Appendix A. – Supplemental Model Estimates

Table A1: Regression Coefficient for Un-weighted U.S. and China Models in the WTP Space

	Attribute	Coef.	Model 1: MNL		Model 2: MXL	
			U.S.	China	U.S.	China
	Price	μ	0.074 (0.002)***	0.035 (0.002)***	0.083 (0.003)***	0.038 (0.002)***
Powertrain Type (base = CV)	HEV	μ	0.807 (0.997)	5.977 (1.834)***	0.906 (1.087)	5.915 (1.883)***
		σ	--	--	1.819 (3.983)	10.244 (7.588)
	PHEV10	μ	1.166 (1.066)	-0.093 (1.948)	1.289 (1.130)	0.230 (1.952)
		σ	--	--	1.587 (3.544)	2.824 (8.072)
	PHEV20	μ	1.648 (1.078)	-1.653 (1.947)	2.015 (1.111)	-1.569 (1.950)
		σ	--	--	6.696 (3.186)	3.695 (7.277)
	PHEV40	μ	2.580 (1.071)	2.160 (1.936)	2.476 (1.123)	2.079 (1.928)
		σ	--	--	1.090 (3.090)	1.262 (7.494)
	BEV75	μ	-16.047 (1.215)***	-6.800 (2.009)***	-15.406 (1.292)***	-7.887 (2.166)***
		σ	--	--	8.979 (4.698)	17.875 (7.289)
	BEV100	μ	-13.004 (1.197)***	-8.614 (2.027)***	-12.064 (1.262)***	-8.593 (2.104)***
		σ	--	--	7.879 (4.939)	8.736 (8.556)
	BEV150	μ	-9.574 (1.151)***	-2.138 (1.958)	-8.433 (1.221)***	-2.055 (1.963)
		σ	--	--	6.742 (4.564)	0.457 (8.351)
Brand (base = German)	American	μ	2.344 (0.796)***	-7.788 (1.458)***	2.624 (0.840)***	-6.864 (1.569)***
		σ	--	--	3.448 (2.802)	11.360 (6.259)
	Japanese	μ	-0.375 (0.792)	-13.371 (1.536)***	-0.068 (0.816)	-12.628 (1.637)***
		σ	--	--	7.462 (3.388)	10.057 (5.992)
	Chinese	μ	-10.269 (0.870)***	-6.518 (1.418)***	-10.180 (0.902)***	-5.864 (1.563)***
		σ	--	--	1.393 (0.301)***	27.724 (7.391)***
	S. Korean	μ	-6.031 (0.833)***	-13.353 (1.534)***	-5.654 (0.872)***	-13.659 (1.892)***
		σ	--	--	0.352 (0.549)	34.504 (7.856)***
Cost and Performance	PHEV Fast-charge	μ	2.879 (0.812)***	7.472 (1.482)***	3.175 (0.838)***	7.726 (1.495)***
		σ	--	--	3.447 (3.031)	3.319 (5.968)
	BEV Fast-charge	μ	2.919 (0.907)***	5.662 (1.517)***	2.632 (1.006)***	5.792 (1.539)***
		σ	--	--	5.513 (2.709)	1.480 (6.444)
	Operating Cost	μ	-1.636 (0.067)***	-2.942 (0.225)***	-1.758 (0.101)***	-3.009 (0.242)***
		σ	--	--	1.477 (3.265)	2.770 (1.084)
	Acceleration Time	μ	-1.697 (0.159)***	-4.915 (0.296)***	-1.709 (0.163)***	-4.964 (0.300)***
		σ	--	--	5.637 (3.705)	1.492 (0.877)
	LL at Convergence:		-4617.0	-6655.6	-4588.0	-6632.5
	Null LL:		-6328.0	-7382.7	-6328.0	-7382.7
	AIC:		9265.9	13343.1	9237.9	13327.1
	McFadden R^2:		0.27	0.10	0.27	0.10
	Adj. McFadden R^2:		0.27	0.10	0.27	0.10
	Num. of Obs:		5760	6720	5760	6720

Table A2: Regression Coefficient for Weighted U.S. and China Models in the Preference Space

	Attribute	Coef.	Model 1: MNL		Model 2: MXL	
			U.S.	China	U.S.	China
	Price	μ	-0.052 (0.002)***	-0.033 (0.002)***	0.066 (0.003)***	-0.039 (0.002)***
Powertrain Type (base = CV)	HEV	μ	-0.061 (0.084)	0.163 (0.063)***	-0.418 (1.585)	0.185 (0.077)
		σ	--	--	0.188 (4.664)	0.762 (0.303)
	PHEV10	μ	0.001 (0.093)	-0.042 (0.069)	0.822 (1.796)	-0.070 (0.081)
		σ	--	--	2.197 (5.428)	0.247 (0.341)
	PHEV20	μ	0.088 (0.091)	-0.040 (0.068)	3.207 (1.734)	-0.090 (0.080)
		σ	--	--	8.664 (5.719)	0.161 (0.265)
	PHEV40	μ	0.138 (0.093)	0.032 (0.067)	3.304 (1.741)	0.011 (0.079)
		σ	--	--	7.141 (5.466)	0.360 (0.243)
	BEV75	μ	-1.053 (0.100)***	-0.200 (0.069)***	-18.453 (1.934)***	-0.310 (0.092)***
		σ	--	--	4.175 (6.232)	1.174 (0.289)***
	BEV100	μ	-1.019 (0.100)***	-0.270 (0.070)***	-18.947 (1.965)***	-0.400 (0.086)***
		σ	--	--	1.898 (5.368)	-0.331 (0.290)
	BEV150	μ	-0.716 (0.100)***	0.044 (0.068)	-12.727 (1.959)***	0.021 (0.080)
		σ	--	--	10.486 (6.061)	0.276 (0.253)
Brand (base = German)	American	μ	0.428 (0.066)***	-0.352 (0.049)***	7.432 (1.268)***	-0.306 (0.063)***
		σ	--	--	0.665 (3.439)	0.745 (0.234)***
	Japanese	μ	0.049 (0.067)	-0.602 (0.050)***	-0.577 (1.289)	-0.602 (0.063)***
		σ	--	--	11.765 (3.508)***	0.919 (0.236)***
	Chinese	μ	-0.993 (0.074)***	-0.322 (0.048)***	-19.848 (1.666)***	-0.251 (0.064)***
		σ	--	--	8.078 (4.173)	1.349 (0.260)***
	S. Korean	μ	-0.497 (0.071)***	-0.644 (0.050)***	-10.412 (1.378)***	-0.718 (0.078)***
		σ	--	--	12.335 (3.850)***	2.148 (0.241)***
Cost and Performance	PHEV Fast-charge	μ	0.206 (0.069)***	0.253 (0.051)***	3.331 (1.335)	0.304 (0.063)***
		σ	--	--	8.882 (4.396)	-0.788 (0.210)***
	BEV Fast-charge	μ	0.175 (0.077)	0.221 (0.052)***	0.030 (1.821)	0.255 (0.064)***
		σ	--	--	26.237 (3.871)***	-0.457 (0.208)
	Operating Cost	μ	-0.083 (0.005)***	-0.107 (0.006)***	-1.626 (0.104)***	-0.134 (0.008)***
		σ	--	--	0.076 (0.247)	-0.128 (0.037)***
	Acceleration Time	μ	-0.061 (0.013)***	-0.155 (0.007)***	-1.269 (0.293)***	-0.189 (0.010)***
		σ	--	--	5.766 (0.880)***	-0.133 (0.037)***
	LL at Convergence:		-3425.6	-6788.8	-3373.1	-6721.0
	Null LL:		-4360.6	-7487.3	-4360.6	-7487.3
	AIC:		6883.3	13609.6	6808.3	13503.9
	McFadden R^2:		0.21	0.09	0.23	0.10
	Adj. McFadden R^2:		0.21	0.09	0.22	0.10
	Num. of Obs:		5760	6720	5760	6720

Signif. codes: '***' <=0.001, '**' <= 0.01, '*'<= 0.05. Standard errors of estimates are presented in parenthesis.

Table A3: Regression Coefficient for Un-weighted U.S. and China Models in the Preference Space

	Attribute	Coef.	Model 1: MNL		Model 2: MXL	
			U.S.	China	U.S.	China
	Price	μ	-0.074 (0.002)***	-0.035 (0.002)***	-0.083 (0.003)***	-0.038 (0.002)***
Powertrain Type (base = CV)	HEV	μ	0.059 (0.074)	0.209 (0.064)***	0.076 (0.085)	0.241 (0.071)***
		σ	--	--	-0.090 (0.342)	0.391 (0.296)
	PHEV10	μ	0.086 (0.079)	-0.003 (0.068)	0.109 (0.089)	0.004 (0.076)
		σ	--	--	-0.078 (0.343)	-0.115 (0.312)
	PHEV20	μ	0.122 (0.080)	-0.058 (0.068)	0.140 (0.089)	-0.065 (0.076)
		σ	--	--	-0.544 (0.282)	-0.145 (0.282)
	PHEV40	μ	0.190 (0.079)	0.076 (0.068)	0.224 (0.088)	0.082 (0.075)
		σ	--	--	-0.186 (0.293)	0.053 (0.290)
	BEV75	μ	-1.186 (0.087)***	-0.238 (0.070)***	-1.439 (0.150)***	-0.276 (0.081)***
		σ	--	--	-1.576 (0.420)***	0.711 (0.282)
	BEV100	μ	-0.961 (0.087)***	-0.302 (0.070)***	-1.186 (0.149)***	-0.339 (0.082)***
		σ	--	--	-1.725 (0.382)***	-0.322 (0.329)
	BEV150	μ	-0.707 (0.084)***	-0.075 (0.068)	-0.771 (0.113)***	-0.078 (0.077)
		σ	--	--	-1.075 (0.355)***	-0.010 (0.321)
Brand (base = German)	American	μ	0.173 (0.059)***	-0.273 (0.050)***	0.183 (0.067)***	-0.246 (0.061)***
		σ	--	--	-0.319 (0.222)	0.441 (0.240)
	Japanese	μ	-0.028 (0.059)	-0.468 (0.050)***	-0.035 (0.066)	-0.469 (0.062)***
		σ	--	--	-0.380 (0.226)	0.391 (0.231)
	Chinese	μ	-0.759 (0.062)***	-0.228 (0.049)***	-0.840 (0.071)***	-0.185 (0.059)***
		σ	--	--	0.265 (0.244)	1.092 (0.285)***
	S. Korean	μ	-0.446 (0.061)***	-0.468 (0.050)***	-0.527 (0.072)***	-0.473 (0.067)***
		σ	--	--	-0.542 (0.241)	1.352 (0.301)***
Cost and Performance	PHEV Fast-charge	μ	0.213 (0.060)***	0.261 (0.051)***	0.243 (0.066)***	0.290 (0.057)***
		σ	--	--	-0.228 (0.247)	-0.135 (0.230)
	BEV Fast-charge	μ	0.216 (0.067)***	0.198 (0.052)***	0.223 (0.098)	0.219 (0.058)***
		σ	--	--	-0.090 (0.288)	-0.067 (0.247)
	Operating Cost	μ	-0.121 (0.004)***	-0.104 (0.007)***	-0.134 (0.005)***	-0.119 (0.008)***
		σ	--	--	0.049 (0.024)	-0.105 (0.041)
	Acceleration Time	μ	-0.125 (0.012)***	-0.172 (0.007)***	-0.139 (0.013)***	-0.192 (0.009)***
		σ	--	--	0.017 (0.049)	-0.058 (0.034)
	LL at Convergence:		-4617.0	-6655.6	-4588.7	-6632.5
	Null LL:		-6328.0	-7382.7	-6328.0	-7382.7
	AIC:		9265.9	13343.1	9239.3	13327.0
	McFadden R^2:		0.27	0.10	0.27	0.10
	Adj. McFadden R^2:		0.27	0.10	0.27	0.10
	Num. of Obs:		5760	6720	5760	6720

Signif. codes: '***' <=0.001, '**' <= 0.01, '*'<= 0.05. Standard errors of estimates are presented in parenthesis.

Table A4: Regression Coefficients for Models Interacting Respondent Demographics with Vehicle Attributes in the U.S. in the Preference Space

Attribute	Model 3: Base case	Model 4: Income	Model 5: Age	Model 6: Other Demographics
Price	-0.052 (0.002)***	-0.098 (0.005)***	-0.083 (0.007)***	-0.067 (0.007)***
HEV	-0.061 (0.084)	0.996 (0.174)***	0.109 (0.235)	0.621 (0.268)
PHEV10	0.001 (0.093)	0.821 (0.182)***	0.187 (0.235)	0.972 (0.284)***
PHEV20	0.089 (0.091)	0.632 (0.169)***	0.239 (0.237)	0.788 (0.283)***
PHEV40	0.139 (0.093)	0.803 (0.179)***	0.353 (0.234)	0.717 (0.286)
BEV75	-1.053 (0.100)***	-0.130 (0.185)	-1.100 (0.255)***	0.013 (0.302)
BEV100	-1.019 (0.100)***	-0.572 (0.182)***	-0.937 (0.252)***	-0.428 (0.312)
BEV150	-0.716 (0.100)***	-0.226 (0.194)	-0.685 (0.246)***	-0.691 (0.298)
PHEV Fast-charge	0.206 (0.069)***	0.201 (0.070)***	0.210 (0.069)***	0.229 (0.071)***
BEV Fast-charge	0.175 (0.077)	0.181 (0.078)	0.184 (0.078)	0.197 (0.079)
Operating Cost	-0.084 (0.005)***	-0.127 (0.010)***	-0.157 (0.015)***	-0.145 (0.016)***
Acceleration Time	-0.061 (0.013)***	-0.066 (0.013)***	-0.062 (0.013)***	-0.063 (0.014)***
American	0.428 (0.066)***	0.442 (0.067)***	0.434 (0.067)***	0.466 (0.068)***
Japanese	0.049 (0.067)	0.043 (0.069)	0.048 (0.068)	0.072 (0.069)
Chinese	-0.994 (0.074)***	-1.029 (0.075)***	-1.000 (0.074)***	-0.992 (0.075)***
S. Korean	-0.497 (0.071)***	-0.505 (0.072)***	-0.500 (0.071)***	-0.501 (0.072)***
High Income * Price	--	0.058 (0.006)***	--	--
High Income * Op. Cost	--	0.057 (0.011)***	--	--
High Income * HEV	--	-1.380 (0.201)***	--	--
High Income * PHEV10	--	-1.041 (0.203)***	--	--
High Income * PHEV20	--	-0.703 (0.193)***	--	--
High Income * PHEV40	--	-0.856 (0.202)***	--	--
High Income * BEV75	--	-1.230 (0.212)***	--	--
High Income * BEV100	--	-0.611 (0.207)***	--	--
High Income * BEV150	--	-0.660 (0.217)***	--	--
High Age * Price	--	--	0.035 (0.007)***	--
High Age * Op. Cost	--	--	0.084 (0.016)***	--
Has Child * Op. Cost	--	--	--	0.047 (0.012)***
Has Child * HEV	--	--	--	-0.945 (0.211)***
Female * PHEV20	--	--	--	-0.799 (0.191)***
Married * BEV75	--	--	--	-0.705 (0.239)***
Household Size * BEV75	--	--	--	-0.342 (0.099)***
Household Size * BEV100	--	--	--	-0.335 (0.092)***
College Grad * Price	--	--	--	0.026 (0.005)***
College Grad * Op. Cost	--	--	--	0.049 (0.012)***
College Grad * BEV150	--	--	--	0.806 (0.227)***
LL at Convergence:	-3425.6	-3327.0	-3399.1	-3313.5
Null LL:	4360.6	4360.6	4360.6	4360.6
AIC:	-6883.3	-6703.9	-6848.3	-6749.0

McFadden R^2:	0.21	0.24	0.22	0.24
Adj. McFadden R^2:	0.21	0.23	0.22	0.23
Num. of Observations:	5760	5760	5760	5760

Signif. codes: '***' <=0.001, '**' <= 0.01, '*'<= 0.05. Standard errors of estimates are presented in parenthesis.

Table A5: Regression Coefficients for Models Interacting Respondent Experience and Attitude with Vehicle Attributes in the U.S. in the Preference Space

Attribute	Model 3: Base case	Model 7: Driving Experience	Model 8: Attitude
Price	-0.052 (0.002)***	-0.078 (0.007)***	-0.062 (0.003)***
HEV	-0.061 (0.084)	0.321 (0.262)	-0.303 (0.113)***
PHEV10	0.001 (0.093)	0.821 (0.328)	-0.255 (0.119)
PHEV20	0.089 (0.091)	0.055 (0.340)	-0.251 (0.118)
PHEV40	0.139 (0.093)	0.173 (0.331)	-0.083 (0.118)
BEV75	-1.053 (0.100)***	-0.936 (0.356)***	-1.502 (0.130)***
BEV100	-1.019 (0.100)***	-0.277 (0.368)	-1.570 (0.134)***
BEV150	-0.716 (0.100)***	-1.321 (0.354)***	-1.037 (0.132)***
PHEV Fast-charge	0.206 (0.069)***	0.198 (0.070)***	0.202 (0.070)***
BEV Fast-charge	0.175 (0.077)	0.207 (0.078)***	0.194 (0.078)
Operating Cost	-0.084 (0.005)***	-0.138 (0.015)***	-0.087 (0.006)***
Acceleration Time	-0.061 (0.013)***	-0.060 (0.013)***	-0.065 (0.013)***
American	0.428 (0.066)***	0.427 (0.067)***	0.448 (0.067)***
Japanese	0.049 (0.067)	0.056 (0.068)	0.072 (0.068)
Chinese	-0.994 (0.074)***	-0.997 (0.074)***	-1.005 (0.074)***
S. Korean	-0.497 (0.071)***	-0.512 (0.072)***	-0.477 (0.072)***
Num. Vehicles * Price	--	0.012 (0.003)***	--
Num. Vehicles * Op. Cost	--	0.027 (0.007)***	--
Env. Appear. * HEV	--	--	0.570 (0.195)***
Env. Appear. * PHEV40	--	--	0.534 (0.201)***
Env. Appear. * BEV100	--	--	1.230 (0.205)***
Stat. Symbol * Price	--	--	0.018 (0.004)***
Stat. Symbol * PHEV20	--	--	0.772 (0.183)***
Stat. Symbol * BEV75	--	--	0.846 (0.194)***
Stat. Symbol *BEV100	--	--	0.538 (0.201)***
Stat. Symbol *BEV150	--	--	0.623 (0.193)***
LL at Convergence:	-3425.6	-3383.9	-3379.8
Null LL:	4360.6	4360.6	4360.6
AIC:	-6883.3	-6847.7	-6825.6
McFadden R^2:	0.21	0.22	0.23
Adj. McFadden R^2:	0.21	0.22	0.22
Num. of Observations:	5760	5760	5760

Signif. codes: '***' <=0.001, '**' <= 0.01, '*'<= 0.05. Standard errors of estimates are presented in parenthesis.

Table A6: Regression Coefficients for Models Interacting Respondent Demographics with Vehicle Attributes in China in the Preference Space

Attribute	Model 3: Base case	Model 4: Income	Model 5: Age	Model 6: Other Demographics
Price	-0.033 (0.002)***	-0.029 (0.002)***	-0.033 (0.003)***	-0.042 (0.006)***
HEV	0.163 (0.063)	0.103 (0.093)	0.044 (0.121)	0.144 (0.221)
PHEV10	-0.043 (0.069)	0.035 (0.097)	0.000 (0.119)	-0.158 (0.225)
PHEV20	-0.041 (0.068)	-0.131 (0.096)	-0.035 (0.118)	-0.547 (0.220)
PHEV40	0.031 (0.067)	-0.028 (0.098)	-0.038 (0.117)	-0.252 (0.215)
BEV75	-0.200 (0.069)***	-0.278 (0.098)***	-0.308 (0.120)	-0.411 (0.218)
BEV100	-0.271 (0.070)***	-0.217 (0.100)	-0.306 (0.121)	-0.742 (0.234)***
BEV150	0.044 (0.068)	-0.092 (0.097)	0.072 (0.117)	-0.233 (0.219)
PHEV Fast-charge	0.253 (0.051)***	0.257 (0.051)***	0.254 (0.051)***	0.258 (0.051)***
BEV Fast-charge	0.221 (0.052)***	0.218 (0.052)***	0.220 (0.052)***	0.221 (0.053)***
Operating Cost	-0.107 (0.006)***	-0.084 (0.010)***	-0.099 (0.012)***	-0.148 (0.023)***
Acceleration Time	-0.155 (0.007)***	-0.155 (0.007)***	-0.155 (0.007)***	-0.157 (0.007)***
American	-0.352 (0.049)***	-0.350 (0.049)***	-0.353 (0.049)***	-0.359 (0.050)***
Japanese	-0.602 (0.050)***	-0.606 (0.050)***	-0.603 (0.050)***	-0.613 (0.050)***
Chinese	-0.322 (0.048)***	-0.319 (0.048)***	-0.323 (0.048)***	-0.322 (0.049)***
S. Korean	-0.644 (0.050)***	-0.651 (0.050)***	-0.648 (0.050)***	-0.652 (0.051)***
High Income * Op. Cost	--	-0.041 (0.013)***	--	--
Household Size * Price	--	--	--	0.004 (0.001)***
Household Size * Op. Cost	--	--	--	0.018 (0.006)***
Household Size * PHEV40	--	--	--	0.142 (0.054)***
College Grad * Price	--	--	--	-0.010 (0.004)***
College Grad * Op. Cost	--	--	--	-0.074 (0.015)***
Married * PHEV20	--	--	--	1.061 (0.288)***
Married * BEV100	--	--	--	0.838 (0.317)***
Married * BEV150	--	--	--	1.360 (0.324)***
Has Child * PHEV20	--	--	--	-1.007 (0.274)***
Has Child *BEV150	--	--	--	-1.351 (0.310)***
LL at Convergence:	-6788.8	-6773.6	-6785.9	-6712.3
Null LL:	7487.3	7487.3	7487.3	7487.3
AIC:	-13609.6	-13597.2	-13621.8	-13546.6
McFadden R^2:	0.09	0.10	0.09	0.10
Adj. McFadden R^2:	0.09	0.09	0.09	0.10
Num. of Observations:	6720	6720	6720	6720

Signif. codes: '***' <=0.001, '**' <= 0.01, '*'<= 0.05. Standard errors of estimates are presented in parenthesis.

Table A7: Regression Coefficients for Models Interacting Respondent Experience and Attitude with Vehicle Attributes in China in the Preference Space

Attribute	Model 3: Base case	Model 7: Driving Experience	Model 8: Attitude
Price	-0.033 (0.002)***	-0.026 (0.006)***	-0.019 (0.003)***
HEV	0.163 (0.063)	0.010 (0.263)	-0.266 (0.134)
PHEV10	-0.043 (0.069)	0.274 (0.274)	-0.189 (0.133)
PHEV20	-0.041 (0.068)	-0.129 (0.261)	-0.056 (0.131)
PHEV40	0.031 (0.067)	0.169 (0.281)	0.190 (0.127)
BEV75	-0.200 (0.069)***	-0.333 (0.272)	-0.330 (0.129)
BEV100	-0.271 (0.070)***	-1.060 (0.275)***	-0.545 (0.137)***
BEV150	0.044 (0.068)	0.126 (0.263)	-0.040 (0.130)
PHEV Fast-charge	0.253 (0.051)***	0.242 (0.051)***	0.262 (0.051)***
BEV Fast-charge	0.221 (0.052)***	0.236 (0.053)***	0.240 (0.052)***
Operating Cost	-0.107 (0.006)***	-0.146 (0.025)***	-0.160 (0.012)***
Acceleration Time	-0.155 (0.007)***	-0.156 (0.007)***	-0.154 (0.007)***
American	-0.352 (0.049)***	-0.348 (0.049)***	-0.349 (0.049)***
Japanese	-0.602 (0.050)***	-0.599 (0.050)***	-0.608 (0.050)***
Chinese	-0.322 (0.048)***	-0.319 (0.049)***	-0.323 (0.049)***
S. Korean	-0.644 (0.050)***	-0.646 (0.050)***	-0.638 (0.050)***
Home Charge * PHEV40	--	0.578 (0.110)***	--
Home Charge *BEV100	--	0.338 (0.113)***	--
Num. Vehicles * BEV100	--	0.741 (0.207)***	--
Env. Appear. * Price	--	--	-0.011 (0.003)***
Env. Appear. * Op. Cost	--	--	0.075 (0.014)***
Env. Appear. * HEV	--	--	0.605 (0.139)***
Env. Appear. * PHEV10	--	--	0.454 (0.138)***
Env. Appear. * BEV100	--	--	0.385 (0.139)***
Env. Appear. * BEV150	--	--	0.411 (0.136)***
Stat. Symbol * Price	--	--	-0.011 (0.003)***
Stat. Symbol * BEV150	--	--	-0.343 (0.129)***
Stat. Symbol * PHEV20	--	--	-0.355 (0.127)***
Stat. Symbol * PHEV40	--	--	-0.434 (0.128)***
LL at Convergence:	-6788.8	-6728.6	-6734.8
Null LL:	7487.3	7487.3	7487.3
AIC:	-13609.6	-13537.2	-13535.7
McFadden R^2:	0.09	0.10	0.10
Adj. McFadden R^2:	0.09	0.10	0.10
Num. of Observations:	6720	6720	6720

Signif. codes: '***' <=0.001, '**' <= 0.01, '*'<= 0.05. Standard errors of estimates are presented in parenthesis.

Appendix B – Details on Modeling Method

Conjoint Analysis

Conjoint analysis has been widely used by marketing researchers since the 1970s to examine the relative importance of a product's many attributes to one another. The approach involves asking participants in an experiment to make trade-offs among several products, each with different levels of the same attributes. These trade-offs are typically presented in one of three ways: ranking-based, rating-based, and choice-based. In a ranking-based experiment, participants are asked to rank each alternative relative to one another; in a rating-based experiment, they are asked to give a rating along a scale of each alternative relative to one another; and in a choice-based experiment, they are simply asked to choose a single alternative that they are most likely to buy in a real buying situation. We chose the choice-based approach for this research as it more realistically mimics a true buying scenario (in which you only choose one product rather than rank several), and because it has been shown that this is especially true when price is one of the attributes shown to respondents (Huber, Wittink, & Johnson, 1992).

Discrete Choice Modeling and Maximum Likelihood Estimation

Choice-based conjoint experiments produce individual level choice data. Discrete choice models are used to relate these choices to the attributes of the alternatives shown or those of the individual respondent. These models utilize a random utility framework and some functional form relating choice probability to product and/or consumer attributes. We employ variants of the logit model (one of the most widely adopted choice models), which assume that the unobservable utility ε_{ijt} has an independent and identically distributed extreme value distribution, yielding a closed-form expression for choice probabilities as shown in equation (2). The explicit model used for this study as shown in equation (3) is the primary functional form describing the utility to a survey respondent from making a particular choice.

To estimate the model parameters in equation (3) we use maximum likelihood estimation. For MNL models we minimize the negative of the log-likelihood function:

$$\mathrm{LL}(\theta) = \sum_{i=1}^{I} \sum_{j=1}^{J} d_{ij} \ln P_{ij} \tag{4}$$

θ are the estimated parameters, P_{ij} are the choice probabilities shown in equation (2), and $d_{ij} = 1$ if i chose j and zero otherwise. For MXL models we used simulated maximum likelihood estimation where the simulated log-likelihood is the same as equation (4) except the choice probabilities are given by

$$\hat{P}_{ij} = \frac{1}{R}\sum_{r=1}^{R} P_{ij}^{r} \tag{5}$$

where P_{ij}^{r} are the choice probabilities from equation (2) calculated using the r^{th} draw of the parameters from their assumed distributions. The choice probabilities used in the simulated log-likelihood function are the average over all draws. This procedure is explained in detail in Train (2009). The program used to estimate all models was written by John Paul Helveston in the "R" computing language and can be downloaded from his website at www.jhelvy.com/logitr. The program package download includes further extensive documentation on the estimation procedure.

Randomized Multistart Estimation Procedure

Since the WTP space model has a non-linear in parameters utility function, the log-likelihood function could have multiple local maxima, and a global maximum is not guaranteed. To search for a global maximum, we implement a multistart algorithm that runs the same optimization algorithm multiple times using different starting points. For each model we estimate, we search using an all zero starting point as well as multiple random starting points for each parameter. For MXL models, we also run a case where we use the MNL results as starting points for the mean parameters with variances of 1. The steps of the multistart algorithm are as follows:

1. Generate a starting value for each parameter by drawing from a uniform distribution between the bounds -1 and 1 (the data was scaled to be on the order of 1 such that the bounds of -1 to 1 provide a wide search space).
2. Minimize the negative of the log-likelihood function using an optimization loop.
3. Compare the negative log-likelihood value at the solution to the current lowest negative log-likelihood value observed thus far.
4. If the new negative log-likelihood value is lower than the previous lowest, set the new lowest value to the new one and save the parameters at this new solution.

5. Repeat steps 1 - 4 many times.

We ran 20 iterations of the multistart algorithm for each different model. In each case we only found on the order of <5 local maxima, with the majority of runs converging to the same (best) local maximum. Thus we have confidence that the best local maxima found is likely the global maximum.

Sample Weighting

We compared the distributions of age and income in the sample we collected in China and the U.S. to those from a much larger, nation-wide survey provided by Ford Motor Company in each country targeting vehicle owners. Taking the un-weighted distributions from the reference survey as representative of the vehicle-buying population in each country, we found we oversampled younger, less wealthy individuals in each country with particularly strong oversampling in the U.S. (as was expected from fielding the survey online in the U.S.). To account for these differences, we weight the respondents using least squares optimization to match the age and income CDFs from our survey to those from the Maritz survey as closely as possible subject to lower and upper constraints on the weight values from 0.2 to 5 to prevent any one respondent from having too large an influence. Figure B1 below shows the CDFs before and after weighting has been applied.

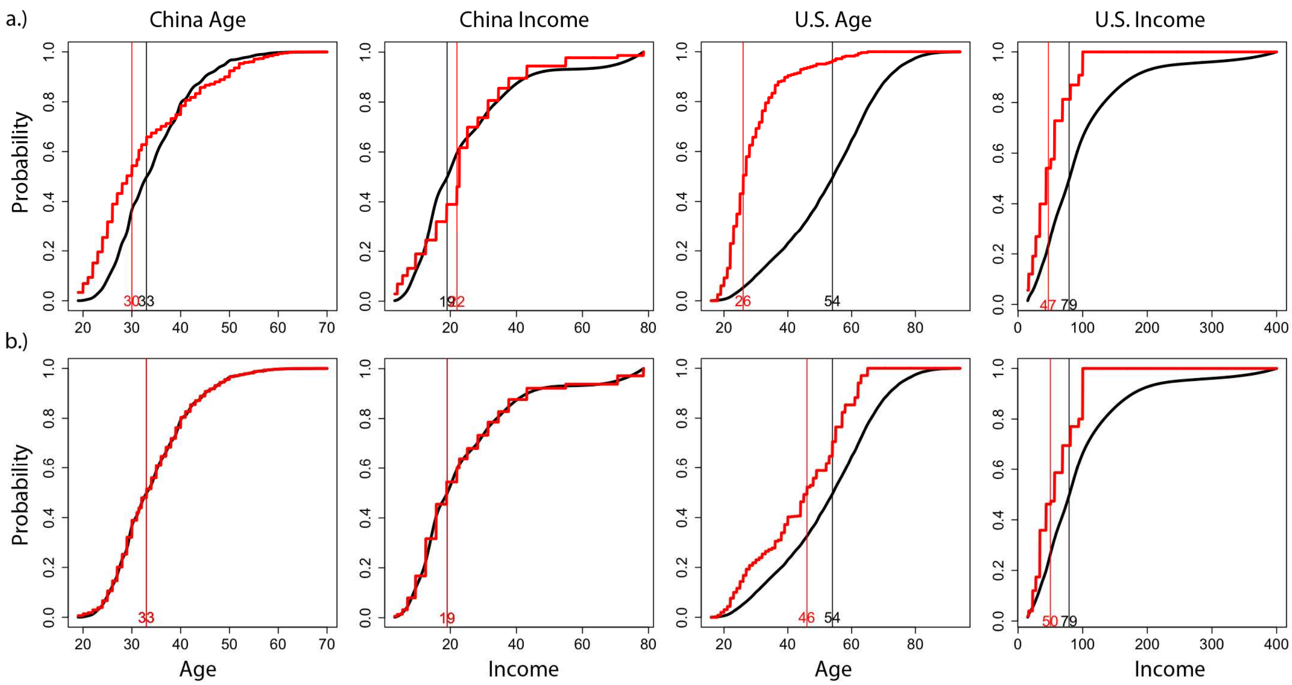

Figure B1: Age and income cumulative distribution functions in China and the U.S. of our survey sample (red) and Ford's survey sample (black) before weighting (a.) and after weighting (b.). Median values are given as vertical lines in each figure.

Market Simulations

To estimate the market simulations in section 4, we use the estimated mean and standard deviation coefficients from model 2 to draw population-level coefficients. To account for uncertainty in these estimated coefficients, we take multiple draws of the model coefficients drawn from the variance-covariance matrix of the estimated model. For each set of drawn coefficients, we use the simple logit probabilities in Eq.(2) to calculate the expected market share of a plug-in vehicle against its gasoline counterpart. We then take the mean of these shares as one data point, and then repeat the simulation again using a different set of drawn. We use these data points across 1,000 draws to estimate a mean and 95% confidence interval on the shares. The attribute levels of the vehicles compared in these simulations are shown below in Table B1.

Table B1: Vehicle attribute values used in market simulations

Brand	Model	Technology	Price ($1,000)	U.S. Operating Cost (U.S. cents/mile)	China Operating Cost (U.S. cents/mile)	0-60 mph acceleration time (sec)
Toyota	Prius	$PHEV_{10}$	32	4.7	5.7	10.9
	Prius	HEV	25	7.4	8.9	9.7
Ford	C-Max	$PHEV_{20}$	33	5.3	6.4	8.9
	C-Max	HEV	26	8.8	10.6	9.4
BYD	F3DM	$PHEV_{40}$	21	8.0	9.7	10.5
	F3	CV	8	12.0	14.5	11.8
Chevrolet	Volt	$PHEV_{40}$	41	3.9	11.2	8.9
	Cruze Eco	CV	19	11.9	14.4	10.2
Nissan	Leaf	BEV_{75}	35	3.7	4.5	7.9
	Versa	CV	16	12.3	14.9	9
Ford	Focus	BEV_{100}	40	3.5	4.3	9.6
	Focus	CV	19	11.9	14.4	8.3

Appendix C. – Field Experiment Setup and Procedure

Experiment Setup & Fielding

The choice experiment survey was fielded in both China and the U.S. The surveys were equivalent in content and in presentation except for (1) translation, which was conducted by the State Information Center in Beijing, China, and then back translated for verification by a third party expert and (2) the values of some attributes, which were each calibrated to the values in the corresponding existing vehicle market, as discussed in Appendix E. The surveys were fielded in China during July and August of 2012 and in the U.S. in September 2012 and February 2013.

In China, the surveys were conducted in-person using laptop computers in the following four major cities chosen for their large passenger vehicle markets as well as geographic representativeness: Beijing, Shanghai, Shenzhen, and Chengdu. In each city a private market research company (arranged by the State Information Center) provided the staff as well as expertise in choosing locations to administer the survey. The survey location in each city was chosen for its proximity to automobile dealerships representative of the current automobile market. John Helveston personally oversaw all survey fielding in each city except for the last few days of fielding in Beijing, as a record-breaking flood interrupted the fielding schedule (a member of the SIC oversaw the final days of fielding in Beijing). Fielding took 3-4 days in each city, and was conducted from Thursday to Sunday of the week, as these were busier vehicle shopping days. Respondents were approached at random and asked if they had recently purchased or were interested in purchasing soon a car or SUV. If so, they were further asked if they were interested in taking a short 10-15 minute survey, for which they would be compensated with a small gift.

In the U.S., the survey was fielded online using Amazon Mechanical Turk (AMT). An initial pool of recent or potential vehicle buyers was found through a short survey that asked about recent or future purchases, and then the full conjoint survey was sent to those who qualified as recent or future vehicle buyers (i.e. selected “car” or “SUV” as a recent or future purchase on the screener survey). Each AMT respondent was compensated with $2 for completing the survey.

In both surveys, respondents were thrown out if they completed the survey in under 6 minutes (as this was found to be a natural cutoff time for completing the survey without randomly answering the choice questions), or if they failed to choose the dominant example choice question which was fixed for each respondent (indicating that the respondent either misunderstood the task or did not pay close attention to the choice question).

Experiment Procedure - China

1. Arrive at survey location, setup laptop computers and boot up survey software.
2. Team members walk around the streets nearby survey location and ask any individual walking by if they recently purchased a vehicle or are planning to purchase one soon.
3. If a respondent says yes to either question in step 2, then the team member asks the respondent if he or she would like to take a survey, explaining it is for university research and that we will provide a small gift.
4. The respondent is seated at a laptop and instructed how to take the survey.
5. While the respondent fills out the survey, a team member sits beside only to answer any misunderstandings.[10]
6. At completion of the survey, the respondent is given a small gift and thanked for participating.

Experiment Procedure – U.S.

1. A small survey is fielded on Amazon Mechanical Turk (AMT) available to all AMT users. It asks some demographic information as well as two questions about recent or future purchases, and users are paid $0.10 each for completing the survey.
2. If an AMT user selects "personal vehicle" as a recent or future purchase, he or she is tagged as a "car buyer."
3. The full survey is fielded on AMT to all AMT users tagged as a "car buyer."
    a. A "HIT" is posted on AMT announcing the survey, which includes a link to the survey hosted on an external website.

[10] Team members rarely had to explain any information about the survey, and primarily just encouraged the respondents to continue on in the survey and to avoid quitting early.

b. Respondents click the link and complete the survey on the external website.
c. At the end of the survey, respondents are provided with a unique completion code which they must copy and paste into the HIT back on AMT.
d. Once the completion codes entered in the HIT are matched to the survey (confirming completion), respondents are paid $2.00 through the AMT portal.

Appendix D. – Field Experiment Questionnaire (English)[1]

CONSENT FORM

This survey is part of a research study conducted by Erica Fuchs, Ph.D. and Jeremy Michalek, Ph.D. at Carnegie Mellon University.

The purpose of the research is to develop a methodology to assess the impact of nation-specific differences in market and production characteristics on the relative competitiveness of emerging technologies and global technology trajectories.

Procedures

We will conduct Conjoint Surveys to assess consumer preference for vehicle attributes in the U.S. and in China. Respondents will be asked to fill out a short conjoint survey where they are shown hypothetical vehicle profiles and asked to choose which they prefer. The survey is anticipated to take 10 to 15 minutes to complete.

Participant Requirements

Participation in this study is limited to individuals age 18 and older.

Risks

The risks and discomfort associated with participation in this study are no greater than those ordinarily encountered in daily life, during other online activities, or when evaluating purchase decisions when shopping for a car.

Benefits

There may be no personal benefit from your participation in the study but the knowledge received may be of value to humanity.

Compensation & Costs

There will be no costs for participating. You will be paid $2 for completing the survey.

Confidentiality

The data captured for the research does not include any personally identifiable information about you.

Right to Ask Questions & Contact Information

If you have any questions about this study, you should feel free to ask them by contacting the Principal Investigator now at erhf@andrew.cmu.edu. If you have questions later, desire additional information, or wish to withdraw your participation please contact the Principle Investigator by mail, phone or e-mail in accordance with the contact information listed above.

[1] The Chinese version of the questionnaire was identical in presentation and content except for translation, which was conducted by the State Information Center in Beijing, China, and then back translated for verification by a third party expert. The attribute levels and units were also adapted for the Chinese market.

If you have questions pertaining to your rights as a research participant; or to report objections to this study, you should contact the Research Regulatory Compliance Office at Carnegie Mellon University. Email: irb-review@andrew.cmu.edu. Phone: 412-268-1901 or 412-268-5460

The Carnegie Mellon University Institutional Review Board (IRB) has approved the use of human participants for this study.

Voluntary Participation

Your participation in this research is voluntary. You may discontinue participation at any time during the research activity.

The following questions will be included in the web page so that they must be answered appropriately before the individual can proceed to the study task:

1. I am age 18 or older. ☐ Yes ☐ No [if the answer is no, the individual cannot participate and should not be allowed to proceed to the next question.]
2. I have read and understand the information above. ☐ Yes ☐ No [if the answer is no, the individual cannot participate and should not be allowed to proceed to the next question.]
3. I want to participate in this research and continue with the survey. ☐ Yes ☐ No [if the answer is no, the individual cannot participate and should not be allowed to proceed to the next question.]

<u>Section 1</u>

We will begin the survey by asking about your vehicle history and interest in purchasing a car.

1. When was the last time you purchased a vehicle?
   - ○ Never
   - ○ Less than 1 year ago
   - ○ Greater than 1 year ago

2. When do you plan on purchasing a vehicle in the future?
   - ○ Never
   - ○ Less than 1 year from now
   - ○ Between 1 and 2 years from now
   - ○ Greater than 2 years from now

3. In your household, who is the primary decision-maker for purchasing a vehicle?
   - ○ Me
   - ○ Another household member
   - ○ Both me and another household member together

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<u>Section 1</u>

4. What was the make and model of the last vehicle you purchased?

Make: ___________________________

Model: __________________________

(leave blank if you do not currently own a vehicle)

5. How many vehicles does your household currently own?
   ○ ○ ○ ○

0 1 2 3 or more

6. On average, how many miles do you drive every day?
   - O Less than 5
   - O 5 to 10
   - O 10 to 15
   - O 15 to 20
   - O 20 to 25
   - O 25 to 30
   - O 30 to 35
   - O 35 to 40
   - O More than 40
   - O I don't know
   - O I don't drive

7. How many total miles did you drive last year?
   - O Less than 5,000
   - O 5,001 to 7,000
   - O 7,001 to 9,000
   - O 9,001 to 11,000
   - O 11,001 to 13,000
   - O 13,001 to 15,000
   - O 15,001 to 17,000
   - O 17,001 to 19,000
   - O More than 19,000
   - O I don't know
   - O I don't drive

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Section 2

From this point in the survey forward, you should consider everything shown as though you were shopping for your next primary vehicle.

-- PAGE 4 --

Section 2

If you were shopping for a car, which car segment would you be most interested in purchasing? (some pictures are presented as examples):

Small Cars:
Midsize Cars:
Large Cars:
None of the above

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Section 2

Of the segment you chose, which vehicle would you be most likely to buy based on appearance only?

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Section 2

You have selected this vehicle design:

[image of chosen design here]

This image will be used for the next section. If the vehicle shown above is not the one you wanted, click the "back" button on the web browser and select a different image, otherwise click "next" below.

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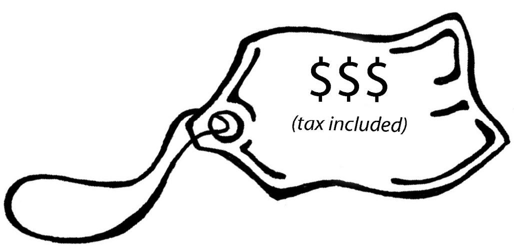
Section 3

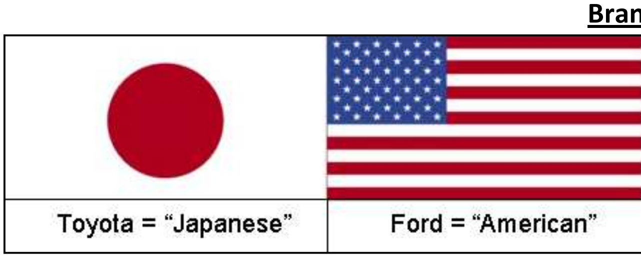
In the next section, we will ask some questions about certain vehicle features, explained below. Please read the descriptions carefully before moving forward in the survey. You will be able to view a summary of these descriptions later in the survey.

Price



The final price paid for the vehicle in dollars, *including all taxes and fees*.

Brand



The vehicle manufacturer country of origin.

Vehicle Type

Conventional: Gasoline engine only.

Hybrid: 
Smaller gasoline engine + electric motor + small batter.
Gasoline engine recharges the battery, fuel consumption is reduced.

Plug-In Hybrid , 
Hybrid that can also be plugged into an electrical outlet to charge the battery.
Runs on electricity for a short range (10 – 40 miles), then switches to gasoline.

Electric: 
Electric motor only. Must be plugged into an electrical outlet to be refueled.
(6 – 10 hours to fully charge).

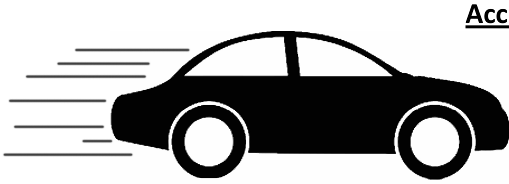
<u>Fast Charging Capability</u>

If this feature is available, an electric vehicle could fully charge in 10 – 20 minutes, but only at special service stations.

<u>Fuel Cost</u>

Cost in cents per mile driven. The equivalent fuel efficiency in miles per gallon (MPG) of a conventional gasoline vehicle is displayed in parenthesis.

<u>Acceleration Time</u>



The acceleration time to go from 0 to 60 mph, such as when entering a highway or interstate.

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<u>Section 3</u>

For the next section, we will show you 3 vehicles for sale, and you should select the choice you are most likely to buy, assuming they are the only available choices on the market.

Each option will look the same, but will have different attributes. Below is an example question.

Note that some of the options are likely to be vehicles you have not seen in the current market, but may become available in the future. You should respond as if they were available today.

** BEGIN EXAMPLE QUESTION **
[example question here]

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Section 3

Great! We will now begin the comparison portion of the survey. You will be asked 15 questions total in this section. You may proceed now by clicking the "next" button below.

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Section 3

Suppose these 3 vehicles below were the only vehicles available for purchase, which would you choose?

Each option will look like this:

Attribute	Option 1	Option 2	Option 3

*To view an attribute description, click on:
**The average acceleration for cars in the U.S. is 0 to 60 mph in 7.4 seconds

[Here each random question was displayed in sequential order]

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Section 4

We will now ask some general questions about your vehicle preferences and experience with alternative vehicles

1. Please rate the importance of these features in making a decision to purchase a vehicle:

	Unimportant	Somewhat Unimportant	Neutral	Somewhat Important	Very Important
Price					
Storage / cargo space					
Reliability / low maintenance					
Safety					
Vehicle towing capacity					
Outer appearance / style					

2. Please rate how much you agree with the following statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The appearance of my vehicle is an important status symbol for me					
I want people to know that I am an environmentally friendly person					
Global climate change is a serious threat to humanity					
Global climate change is mostly caused by human activities					

3. Please select any of the vehicle types that you have ever driven, even if for just a test drive:

   ○ Conventional ○ Hybrid ○ Plug-in Hybrid ○ Electric ○ I have never driven any of these vehicle types

4. Please select how many parking spaces you have to park a vehicle at the following locations:

At home in my personal garage:

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 or more ○ I don't know

At home in a community parking garage:

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 or more ○ I don't know

At home in my driveway:

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 or more ○ I don't know

At home on the street:

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 or more ○ I don't know

At home at another location:

○ 1 ○ 2 ○ 3 ○ 4 ○ 5 or more ○ I don't know

5. Of the places you have available parking, which have access to an electric outlet where you could plug in a vehicle for charging? (select all that apply)

   ○ At home in my personal garage
   ○ At home in a community parking garage
   ○ At home in my driveway
   ○ At home on the street
   ○ At home at another location
   ○ At work in a community parking garage
   ○ At work in my driveway
   ○ At work on the street
   ○ At parking meters in town

6. Do you have access to fast charging stations in your city?

   ○ Yes ○ No ○ I don't know

7. Please rank your top 3 favorite vehicle brands starting from "1" as most favorite:

#1:
#2:
#3:

8. Which vehicle type do you expect will have highest maintenance cost?

O	O	O	O	O
Conventional	Hybrid	Plug-in Hybrid	Electric	All about the same

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Section 5

Thank you so much for your help. Please answer these last few demographic questions for statistical purposes and then we'll be finished. Your responses will be kept confidential, and we have designed the survey such that there is no way to identify you to your responses.

1. What is your annual household income range?

   - O Less than $12,500
   - O $12,500 to $19,999
   - O $20,000 to $24,999
   - O $25,000 to $29,999
   - O $30,000 to $37,499
   - O $37,500 to $49,999
   - O $50,000 to $62,499
   - O $62,500 to $74,999
   - O $75,000 to $87,499
   - O $87,500 to $99,999
   - O $100,000 or more
   - O I do not wish to answer

2. What is your sex?

O	O	O
Male	Female	I do not wish to answer

3. Including yourself, how many people are in your household?

O	O	O	O	O	O	O	O
1	2	3	4	5	6	7 or more	I do not wish to answer

4. In what year were you born: ____________
5. Please enter your zip code: _____________

6. Which of the following best describes your highest achieved education level?

   - O Some secondary education
   - O Graduated high school
   - O Some university Education
   - O 2 year university or trade school degree

- ○ 4 year university degree (bachelors)
- ○ Masters degree
- ○ Doctoral degree
- ○ I do not wish to answer

7. How many children do you have?

○	○	○	○	○	○	○
1	2	3	4	5	6 or more	I do not wish to answer

8. Could you tell us what your current living situation is?

- ○ Married or living with a partner
- ○ Separated
- ○ Divorced
- ○ Widowed
- ○ I do not wish to answer

9. Please share your comments on the survey design:

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This completes the survey. Thank you!

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Appendix E – Details of Survey Design and Preparation

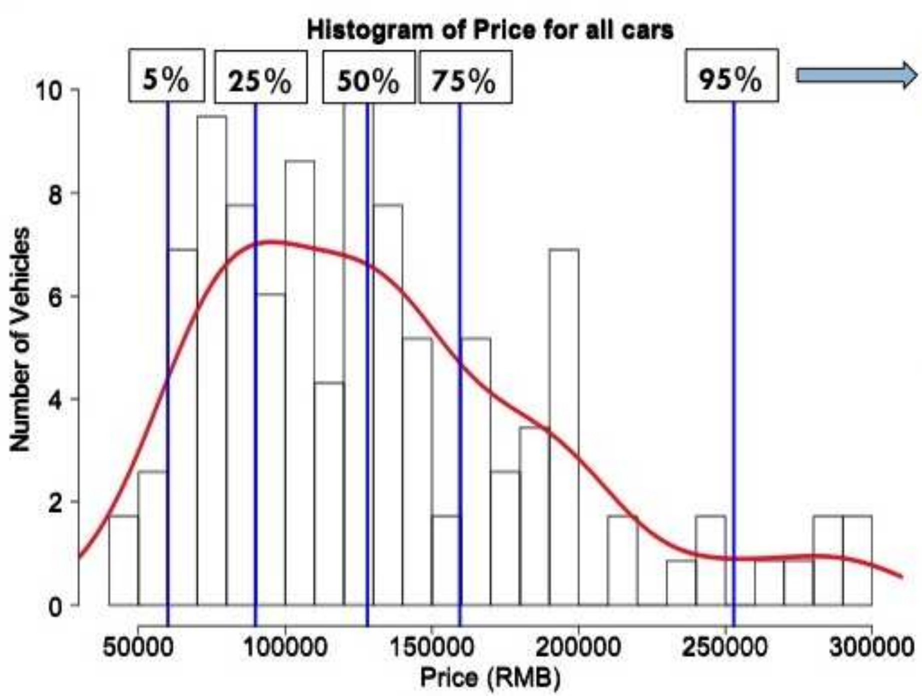
The survey design process began in the spring of 2011. John Helveston was interning in Beijing, and during this time he visited several automotive dealerships and conducted informal interviews with salesmen to identify which vehicle attributes were most important to consumers. In addition, a review of previous literature revealed attributes that have been shown to be important in vehicle choice, as shown in Table E1 below. The results of the interviews and literature review were used to narrow the attribute list included in the choice survey.

Table E1: Important attributes for vehicle choice from previous literature.

Study	Price	Brand	Type	Charge Time	Efficiency	Acceleration
Train	x	x	x	x	x	x
Brownstone	x		x	x	x	x
McFadden	x	x	x		x	x
Golob	x		x		x	
Axsen	x	x	x	x	x	x

Once the attributes were chosen, we had to choose levels for each, which required considering the interests of the study as well as characteristics of the U.S. and Chinese vehicle markets. For vehicle type, we used a CV, a HEV, 3 PHEVs, and 3 BEVs (each with different electric ranges). These were chosen because we needed to compare preferences for electrified vehicle types against CVs and we also wanted to compare the effect of AER for BEVs and PHEVs on preferences. We chose 3 BEVs and 3 PHEVs as a compromise between the number of attributes we would need to estimate and the ability to estimate the effect of AER. We did not want to include Brand originally as we were afraid it might "swamp" the effects of other attributes and because we were not particularly interested in its effect on vehicle choice, but previous interviews suggested that without it respondents would likely not take the survey seriously as brand is such an important factor. As a result, brand was represented as the country of origin of the make (ex. "Volkswagen" would be "German," and "Ford" would be "American") in order to maintain a manageable number of alternatives. We originally had 3 levels for "fast charging" times (10, 20, and 30 minutes) and 3 levels for "slow charging" times (4, 6, and 10 hours) that were used in several pilot studies, but we found no significance in any of these attributes, so we ended up using only a "Fast Charging Capability" attribute, which was a binary attribute for whether or not a PEV had the ability to charge in under 15 minutes. Since fuel prices are different in each country and the mixed vehicle types in the survey have different fuels (gasoline and electricity), operating cost was presented in cost per mile driven rather than presenting vehicle efficiency. The equivalent fuel economy for a conventional gasoline vehicle was provided in parenthesis for reference, since it is a more familiar metric for respondents, a result of feedback from the pilot studies. Finally, the acceleration time attribute was simply the time it took to accelerate from 0 to 60 miles per hour in the U.S. or 0 to 100 kilometers per hour in China.

For purchase price, operating cost, and acceleration time, the levels were different between each country as well as between cars and SUVs because this is more reflective of what is available in the real market. The levels for these attributes were chosen based on the respective sales distributions of currently available vehicles in the market in 2011 to represent the range of attributes relevant for each market. In each case, we plotted the histogram of the sales data and used approximately the 5th, 25th, 50th, 75th, and 95th percentile values from the resulting distribution as the levels for the attribute. Figure E1 below illustrates an example for car prices in China.



Price Levels
1. ¥60,000
2. ¥90,000
3. ¥130,000
4. ¥170,000
5. ¥250,000

Figure E1: Histogram of prices for new cars in China in 2011, with percentiles indicating how the 5 price levels for the China survey were chosen.

第三部分

各款型的外观如下:

假设只能选择购买下面3款车中的一款，您会选择哪一款？

属性*	款型 1	款型 2	款型 3
车辆类型	传统汽车 一罐汽油可开450 公里	插电式 混合动力汽车 & 第一个 65公里使用电力 (一罐汽油可开450 公里)	电动汽车 满电可开120公里
价格	90,000 元	170,000 元	130,000 元
品牌	德国	美国	日本
快速充电能力	没有	没有	有
燃料成本	0.61元/公里 (8.0 升/100 公里)	0.42元/公里 (5.5升/100 公里)	0.34元/公里 (4.5升/100 公里)
0 至100 公里/时加速时间**	13 秒 (一般慢)	13 秒 (一般慢)	11 秒 (一般快)
	○	○	○

*了解某一属性的详细描述，请点击:

**中国汽车平均加速在12.4秒内0 – 100公里/时。

Figure E2: Example choice task for China. The attribute values (levels) in each choice task were randomly assigned for each question and each respondent.

In an attempt to make the survey as realistic to a true purchase situation as possible, we considered displaying the attributes and levels in the survey in the same manner as the fuel economy labels in each country. Figure E3 and Figure E4 are example images of the current labels in the U.S. and China. While perhaps a better representation of reality, we decided against this option in favor of a simple table of the attributes because the information on the labels in each country is so different and because not all of the attributes in our study are on each label.

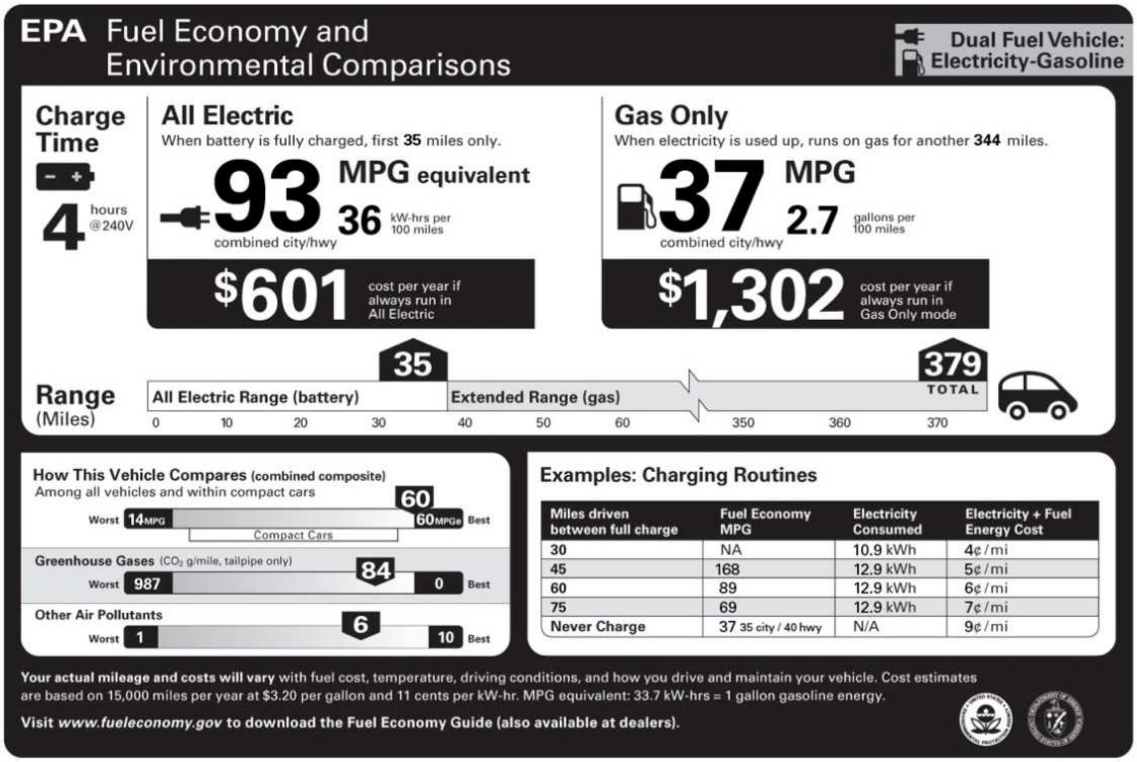


Figure E3: Example U.S. EPA fuel economy label.

Figure E4: Example Chinese fuel economy label (with English translations).

Appendix F - Government Support for Vehicle Electrification in the U.S. and China

In the U.S., interest in vehicle electrification grew out of growing energy concerns following the 1970s and 1980s energy crises as well as the zero-emissions vehicle mandate set by the California Air Resources Board in 1990. Federal tax credits for new qualified plug-in electric vehicles, including BEVs and PHEVs, were granted under the American Recovery and Reinvestment Act of 2009. The federal credit for new PEVs is worth $2,500 plus $417 for each kilowatt-hour of battery capacity over 5 kWh. The total maximum allowable credit is $7,500 (U.S. Congress, 2009). In China, the government's 12th five-year plan targets PEV ownership and domestic production of one million electric vehicles in 2015. For all domestically produced PEVs, the government currently waives the 9% sales tax and provide subsidies of RMB 3,000 ($470) per kWh of battery capacity with a maximum of RMB 60,000 (~$9,420) for BEVs and RMB 50,000 (~$7,850) for PHEVs (State Council, 2012). Figure F1 below summarizes the national incentives in place in each country.

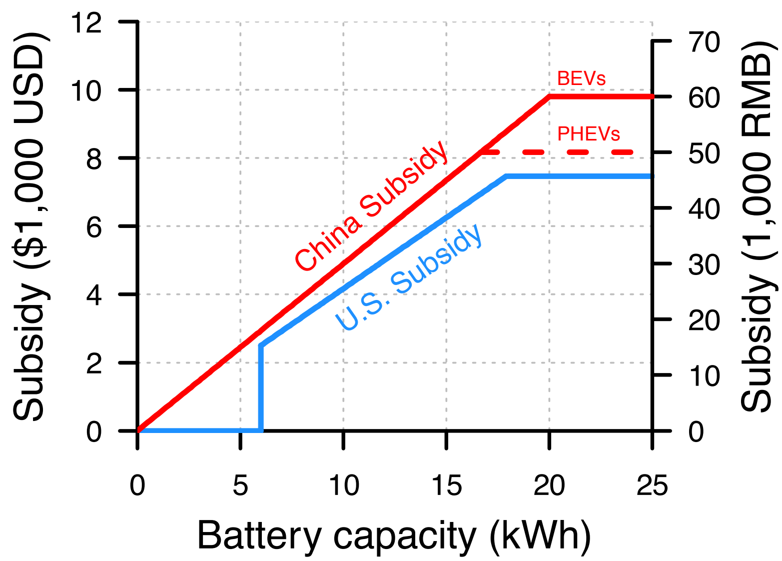


Figure F1: PEV Subsidies in the U.S. and China versus battery capacity.