University of Lucerne
Department of Political Science
Course Syllabus

Research Design in Quantitative Political Science

21 September 2020[1]

Course:

Level: Graduate[2]
Credits: 4 ECTS (2 SWS)
Sessions: 13 (15 Weeks)
Time: Monday, 16:15–18:00
Room: 4.B01

Instructor:

Resul Umit
Postdoctoral Researcher
Department of Political Science
Office: 3.A11
Office Hours: Tuesday, 09:00–11:00

Course Description

This course is about the fundamentals of research design in the field of quantitative political science. Covering actual designs in published research as well as guidelines in textbooks, students will learn about how contemporary political scientists answer some of the most pressing questions of our time.

The course also has a strong practical component. It will introduce students to a reproducible research workflow, with R programming language and some of the most commonly used datasets in political science.

By the end of the course, students will be able to:

(1) distinguish scientific research from other methods of knowing and the good research from the bad,

(2) identify common research designs used in political science,

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[1] I keep the latest version of this syllabus at https://resulumit.com/syllabi/20spring_rd.pdf.

[2] The course is also open to undergraduate students, from 3rd semester onwards.

(3) define a research problem, and

(4) develop an appropriate research design for that problem.

As such, the course will be useful for any student looking to develop skills to evaluate scientific research in quantitative political science. It will be useful particularly for students who are, or will be, working on their thesis. They will find practical answers regarding question formulation, hypothesis development, and choice of technique in this course. They will also receive feedback on their research design, which they might want to use for their thesis.

Course Philosophy

This course is concerned with covering breadth rather than depth in the classroom, without being superficial. The aim is to make the overall group of students aware of the fundamentals of research design in quantitative political science, and guide each individual student to gain further depth in designing their own research project.

Office Hours

Students are welcomed to meet the instructor during the office hours, held regularly on Tuesday mornings, between 09:00 and 11:00, at office 3.A11. Scheduling meetings beforehand, at https://calendly.com/resulumit, is encouraged.

Assessment

Assessment will be based on a research design paper, a presentation, and some smaller assignments. The *Guidelines for Academic Research and Writing of the Department of Political Science* includes detailed instructions on how to define a research question, write a research design, and give an academic presentation—the main assignments in this course. Students will be provided with further instructions for completing course work and, where appropriate, annotated examples of how one can complete them.

Research Design Paper — 50%

Students will write a paper on a political science problem of their choice with (1) a review of the existing literature and theory relevant to that research problem (*what do we already know?*), (2) a research question and one or more hypotheses stemming from that review (*what else do we need to know?*), and (3) a plan to answer that question (*how can we know?*). This paper will therefore resemble an empirical journal article, except that it will end before the results section.

This assignment is due on the day of the last session (Monday, 25 May 2020). However, students should work on this assignment throughout the semester. As an incentive, students will be offered feedback on (a) their research problem and question if submitted by the end of March and (b) their theory and hypotheses if submitted by the end of April. These pre-submissions are neither obligatory nor graded, but they are strongly encouraged.

Research Presentation — 25%

For Sessions 7th to 11th, the required readings will include not only chapters form the textbooks but also empirical articles published in academic journals. Students will present one of these journal articles in class, following the instructor's discussion to the subject matter of the session. These presentations should aim at contributing to that discussion with a critical evaluation of the research design of the chosen journal article.

Small Assignments — 25%

In addition to the main assignments above, students will have three small tasks to complete throughout the semester. These assignments will not require as much time as the main assignments, but they are equally important to achieve the course objectives.

- Article Classification:

    - Students will write a short report, classifying one of the journal articles referenced in this syllabus in line with the readings for, and classroom discussions in, the 2nd Session (*Research Questions and Types of Research*). This assignment is due on the following session (Monday, 9 March 2020).

- Descriptive Finding:

    - This is a group assignment. In groups of two, students will analyse a publicly available dataset to write a short report, with an accompanying R script, to explore a political concept of interest. Sessions 5th – 7th will provide the foundations for this assignment, which is due on the following session (Monday, 20 April 2020).

- Quizzes on Readings:

    - To incentivise and reward (a) reading the required materials before each session and (b) attending the classes, some sessions will start with a short quiz with closed-ended questions.

Course Materials

Course materials include slides, readings, software, datasets, and examples for coursework. All course materials, or links to them, will be available on the OLAT course website, at https://lms.uzh.ch/url/RepositoryEntry/16703096302.

Slides

The seminar slides will be available on the course website, weekly before the start of each session. In this course, the slides are designed to provide the structure for the discussions in each session. They do not summarise the reading material, and therefore they cannot be thought as a substitute for the latter.

Readings

The course will be based mainly on the following two books:

- Toshkov, D. (2016). *Research design in political science.* London: Palgrave Macmillan.
- Angrist, J. D., & Pischke, J.-S. (2015). *Mastering 'metrics: The path from cause to effect.* New Jersey: Princeton University Press.

A number of chapters from the following books also feature in the reading list:

- De Vaus, D. (2001). *Research Design in Social Research.* London: Sage.
- Gschwend, T., & Schimmelfennig, F. (Eds.). (2007). *Research design in political science: How to practice what they preach.* Basingstoke: Palgrave Macmillan.
- King, G., Keohane, R. O., & Verba, S. (1994). *Designing social inquiry: Scientific inference in qualitative research.* New Jersey: Princeton university press.
- Imai, K. (2017). *Quantitative social science: An introduction.* New Jersey: Princeton University Press.

One or more chapters from these books are allocated for each session. For several sessions, there will be additional readings, often in the form of articles published in academic journals. See Sessions for the list of required readings, which should be completed before the class meets.

The syllabus also provides recommendations for further readings. All readings, required or recommended, are available through the library or online. The required readings are also available on the course website.

Software

The course will introduce students to data analysis and research workflow R—a free and open source software for statistical analysis as well as a programming language. It is available for download at https://cloud.r-project.org/. R is easier to use with a text editor or an integrated development environment. Although numerous alternatives are available, students are recommended to use the free version of the RStudio Desktop, available at https://rstudio.com/products/rstudio/download/ to facilitate coordination during the course.

For any problems with installing R and/or RStudio, students are encouraged to seek help from the instructor, preferably at an office hour before the 5th Session on 23 March 2020.

Datasets

There is a growing number of publicly available political science datasets and databases, and a comprehensive list can be found online at https://github.com/erikgahner/PolData. For a list of datasets in general, see also https://github.com/awesomedata/awesome-public-datasets. Students may wish to consult these lists for the *Descriptive Finding* assignment.

Throughout the course, and especially during the Sessions 5th and 6th, we will work with a combination of data from the *Parliaments and Governments* (http://www.parlgov.org/) and the *Manifesto Project* (https://manifesto-project.wzb.eu/) databases.

Timetable

Below is the timetable for classroom sessions and coursework deadlines. Note that the class will not meet on 24th February or 13th April due to public holidays:

17.02.2020 – 1st Session : Introduction

24.02.2020 – Public Holiday (Lucerne Carnival)

02.03.2020 – 2nd Session: Research Questions and Types of Research

09.03.2020 – 3rd Session: Theory and Concepts

- Due: Article Classification

16.03.2020 – 4th Session: Measurement

23.03.2020 – 5th Session: Quantitative Data, with R

30.03.2020 – 6th Session: Research Workflow, with R

06.04.2020 – 7th Session: Descriptive Research

- Due: Descriptive Finding

13.04.2020 – Public Holiday (Easter Monday)

20.04.2020 – 8th Session: Experiments

27.04.2020 – 9th Session: Regression

04.05.2020 – 10th Session: Instrumental Variables

11.05.2020 – 11th Session: Regression Discontinuity

18.05.2020 – 12th Session: Difference-in-Differences

25.05.2020 – 13th Session: Conclusion

- Due: Research Design Paper

Sessions

17.02.2020 – 1st Session : Introduction

- *Required*
  - King et al., Chapter 1
- *Recommended*
  - De Vaus, Chapter 1
  - Gschwend & Schimmelfennig, Chapter 1
  - Toshkov, Chapter 1

02.03.2020 – 2nd Session: Research Questions and Types of Research

- *Required*
  - Toshkov, Chapter 2
- *Recommended*
  - Gschwend & Schimmelfennig, Chapter 2

09.03.2020 – 3rd Session: Theory and Concepts

- *Required*
  - Toshkov, Chapters 3 & 4
- *Recommended*
  - Gschwend & Schimmelfennig, Chapter 3 & 4

16.03.2020 – 4th Session: Measurement

- *Required*
  - King et al., Chapter 5
  - Toshkov, pp. 107 – 122 in Chapter 5
- *Recommended*
  - Gschwend & Schimmelfennig, Chapters 5 & 6

23.03.2020 – 5th Session: Quantitative Data, with R

- *Required*
  - Imai, pp. 10 – 29 in Chapter 1

30.03.2020 – 6th Session: Research Workflow, with R

- *Required*
  - Healy, K. (2019). *The plain person's guide to plain text social science.* Available at https://kieranhealy.org/publications/plain-person-text/.
- *Recommended*
  - Bryan, J. (2018). Excuse me, do you have a moment to talk about version control?. *American Statistician, 72*(1), 20-27.

06.04.2020 – 7th Session: Descriptive Research

- *Required*
  - Toshkov, pp. 123–144 in Chapter 5
  - King et al., Chapter 2
  - Lührmann, A., and Lindberg, S. I. (2019). A third wave of autocratization is here: What is new about it? *Democratization, 26*(7), 1095 – 1113.
- *Recommended*
  - Fariss, C. J. (2014). Respect for human rights has improved over time: Modeling the changing standard of accountability. *American Political Science Review, 108*(2), 297-318.
  - Jennings, W., Wlezien, C. (2018). Election polling errors across time and space. *Nature Human Behavior, 2*, 276 – 283.
  - McDonald, M. P., & Popkin, S. L. (2001). The myth of the vanishing voter. *American Political Science Review, 95*(4), 963 – 974.

20.04.2020 – 8th Session: Experiments

- *Required*

- Angrist & Pischke, Chapter 1
- Toshkov, Chapter 7
- Sands, M. L. (2017). Exposure to inequality affects support for redistribution. *Proceedings of the National Academy of Sciences, 114*(4), 663 – 668.

- *Recommended*
  - Butler, D. M., & Broockman, D. E. (2011). Do politicians racially discriminate against constituents? A field experiment on state legislators. *American Journal of Political Science, 55*(3), 463 – 477.
  - Hainmueller, J., Hangartner, D., & Yamamoto, T. (2015). Validating vignette and conjoint survey experiments against real-world behavior. *Proceedings of the National Academy of Sciences, 112*(8), 2395 – 2400.

27.04.2020 – 9th Session: Regression

- *Required*
  - Angrist & Pischke, Chapter 2
  - Toshkov, Chapter 8
  - Lewis, D. E. (2007). Testing Pendleton's Premise: Do Political Appointees Make Worse Bureaucrats?. *Journal of Politics, 69*(4), 1073 – 1088.

- *Recommended*
  - Klein, E., & Umit, R. (2016). The electoral connection of ministerial selection in the UK. *Journal of Legislative Studies, 22*(2), 276 – 294.
  - Meyer, T. M., Haselmayer, M., & Wagner, M. (2020). Who gets into the papers? Party campaign messages and the media. *British Journal of Political Science, 50*(1), 281 – 302.

04.05.2020 – 10th Session: Instrumental Variables

- *Required*
  - Angrist & Pischke, Chapter 3
  - Berinsky, A. J., & Lenz, G. S. (2011). Education and political participation: Exploring the causal link. *Political Behavior, 33*(3), 357 – 373.

- *Recommended*
  - Gabel, M., & Scheve, K. (2007). Estimating the effect of elite communications on public opinion using instrumental variables. *American Journal of Political Science, 51*(4), 1013 – 1028.
  - Sovey, A. J., & Green, D. P. (2011). Instrumental variables estimation in political science: A readers' guide. *American Journal of Political Science, 55*(1), 188 – 200.

11.05.2020 – 11th Session: Regression Discontinuity

- *Required*
  - Angrist & Pischke, Chapter 4
  - Dinas, E., Riera, P., & Roussias, N. (2015). Staying in the first league: Parliamentary representation and the electoral success of small parties. *Political Science Research and Methods, 3*(2), 187 – 204.
- *Recommended*
  - Cattaneo, M. D., Idrobo, N., & Titiunik, R. (2019). A Practical Introduction to Regression Discontinuity Designs: Foundations. Available at https://arxiv.org/abs/1911.09511.
  - Broockman, D. E. (2014). Do female politicians empower women to vote or run for office? A regression discontinuity approach. *Electoral Studies, 34*, 190 – 204.
  - Abou-Chadi, T., & Krause, W. (2018). The causal effect of radical right success on mainstream parties' policy positions: A regression discontinuity approach. *British Journal of Political Science*, 1 – 19.

18.05.2020 – 12th Session: Difference-in-Differences

- *Required*
  - Angrist & Pischke, Chapter 5
  - Bechtel, M. M., Hangartner, D., & Schmid, L. (2016). Does compulsory voting increase support for leftist policy? *American Journal of Political Science, 60*(3), 752 – 767.
- *Recommended*
  - Bechtel, M. M., & Hainmueller, J. (2011). How lasting is voter gratitude? An analysis of the short-and long-term electoral returns to beneficial policy. *American Journal of Political Science, 55*(4), 852 – 868.
  - Enos, Ryan D. (2016). What the demolition of public housing teaches us about the impact of racial threat on political behavior. *American Journal of Political Science 60*(1), 123 – 142.

25.05.2020 – 13th Session: Conclusion

- *Required*
  - Toshkov, Chapter 12