

Why Do Firms Lobby In Favor, Or Against, Climate Change Legislation?

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Motivation

- ▶ **BP**: Founding member, U.S. Climate Action Partnership; drafted legislative blueprint for H.R. 2454 “American Clean Energy and Security Act.”
- ▶ **Exxon Mobil**: Engaged in “sophisticated disinformation campaign...to deceive the public”¹; provided \$16mn in grants to promote climate change skepticism

Why do some firms lobby in favor, and some against, climate change legislation?

¹Union of Concerned Scientists, 2007

Existing Literature

1. **Firms oppose environmental legislation until inevitable; then cooperate to shape (Bernhagen, 2008).**

But why do we see diversity in firm positions?

2. **Those with lower (higher) adjustment costs support (oppose). (Kim et al. 2014).**

But why do differences in costs/benefits emerge within industry?

Assumptions

1. Regulation of GHG would impose **adjustment costs**, but also **opportunities for private gain**.
2. Costs and benefits depend on **prior investment choices**: “green” vs. “status quo” investment strategies.
3. But **investments sticky**, cannot be changed quickly.
4. Firms must choose investment strategy under **uncertainty**.

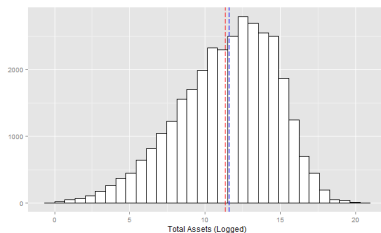
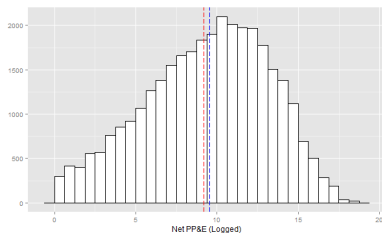
Argument

- ▶ Given private assessment of likelihood of legislation, firms choose whether or not to invest.
- ▶ If firms invest, choose “green” or “status quo” strategy to maximize expected utility.
- ▶ Sunk investments alter (and intensify) relative costs and benefits of legislation; create incentive to lobby for preferred outcome.
- ▶ Probability of lobbying in favor increasing with “green” investments. Probability of lobbying against, increasing in “status quo” investments.

Observable implication: overall positive association between investment and propensity to lobby.

Data

- ▶ Lobbying (yes/no) on all climate change related bills 2009-2014
- ▶ Financial data for U.S. publicly-traded firms
- ▶ $\approx 26,000$ observations, 500 bills, 9,000 firms.



Two Observations

1. Frequency of lobbying

Policy area	Rate of lobbying
Climate change	3.4%
International trade	5%
Financial regulation	1.7%

2. Diversity of positions²

Favorable	Opposed	Unknown
45%	10%	45%

²Coding of random sample of firms lobbying on H.R.2454 The American Clean Energy and Security Act

Empirical Analysis

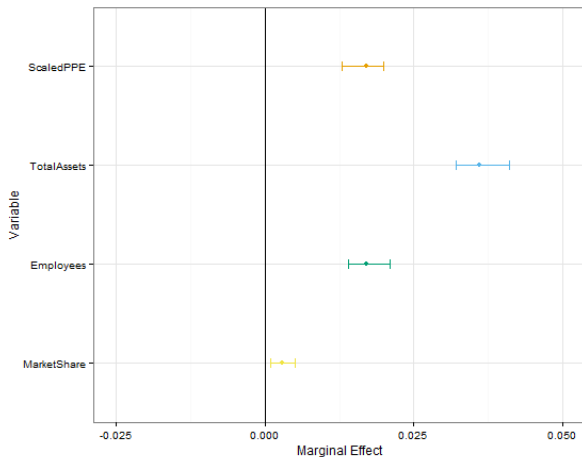
1. **Rare events logistic regression** of lobbying (1 or 0) on:

$$\text{Scaled PPE} = \frac{\text{Net Property, Plant \& Equipment}}{\text{Total Assets}}$$

2. Covariates: Total Assets, Number of Employees, Market Share, year fixed effects.
3. Alternative approach: **coarsened exact matching**.

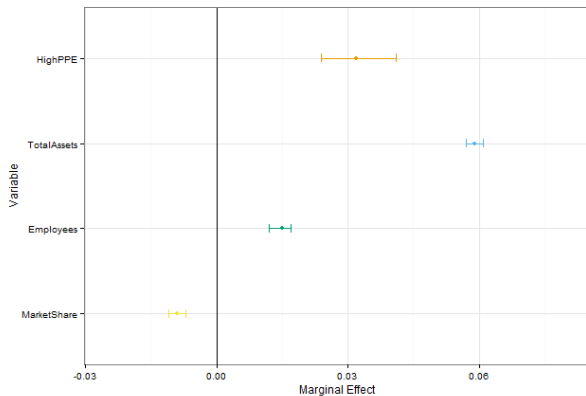
Baseline Results

Figure : Marginal Effects (Rare Events)



Coarsened Exact Matching

Figure : Marginal Effects (CEM)



Potential for Heterogenous Effects

If green investment and status quo investment affect lobbying differently, undifferentiated data may mask true effect.

Two strategies:

1. Identify firms more likely to invest in green technology
2. Identify bills more likely lobbied by pro-regulation firms

Strategy 1

Identify firms more likely to invest in green technology:

- ▶ Increase in electricity prices major portion of adjustment costs.
- ▶ Regions vary in efficiency of electricity generation.
- ▶ Relatively higher adjustment costs make green investments less appealing.

Identify states with **higher than average CO₂ emissions per capita** and estimate interaction (High Emissions * ScaledPPE).

Emissions

Figure : Per Capita Carbon Emissions from Electricity Generation

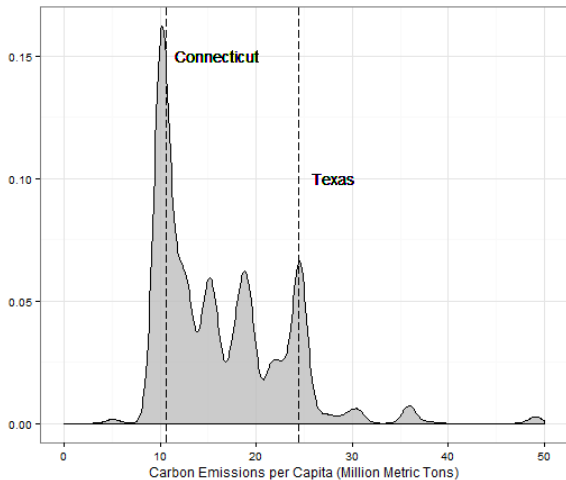
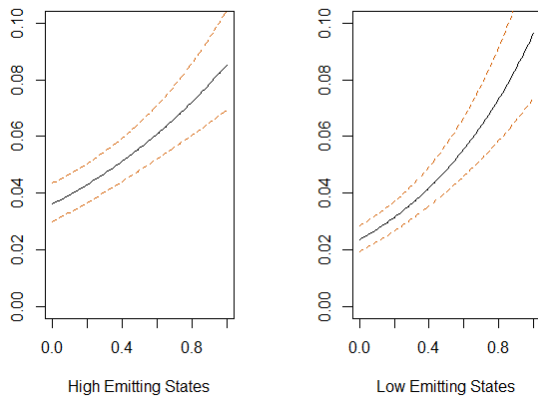


Figure : Predicted Probability of Lobbying



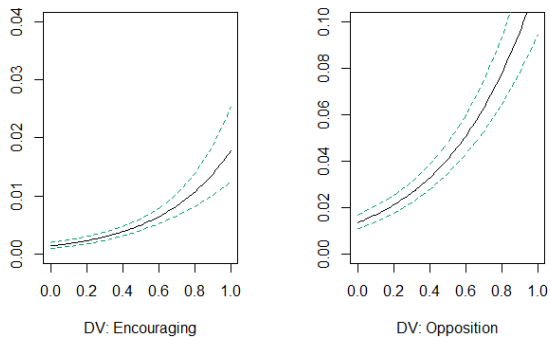
Strategy 2

Identify bills more likely lobbied by pro-regulation firms:

- ▶ **Encouraging Bills:** Legislation incentivizing energy efficiency etc. Creates private benefits for green investors. No clear costs/benefits for status quo firms.
- ▶ **Opposition Bills:** Obstruct legislation/regulation of greenhouse gases. Clearly favorable to status quo firms. Unfavorable to green firms, but threat more diffuse (no opportunity for private gain).

Little observed overlap between firms lobbying on each type...

Figure : Predicted Probability of Lobbying



Conclusion

Theory:

- ▶ Firm preferences over climate change reflect prior investments made under uncertainty.
- ▶ Investment increases stakes in legislative process.

Empirically:

- ▶ High overall rate of lobbying.
- ▶ Significant diversity in firm positions.
- ▶ Higher investments (in green or status quo goods) associated with more lobbying.