The paper is interesting. The question they tried to answer is "how does liberal/environmental ideology affect responses to peer comparison information?" (Costa & Kahn, 2013, p.698). The dataset was constructed by merging individual voter registration and marketing data for March 2009 (purchased from www.aristotle.com) to residential billing data from January 2007 to October 2009 (got from utility company) (Costa & Kahn, 2013, p.685). It had multiple dimensions, including electricity consumption, household characteristics (age structure, income, home square footage, etc), block characteristics (education, political preference), etc (Costa & Kahn, 2013, p.687).

In their final data set, "the treatment and control data therefore contain 81,722, with 48,058 households in the control group. Among the households in the treatment group, 24,028 received a monthly report and 9,636 received a quarterly report" (Costa & Kahn, 2013, p.685). The treatment is to make household receive the Home Energy Report (Costa & Kahn, 2013, p.689). The treatment group was those who received the HER, and the control group was those who didn't receive any HER.

To answer their research question, authors dealt with an extra layer of participant heterogeneity, the block heterogeneity. Related data included percentage of college-educated in the block, percentage of liberal in the block and so on.

At last, Costa and Kahn (2013) found that environmental nudges are most effective in relatively liberal communities and targeted messaging is more

effective (p.698).

## Reference

Costa, Dora L. and Matthew E. Kahn, "Energy Conservation Nudges and Environmentalist Ideology: Evidence from a Randomized Residential Electricity Field Experiment", *Journal of the European Economic Association*, June 2013, 11 (3), 680-702.

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