

The Soft Costs Of Solar: How Social Science Can Inform Customer Acquisition

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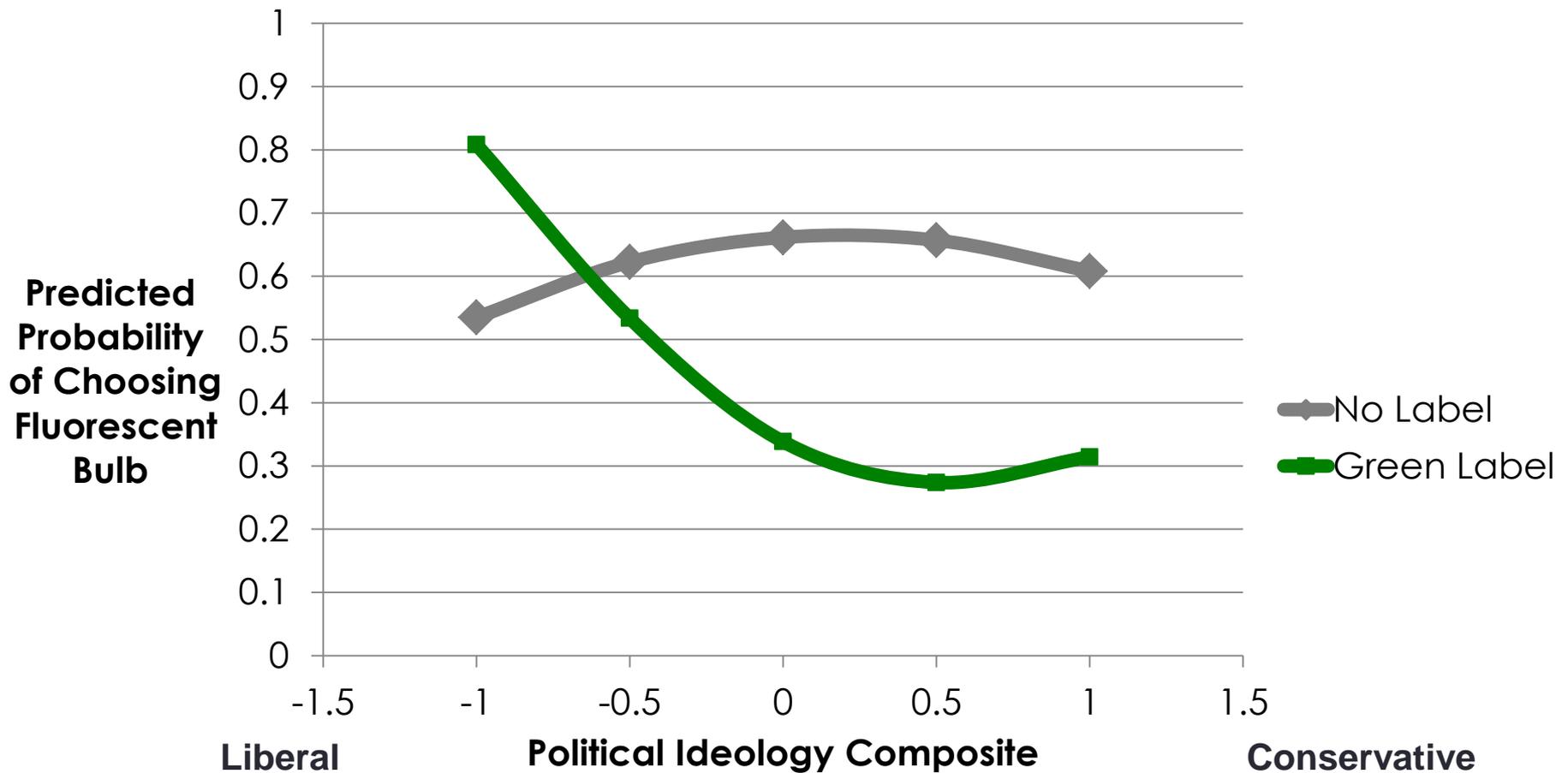
Decisions often reflect social concerns

- How do we compare to others?
 - We do not want to be the worst performer (or left behind)
 - Providing feedback about how energy use compares to neighbors: 2.5% decrease in energy use (Allcott, 2011)
 - Neighbor installs solar panels: Increases probability that another neighbor will by .78 percentage points (Bollinger & Gillingham, 2012)
- What do others think of us?
 - We want our choices to show us in a positive light
 - Making sign-up for a demand-response program observable: Residents were 3 times more likely to sign-up (Yoeli et al., 2013)
- Does this choice reflect who we are?
 - We want our choices to align with our values

Choices and Values

- Political ideology is an important source of values, particularly in the energy domain
- One example:
 - Much of the messaging around energy innovations highlight environmental benefits
 - Environmental protection is currently a liberal issue
 - What are the consequences of this?

Light Bulb Choice



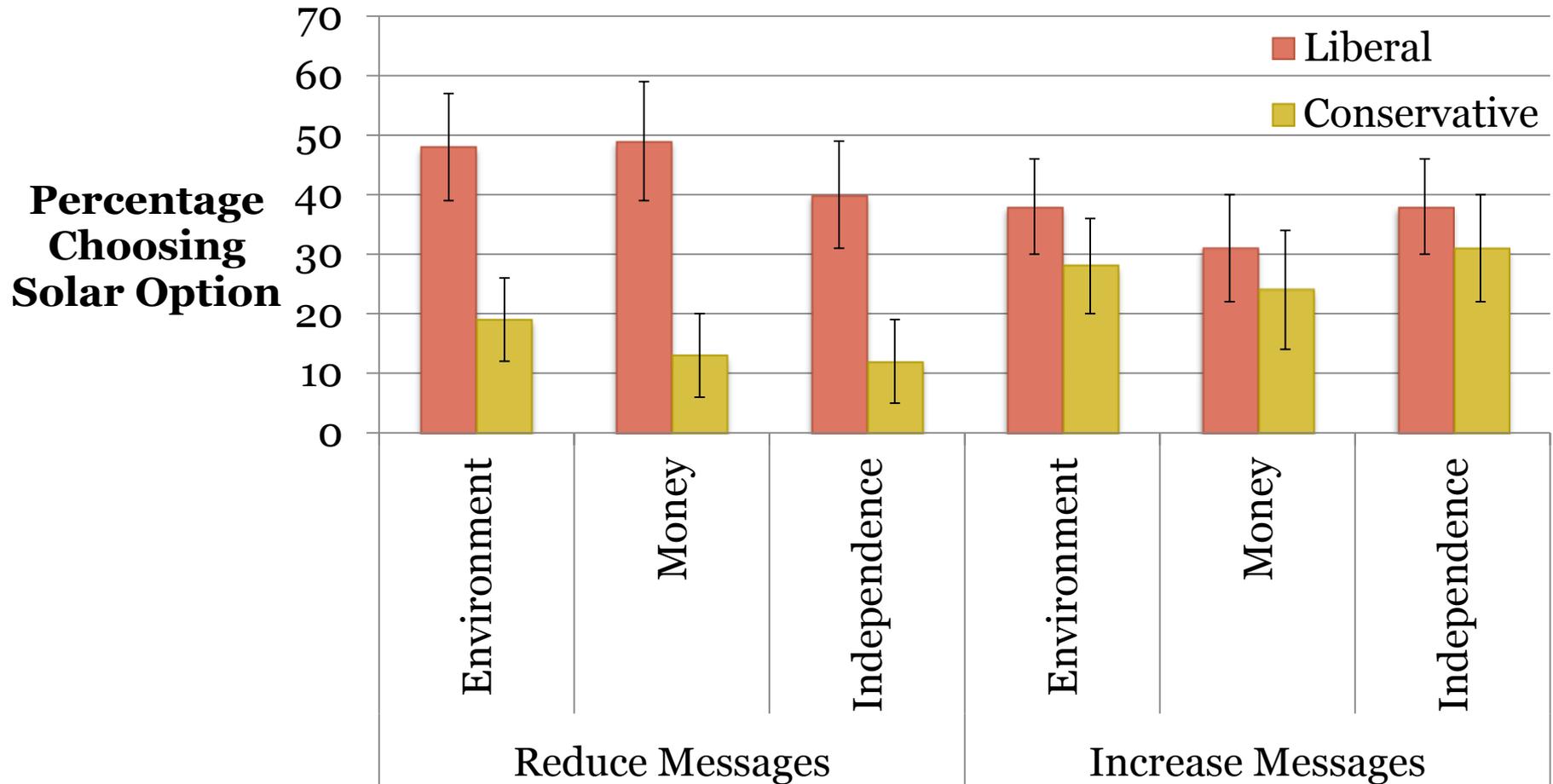
Implications for Solar Customer Acquisition

- Provides insight into the *social* (dis)incentives of adoption
 - Some of these factors should increase overall adoption rates (i.e., comparison to others)
 - Other factors demonstrate the importance of segmentation (i.e., political values)
- The SEEDS Sandia team is investigating how messaging influences customer purchasing of solar panels
 - Solar as reducing negative aspects of energy use (e.g., use of fossil fuels) versus increasing a positive aspect (e.g., use of renewable energy)

Solar and The Language of Reduction

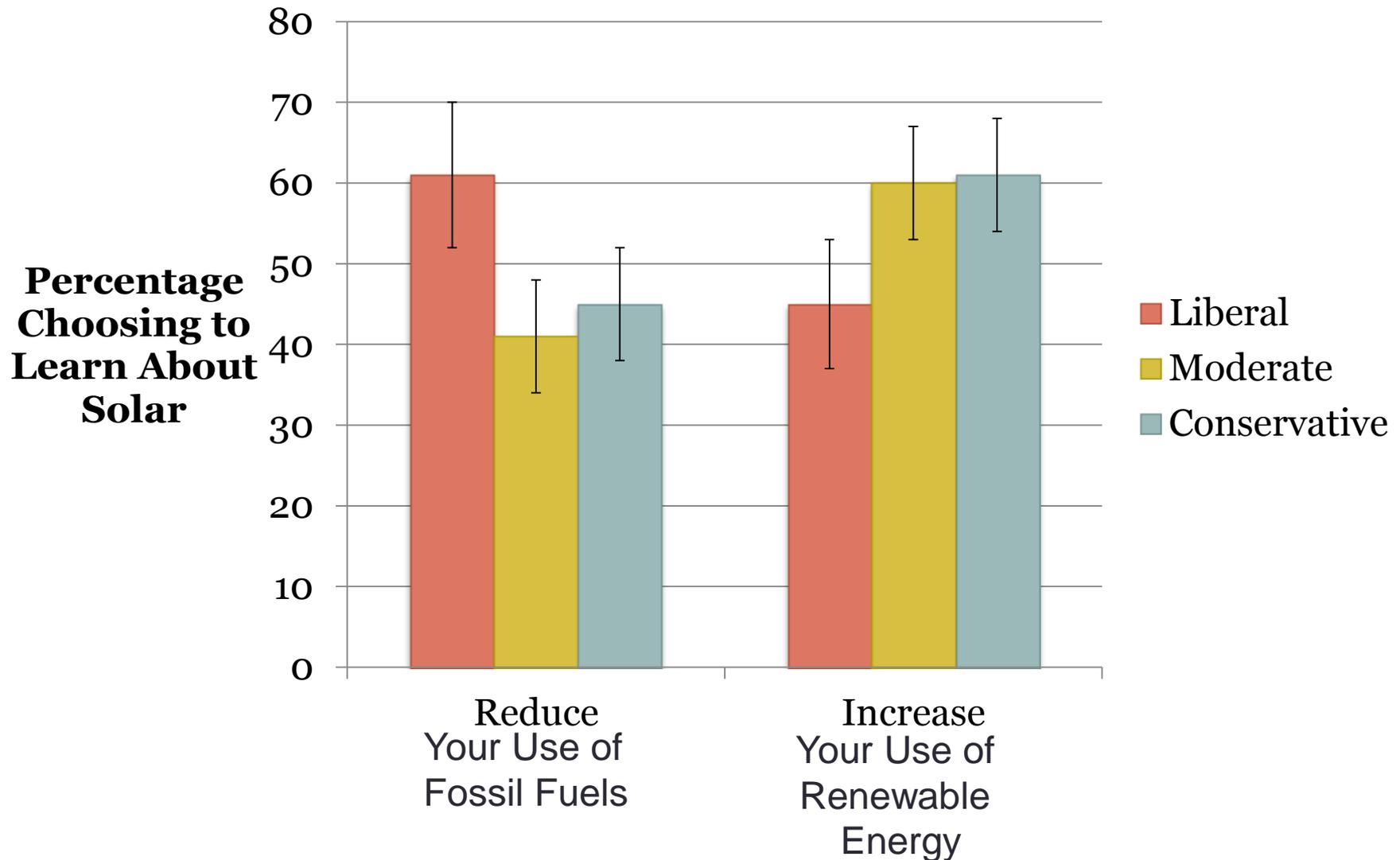
- Current framings focus on reducing negative aspects of energy use
 - Reduce your utility bills!
 - Reduce your carbon emissions!
- Reduce → Negative
 - Aligns with liberals' view of energy issues, but not conservatives
- Increase → Positive
 - Reduce cost → Increase savings
 - Emphasizes benefits
- Reduce a **negative** versus increase a **positive**
 - Liberals should be more interested in solar than conservatives when the emphasis is on reduction

Choice to Learn about Solar Based on Political Ideology and Message



N = 905 California homeowners who do not have solar panels installed

Choice To Learn about Solar Based on Political Ideology and Message



The Sandia SEEDS Diffusion Project

- Pilot experiments will inform a field study (conducted in collaboration with Group Energy)
- The Sandia team brings together scientists and practitioners
 - Modeling based on adoption data from San Diego County
 - In-depth surveys of adopters and non-adopters
 - Data fed into model created to identify optimal policies
- Different expertise and viewpoints: Better and more complex understanding of individual solar adoption

