

Intro to Social Science Data Analysis

Research Question Design & Data Download

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November 19, 2012

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Quick Quiz 1

What are the three minimum criterion for establishing a **causal relationship**?

Quick Quiz 2

Why do we often need to use tools for **statistical control**?

What is the main tool we learned last week for statistical control?

Quick Quiz 3

What is a reference category?

Quick Quiz 4

Why do King et al. (2000) recommend simulating expected outcomes and graphing the results?

Goals:

With a partner, answer a **social science research question** primarily using the **data analysis tools** covered in this course.

Present your results in both a:

- ▶ **short paper** (max 1,000 words),
- ▶ **short presentation** (max 15 minutes).

As always, it must be **reproducible**.

Schedule

We are dedicating **all** of the class time for the rest of the course to the research project.

Schedule:

- ▶ Week 13: Research question, design, & data download,
- ▶ Week 14: Statistical Analysis & Results Visualization,
- ▶ Week 15: Write up.
- ▶ Week 16: Presentations.

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Due:

- ▶ Paper: 18 December
- ▶ Presentation: 19 or 20 December

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Paper Structure

Your paper should have the following structure:

- ▶ **Introduction:** Research Question, Thesis Statement, Paper Outline.
- ▶ **Literature Review:** Brief discussion of previous research on this topic (including possible alternative explanations).
- ▶ **Data & Methods:** Describe the data you collected (sources, variable meaning) & the methods that you use to test your hypothesis.
- ▶ **Results:** Show and discuss your results.
- ▶ **Conclusion:** Wrap up & discuss your research **limitations**.

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Note;

Your presentation's structure will mostly be the same as your paper's.

This week:

You will develop your research question and the research design you will use to try to answer it.

This is also **Assignment 4**.

Assignment 4

Due: Friday 30 November

Research Design

With your partner plan your research by answering the following questions:

1. What **difference** do you want to explain?
2. What is your best guess explanation (i.e. thesis statement)?
3. Can you test your hypothesis using data? If so, what data do you need to collect and what tests could you use?
4. What **rival explanations** are there?
5. What **other factors** may influence the relationship you observe?
6. How could you use data to test whether your best guess or the rival explanations are better? Write this as an **equation**.

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