

Time Series and Panels: Lab 2

Due on Spring 2023

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Problem 1

Stationarity

Consider the model $(1 - L)^2 Z_t = (1 - 0.3L - 0.5L^2)a_t$. Is this model stationary, or can you not answer? What information, if any, is needed to clarify

Problem 2

Is Trump's Approval Rating Integrated

Test the Trump approval time series from last lab for integration. Report and discuss your results. If the time series is integrated, discuss solutions.

Problem 3

Life Expectancy I

Does democracy increase a country's life expectancy, net of wealth? Use the qog dataset to estimate some basic panel models around this problem. Report at least a pooled model and some kind of fixed-effects model. Which is best? Does the analysis pass the poolability test? If not, how would you proceed?

Problem 4

Life Expectancy II

Put together a multi-level model of the wealth and life expectancy relationship. Report and discuss your results. Test the key assumptions, and describe steps you would take to improve the model in response to any problems that you find.

Problem 5

Your Own Panel Data

For a panel that interests you, please estimate some fixed-effects and multi-level models until you find the best model that you can. Please discuss your model selection process and interpret your results.