Does a Warm Spell Influence Public Attitudes about Assisting Farmers in Climate Change Adaptation? Evidence from a Natural Experiment from Michigan

Gi-Eu Lee
Ph.D. Candidate, Department of Agricultural, Food, and Resource Economics, Michigan State University
leegieu@msu.edu

Scott Loveridge
Professor, Department of Agricultural, Food, and Resource Economics, Michigan State University
loverid2@anr.msu.edu

Julie Winkler
Professor, Department of Geography, Michigan State University
winkler@msu.edu


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Introduction

- Our study aims to understand how the public attitudes towards helping farmers adapt to climate change might be influenced by contemporaneous temperature.

Hypotheses

- Public attitudes about government adaptation assistance may vary across level of government (state or national) and crop type (corn-soybeans compared to fruit-vegetables).

Identification Strategy

- Taking advantage of an unexpected abnormal warm spell during our survey period: 2012 spring.
- The interview date was random with respect to geography, with observations in each region before, during, and after the warm spell.
- Various sets of variables were used to identify the effects of warm spell: daily temperature; daily temperature deviation; treatment of warm spell; 3 day dummy, etc.

Data and Method

- Our data are based on a poll supplemented with secondary data. The poll was a stratified random sample telephone survey of 963 Michigan adults conducted from February to April 2012.
- For the analysis, multinomial logit was used as main model while logit/ordered logit were used for robustness analysis.

Results and Findings

- Approximately half of the respondents (50.8%) supported a government role in helping “employers” adapt to climate change. However, when the questions more specifically indicate farmers, crop type, and the source of the support (i.e., state or national government), the support rate is at least 10% higher regardless if the respondents were or had been experiencing the warm spell.
- The public attitudes about whether government should be involved in the adaptation seem quite sensitive to short run temperature anomalies.

- The first week of the warm spell had a positive effect on the public to support (strongly agree and somewhat agree) government helping farmers adapt to climate. But in the second week of the warm spell or after the warm spell the support rate drops quickly back to the pre-event level or even lower and the influence no longer existed.

Conclusion

- Analysis of public attitude toward climate change issues should take into consideration the influence of contemporaneous temperature.

Reference