

Econ 131  
Spring 2017  
Emmanuel Saez

Problem Set 1

**DUE DATE: February 15**

Student Name:

Student ID:

GSI Name:

- **You must submit your solutions using this template.**
- **Although you may work in groups**, each student must submit individual sets of solutions. You must note the names other students that you worked with. Write their names here:

## 1. Essay

Read the following New York Times article and the summary of the CBO background article the New York Times refers to. Write a short essay [the essay has to fit in the page below] explaining whether the Times article accurately reported on the new CBO report. Will it be possible for the new Trump administration to cut taxes, fund infrastructure spending, while not increasing the Federal debt (relative to the current law CBO projections)?

NY Times link:

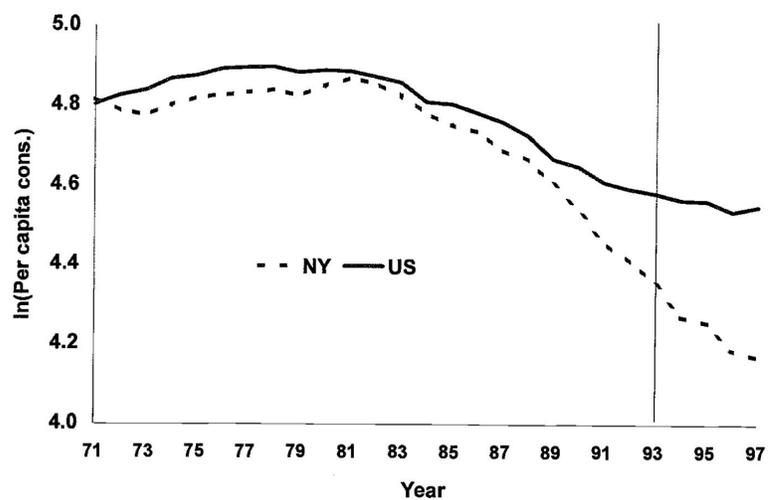
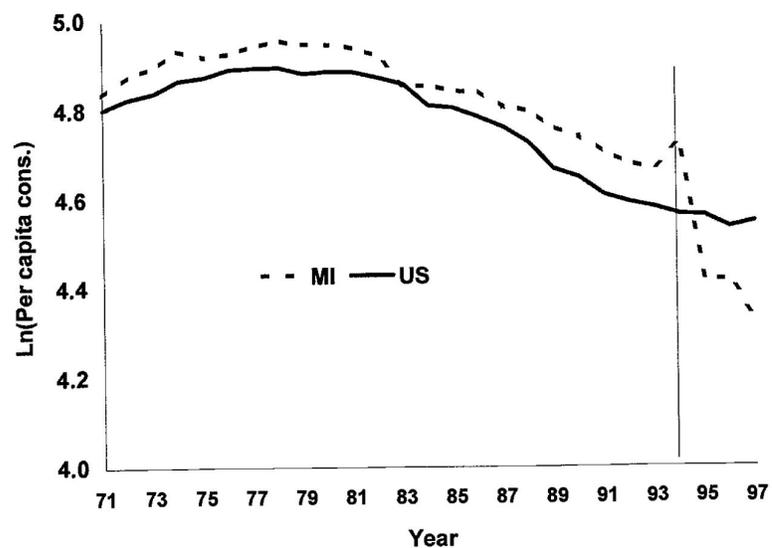
<https://www.nytimes.com/2017/01/24/us/politics/budget-deficit-trump.html>

CBO link: <https://www.cbo.gov/publication/52370>



(d) In 1994, Michigan raised taxes on cigarettes sold in Michigan. The governor wants to know how much this tax increase changed log per-capita cigarette purchases in Michigan. In 1992, Michigan's log per-capita consumption of cigarettes was 4.7. In 1996, Michigan's log per-capita consumption of cigarettes was 4.4. In 1992, the U.S. average was 4.6. In 1996, the U.S. average was 4.5. Using these numbers to conduct a difference-in-difference (DD) analysis of Michigan cigarette consumption relative to the U.S. average between years 1992 and 1996, you should report to the governor that Michigan's cigarette tax reduced log per-capita cigarette purchases in Michigan by 0.2. (Ignore any impact of state taxes on the U.S. average. This problem is based on graphs from Evans, Ringel, Stech "Tobacco Taxes and Public Policy to Discourage Smoking" *Tax Policy and the Economy, volume 13*)

(e) In 1993, New York substantially raised taxes on cigarettes sold to consumers in New York. The governor of New York heard about your work for the Michigan governor and sends you a new report with the following graphs of annual data on log per-capita cigarette consumption by state and also for the U.S. on average. She then asks you for a DD estimate of the impact of New York's tax change, computed in the exact same way as you did for Michigan (except using years 1991 and 1995 instead of 1992 and 1996 for comparability).



The NY graph suggests that the DD estimate for the effect of the NY tax increase on NY cigarette consumption is similar to your DD estimate for MI. You should therefore feel confident that the MI and NY taxes had similar effects on cigarette consumption in their respective states. (Ignore any impact of state taxes on the U.S. average. This problem is based on graphs from Evans, Ringel, Stech "Tobacco Taxes and Public Policy to Discourage Smoking" *Tax Policy and the Economy, volume 13*)



4. Calculate the own-price elasticity of demand for each one of the two goods

5. Calculate the cross-price elasticity of demand for each one of the two goods