

ONLINE APPENDIX

Has Consumer Acceptance of Electric Vehicles Been Increasing? Evidence from Microdata on Every New Vehicle Sale in the United States

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Appendix 1: Summary Statistics

Table A1. Summary statistics.

| | Min | Max | Mean | Standard Deviation | Sales- Weighted Mean |
|---|------------|------------|------------|-----------------------|----------------------------|
| <i>VIN-level sales data (2014-2020)</i> | | | | | |
| Annual Vehicle Sales | 11,967,246 | 16,920,140 | 15,126,985 | 2,053,686 | - |
| Annual EV Sales | 40,022 | 218,457 | 130,517 | 74,673.85 | - |
| Average MSRP (1,000 2021 USD) | 11.54 | 119.57 | 47.34 | 21.79 | 36.12 |
| Average EV MSRP (1,000 2021 USD) | 25.42 | 119.56 | 54.07 | 25.9 | 57.18 |
| Average EV Price (1,000 2021 USD) | 17.13 | 111.09 | 46.99 | 26.63 | 51.52 |
| <i>Vehicle Demographic Data (2017-2021)</i> | | | | | |
| Annual Vehicles | 4,171,546 | 11,545,976 | 9,251,101 | 3,047,115 | - |
| Annual EVs | 46,469 | 129,998 | 101,050.8 | 33,699.65 | - |
| Income (1,000 nominal USD) | 86.63 | 180.57 | 120.28 | 17.87 | - |
| Share College Educated | 0.28 | 0.65 | 0.39 | 0.06 | - |
| Share Urban | 0.31 | 1 | 0.79 | 0.17 | - |
| Share Single-Family Home | 0.55 | 0.96 | 0.88 | 0.08 | - |

Demographic statistics (income and share income, college-educated, urban, and single-family home) are calculated at the state-year level.

Appendix 2: Matching Analysis

We compare EV sales to comparable sales of conventional vehicles using two approaches. In addition to the propensity score matching discussed in the main text, we confirm the results are robust to a direct matching-on-observables approach (see Figure A1). For each electric vehicle, we find the conventional vehicles that minimize the sum of the distance between attributes (scaled by standard deviation). The attributes are the same as those used in the matching on observables. The matches for the most popular EV of each year from the matching-on-observables approach are shown in Table A2, and the matches from the propensity score matching approach are shown in Table A3.

Figure A1. Ratio of sales of EVs to comparable gasoline vehicles using alternative matching approach.

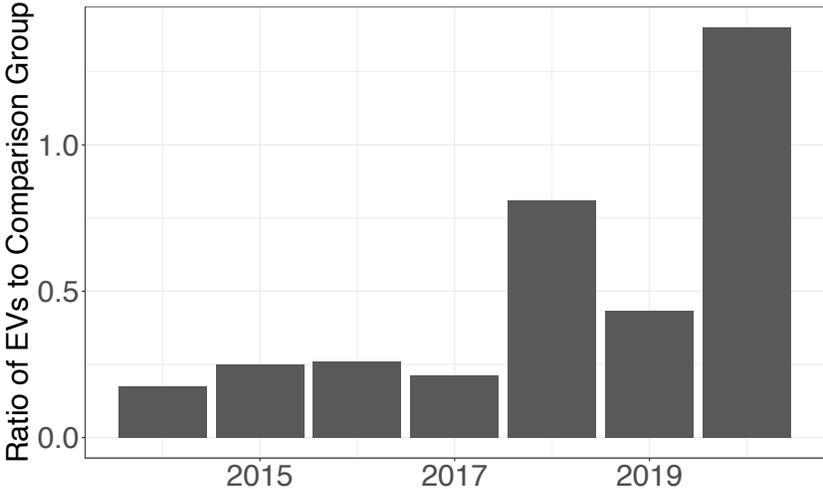


Table A2. Comparison vehicles for most popular EVs each year (matching on observables).

| Year | EV Make | EV Model | Matched Make | Matched Model |
|------|-----------|----------|--------------|-----------------|
| 2014 | Tesla | Model-S | Jaguar | XJ |
| | | | Lexus | L 460 |
| | | | Jaguar | XJL |
| 2015 | Nissan | Leaf | Toyota | Prius |
| | | | Toyota | Prius C |
| | | | Volkswagen | Golf |
| 2016 | Tesla | Model-S | Audi | A7 (gasoline) |
| | | | Audi | A7 (diesel) |
| | | | Audi | A8 L |
| 2017 | Chevrolet | Bolt-EV | Volkswagen | Golf GTI |
| | | | Lexus | CT 200H |
| | | | Volkswagen | Golf |
| 2018 | Tesla | Model-3 | Ford | Taurus |
| | | | Buick | Regal Sportback |
| | | | Jaguar | XE |
| 2019 | Tesla | Model-3 | Ford | Taurus |
| | | | Kia | Cadenza |
| | | | Jaguar | XE |
| 2020 | Tesla | Model-3 | Kia | Cadenza |
| | | | Lexus | ES 350 |
| | | | Jaguar | XE |

Table A3. Comparison vehicles for most popular EVs each year (propensity score matching).

| Year | EV Make | EV Model | Matched Make | Matched Model |
|------|-----------|----------|--------------|---------------|
| 2014 | Tesla | Model-S | BMW | 5 Series |
| | | | BMW | 3 Series |
| | | | Lincoln | MKZ Hybrid |
| 2015 | Nissan | Leaf | Lexus | CT 200H |
| | | | Toyota | Prius C |
| | | | Toyota | Prius |
| 2016 | Tesla | Model-S | Audi | A8 L |
| | | | Audi | S7 |
| | | | Maserati | Quattroporte |
| 2017 | Chevrolet | Bolt-EV | Smart | Fortwo |
| | | | Toyota | Prius C |
| | | | Toyota | Prius |
| 2018 | Tesla | Model-3 | Nissan | Versa |
| | | | Honda | Pilot |
| | | | Kia | Sorento |
| 2019 | Tesla | Model-3 | Ford | Ranger |
| | | | Nissan | Maxima |
| | | | Ford | Escape |
| 2020 | Tesla | Model-3 | BMW | 2-Series |
| | | | Jeep | Wrangler |
| | | | Buick | Encore |