

Objective

The main objective is to replicate the RDD graphs to analyze the discontinuities at the cutoff date for the benefit eligibility, providing insights into the policy's effects on the targeted outcomes.

Data Source

The analysis utilizes various datasets, including vital statistics for birth and abortion rates, and labor force surveys for maternal labor supply data. The datasets cover a period surrounding the introduction of the child benefit, allowing for a before-and-after comparison.

Methodology

The RDD approach exploits the sharp cutoff in benefit eligibility based on the child's birth date. This quasi-experimental design compares outcomes for individuals just below and just above the threshold, assuming that the only systematic difference between these groups is the receipt of the benefit.

Key Steps:

Data Preparation: Clean and preprocess the data to identify the cohorts just below and above the eligibility cutoff.

Analysis: Employ RDD techniques to estimate the discontinuity at the cutoff. This involves fitting separate regression models for the groups below and above the threshold and examining the gap at the cutoff.

Graphical Representation: Generate graphs illustrating the relationship between the birth date and the outcomes of interest (fertility, abortion rates, maternal labor supply), highlighting the discontinuity at the eligibility cutoff.

Tools and Libraries

- Python: For data manipulation and analysis.
- Pandas: For handling data structures.
- Statsmodels/Scikit-learn: For regression analysis.
- Matplotlib/Seaborn: For plotting the RDD graphs.

Results Interpretation

The graphs are expected to show clear jumps at the eligibility cutoff for the various outcomes, indicating the potential impact of the child benefit policy. The magnitude and direction of these discontinuities provide insights into how the policy influenced behavior related to fertility, abortion, and work participation among new mothers.

GPT PROMPTS USED

Using the provided data from `data_abortions_20110196.dta` and `dofile_fertility_20110196.do`, please replicate the RDD Model shown in Libertad González' "The Effect of a Universal Child Benefit on Conceptions, Abortions, and Early Maternal Labor Supply." The model shows the number of abortions by month before and after the Universal Child Benefit in July 2007 -- or the cut-off point for the RDD in this case. Please plot the accurate y-axis and x-axis as shown in the figure. Use the correct column names provided in the '.do' file. All data needed for this python code will be in the .dta file. I need a graph to show the data for number of abortions relative to the month of abortion from July 2005 to July 2009, with the cut-off point being July 2007. Please provide the regression discontinuity line that follows the scatter plots.
`data_abortions_20110196.dta`, `dofile_fertility_20110196.do`

Using the provided data from `data_births_20110196.dta` and `dofile_fertility_20110196.do`, please replicate the RDD Model shown in Libertad González' "The Effect of a Universal Child Benefit on Conceptions, Abortions, and Early Maternal Labor Supply." The model shows the number of conceptions by month before and after the Universal Child Benefit in July 2007 -- or the cut-off point for the RDD in this case. Please plot the accurate y-axis and x-axis as shown in the figure. Use the correct column names provided in the '.do' file. All data needed for this python code will be in the .dta file. I need a graph to show the data for number of conceptions relative to the month of abortion from July 2005 to July 2009, with the cut-off point being July 2007. Please provide the regression discontinuity line that follows the scatter plots.