

Tutorial 5 – Environmental policies: households

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This exercise is based on Douenne and Fabre’s paper titled “Yellow Vests, Pessimistic Beliefs, and Carbon Tax Aversion” (forthcoming, *AEJ: EP*). The paper is available [here](#).

1. What is the research question of this paper?
2. Download the dataset `data_yellow_vests.dta` and the file `problem_set_douenne_fabre_tutorial.do`. Briefly describe the dataset.
3. Run the data preparation (i.e. the first 110 lines of code) and lines 113-116. Comment the results.
4. We want to reproduce a figure similar to Figure 3.1.
 - (a) For this question, keep only the subsample of respondents with *estimated_gain* > -400.
 - (b) Using the command *kdensity*, and a bandwidth of 50, plot the kernel density of the variables *perceived_gain* and *estimated_gain*.
 - (c) Comment the figure that you obtained.
5. We want to reproduce part of Table 3.1.
 - (a) First, create a variable called *large_bias* defined as in the paper: a binary variable that is 1 if the difference between *perceived_gain* and *estimated_gain* exceeds 110€.
 - (b) Regress *large_bias* on tax approval variables (take *tax_approval_nsp* and *tax_approval_yes*).
 - (c) Run a second regression in which you include sample weights through the variable *weight*.
 - (d) Run a third regression in which you include a larger set of explanatory variables.
 - (e) Comment your results.
6. We want to reproduce part of Table 4.2.
 - (a) First, discuss the results of Table 4.1.
 - (b) Explain the objective of the regressions included in this table, and the identification strategy employed.
 - (c) Create a variable *estimated_gain2*, that is the square of *estimated_gain*.
 - (d) On the subsample of those who have received a feedback about their estimated gains (i.e. *d_feedback* = 1), regress *believes_does_not Lose* on *estimated_winner* using *estimated_gain* and its square as controls.

- (e) Run the same regression on the sub-sample of those whose estimated gains are below 50 in absolute value.
 - (f) Run the same regression where you also interact *estimated_winner* with *tax_approval_not_no* and *d_yv_supporter*.
 - (g) Comment your results.
7. Reproduce the first column of Table D.5 in appendix, and comment your result.
 8. Reproduce columns 1 and 2 of Table D.6 in appendix, and comment your result. Note: you need to work on the subsample who were asked the question about the tax progressivity (defined by *tax_progressivite_not_nan*).
 9. We want to reproduce something similar in spirit to Table J.1 in appendix.
 - (a) Simply regress *tax_approval_not_no* on *believes_does_not_lose_initial*, *tax_effective_not_no*, and *tax_progressivite_not_no*.
 - (b) Comment the results. What are the threats to identification?
 10. We want to reproduce part of Tables 5.3 and 5.4.
 - (a) Using the command *ivregress*, run a two stage least squares regression with *tax_approval_not_no* as your dependent variable, *tax_effective_not_no* as your endogenous variable, and *ze_treatment* and *info_CC* as your instruments.
 - (b) Display both the first and second stage tables and comment.
 11. We want to reproduce part of Tables 5.1 and 5.2.
 - (a) We focus on column 2, i.e. the tax and targeted dividend estimated on the full sample. Explain the identification strategy.
 - (b) Create new variables for the square of *respondent_income* and *households_income*.
 - (c) Run a two-stage least squares regression with *targeted_tax_approval_not_no* as your dependent variable, *winner_targeted_tax_not_loser* as your endogenous variable, and the following instruments: *respondent_eligible*, *partner_eligible*, and their interaction. Add the following controls: incomes and the *policy_assigned* categorical variable.
 - (d) Display both the first and second stage tables and comment.