How can consumer research help us grow markets for electric vehicles?

**Characterizing California Electric Vehicle Consumer Segments**

**Brett Williams, M.Phil. (cantab), Ph.D.**

Clair Johnson, Ph.D.

**www.cleanvehiclerebate.org**

**Introduction**

**Overview**

In order to expand the frontiers of the electric vehicle (EV) market into the mainstream, this inquiry aims to identify and profile consumer market segments.

- **“Rebate Essentials”** – those consumers highly influenced by rebates.
- **“Converts”** – EV adopters who had a low initial interest in EVs.

Characteristics examined: transaction, household, demographics, motivations and experience with EVs. Consensus of all interviews are necessary to allow for important differences in these two products.

**How can consumer research help us grow markets for electric vehicles?**

“Adding fuel to the fire” identifies ideal consumer segments that can be induced to target similar consumers.

- **“Rebate Essentials”**
  - Those consumers highly influenced by rebates.
  - Adopted more influenced by statements “rebate essential”.
  - Adopted with low initial interest in EVs “Converts”.

“Tough market nuts to crack” identifies potential consumer segments with low adoption potential.

- More influential by statements “non-rebate essential”.
- Product with low initial interest in EVs “Converts”.

“Expand market frontiers” identifies target consumer segments.

- More influential by statements “rebate essential”.
- Product with low initial interest in EVs “Converts”.

**Methodology**

**Objectives**

- Increased rebate influence
- Identify characteristics associated with
- Identify targeting strategies at

**Purpose**

- Inform targeting strategies at
- Non-enthusiasts

**Model**

- Binomial logistic
- Ordered logistic

**Outcome variables**

- “Would you have purchased or leased your EV without the CVRP rebate?”
- “Which of the following statements best describes your interest in a PEV when you started your search for a new vehicle?”

**Predictor variables**

- Consumer, household, vehicle and transactional data reduced based on lack of theoretical relevance, “actionability”, and to a lesser extent, correlations

**Data**

- 19,460 individuals surveyed in the survey.
- CVRP Consumer Survey 2014 (n=19,460).
- CVRP Consumer Survey 2014 (n=13,720).
- CVRP Consumer Survey 2014 (n=11,478).

**Vehicle characteristics**

- BEV Consumers
  - More motivated by vehicle performance
  - More motivated by environmental independence; more rebate essential

- Disadvantaged communities
  - More motivated by energy independence; more rebate essential

**Differences from Rebate Essentials**

- More motivated by saving money on fuel
- More motivated by carpool lane access
- More motivated by vehicle performance
- More motivated by lower initial interest in EVs

**Common Across All Segments**

- The odds of being in all four of the consumer segments are increased for consumers that are other than white, more motivated by fuel cost savings, more motivated by environmental impacts, and who found it more difficult to find info on EVs.

**The rebate is more essential to consumers:**

- Those who face “greater contextual constraints” or are otherwise less able to adopt
- Those whose adoption is driven less by “green enthusiasm”
- With “challenging informational environments”

**How would you purchased or leased your EV without the rebate?**

**Percent that answered “No”**

**Which of the following statements best describes your interest in a PEV when you started your search for a new vehicle?**

**Target Consumers: “Rebate Essentials”**

- Consumers most strongly influenced by the rebate.

**Characteristics:**

- Male, non-white, higher education, lower household income, perhaps younger and larger households.

**Reasons and interest**

- More motivated by saving money on fuel
- More motivated by environmental impacts and saving money on fuel, carpool lane access, and perhaps energy independence

**Information gathering**

- Found it “more difficult” to find info on EVs.

**Target Consumers: Low-Interest “Converts”**

- Those consumers that are other than white, more motivated by fuel cost savings, more motivated by environmental impacts, and who found it more difficult to find info on EVs.

**Data sources:**

- 19,460 individuals surveyed in the survey.
- CVRP Consumer Survey 2014 (n=19,460).
- CVRP Consumer Survey 2014 (n=13,720).
- CVRP Consumer Survey 2014 (n=11,478).

**‘I did not know PEVs existed’**

- I did not know PEVs existed.
- I wanted more info on PEVs.
- I wanted to learn more about PEVs before buying.

**‘I was very interested in a PEV’**

- I was very interested in a PEV.
- I was ONLY interested in a PEV.
- I had some interest in a PEV.
- I did not know a PEV existed.

**‘I was interested in a PEV’**

- I was interested in a PEV.
- I was not interested in a PEV.
- I did not know PEVs existed.

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**Target Consumers: Low-Interest “Converts”**

- Consumers most influenced by the rebate.

**Characteristics:**

- Non-enthusiasts, perhaps larger households.

**Reasons and interest**

- More motivated by saving money on fuel and perhaps vehicle performance, less carpool lane access and less by energy independence, more rebate essential

**Information gathering**

- Found it “more difficult” to find info on EVs.

**Target Consumers: Rebate Essentials**

- Those consumers that are other than white, more motivated by saving money on fuel, carpool lane access, and perhaps energy independence

**Characteristics:**

- Male, non-white, higher education, lower household income, perhaps younger and larger households.

**Reasons and interest**

- More motivated by saving money on fuel
- More motivated by environmental impacts and saving money on fuel, carpool lane access, and perhaps energy independence

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