Energy Efficiency Paradox: Comments

Tim Brennan

Professor, Public Policy and Economics, UMBC
Senior Fellow, Resources for the Future

brennan@umbc.edu

Society for Benefit-Cost Analysis

Washington, DC

March 18, 2016

Energy efficiency paradox

- Do people or businesses fail to spend on energy efficiency when reduced energy spending covers cost?
- If so, why?
- Is the behavior “paradoxical”, that is, inconsistent with neoclassical economic rationality?
- What do we do about it?

Three papers

	Sector	Hypotheses	Evidence
Lutter and Fraas	Heavy-duty trucks	Principal/agent?	No significant EE difference attributable to ownership
		Effect at all?	No, EE use fits predictable pattern
Helfand and Higgs Boson CERN team	Consumer cars	Are there "hidden costs"?	No, lack of EE disparagement and favorable mention in auto reviews
Klemick, Kopits, Wolverton	Heavy-duty trucks, Supermarket refrigerators, data centers	Market failure, "analytical gaps", behavioral anomalies	Case study focus groups provide "some" evidence of market failure, anomalies, "strong" evidence of "analytical gaps"

Lutter and Fraas

- Confess: Their findings match my priors
- Also, I work around the corner from them at RFF, and they're bigger than I am
- Seriously, principal/agent story seems overwrought
  - Underlying market competitive
  - "Principals" compete for "agents" by providing means for latter to increase profits/utility
  - Amenities in apartment buildings, hotels
  - Why not EE?
- On existence, though, matching predicted pattern of EE adoption doesn't refute other hypotheses
  - Right movement, but still wrong starting point

Helfand *et al.*

- **My car (but maybe not for long): 1989 Honda Prelude with > 345K miles**

- **Relevance: I spend a lot of time in auto repair places reading reviews**
- **Reviews conditioned on type of car. No one explicitly says that but for high mileage, a Fit would be a Ferrari**
  - **Relevant tradeoffs off the margin**
- **Better measure: *Consumer Reports* overall scores?**

Klemick, Kopits, Wolverton

- **Method: Easy to criticize focus groups, but they pass the market test**

- **To understand findings and whether to respond, look at framework**

- **Market failures?**
  - **Imperfect information? OK**
  - **Principal/agent? Is that a market failure apart from info?**
  - **Borrowing constraints? Is that a market failure apart from info?**
  - **Network externalities? Not sure about relevance, but not a big deal here**

Behavioral anomalies

- **Inattention**
  - **Salience perhaps better**
  - **Wonder about minimum cost of information processing**
  - **Is heuristic decision making unreasonable if those costs real?**
- **Loss aversion**
  - **Associated with "endowment effect", but here and in most cases, nothing more than neoclassical risk aversion**
  - **Come back to with analytical gap**
- **Social norms**
  - **Observed or unobserved compliance?**
  - **Is "corporate social responsibility" a "social norm" or a marketing device?**

“Analytical gaps”

- These are all just conventional “utility” functions
- That’s why they are strong

1. Firm-specific heterogeneity
2. Tradeoffs
3. Uncertainty
4. Discounting

- Add in loss aversion, social norms
  - What else explains wearing ties, some might ask
- No justification for intervention here

Policy take-aways

- **Maybe there's not a problem (Lutter and Fraas) – or there is (Helfand *et al.*)**
- **Imperfect information**
  - o **Who can object to more and better info, unless "market can take care of it" (*Consumer Reports*, user reviews …)**
- **Salience (inattention)**
  - o **Who gets to decide if people are no more salient as voters than as consumers? Is paternalism unavoidable?**
  - o **Could government inattention lead to biased choices?**
- **Social norms – analogy to inefficient standards?**
- **If justified as climate policy—what if consumer error improves climate?**