

**Instructor:** Héctor Bahamonde, PhD.

**e:** [hector.bahamonde@utu.fi](mailto:hector.bahamonde@utu.fi)

**w:** [www.hectorbahamonde.com](http://www.hectorbahamonde.com)

**Course:** Experimental Methods in Social Sciences—INWS0059.

## PROGRAMMING TAKE-HOME EXERCISE

### Instructions

1. Download the toy conjoint dataset in any of the following formats: **RData**, **csv** or **dta**.
2. Familiarize yourself with the `cj` function in the **cregg** **R** package. Start [here](#).
3. Following Hainmueller, Hopkins, and Yamamoto (2014), compute the *Average Marginal Component Effect* (AMCE) estimator. Write 100 words on what can be learned. Use graphical methods to support your answer. Hint: `estimate = "amce"`.
4. Following Leeper, Hobolt, and Tilley (2020), compute the *Marginal Means* (MM) estimator. Write 100 words on what can be learned. Use graphical methods to support your answer. Hint: `estimate = "mm"`.
5. Discuss the strengths and weaknesses of each estimator in up to 200 words.

### Expected Outputs

1. One **R** script with your code. The code must run in one try and include all necessary packages and libraries. If the code does not run, the assignment will not be graded.
2. One written report with your text responses in PDF format.

## REFERENCES

- Hainmueller, Jens, Daniel Hopkins, and Teppei Yamamoto (2014). “Causal Inference in Conjoint Analysis: Understanding Multidimensional Choices via Stated Preference Experiments.” In: *Political Analysis* 22.1, pp. 1–30.
- Leeper, Thomas, Sara Hobolt, and James Tilley (2020). “Measuring Subgroup Preferences in Conjoint Experiments.” In: *Political Analysis* 28.2, pp. 207–221.