individual research using **qualitative** methods?

○ Strongly agree (13)

○ Somewhat agree (14)

○ Neither agree nor disagree (15)

○ Somewhat disagree (16)

○ Strongly disagree (17)

Appendix B. Operationalization and Regression Models

Operationalization

The main dependent variables of interest is the share of methods covered in class and the share of methods employed in research. To construct the former measure, the share of methods covered in class, we summed the number of courses respondent had indicated to have covered in class (see Q42, Appendix A) and took them as a share of the number of quantitative courses asked—i.e. 18. On average, respondents have covered 35% of the 18 classes, amounting to 6 classes, with a standard deviation 0.25.

For our second dependent variable, the share of methods employed in research, we summed the number of listed methods employed (see Q46, Appendix A) and took them as a share of total number of courses covered. Hence, the denominator for each respondent is determined by how many techniques the respondent has covered in class. On average, respondents have employed 63% of the techniques covered in class in their own research, with a standard deviation of 0.33.

Our main individual level determinants are gender (Q70, Appendix A), academic career plans (Q9, Appendix A), age (Q8, Appendix A), length of the current position (Q24, Appendix A), ethnicity (Q35, Appendix A), funding of the PhD (Q75, Appendix A), and subfield (Q1, Appendix A). Our main departmental level determinants are size of the department - determined by number of PhD's in the department, and offers of mandatory methods training (Q49, Appendix A). For illustration purposes, we have dichotomized the categorical variables academic career plans, age, length of the current position, ethnicity, funding of the PhD.

Regression Models (illustrated in Figures 2 and 3)
Table B1 demonstrates the incidence-rate ratios—this is a relative difference measure used to compare the incidence rates of events occurring at any given point in time. Coefficients smaller than 1 indicate a negative effect, whereas coefficients bigger than 1 indicate a positive effect.

Table B1. Negative Binomial Regression Results

	DV: Methods Covered in Class		DV: Methods Employed in Research	
	IRR	SE	IRR	SE
Female (ref. Male)	0.84	0.06	0.99	0.12
Academic Career Plans (ref. Other)	1.00	0.07	0.96	0.12
Age: >35 Years (ref. 18-34 Years)	0.65	0.08	0.85	0.19
Length Position: <2 Years (ref. < 2 Years)	1.00	0.07	1.08	0.14
Ethnicity: White (ref. Others)	1.21	0.11	0.90	0.15
Mandatory Methods Training (ref. Not)	0.97	0.08	0.87	0.12
Size of Department	1.00	0.00	1.00	0.00
Funded PhD (ref. Not)	1.47	0.11	1.25	0.17

Subfield: Comparative Politics (ref)				
Subfield: IR	0.62	0.06	1.01	0.18
Subfield: Political Behavior	1.00	0.12	0.93	0.20
Subfield: Political Methodology	1.14	0.29	1.03	0.42
Subfield: Political Theory	0.55	0.10	0.76	0.26
Subfield: Public Administration	0.89	0.10	1.00	0.19
Subfield: Others	0.88	0.11	1.05	0.22
Belgium	0.60	0.31	0.76	0.65
Denmark	1.09	0.61	1.07	0.96
Estonia	0.21	0.13	1.12	1.12
France	0.52	0.24	0.93	0.69
Germany	0.57	0.25	0.89	0.62
Hungary	0.43	0.21	0.95	0.75
Ireland	0.71	0.33	0.79	0.59
Italy	0.60	0.27	0.81	0.58
Lithuania	0.68	0.40	0.76	0.77
Netherlands	0.45	0.20	0.71	0.52
Norway	0.70	0.34	0.92	0.71
Portugal	0.24	0.13	0.99	0.90
Republic of Cyprus	0.48	0.44	2.09	2.66
Romania	0.61	0.53	1.06	1.49
Spain	0.59	0.29	0.81	0.66
Sweden	0.79	0.36	0.84	0.63
Switzerland	0.57	0.25	0.95	0.67
United Kingdom	0.57	0.25	0.79	0.56
N	475		475	
Log-Likelihood	-2104.63		-387.49	
Chi-square (df)	121.36 (32)		9.64 (32)	