



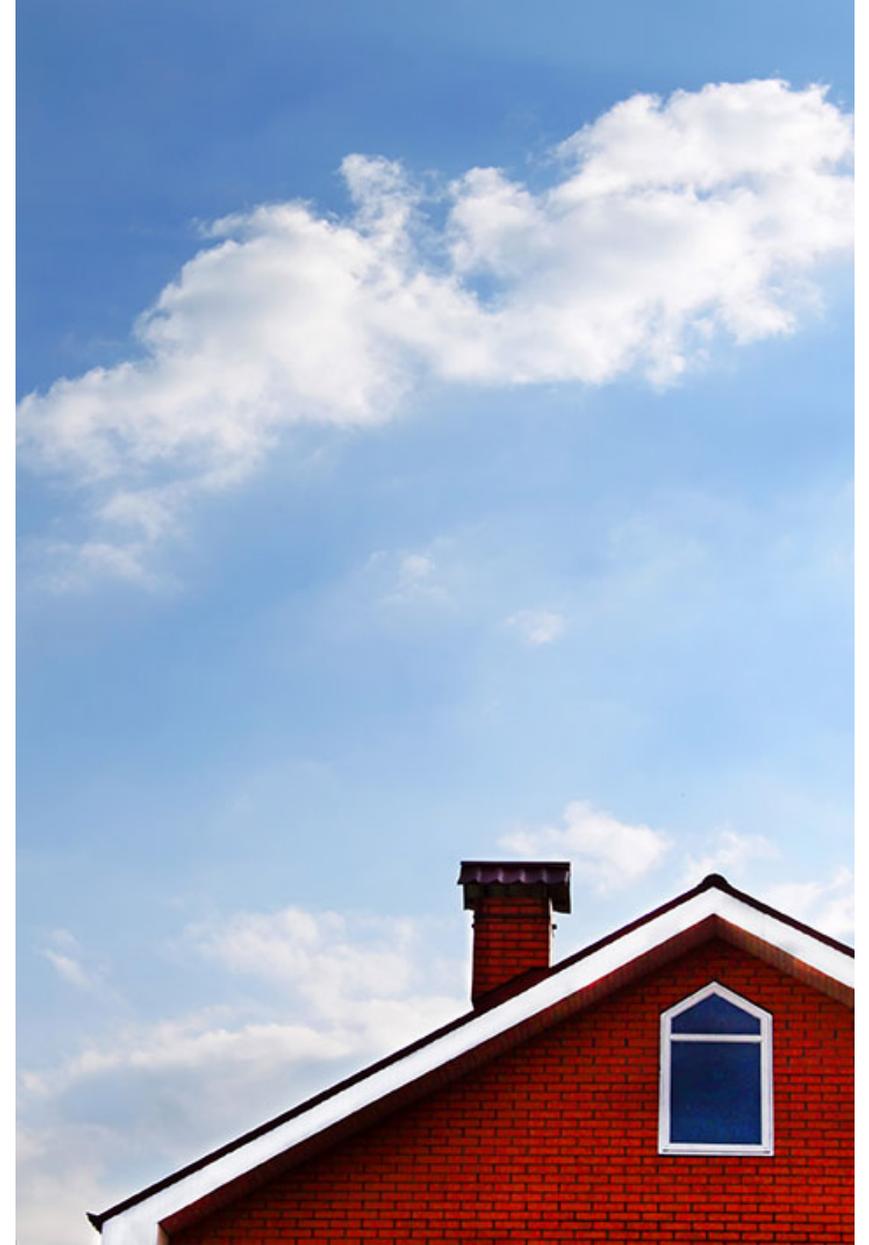
SEEDS STUDY ON SOLAR ADOPTION

Why Do People Go Solar (Or Not), and What Makes Them Advocates?

JUNE 15, 2016

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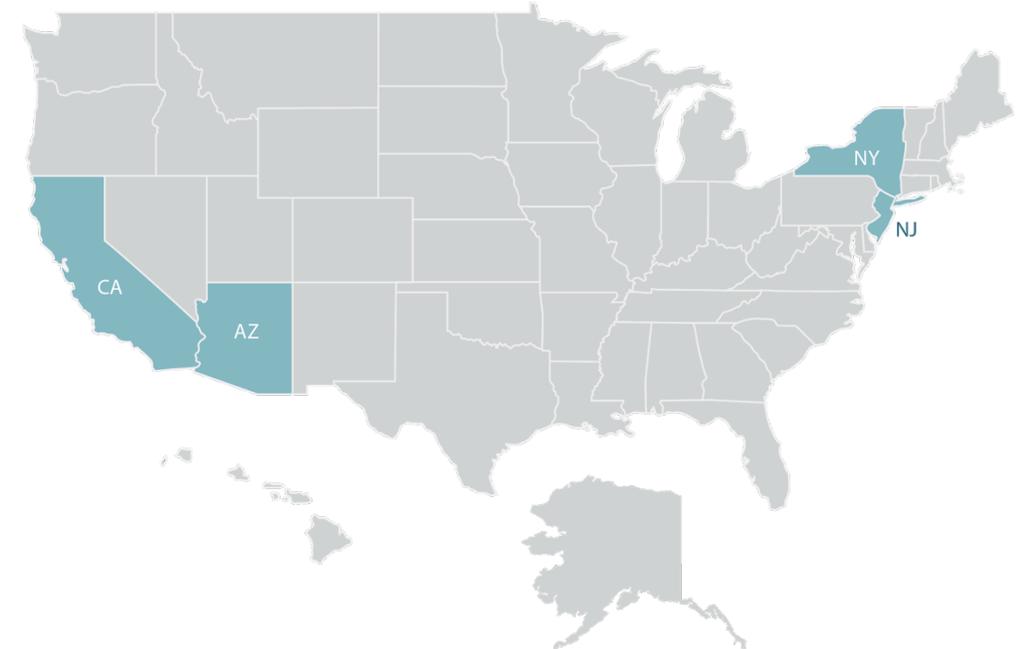
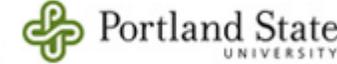
OVERVIEW OF SEEDS



Overview of SEEDS

Solar Energy Evolution and Diffusion Studies

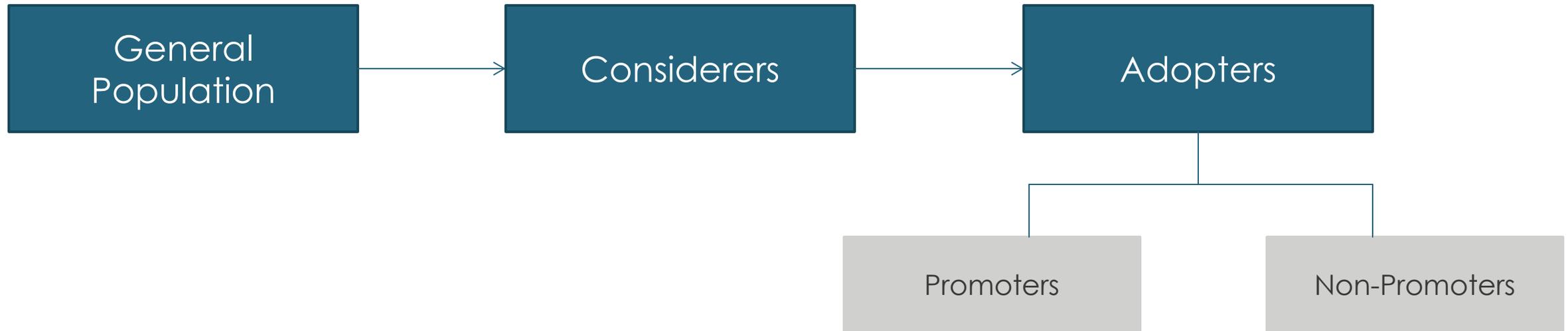
- \$2.3M study to understand drivers and barriers of consumer adoption of rooftop solar
- **Goals:**
 - Drive down customer acquisition costs
 - Deepen understanding of technological diffusion
- **Key Activities:**
 - Installer interviews
 - Three surveys of ~3600 households: Adopters, Non-Adopters/Considerers, and General Population
 - Market Pilots
- **SEEDS Projects:**
 - <http://www.nrel.gov/extranet/seeds/>



The Solar Sales Process & The SEEDS Approach

How we laid out the study

- Compared data from considers vs. adopters and promoters vs. non-promoters



- Analyzed findings (differences, similarities, etc.)
- Hypothesized reasons for results
- Suggestions to get more adopters and promoters

02

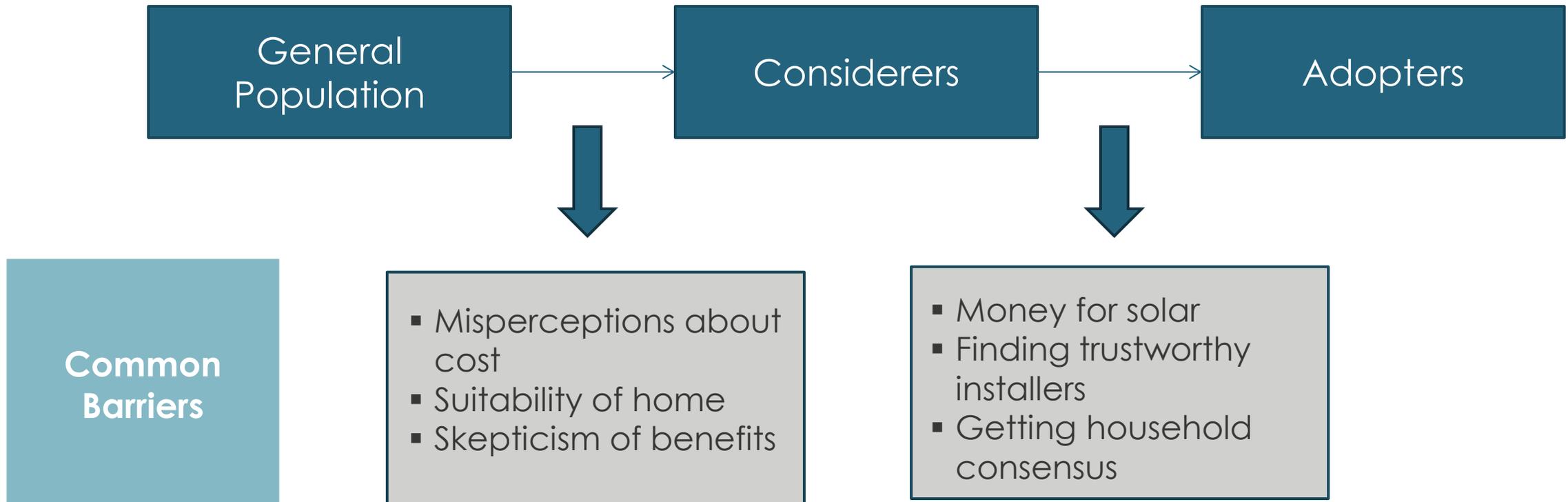
RESULTS: CONSIDERERS VS. ADOPTERS



Solar Sales Involve Two Steps

Customers must be sold on solar before they're sold on different options

- Interest in solar is largely events-driven
- Less familiarity → more basic concerns
- Need to target concerns sequentially

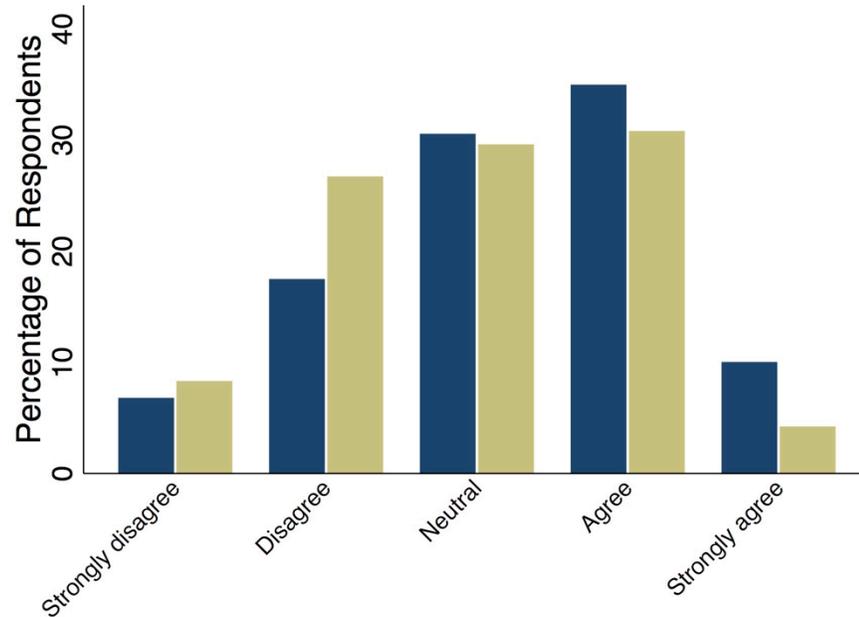


Competition Can Be Good for Your Business

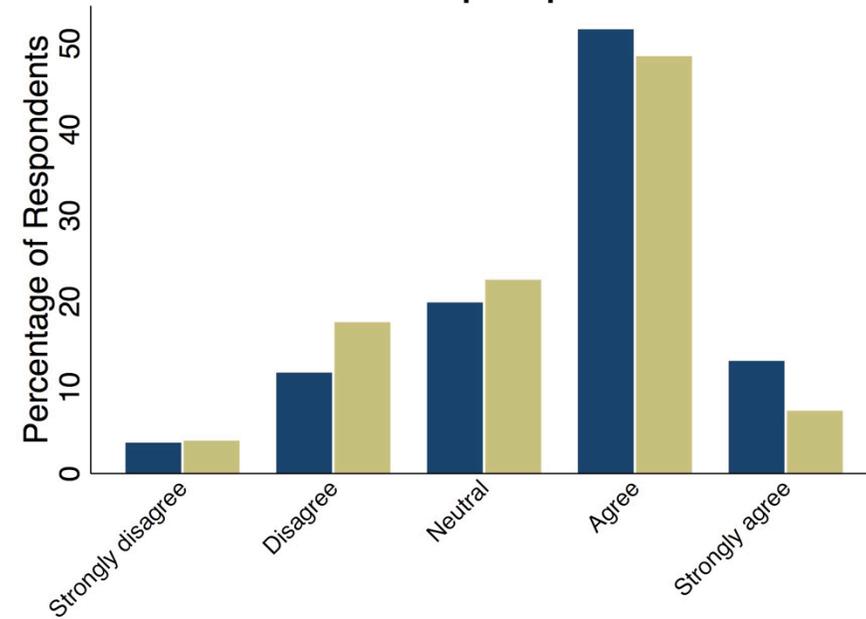
Can lead to more considerers

- More solar installations from you or your competitors will likely increase familiarity with solar and lower barriers for consideration

While considering solar, I frequently heard people I know talking about solar



While considering solar I frequently saw solar on other people's homes

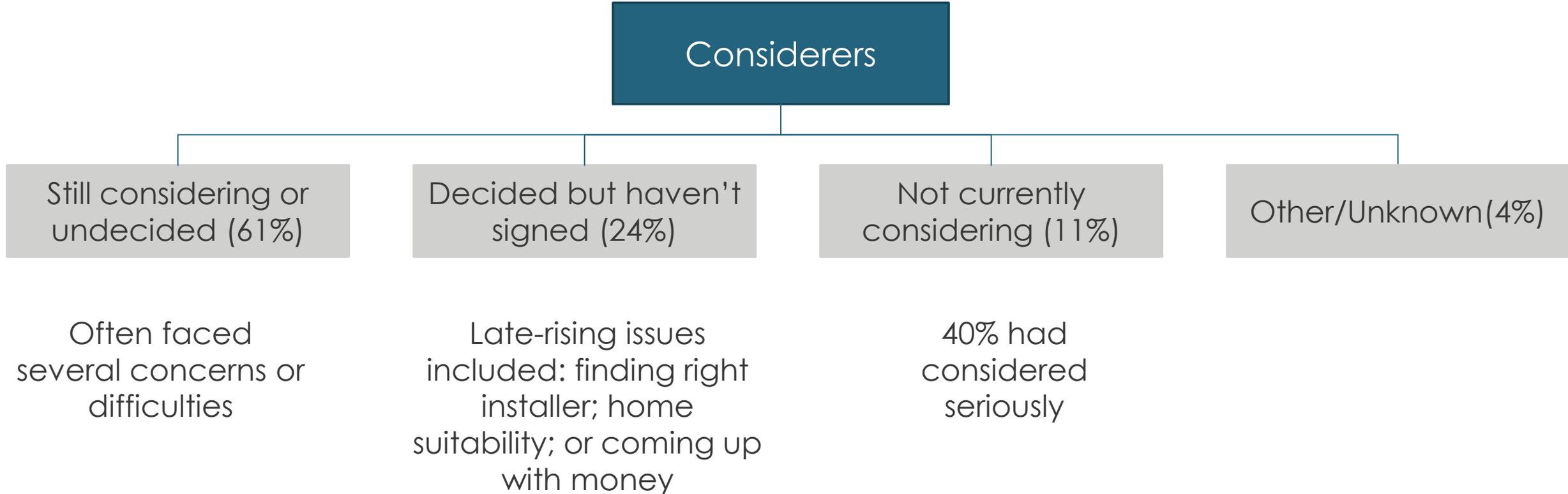


Considerers Adopters

Most Considerers Could Still Be Adopters

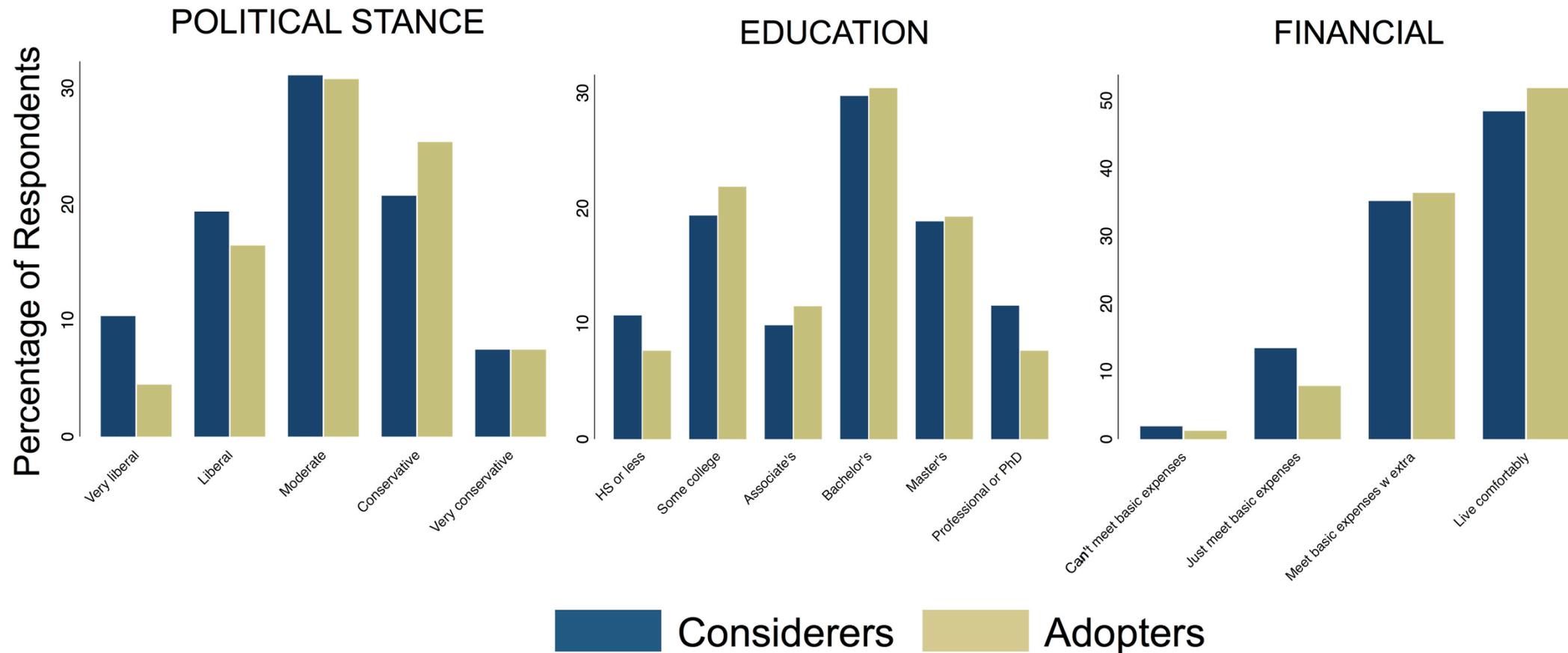
Very few people write off solar altogether

- There are 10 times more considerers than adopters
- 85% of considerers are still potential customers



Considerers and Adopters Are Very Similar

Demographics are comparable

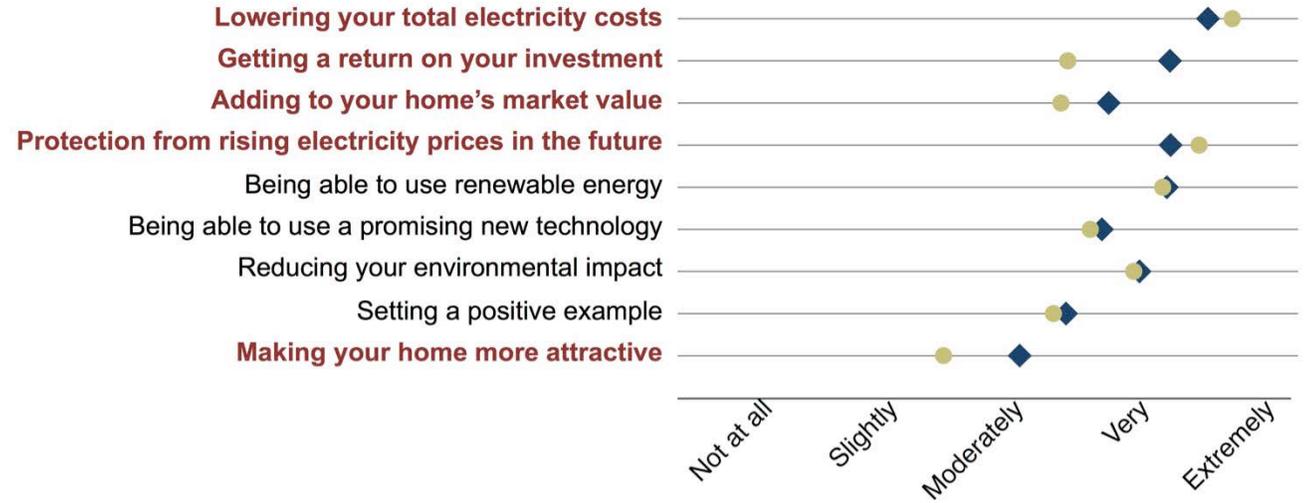


Motivations and Concerns

Similar among considerers and adopters

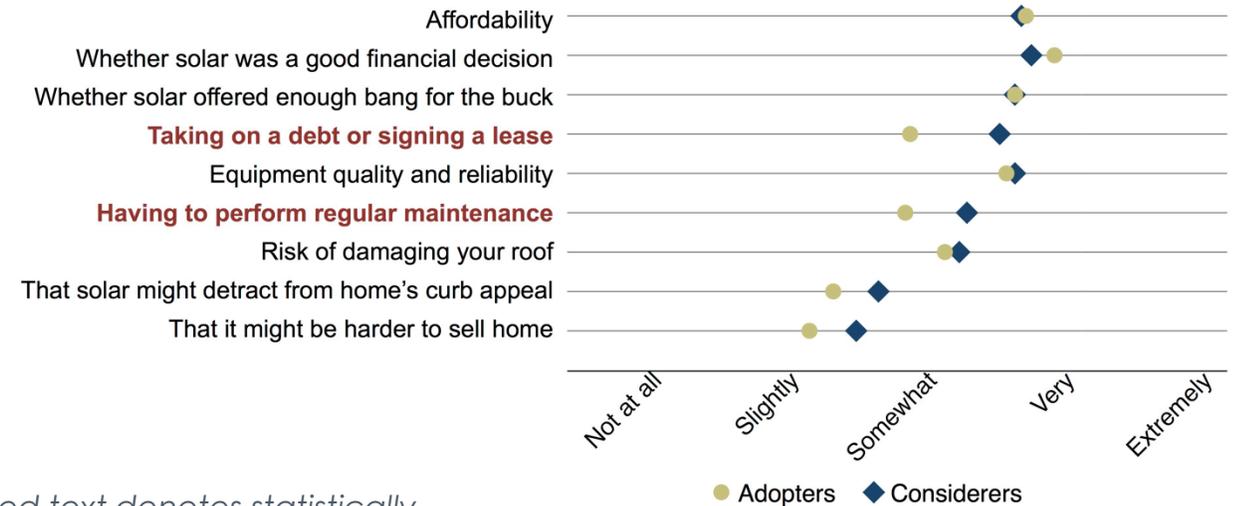
Motives

“While considering solar panels, how important were each of the following factors for you?”



Concerns

“While considering solar panels, how important were each of the following factors for you?”

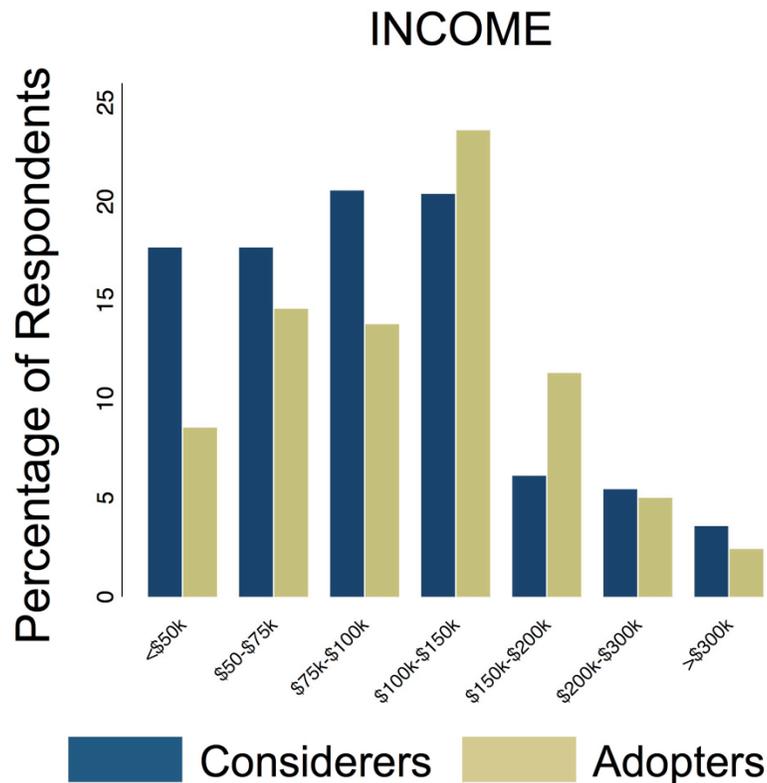


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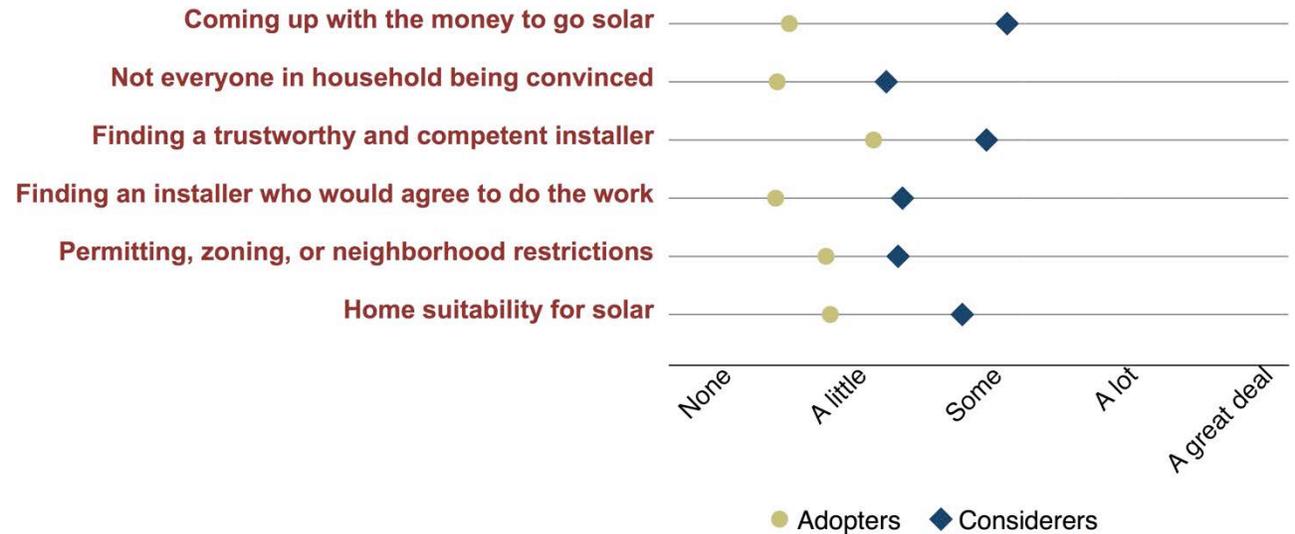
Biggest Difference? Financial Resources

Considerers have more difficulty

- Considerers had lower incomes and more difficulties across the board
- “Coming up with the money to go solar” was far easier for adopters



“While considering solar, how much difficulty did you have with the following?”

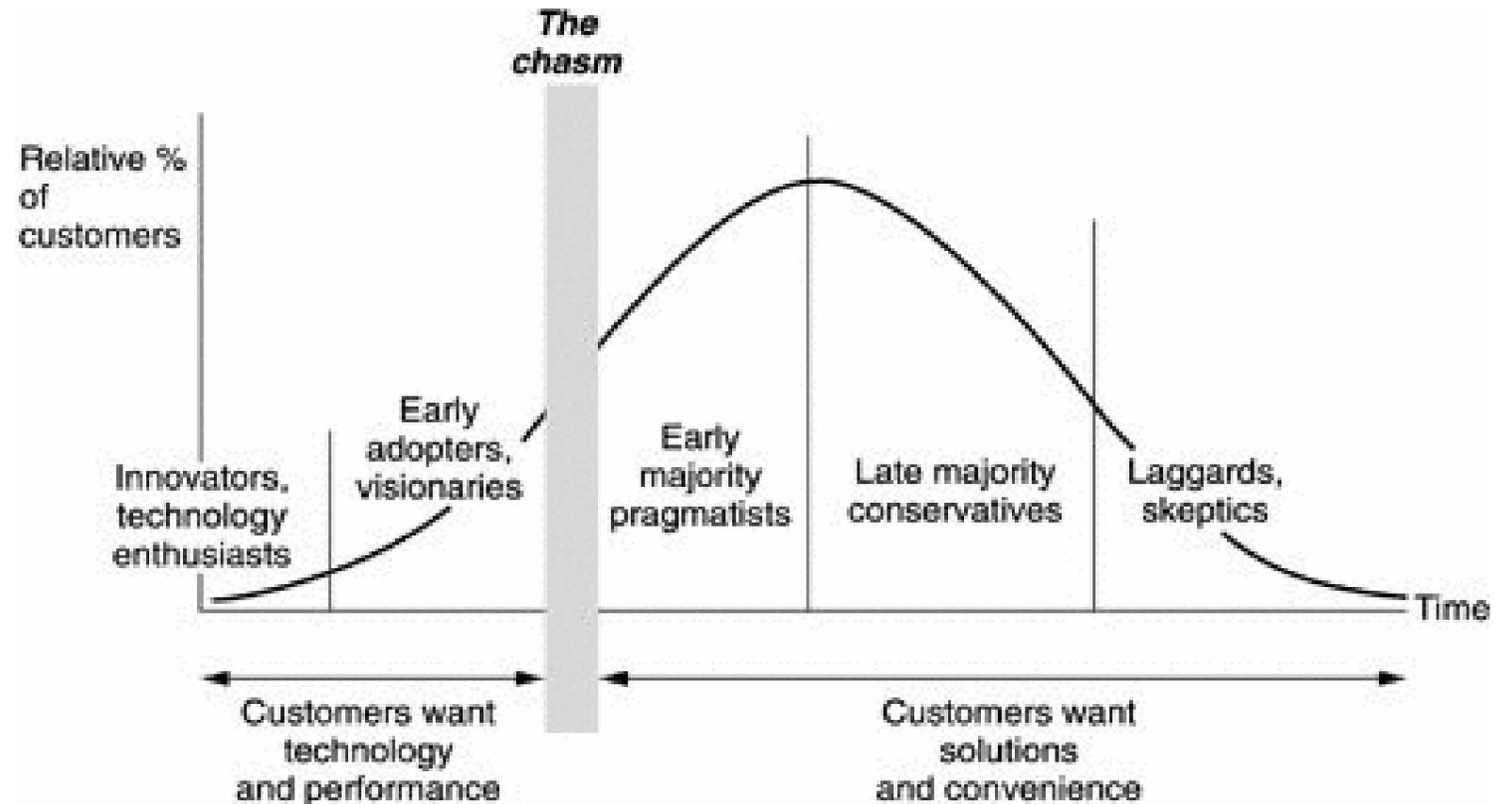


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All This Tracks with Diffusion of Innovation Theory

Same thing happens in tech industry and others

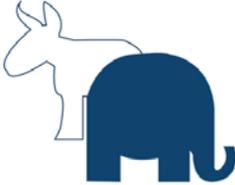
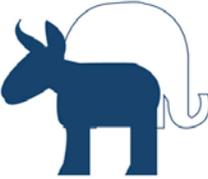
- Innovators and early adopters are often trendsetters and less risk-averse
- Later adopters are more driven by practical considerations → need more proof of benefits



Key Takeaways from Considerers vs. Adopters

Customer segments will evolve as market matures

- Considerers and adopters are very similar, except on financial resources
- Concerns vary depending on customers' familiarity with solar
- Competition can be a good thing
- Potentially large opportunity among old leads
- Findings consistent with diffusion of innovation theory

	Adopters	Considerers	
Demographics			Considerers were 31% more likely than adopters to have a household annual income below \$100,000, and 8% less likely to report having a comfortable financial condition.
Political stance			Liberals and conservatives were fairly evenly distributed among considerers and adopters.
Economic motivations			Considerers were 43% more likely to report a good return on investment as very important to their decision to pursue solar.
Environmental motivations			Considerers and adopters showed no significant differences in terms of environmental factors playing a role in their decisions to pursue solar.
Challenges			Adopters reported having a far easier time coming up with the money to go solar.

03

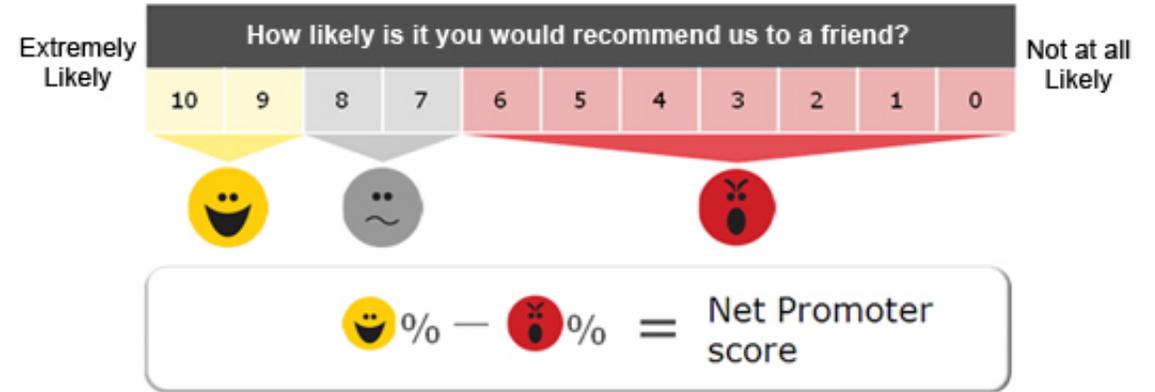
RESULTS: PROMOTERS VS. NON-PROMOTERS



Overview of Net Promoter Score (NPS)

Are people promoting your business?

- Measure of customer satisfaction and loyalty using one question
- High NPS correlates with growth potential



Source: Bain & Company

SEEDS survey asked solar adopters two questions:

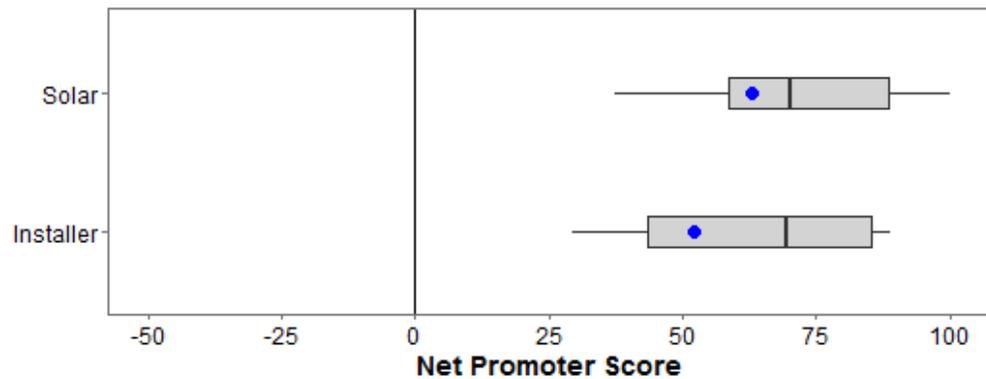
“How likely are you to recommend *solar panels* to a friend or neighbor?”

“How likely are you to recommend your *solar installer* to a friend or neighbor?”

Solar Customers Are Extremely Satisfied Overall

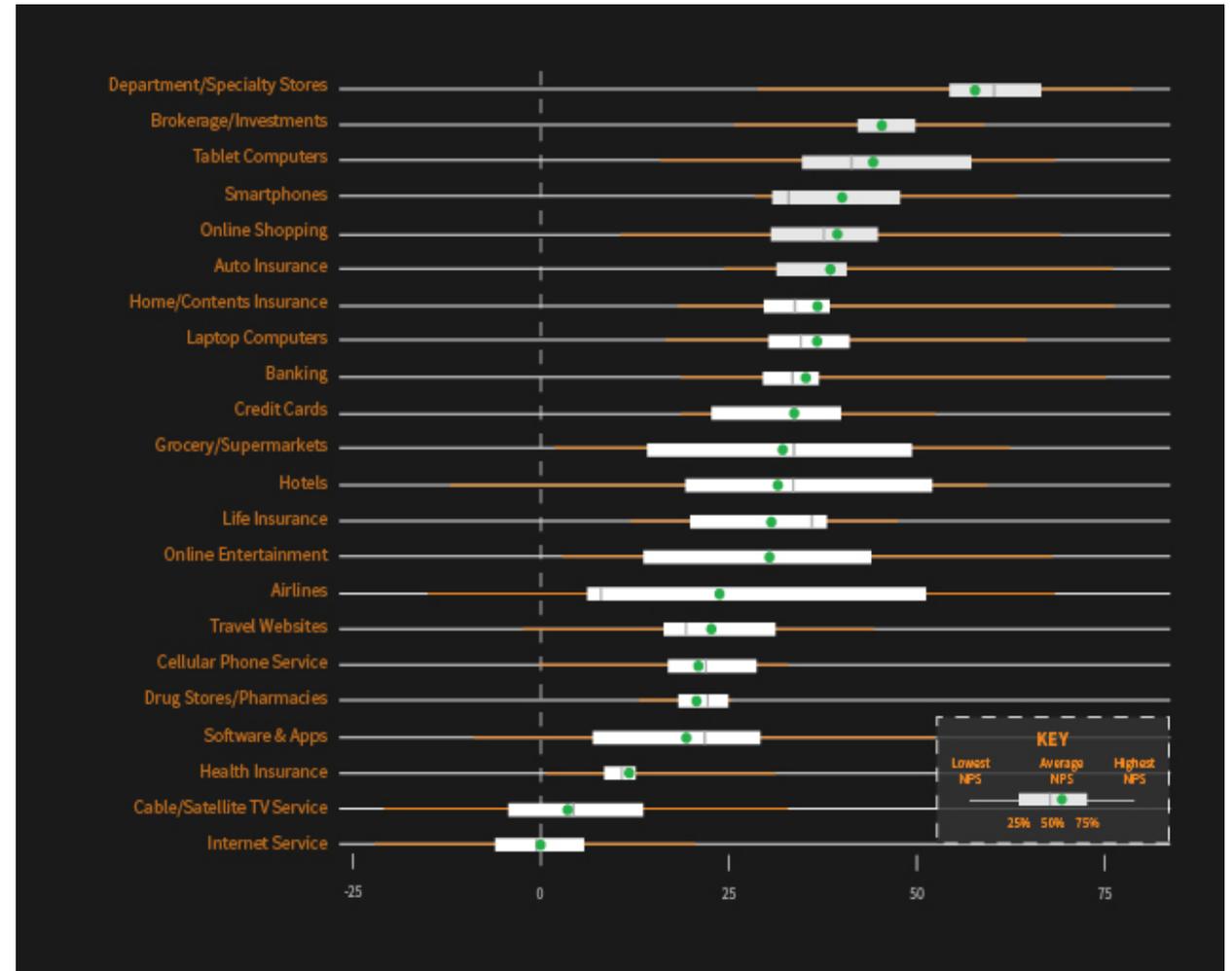
More so than most other industries

- NPS for solar panels = 63
- NPS for installers = 52



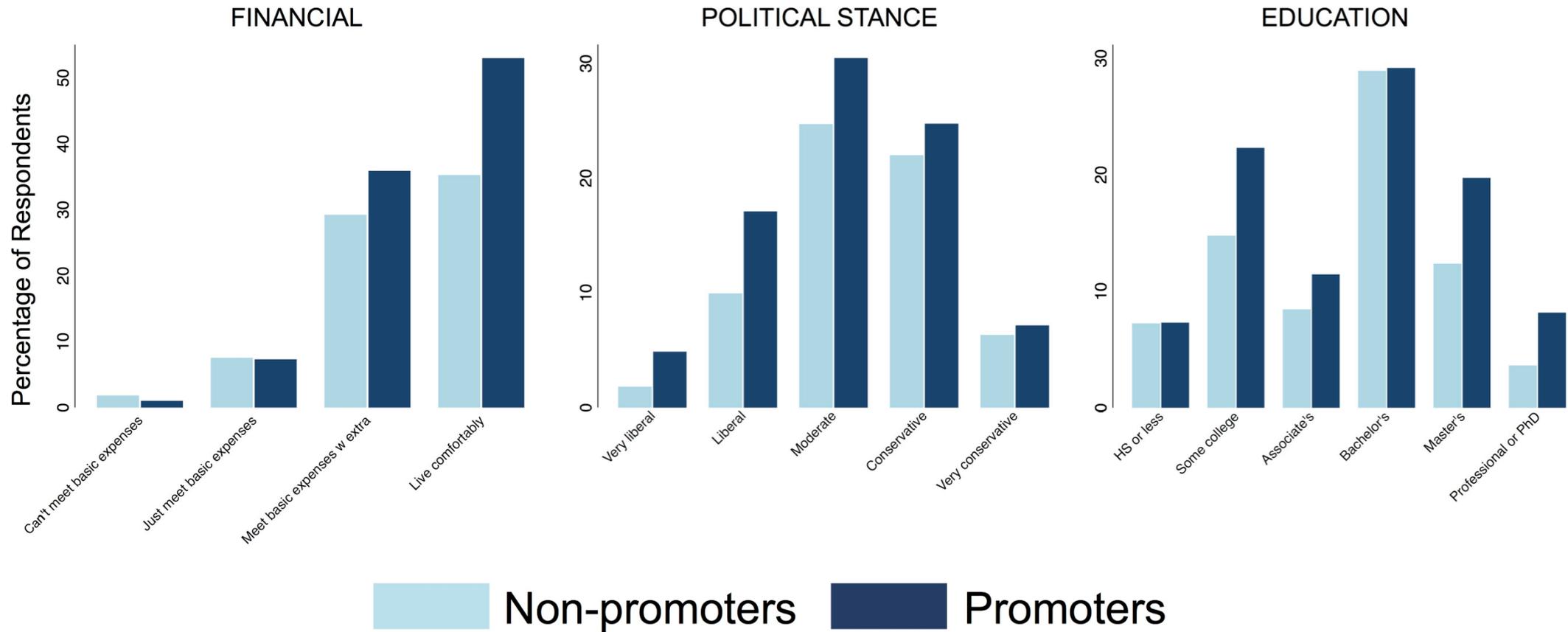
- Most solar customers are making referrals
- 80% of respondents referred their installer to an average of 3 other people

NPS By Industry



Promoters & Non-Promoters Are Similar

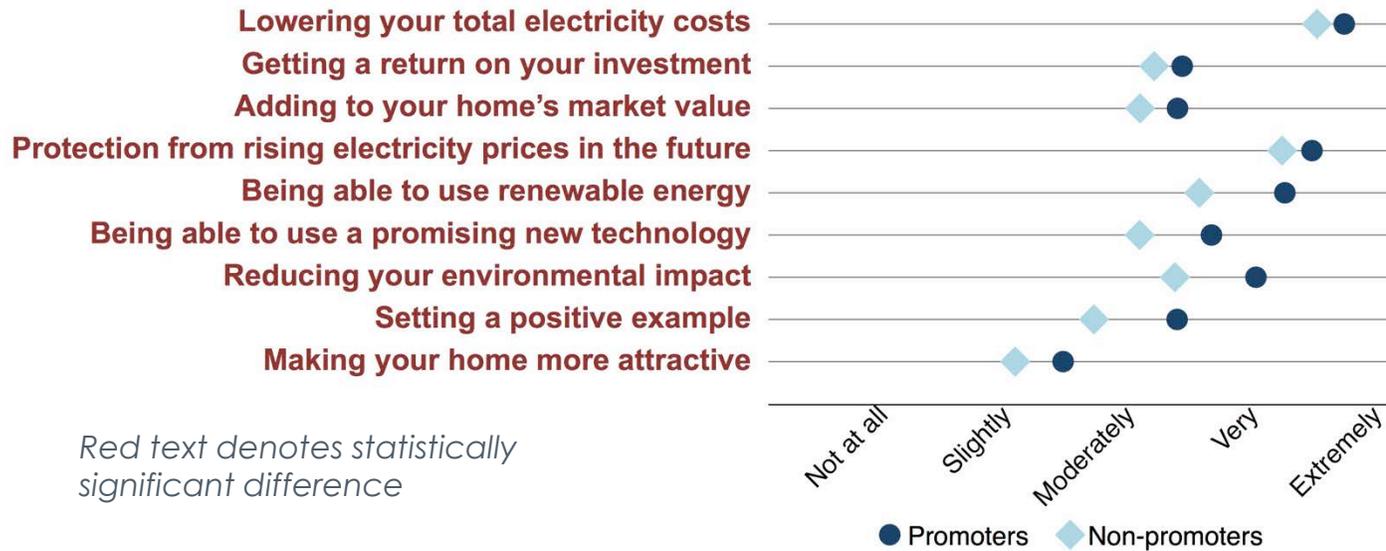
Demographics are proximate



Promoters More Motivated By Non-Economic Reasons

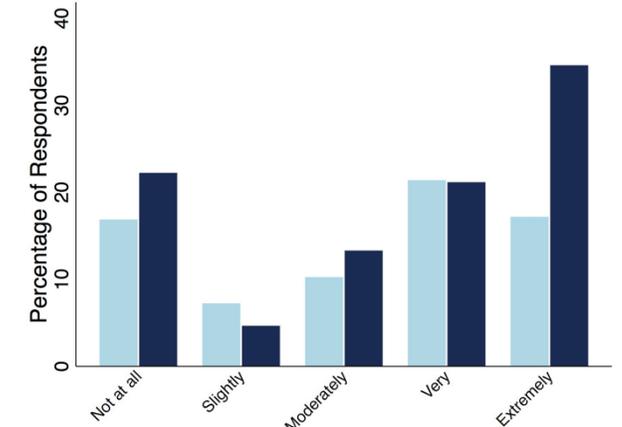
Much more likely to care about environmental benefits

“While considering solar panels, how important were each of the following factors for you?”

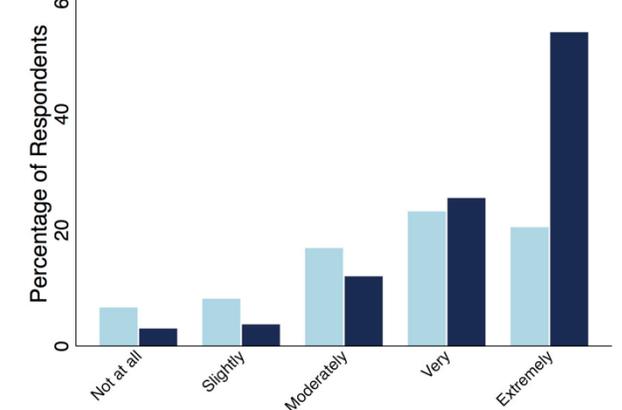


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How important was a good return on investment?



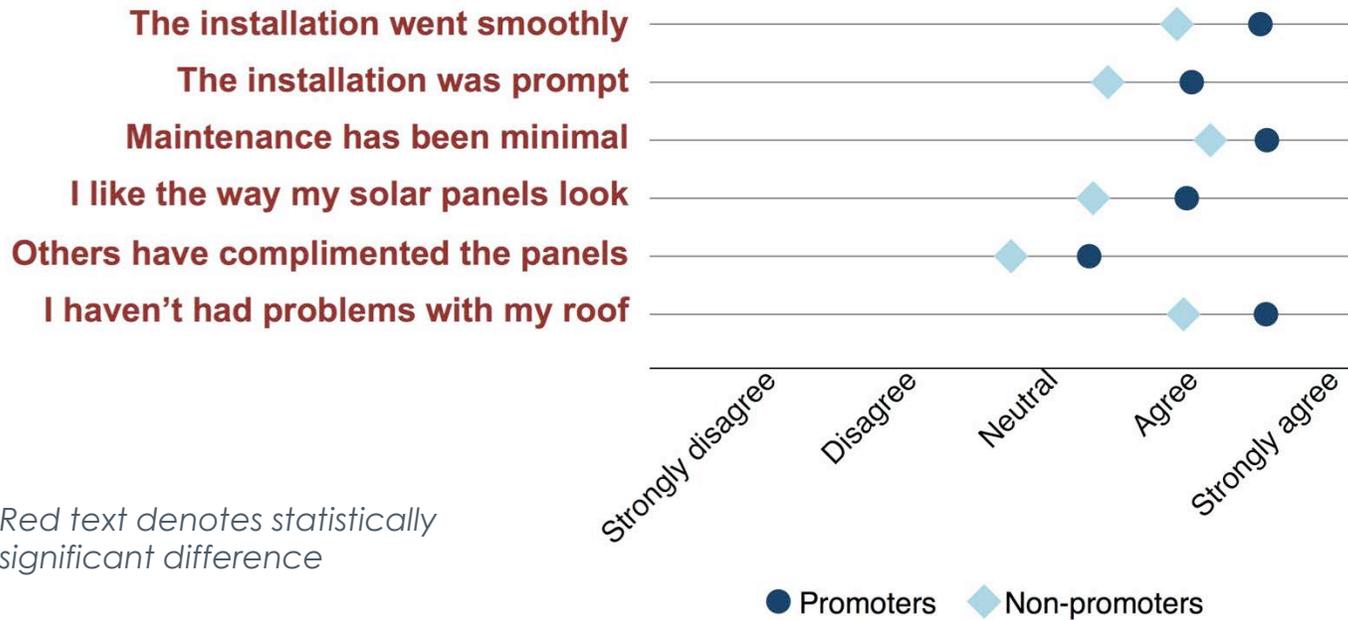
How important was being able to use renewable energy?



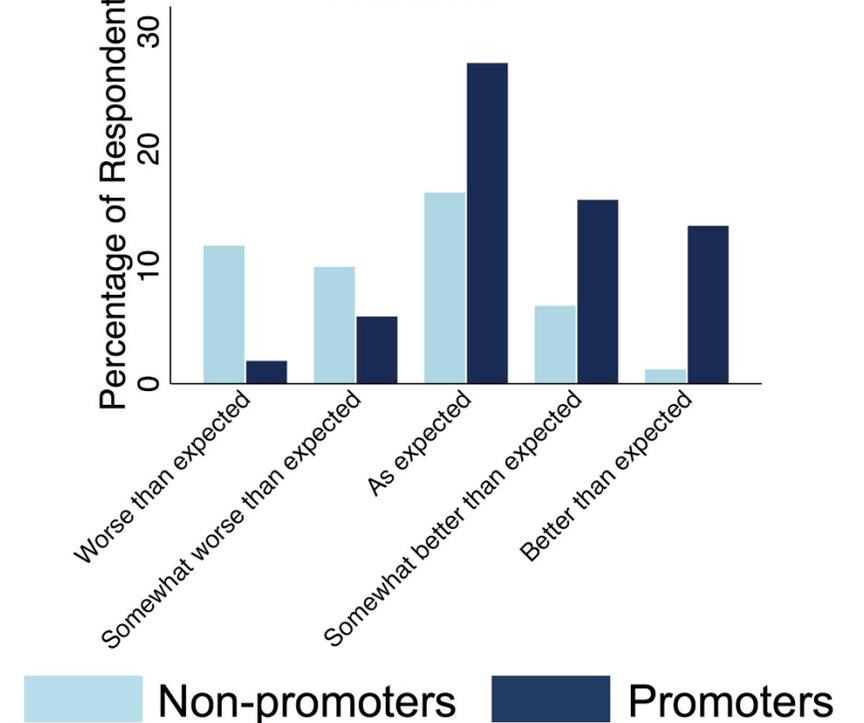
Non-promoters Promoters

Promoters Had Better Experience

Meeting expected savings represented the biggest difference

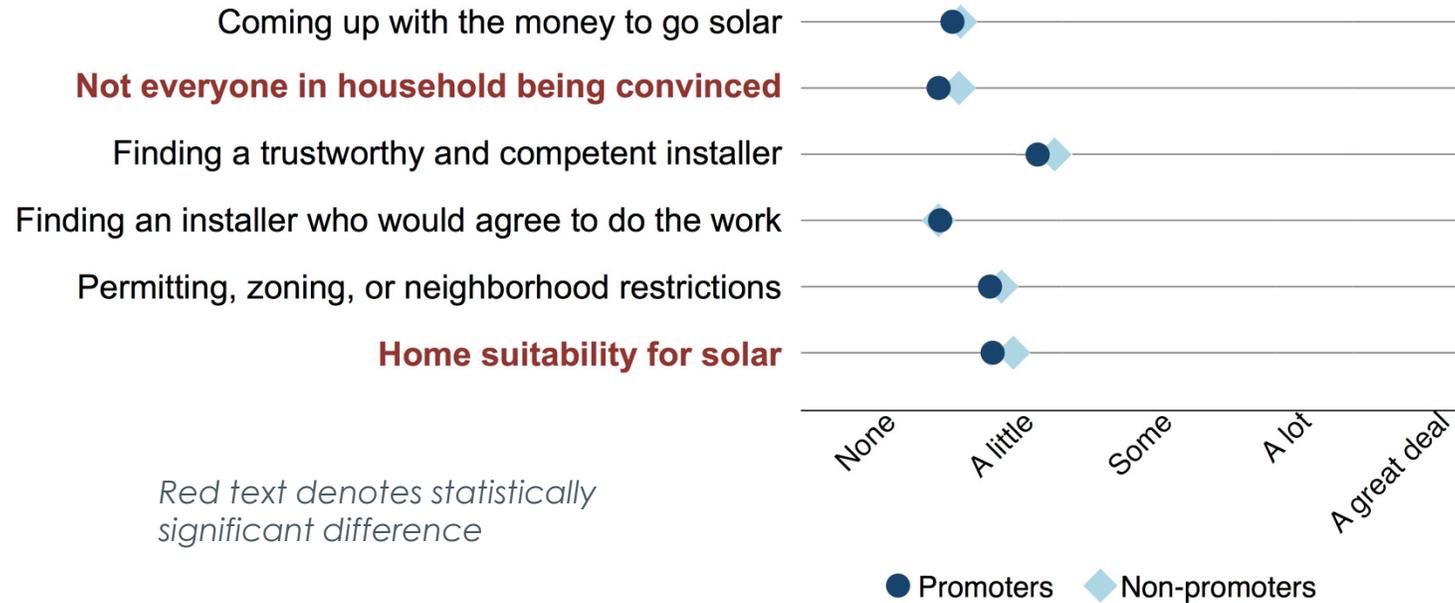


Actual bill savings compared to estimated



...Despite Slightly More Difficulties Going Solar

Satisfaction post-installation was inversely proportional to difficulties during process

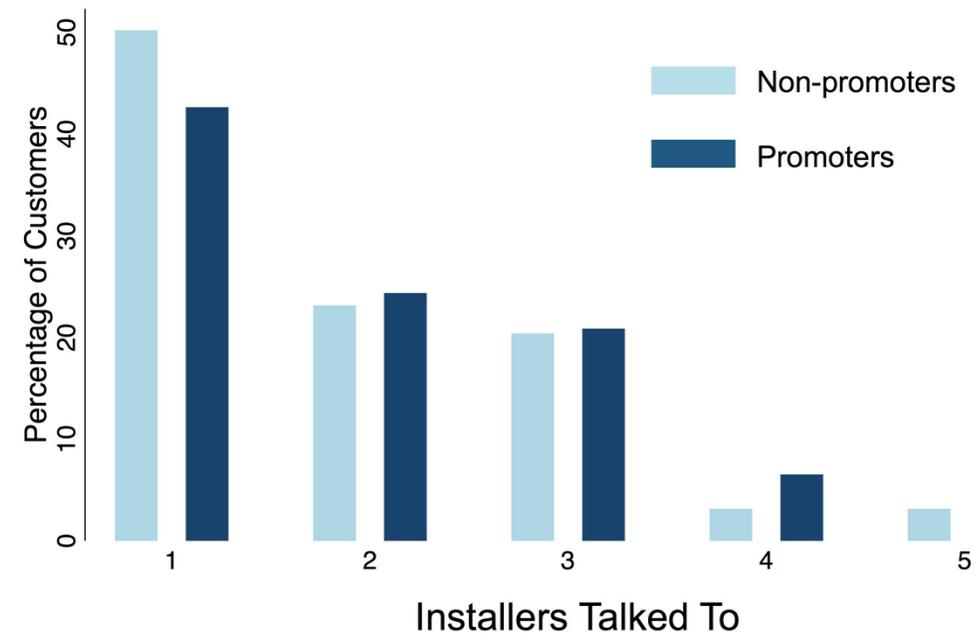


- Possible explanations include:
 - Promoters recognized difficulties are outside installers' control
 - Promoters are more willing to overlook problems
 - Installers properly set expectation ahead of time

Overpromising May Drive Dissatisfaction

Satisfaction depends on performance relative to expectations

- 8.5% of adopters expressed regret about going solar
 - However, 35% of them are solar promoters
- Common reasons for regret:
 - Not realizing anticipated savings
 - Leased system instead of buying
 - Didn't shop around for better installer
- Non-promoters were 30% more likely to have reported their interest in solar was prompted by an installer approaching them
- Promoters were 15% more likely to have shopped around



Key Takeaways from Promoters vs. Non-Promoters

More solar promoters = more solar considerers and adopters

- NPS for solar industry is stellar
- Promoter and non-promoters are demographically similar
- Promoters more likely to have stronger non-economic motivations
- Delivering on expected savings was biggest difference between promoter vs. non-promoters
- Customer satisfaction depends on performance against expectations



04

IMPLICATIONS FOR INSTALLERS & THE INDUSTRY



Implications for Solar Installers

Recommendations for your business

- 1 Don't give up on old leads**
- 2 Understand specific concerns**
- 3 Incorporate more consultative sales tactics**
- 4 Get third-party validation**
- 5 Check in with existing customers**
- 6 Set appropriate expectations**
- 7 Find new points of differentiation**
- 8 Don't just sell on price**
- 9 Grow your business for the long term, not the immediate sale**

Implications for the Solar Industry

Industry-level support and coordination needed, too

1 The residential solar industry needs recognizable standards

2 Competitive FUD can hurt everyone

3 Consumers need stable rate design and NEM policies

Thank You

- Questions
- Thank you for attending the SEEDS Webinar Series
 - Upcoming Events:
 - **Wednesday, June 29** **Solar Aspirations and Disinclinations: Learning from 3,600 Households**
<https://attendee.gotowebinar.com/register/3200297192758389251>
 - For more information: Benjamin.Sigrin@nrel.gov
<http://www.nrel.gov/extranet/seeds/>