

Econ 230B
Spring 2023
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Problem Set 2

DUE DATE: April 4

1. Chasing Natural Experiments within a Country

As seen in class, many of the best papers on migration responses to taxes and transfers exploit a policy change (a so-called “Natural Experiment”) in order to obtain convincing estimates. This exercise asks you to find a Natural Experiment and propose an estimation methodology.

Download the pdf copy of the EU Tax Observatory report on “New Forms of Tax Competition in the European Union” ([link here](#)). Chapter 3 of this publication describes preferential individual income tax schemes for new high income migrants.

a) Find the introduction of one such scheme in one country that could be used to estimate migration responses to taxes for some group of interest in the population. Make sure the scheme is large enough to be useable for compelling identification. Describe the scheme you have picked.

b) Look for the papers cited in the EU tax observatory report and on google scholar to check whether the scheme you have picked has already been analyzed. Ideally, you want to be the first one to analyze this scheme. If there are already existing papers studying this scheme, explain why your proposed analysis would complement or add to the existing research on your chosen scheme.

c) Describe the methodology you would use to estimate such migration responses. In particular, make sure to be fully explicit about the assumptions you need to identify the migration responses.

d) Describe the data you would need to carry out the analysis. Survey or administrative data, variables, realistic sample size, time period, panel or repeated cross section, etc. Search online to investigate whether such data exist and how they could be obtained for the research analysis you are proposing. In particular, discuss whether you would need to follow the same people as they move across countries or whether data from a single country would be sufficient for your analysis.

2. Mobility of High Income US Taxpayers across States

The goal of this exercise is to estimate the mobility of high income US taxpayers across US states due to variation in state income top tax rates across states and over time. High income US taxpayers are defined as tax filers reporting Adjusted Gross Income (AGI) above \$1m.

a) Find online information on the state top income tax rates across all states for **2020** incomes. List the five states with the highest top tax rates (group T) and the five states with the lowest top rates (group C) along with the top tax rates in those 5 states. (NOTE: do not exclude zero tax states, if you have ties, keep the largest states in terms of population to have exactly five states in each group).

b) Use IRS state level data in excel format for tax year 2020 at (link here) to compare the fraction of high income earners in states in group C and states in group T. Fraction high earners is defined as the ratio of number of tax returns with AGI above \$1m to all tax returns in group.

Under what assumption does this comparison identify the effects of state income tax rates on mobility? Is this assumption realistic (how could it be tested)?

If this assumption holds, what is the elasticity of the number of high earners with respect to the net-of-tax rate at the state level?

c) TCJA (the Trump tax cut) imposed a cap of \$10K on state and local income taxes that taxpayers can deduct in their itemized deductions. This implies for high earners, state income taxes are no longer deductible. Explain how this magnifies the impact of state income taxes on the net-of-tax (one minus the marginal tax rate) when combining both federal and state income taxes.

d) Use IRS state level data in excel format for tax years 2017 and 2020 at (link here) to compare the changes in the fraction of high income earners in states in group T and states in group C from 2017 to 2020. Fraction high earners is again defined as the ratio of tax returns with AGI above \$1m to all tax returns.

Construct the DD estimate using the variation created by TCJA that was discussed in c). What is the elasticity of the number of high earners with respect to the net-of-tax rate at the state level that you obtain?

Do you find this estimate more compelling than the one obtained in question a)? Why or why not?