Q-Step: Week 2 Lecture

Concepts and Measurement

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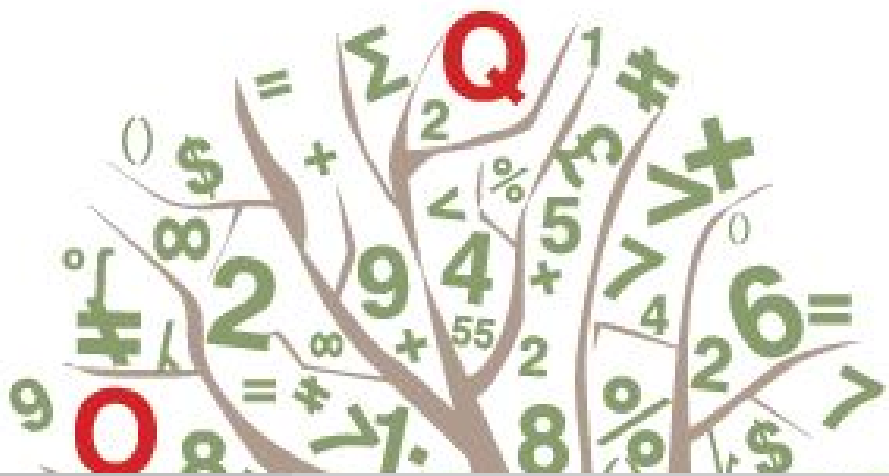

Roadmap

- Getting ready for your first lab session
- "New" knowledge
  - What is research?
  - How do we go about conducting it?
  - What are the basic ingredients of a good research design?
  - Focus on Concepts and Measurement

Your first lab session

Preps

- Download the software!

1. download R itself, through https://www.r-project.org Select your operating system (Mac, Windows, and Linux are supported), and the version of R you want to download, depending on which version of the operating system your computer runs on.
2. download RStudio, through https://rstudio.com/products/rstudio/download/. "RStudio Desktop – Open source license" is what you want. Select the version of RStudio you want to download, depending on which version of your operating system your computer is running on.

- If you are using chromebook (and probably an iPad) sign up to the Cloud-based version of the RStudio software through the course.
- create an RStudio Cloud account using the same address that is registered with DPIR. To do so, just go to https://rstudio.cloud/ and register following the instructions. Please also ensure that you have set up your eduroam account, so you will have a working internet connection in class.

Your first lab session

- Social Science Library
- Follow the signs for the Q-Step Lab
- Take a sit and plug in your PC
- Open RStudio and the instructor will give you the materials.
- When you are done, find some time to do the homework!
- Remember, because the sessions are taking place in the SSL, we need to respect the students studying there!

Key Ingredients of Research

- Research Question
- Theory
- Hypotheses
- Concepts and Measures
  - Validity
  - Reliability
- Empirical Test

The fundamentals

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2. Does consensus democracy improve economic outcomes?
3. Does consensus democracy improve the quality of government?

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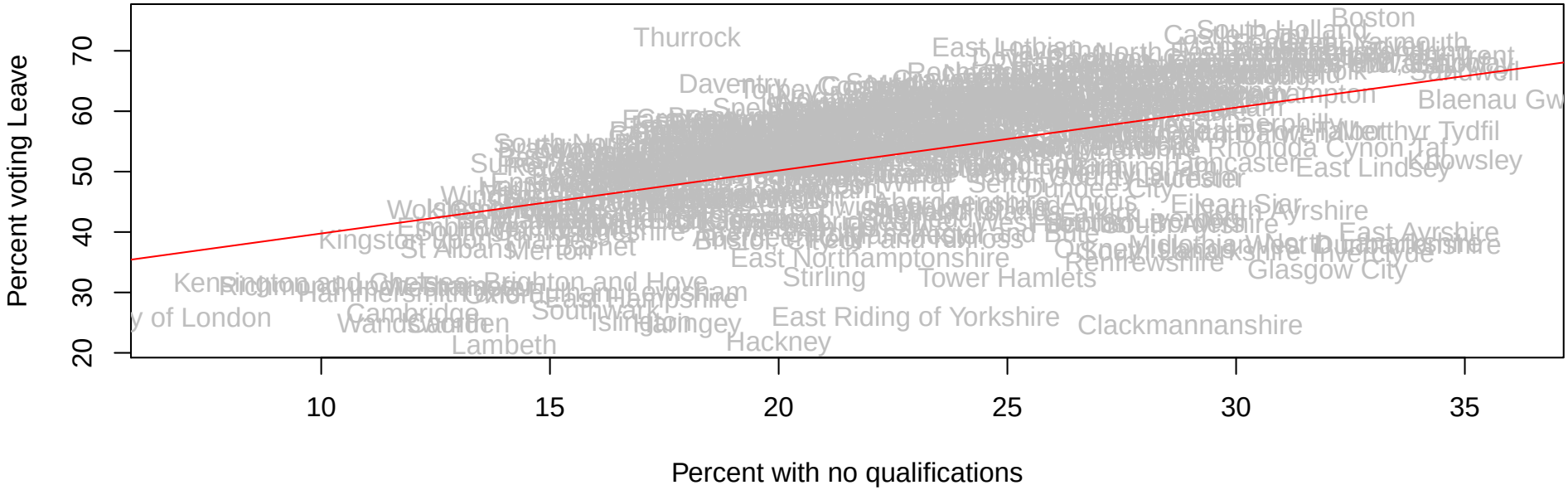

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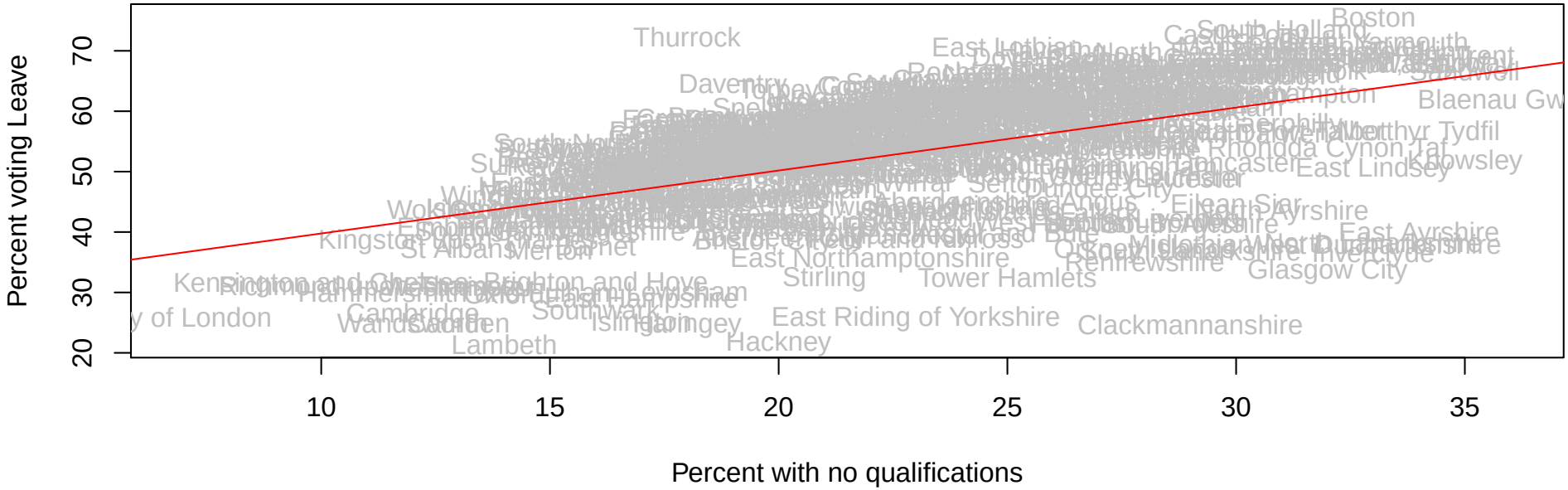

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Research Questions Typologies

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- What is Y?
- Why Y?
- Under what conditions Y?
- Do Y and X covary?
- Does X cause Y?
- What is the effect of X on Y?
- Is the effect of X on Y conditional upon Z?
- Why Y varies across G or T?
- Why X affects Y in T but not before?

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Once you have a research question, you need to set out the reasons why your answer to the puzzle is sensible

Theory

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Rueschemeyer, 2009:6

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What is a Theory?

A theory is a tentative conjecture about the cause of some phenomenon of interest. A logical statement based on assumptions that explain a causal mechanism from which we derive observable hypotheses and therefore theoretical expectations.

Key pillars of a good theory

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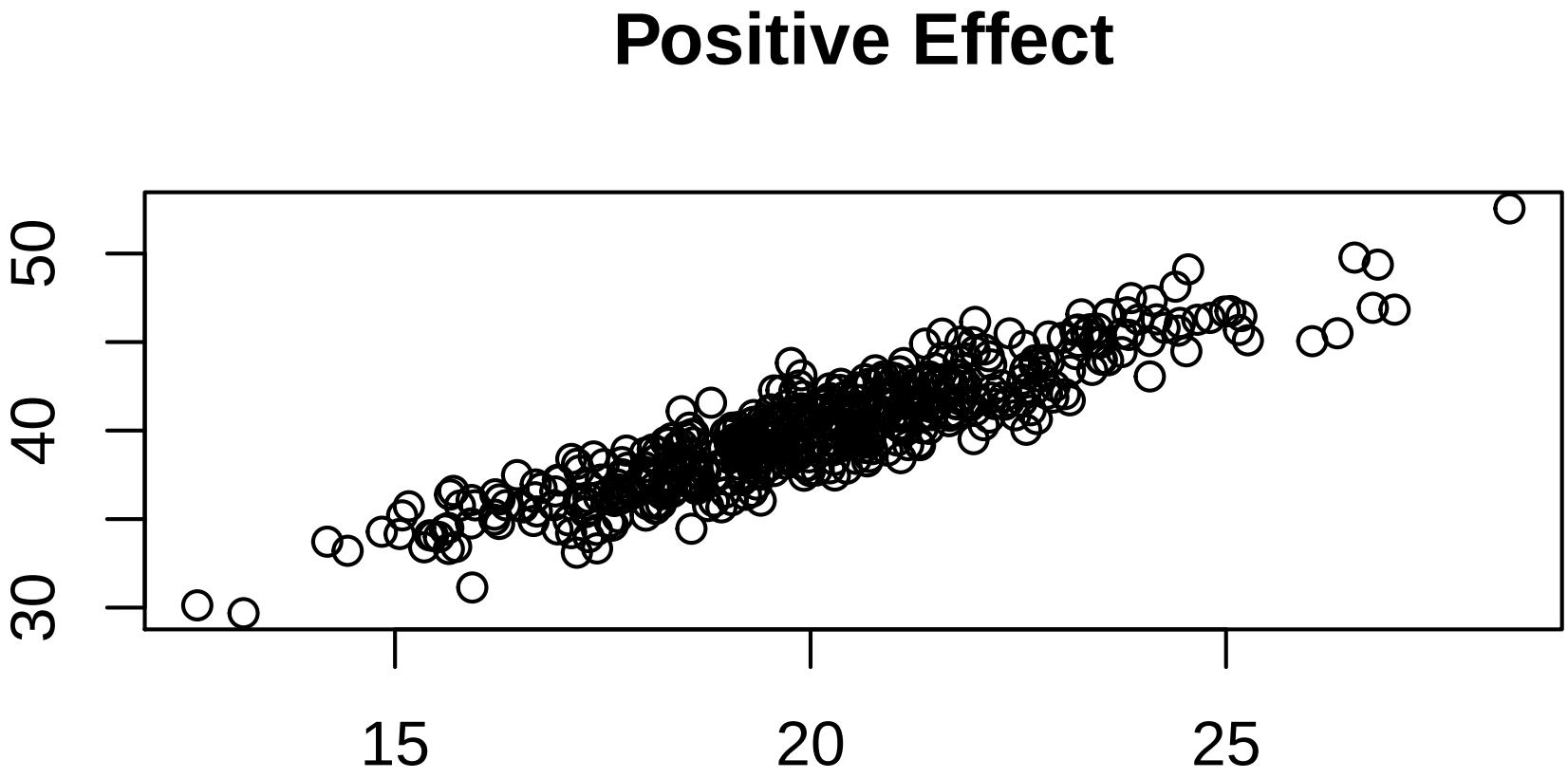
1. Does your theory offer an answer to an interesting research question?
2. Is your theory causal?
3. Can you test your theory on data that you have not yet observed?
4. How general is your theory?
5. How parsimonious is your theory?
6. How novel is your theory?
7. How non-obvious is your theory?

see Kellstedt and Whitten, Chapter 2

Hypotheses

- Your theory should lead to a very specific testable hypothesis (or more)
- e.g. If X increases, then Y is expected to increase
- Empirically, this test should be conducted statistically.



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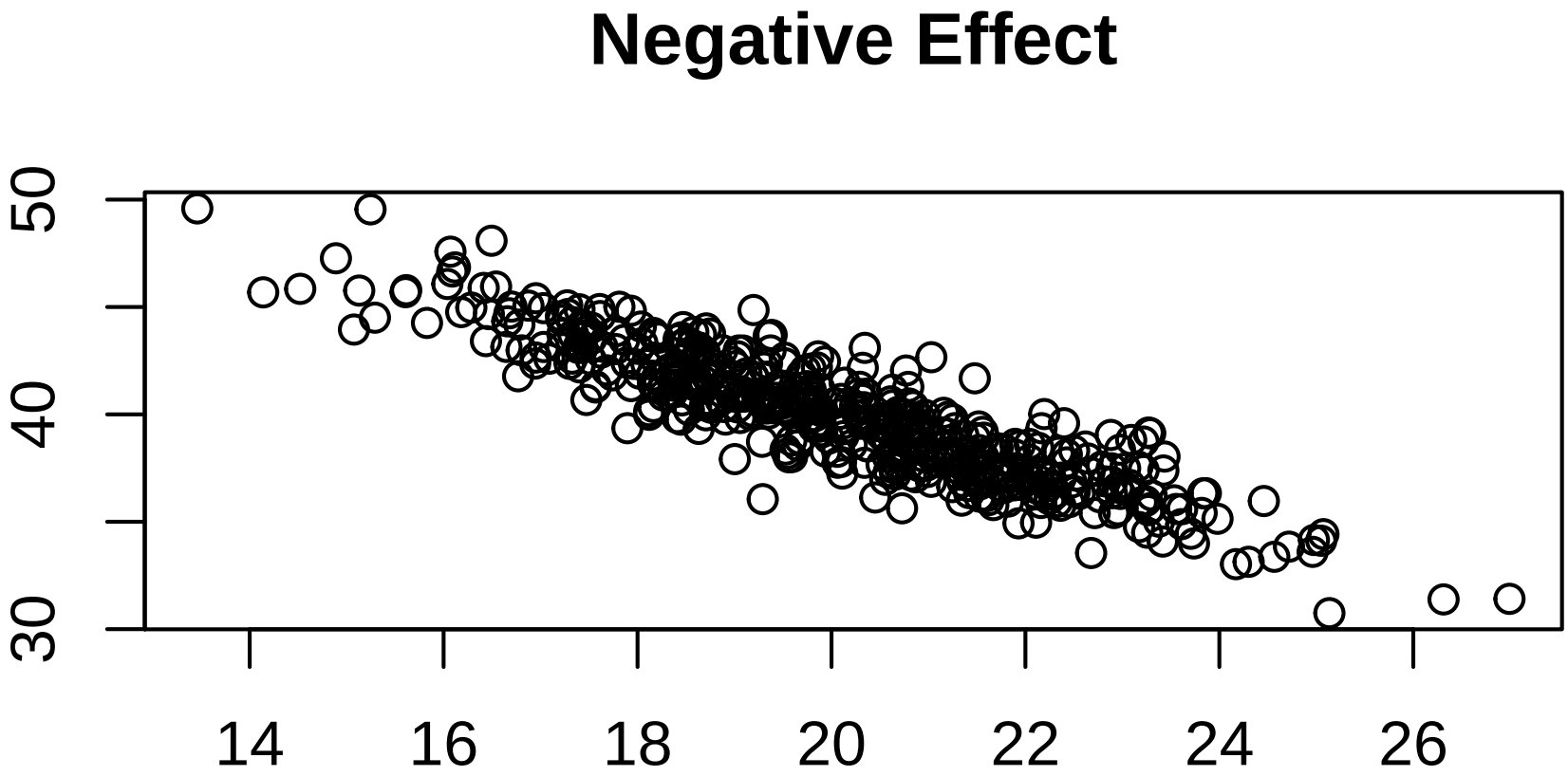

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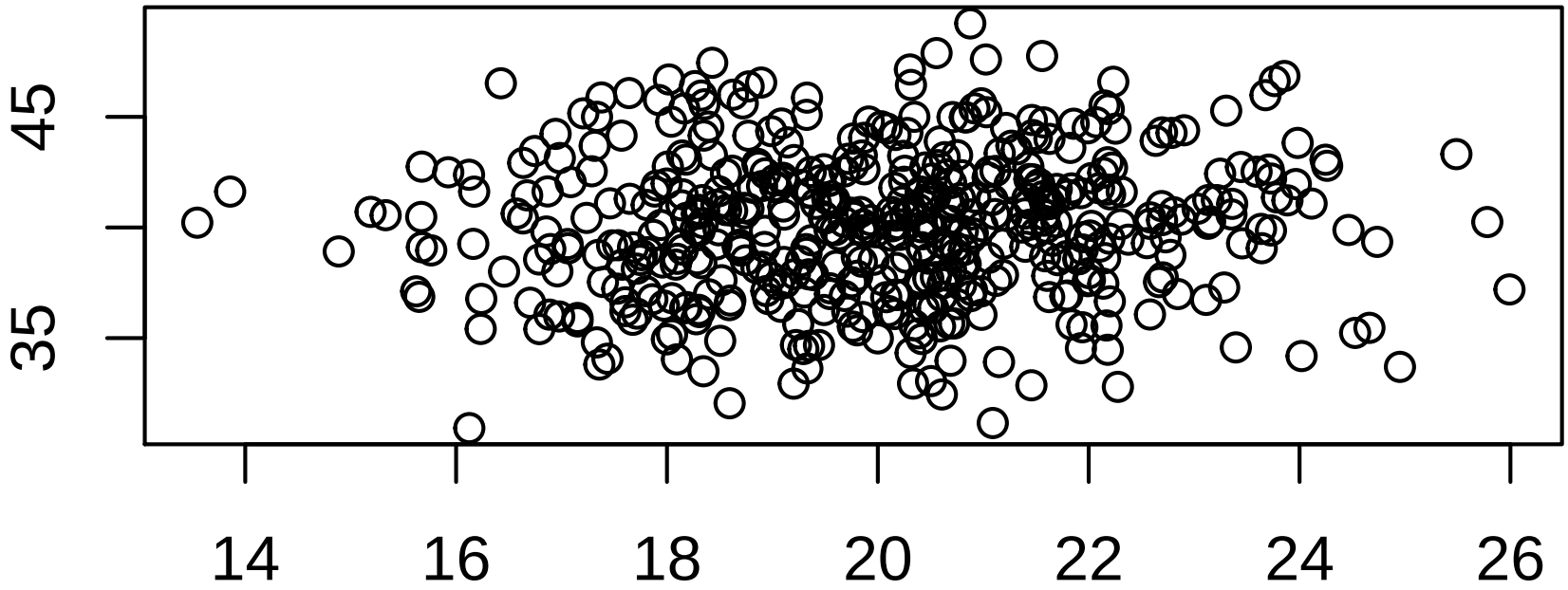

Working Example (Oversimplified)

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Theory: Reasons why economic growth should predicted higher levels of democracy

Hypothesis: higher growth (X) leads to democratic consolidation (Y)

- Much of Q-Step relates to the statistical test the confirms or refutes the hypothesis
- But, clearly, if we are to perform any kind of test, we first need to measure the variables
- How can we measure them?

Measurement

- Whereas economic development can be measured in multiple ways, democracy is much harder to measure.
- Democracy is a contestable concept (minimalist versus substantive view)
- In trying to measure it, different scholars make different assumptions

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- In trying to measure it, different scholars make different assumptions check out your Practice of Politics Syllabus
- Think of the well cited polity score that often people use
- This is a -10 to +10 scale calculated from the following items.

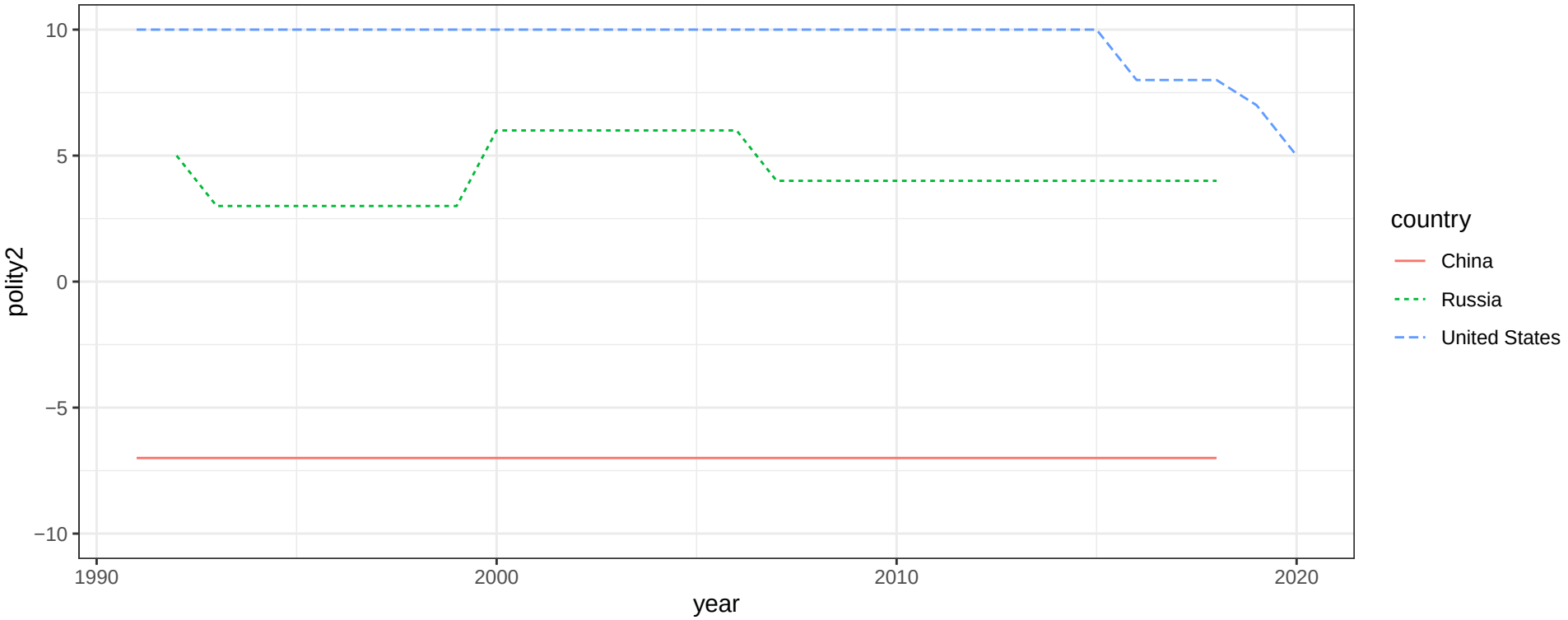
1. Competitiveness of executive recruitment.
2. Openness of executive recruitment.
3. Regulation of political participation.
4. Competitiveness of political participation.
5. Executive constraints.

- But does the polity score always capture what it is supposed to capture?

Two Concerns

- Validity is the extent to which a measure maps the true values of the concept
- Reliability denotes the consistency of a measure

Validity and Reliability



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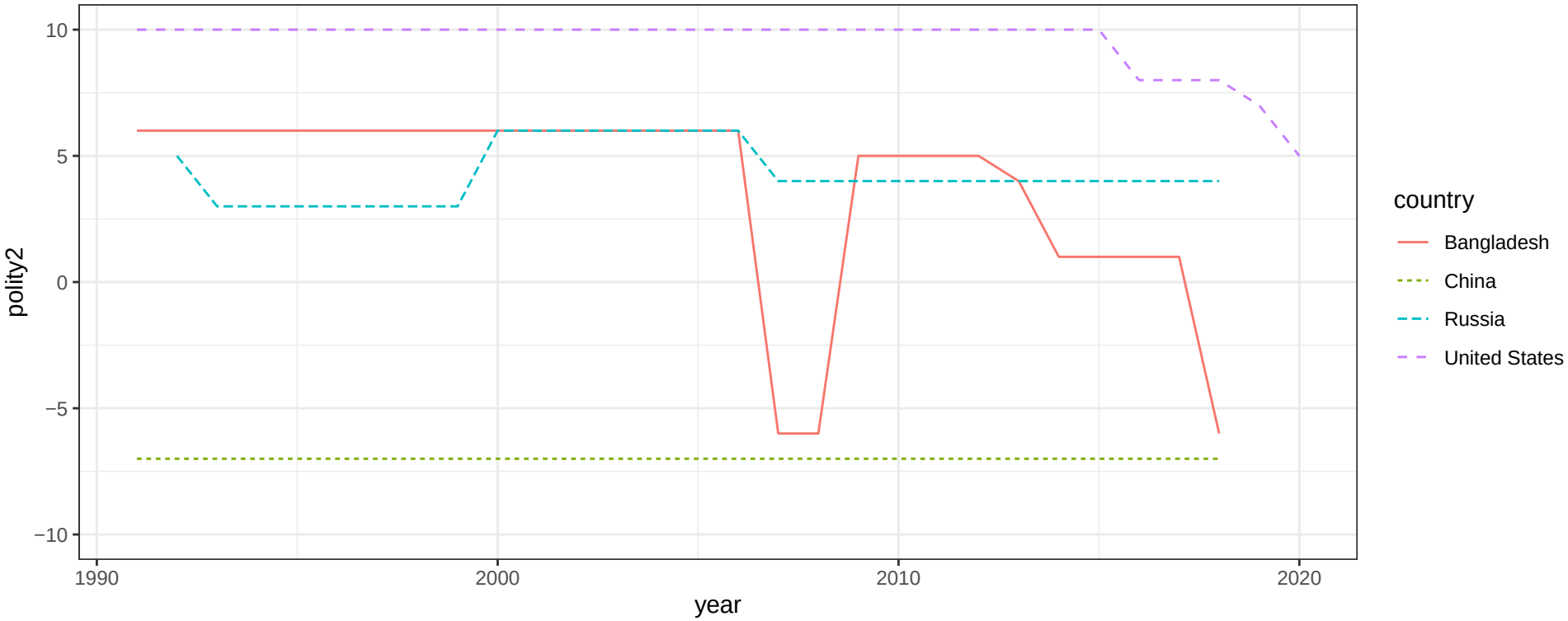
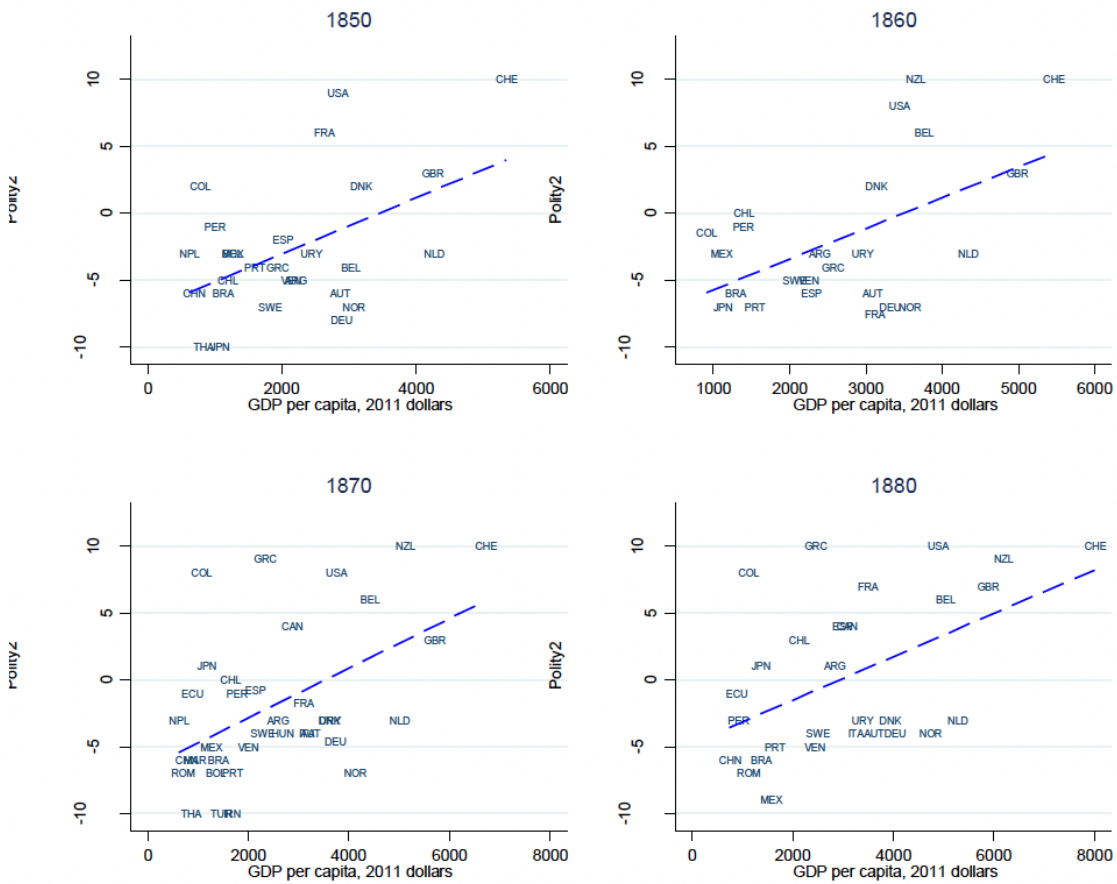


Back to our working example

Figure 1: Income and Democracy, scatterplots by decade



see Treisman, 2020

Next Week

- As you saw, measurement can be hard!
- Next week, you will be introduced to variables and their measurement
- Apart from interval (like the ones from today), other types variables (or levels of measurement) are being used in the social sciences.
- I want to stress -again- how important the lab sessions are!
- I think that the one taking place this week is crucial; if you are not consistent with your learning, you will be facing difficulties later on.
- Your lab tutors are here to help!
- Ask them questions, they are happy to help you!

Thank you!