Making Causal Critiques

Day 1 - Deconstructing an Argument

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Causal Critiques

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Does democracy prevent war?	"Of course not, India and Pakistan were democracies and had a war in 1999"
Did voters support President Trump because of jobs lost to immigration?	"Obviously not, jobs were lost to technological change"

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  - A worry about your *own* research paper

What makes an Explanation Convincing?

- Explanation requires:
  1. Theory
  2. Evidence

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- Next time the laptop fails to charge, our wiggling might not be enough and we won't know how to fix it

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- We can design other tests to check the laptop, charger, adapter etc.

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- We need to design tests (produce evidence) that *distinguish between* specific theories

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- A **Convincing Explanation** requires evidence that supports a *specific* theory
  - And *rejects other theories*

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  4. **Doubly Decisive Test**: Can confirm a hypothesis and reject all other hypotheses
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- What caused the reduction in price variation in Kerala's fishing industry?
- **Hypothesis:** The introduction of mobile phone service
- **Theory:** Mobile phones allowed people to quickly share the price of fish in different villages, so fishermen got the best prices more consistently
  - Jensen et al (2007)
  - A 'smoking gun' test

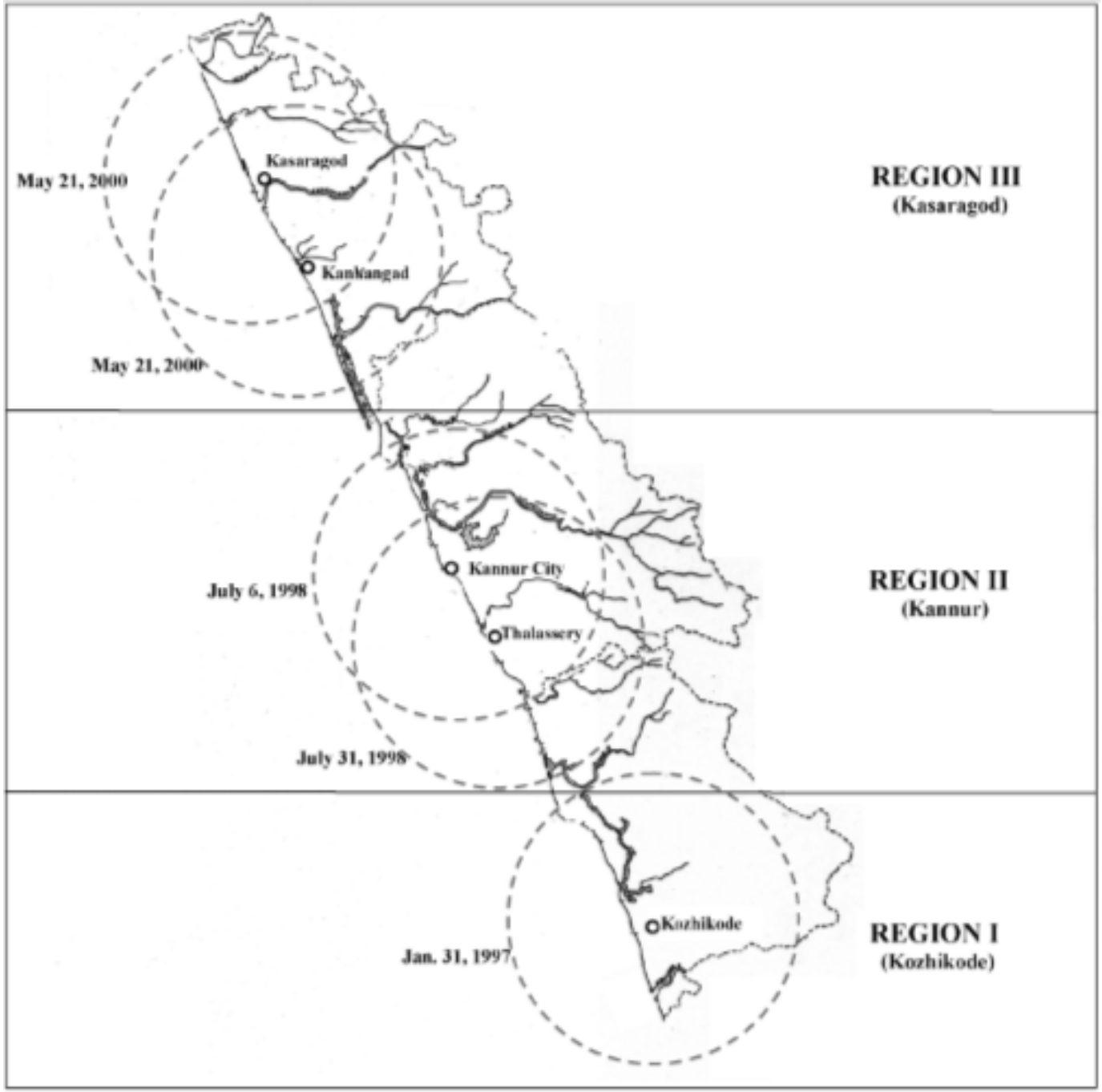

FIGURE II
Spread of Mobile Phone Coverage in Kasaragod, Kannur, and Kozhikode Districts

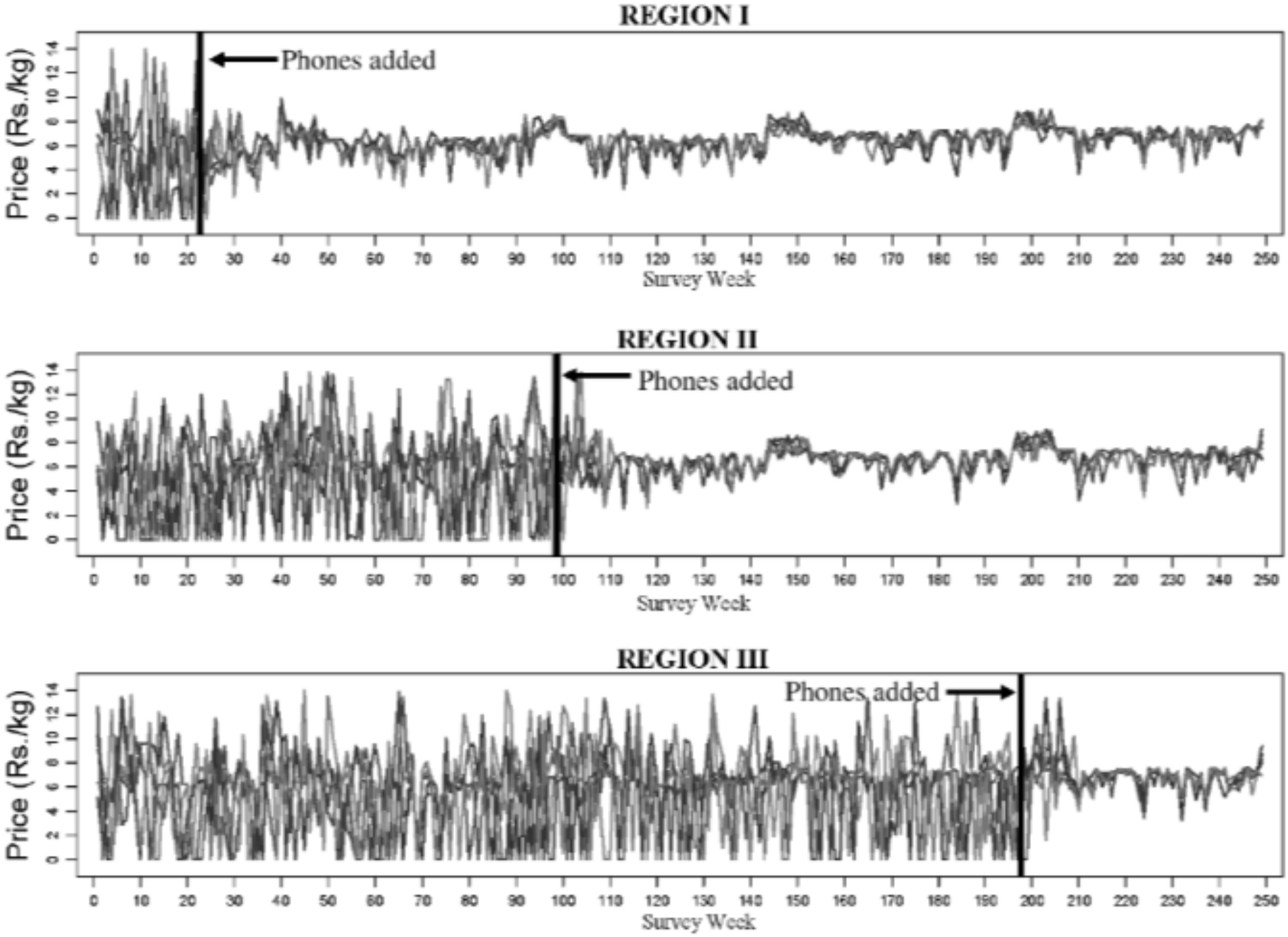

FIGURE IV

Prices and Mobile Phone Service in Kerala

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  4. Ethical constraints on the data we can gather
  5. Political explanations in one place may not work in another

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- For example, a left-wing party in government may not guarantee the passage of social welfare legislation
- But it can make it more likely

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7. **Granger Causation** - If D causes Y, D must be before Y

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10. **Policy-relevance** - Can the argument help us design better policy?

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7. **Replicability** - Can we take the same (or similar) data and reach the same conclusion?

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  - ~~$\forall p : h, h \Rightarrow p$~~
  - This is logically inconsistent

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  3. **Circular reasoning**: The conclusions just restate the premises
     - Eg. "Abortion should be legal because women have the right to an abortion."

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  5. **Post hoc Fallacy**: Just because something happened earlier does not mean it was the cause
     - Eg. "You moved into this apartment yesterday and now the cooker is broken. It must be your fault."

Consistent Theories

- Logical Fallacies
  4. **Over-generalization**: Extending the conclusions beyond the scope of the evidence
     - Eg. "All of my friends support party X so of course they will win the election"
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     - Eg. "You moved into this apartment yesterday and now the cooker is broken. It must be your fault."
  6. **Appeal to Authority**: Assuming the author is right because they are senior
     - Eg. Assuming that political science professors know what they are doing!

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     - Eg. "If someone stands up at a football match, they can see better. Therefore, if everyone stands up, they can all see better."

Consistent Theories

- Some political science arguments are logically inconsistent:
  - Voters are rational - they choose the politician that is best for them. Therefore we always elect the best politicians.

Deconstructing a Political Science Paper

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  - **Evidence** - What evidence does the methodology produce?

Title:

Authors: **Year:**

Research Question:

Answer/Causal Argument:

Scope of Argument (in Time, Space, Demographics etc.)**:**

Concept/Variable	Measure	Unit of Analysis	Role (DV, XV, Control)

Theory:

Evidence:

Methodology:

- ❑ Case Study, Process Tracing
- ❑ Comparative Cases
- ❑ Regression with Controls
- ❑ Matching
- ❑ Field Experiment
- ❑ Lab/Survey Experiment
- ❑ Natural Experiment
- ❑ Instrumental Variable
- ❑ Regression Discontinuity
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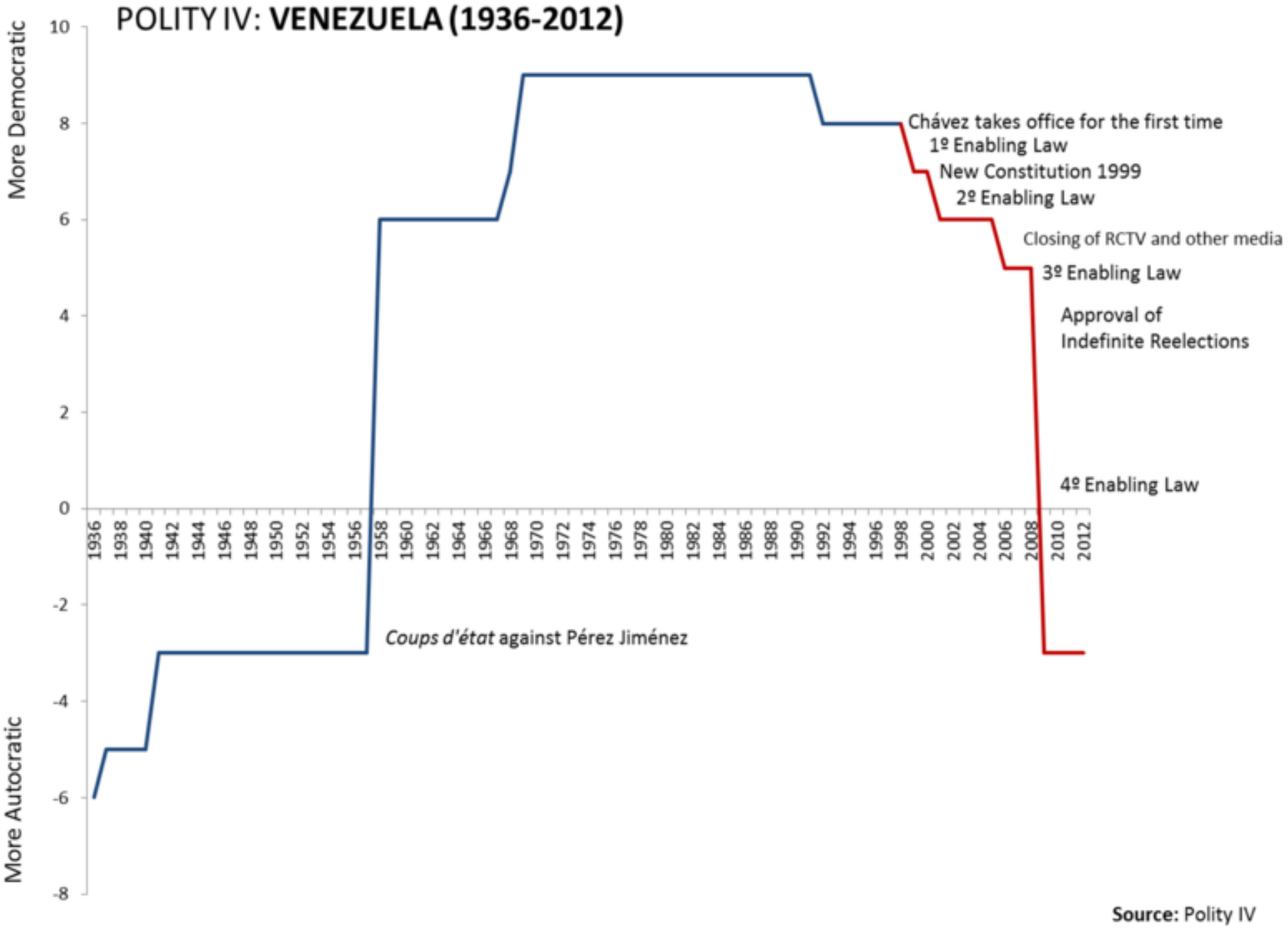
  - Are the cases (units) scored correctly? How reliable is the scoring?


POLITY IV: VENEZUELA (1936-2012)
More Democratic
More Autocratic
10
8
6
4
2
0
-2
-4
-6
-8
1936
1938
1940
1942
1944
1946
1948
1950
1952
1954
1956
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
Chávez takes office for the first time
1º Enabling Law
New Constitution 1999
2º Enabling Law
Closing of RCTV and other media
3º Enabling Law
Approval of
Indefinite Reelections
4º Enabling Law
Coups d'état against Pérez Jiménez
Source: Polity IV

Methodology

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  - Measurement error
  - Data entry, cleaning
  - Statistics/statistical model chosen
- What was the "Data Generating Process"?
- How does this data help us answer the question?

Methodology

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Title: Making Democracy Work

Authors: Robert Putnam **Year:** 1993

Research Question: Why are some parts of Italy governed better than others?

Answer/Causal Argument: Places with more civic social interactions have better government

Scope of Argument (in Time, Space, Demographics etc.): Advanced Democracies

Concept/Variable	Measure	Unit of Analysis	Role (DV, XV, Control)
Civil Society	Density of sports clubs, newspapers, electoral turnout	Region	Explanatory Variable
Government Performance	12 Indicators, eg. Budget on time, number of day care centres per child	Region	Dependent Variable
Wealth	GDP per capita	Region	Control Variable

Theory: Civic interactions between people and groups create trust and more 'horizontal' relationships that prevent government from being predatory

Evidence: Regions of Italy with similar institutional rules and similar wealth but with more civil society have, on average, better performing government

Methodology:

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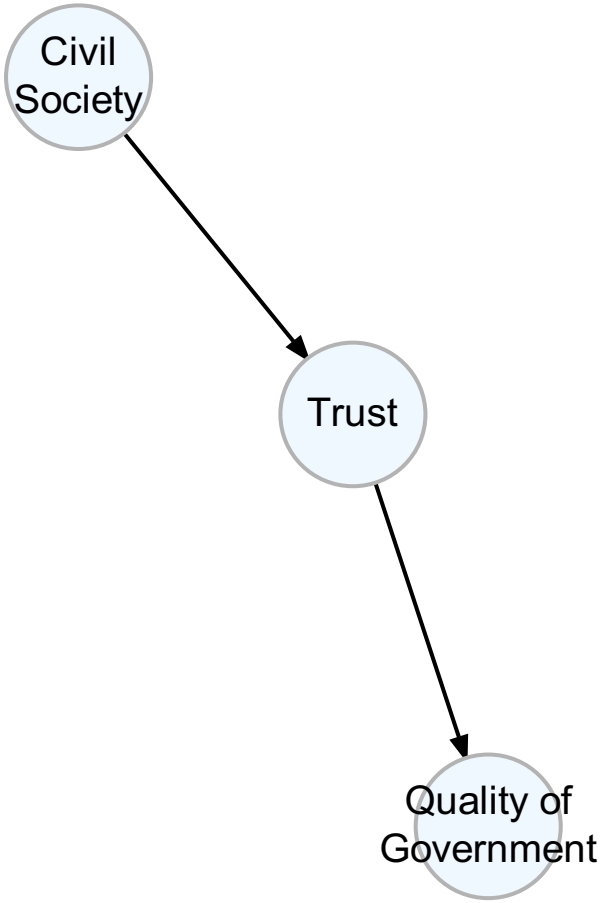
  - And also the *threats* to the author's argument
    - Even if they can't be measured

Causal Theory

```
## Warning:  Prefixing ‘UQ()‘ with the rlang
namespace is deprecated as of rlang 0.3.0.
## Please use the non-prefixed form or ‘!¡ instead.
##
##  # Bad:
##  rlang::expr(mean(rlang::UQ(var) * 100))
##
##  # Ok:
##  rlang::expr(mean(UQ(var) * 100))
##
##  # Good:
##  rlang::expr(mean(!!var * 100))
##
## This warning is displayed once per session.
```

Causal Theory



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