PoliSci 4782 Political Analysis II

About Final Examination

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Exam Format

- 2% of your final grade
- On Carmen (quiz available during finals week)
- Up to 1 hour and 45 minutes (second attempt is not allowed)
  - Remind me by today, if you need special accommodation
- Rstudio is needed
- Free to use Internet, texts, notes, or other resources
- Discussion or collaboration is forbidden

Types of Questions

- 13 multiple-choice questions (13 pts)
  - conceptual questions
  - practical questions (based on R)
- 2 text response questions (10 pts)
  - a conceptual and theory-related one
  - a problem-solving one based on R

Preparation

- Go through all the past comprehensive checks and lab assignments.
- Clear up your questions via office hours with me or emails.
- Make some notes of important concepts and R codes.

Sample Conceptual Question

Which statement about $E(Y) = \mu = g^{-1}(\boldsymbol{X}\beta)$ is correct?

A This model cannot be a linear regression model

B We choose a proper mean function g^{-1} to make our model suitable to whatever outcome variable Y we may possibly have

C We are estimating Y and X

D μ is called ancillary parameter

Sample Question I

Which statement about $E(Y) = \mu = g^{-1}(\boldsymbol{X}\boldsymbol{\beta})$ is correct?

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B We choose a proper mean function g^{-1} to make our model suitable to whatever outcome variable Y we may possibly have

C We are estimating Y and X

D μ is called ancillary parameter

Answer: B

Sample Question II

Load `capacity` dataset from `panelView` package. Build a linear model to explain the variation of the democracy score (`polity2`) by population (`lnpop`), GDP per capita (`lngdp`), state capacity (`Capacity`), and country fixed-effects. How much variation can this model explain?

A 40.52%

B 19.12%

C 87.91%

D 71.49%

Sample Question II

Load "capacity" dataset from `panelView` package. Build a linear model to explain the variation of the democracy score (`polity2`) by population (`lnpop`), GDP per capita (`lngdp`), state capacity (`Capacity`), and country fixed-effects. How much variation can this model explain?

A 40.52%

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Answer: D