

Supplementary Material

Driving towards Sustainability: Exploring Risk Perceptions of Fossil Fuels, E-Fuels, and Electric Drives in Individual Transport

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Supplementary Table 1: Results of t-tests to analyze mean differences of the semantic differential.

Dimension	Variables	M	SD	SD of Mean	95% confidence interval		T	df	Significance	
					Lower value	Upper value			One-sided p	Two-sided p
Harmful to health - harmless to health	Fossil - Efuel	-1.49	1.55	.14	-1.76	-1.22	-11.00	129	<.001	<.001
	Fossil - EV	-1.37	2.32	.20	-1.76	-.97	-6.90	136	<.001	<.001
	Efuel - EV	.05	2.15	.19	-.33	.42	.24	130	n.s.	n.s.
Environmentally harmful - sustainable	Fossil - Efuel	-1.73	1.58	.14	-2.00	-1.46	-12.65	132	<.001	<.001
	Fossil - EV	-1.14	2.39	.21	-1.55	-.73	-5.54	133	<.001	<.001
	Efuel - EV	.52	2.22	.19	.14	.90	2.67	130	<.01	<.01
Unnecessary – necessary	Fossil - Efuel	.23	1.76	.16	-.08	.53	1.45	128	n.s.	n.s.
	Fossil - EV	.32	2.80	.24	-.16	.80	1.30	132	n.s.	n.s.
	Efuel - EV	.10	2.86	.25	-.40	.60	.40	127	n.s.	n.s.
Inflexible - flexible	Fossil - Efuel	.20	1.61	.14	-.09	.48	1.38	126	n.s.	n.s.
	Fossil - EV	1.28	2.58	.22	.84	1.72	5.73	133	<.001	<.001
	Efuel - EV	1.05	2.56	.23	.59	1.50	4.57	126	<.001	<.001
Boring - fascinating	Fossil - Efuel	-.46	1.60	.14	-.74	-.18	-3.26	127	<.001	<.01
	Fossil - EV	.11	2.65	.23	-.34	.56	.49	133	n.s.	n.s.
	Efuel - EV	.50	2.64	.24	.03	.96	2.10	124	<.05	<.05
Complex - simple	Fossil - Efuel	.50	1.67	.15	.21	.78	3.42	132	<.001	<.001
	Fossil - EV	.61	2.18	.19	.24	.97	3.26	136	<.001	<.01
	Efuel - EV	.06	2.28	.20	-.33	.45	.31	132	n.s.	n.s.
Expensive - cheap	Fossil - Efuel	.87	1.72	.15	.58	1.17	5.92	134	<.001	<.001
	Fossil - EV	1.20	2.11	.18	.84	1.56	6.62	135	<.001	<.001

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	Efuel - EV	.28	2.20	.19	-.10	.65	1.46	133	n.s.	n.s.
Negative - positive	Fossil - Efuel	-.90	1.78	.16	-1.21	-.59	-5.74	128	<.001	<.001
	Fossil - EV	-.60	3.13	.27	-1.14	-.07	-2.22	132	<.05	<.05
	Efuel - EV	.14	2.87	.26	-.36	.65	.56	124	n.s.	n.s.
Risky - safe	Fossil - Efuel	-.47	1.68	.15	-.76	-.18	-3.23	130	<.001	<.01
	Fossil - EV	-.05	2.44	.21	-.46	.37	-.21	133	n.s.	n.s.
	Efuel - EV	.49	2.11	.19	.13	.86	2.67	129	<.01	<.01
Dirty - clean	Fossil - Efuel	-1.56	1.60	.14	-1.84	-1.28	-10.99	127	<.001	<.001
	Fossil - EV	-1.39	2.45	.21	-1.80	-.97	-6.58	134	<.001	<.001
	Efuel - EV	.15	2.30	.20	-.25	.55	.73	129	n.s.	n.s.
Scary - harmless	Fossil - Efuel	-.64	1.66	.15	-.93	-.36	-4.43	130	<.001	<.001
	Fossil - EV	-.53	2.19	.19	-.91	-.16	-2.81	132	<.01	<.01
	Efuel - EV	.18	2.10	.19	-.19	.54	.96	128	n.s.	n.s.

Supplementary Table 2: Results of t-tests to analyze mean differences between cognitive and affective risk perception dimensions and all drive types.

Risk perception dimension	Variables	M	SD	SD of Mean	95% confidence interval		T	df	Significance	
					Lower value	Upper value			One-sided p	Two-sided p
Cognitive	Fossil - Efuel	.52	1.11	0.09	0.33	0.70	5.49	138	<.001	<.001
	Fossil - EV	0.12	2.07	0.18	-0.22	0.47	0.70	139	n.s.	n.s.
	Efuel - EV	-0.40	2.05	0.17	-0.74	-0.05	-2.28	138	<.05	<.05
Affective	Fossil - Efuel	0.88	1.41	0.12	0.65	1.12	7.38	138	<.001	<.001
	Fossil - EV	0.33	2.49	0.21	-0.08	0.75	1.59	139	n.s.	n.s.
	Efuel - EV	-0.54	2.29	0.19	-0.93	-0.16	-2.79	138	<.01	<.01
Cognitive - Affective	Fossil	0.17	0.69	0.06	0.06	0.29	2.96	139	<.01	<.01
	Efuel	0.53	0.69	0.06	0.42	0.65	9.18	138	<.001	<.001
	EV	0.40	0.66	0.06	0.28	0.51	7.07	140	<.001	<.001

Supplementary Table 3: Results of t-tests to analyze mean differences the effect risk perception dimensions (finance, health, environment) and all drive types.

					95% confidence interval				Significance	
					Lower value	Upper value			One-sided p	Two-sided p

Dimension	Variables	M	SD	SD of Mean	Lower value	Upper value	T	df	One-sided p	Two-sided p
Finance	Fossil - Efuel	.13	1.30	.11	-.09	.34	1.17	140	n.s.	n.s.
	Fossil - EV	-.43	1.23	.10	-.63	-.22	-4.13	140	<.001	<.001
	Efuel - EV	-.56	1.25	.11	-.76	-.35	-5.30	140	<.001	<.001
Health	Fossil - Efuel	.62	1.21	.10	.42	.82	6.08	140	<.001	<.001
	Fossil - EV	.43	1.14	.10	.24	.62	4.48	140	<.001	<.001
	Efuel - EV	-.19	1.14	.10	-.38	.00	-2.00	140	<.05	=.05
Environment	Fossil - Efuel	.69	1.46	.12	.44	.93	5.59	140	<.001	<.001
	Fossil - EV	.41	1.33	.11	.19	.63	3.68	140	<.001	<.001
	Efuel - EV	-.28	1.60	.13	-.54	-.01	-2.05	140	<.05	<.05
Fossil	F – H	.19	1.33	.11	-.03	.41	1.72	140	<.05	n.s.
	F - E	-.77	1.47	.12	-1.01	-.52	-6.20	140	<.001	<.001
	H - E	-.96	1.01	.08	-1.13	-.79	-11.35	140	<.001	<.001
Efuel	F – H	.68	1.47	.12	.44	.93	5.55	140	<.001	<.001
	F - E	-.21	1.52	.13	-.46	.04	-1.63	140	=.05	n.s.
	H - E	-.89	1.05	.09	-1.07	-.72	-10.10	140	<.001	<.001
EV	F – H	1.05	1.20	.10	.85	1.25	10.37	140	<.001	<.001
	F - E	.07	1.35	.11	-.15	.30	.62	140	n.s.	n.s.
	H - E	-.98	1.01	.08	-1.15	-.81	-11.54	140	<.001	<.001