Economics 430: Project 3
Fall 2022, UCLA
Instructor: Dr. Rojas

Due Date: Nov 30, 2022

For this project, you will work any with two datasets you like. One will be used for panel data models, and the other for qualitative dependent variable models (for this one you need to have at least 5 predictors). Your task will be to find the best fit model for each case by following the steps outlined below.

I. Panel Data Models

1. Briefly discuss your data and economic/finance/business question you are trying to answer with your model.

2. Provide a descriptive analysis of your variables. This should include histograms and fitted distributions, correlation plot, boxplots, scatterplots, and statistical summaries (e.g., the five-number summary). All figures must include comments.

3. Fit the three models below, and identify which model is your preferred one and why. Make sure to include effects plots, statistical diagnostics, etc., to support your conclusion, and to comment on your findings.

   - Pooled
   - Fixed Effects
   - Random Effects

II. Qualitative Dependent Variable Models

1. Briefly discuss your data and economic/finance/business question you are trying to answer with your model.

2. Provide a descriptive analysis of your variables. This should include histograms and fitted distributions, correlation plot, boxplots, scatterplots, and statistical summaries (e.g., the five-number summary). All figures must include comments.

3. Fit the three models below, and identify which model is your preferred one and why. Make sure to include relevant plots, statistical diagnostics, etc., to support your conclusion, and to comment on your findings.

   - Linear Probability Model

- Probit Model

- Logit Model

4. Using your preferred model, make 4 different predictions, and comment on their reliability.