

PUBPOL 639: ASSIGNMENT 6

Winter 2011

Due: Monday, April 18th at the start of class

A Critical Review of Two Recycling Studies

We are going to read a number of empirical studies in order to answer the question: “What is the effect of offering curbside recycling and per-unit garbage pricing¹, individually or together, on the amount that households recycle?” There are other interesting questions about recycling that may be interesting or important, such as “Is recycling cost-effective?” We will keep focused on the first question to the degree possible.

This assignment starts you off with two empirical recycling studies, giving you practice with the framework we will apply to a larger set of studies in the final project. On the next page is a list of questions that form a framework for critically assessing an empirical study. Your assignment is to answer Questions 1-4 completely for each of the two studies. Then answer Question 5, which asks you to compare the results of the two papers and try to reconcile them. Please answer the questions in Q&A format, in the order in which they are posed. In this assignment, we want to make sure you can answer the questions precisely. In the final assignment, you will write up this analysis in a prose memo.

Logistical note: You should hand in a hard copy (single-sided) in class and also upload it to CTools (using the Drop Box tool).

Callan, Scott and Janet Thomas. 1997. “The Impact of State and Local Policies on the Recycling Effort.” *Eastern Economic Journal* 23(Fall), 411- 24.

Fullerton, Don and Thomas C. Kinnaman. 1996. “Household Responses to Pricing Garbage by the Bag.” *American Economic Review* 86, 971–83

¹ Curbside recycling is when the municipal government (or its agent) collects recyclable materials (paper, glass, aluminum, plastic) directly from household’s curbs, often in conjunction with the weekly trash collection. Per-unit garbage pricing is when households are charged a fee for garbage collection that varies with the amount of garbage collected (either weight or volume). This can be implemented in a number of different ways: having households purchase “tags” to affix to each bag of garbage, having households pay per can, or weighing the amount collected with on-truck scales.

General Advice on Reading Empirical Studies

Expect jargon and poor writing (enjoy the rare exceptions!). Plowing through nonsense in order to grasp the gist of a study is a critical task for policy analysts. You have an excellent grounding in empirical methods and are quickly gaining the skills needed to assess just about any empirical evaluation. You may not be able to interpret every equation or sentence, but if the authors have done their job then you will be able to evaluate their results and judge the quality of their analysis.

Questions to Answer

- 1) FAQs
 - a) What is the causal question of interest?
 - b) Ideal experiment: How could you use an RCT to answer this causal question?
 - c) Identification strategy: How does the study use observational data to approximate an ideal experiment?
- 2) Important Details
 - a) What is the estimated effect of X on Y?
 - i) What is its statistical significance?
 - ii) What is its practical significance (magnitude)?
 - b) Data
 - i) What is the unit of observation?
 - ii) What is the size of sample
 - iii) What are some key characteristics of the sample (you could say a lot here – try to focus on what is relevant for assessing internal and external validity)
- 3) Assess internal validity: is the identification strategy a good one?
 - a) To answer this, first think about (and discuss) *why* treatment status varies in general. Do people choose treatment? Is it chosen for them? By what process?
 - b) Then describe the *identifying variation* in this study. This is the variation left after we control for the other variables.
 - c) What are the key threats to the internal validity of the study? As you list them, make sure you tell us how these threats could affect the results (e.g., sign the bias).
- 4) Assess external validity: to what populations, programs and places can the results be safely extrapolated?
- 5) Reconciling the two studies
 - a) Do the studies differ in their findings and conclusions? If so, why?
 - i) Bias differs across the studies (issues of internal validity)?
 - ii) Differences in treatment, outcome, population (issues of external validity)?
 - b) Based on the weight of this evidence, what is your answer to the causal question of interest? What are you most and least confident about in your conclusions?