

# EC1410-Spring 2023

## Problem Set 10

(Updated 17 January 2023)

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When you write up your answers, your goals should be to (1) be correct, and (2) convince your reader that your answer is correct. It is always helpful if your work is legible and if all steps are presented, possibly with a line of explanation. Answers that do not achieve these goals will not be awarded full credit.

### *Problems*

1. The standard deviation of the sprawl index in Eid et al. (2008) is 0.281. Use this to evaluate the relationship between a one standard deviation change in sprawl and BMI (using the results from both the cross-sectional regression and the first-differences regression).
2. Use Allcott et al. (2019) to determine, on average, by how much does a \$20,000 increase in household income change the grams of sugar added per 1,000 calories of food on your grocery store shelf? Explain.
3.
  - (a) Using the right two panels of Figure 1 of Bayer et al. (2007), estimate the willingness to pay per point for a neighborhood with better test scores.
  - (b) Using the same logic, estimate the value of a 1 percentage point higher college share, black share, and \$1,000 in neighborhood income.
  - (c) Using these four estimates, what is the implied price increase when you cross the boundary into a higher quality school district?
  - (d) Compare this to the actual price increase. Your estimate should have been much bigger than what is observed. Why did this happen?