Supplementary material: Divergent effects of economic and behavioural climate policy coupling at the individual and system levels

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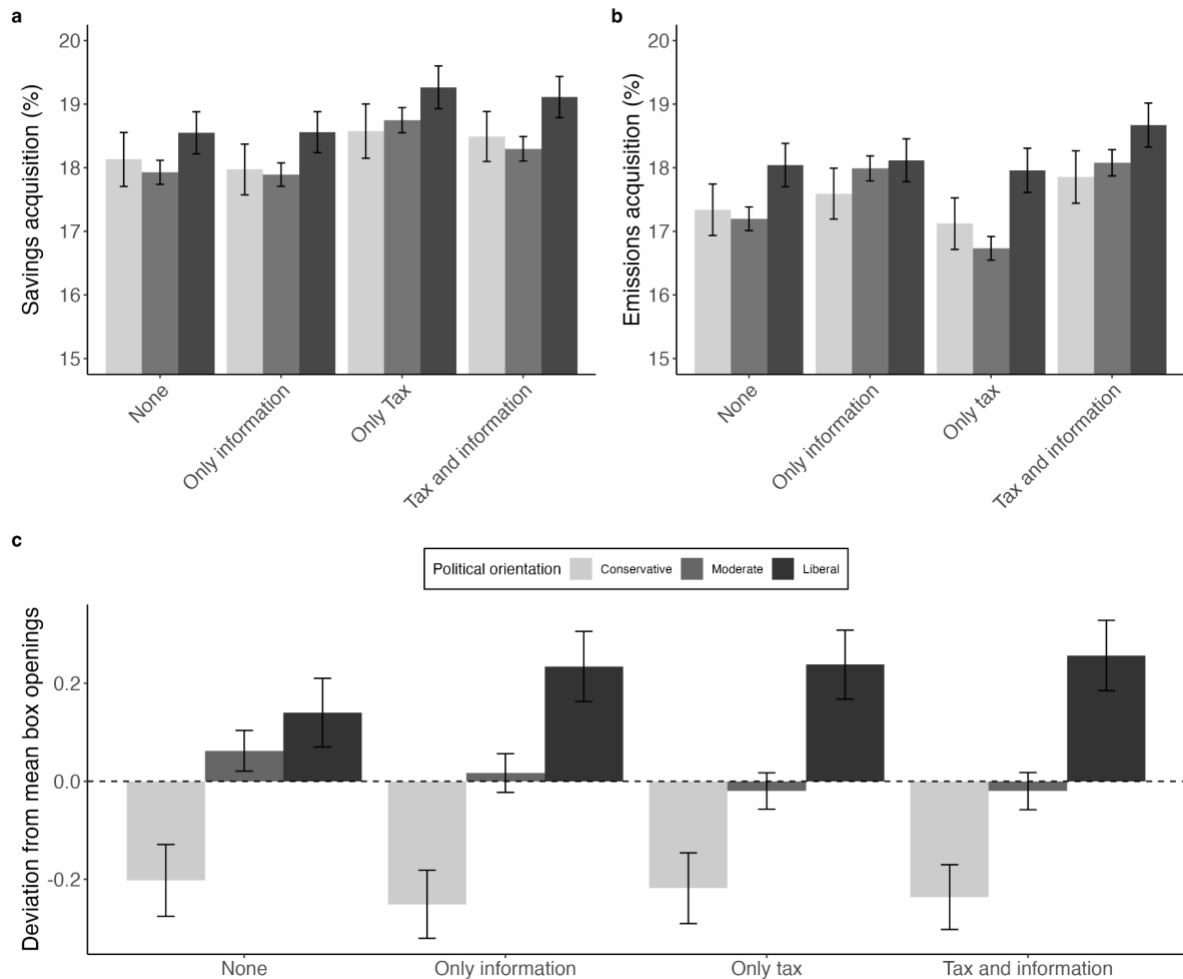
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Supplementary Figure 1. Attention allocation as a function of political orientation and intervention condition

Note. The figure shows descriptive results of attention allocated during decision-making. Error bars represent 95% confidence intervals. **a** No significant interaction observed between the carbon tax and political orientation on attention to savings (b=-0.02, 95% CI [-0.15, 0.12], p=0.806). **b** More liberal participants did not seek out significantly more information regarding GHG emissions than conservatives (main effect political orientation: b=-0.23, 95% CI [-0.57,0.11], p=0.184; evidence against preregistered H9b). No significant interaction observed between information intervention and political orientation on attention to GHG emissions (b=0.12, 95% CI [-0.01, 0.26], p=0.081). **c** Deviation from mean absolute box openings by condition and political orientation. More conservative participants acquired significantly less information overall than liberals before making a decision (b=-0.12, 95% CI [-0.19, -0.04], p=0.002; evidence for preregistered H9a). For the figure, political orientation was categorised as liberal (-1SD), conservative (+1SD), and moderate (between -1SD and +1SD).

Supplementary Figure 2. Agent-based model simulation results under a 2°C policy scenario
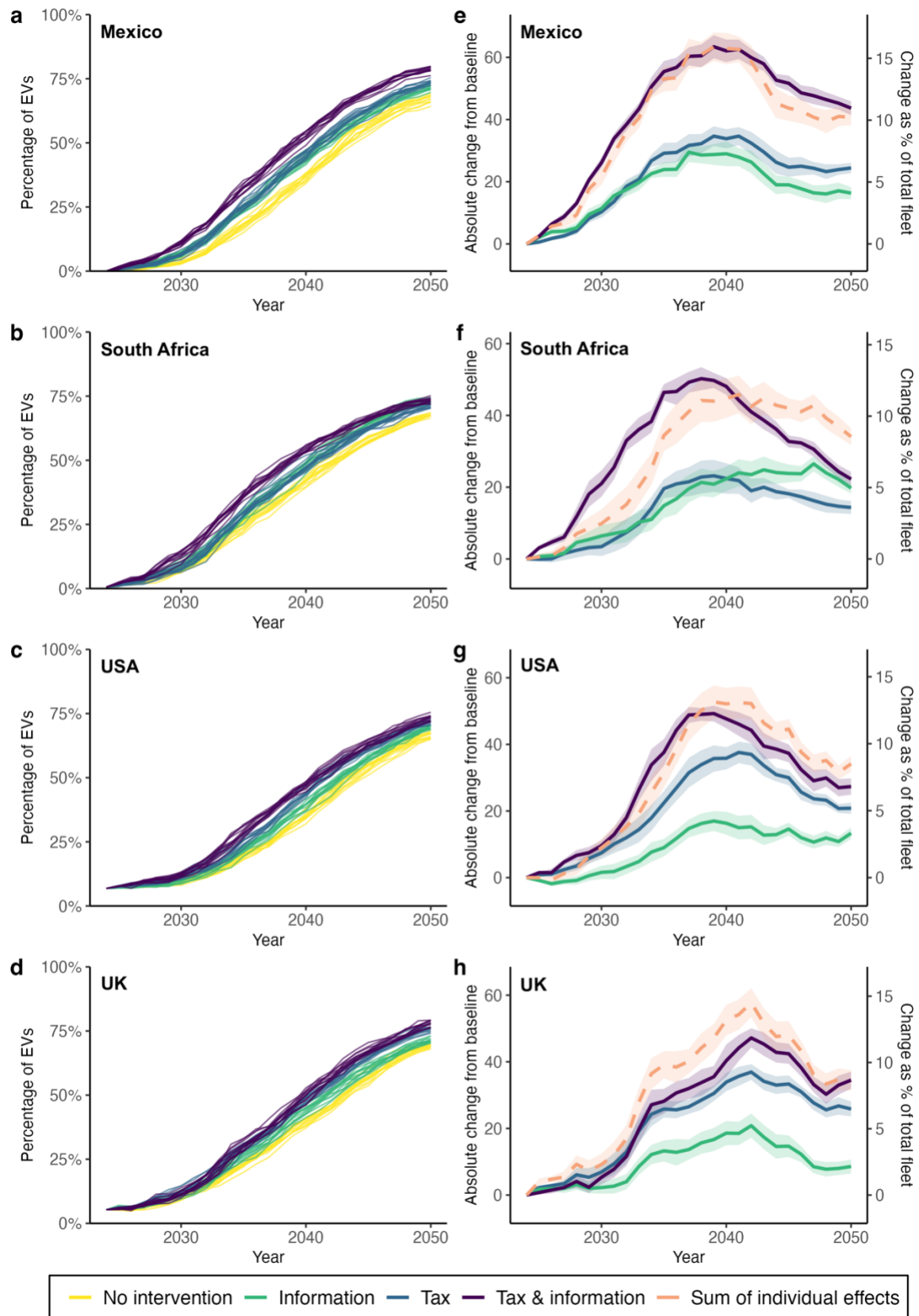
Note. **a-d** Mean diffusion curves of EV adoption under different intervention scenarios: no intervention, carbon tax only, information intervention only, and both interventions combined. Each line represents one simulation, capturing stochastic variation (e.g., agent interactions). Initial share of EVs in the simulations were based on participants' reported EV ownership in each country: Mexico=0%, South Africa=0.51%, USA=6%, UK=4.36%. These values represent realistic EV market shares. Lifecycle GHG emissions in the simulations were based on projections from ref.[1] under a 2 °C climate policy scenario consistent with the Paris Agreement. Underlying policies include stronger renewable energy policies, which lead to reduced lifecycle GHG emissions from EVs. **e-h** Absolute change in EV adoption over time relative to the baseline (neither tax nor information intervention, corresponding to yellow line in left panels). Lines depict adoption under different policy scenarios: combined interventions, individual interventions (carbon tax or information intervention), and their sum (additive expectation). Deviations between observed (purple line) and additive effects (orange dashed line) highlight synergistic, additive, or subadditive dynamics when interventions are combined. The left y-axis shows the absolute change in number of EVs; the right y-axis translates this into the equivalent change as a percentage of the total vehicle fleet in the agent population. Shaded areas represent the 95% range of simulated outcomes.

Supplementary Figure 3. Sensitivity analysis results for country-specific agent-based models
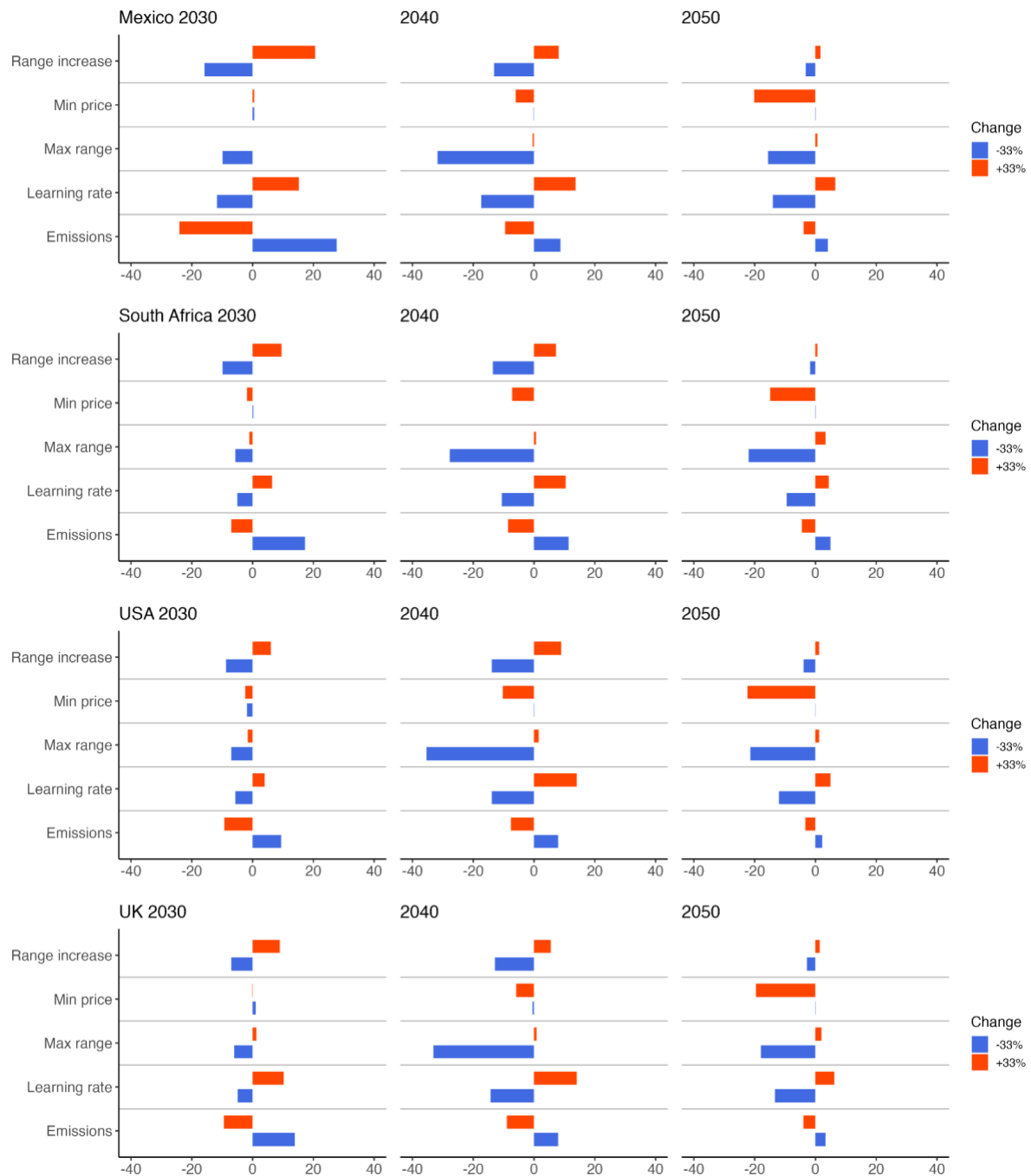
Note. The figure shows the percentage difference (x-axis) in mean EV adoption outcomes in 2030, 2040, and 2050 between the baseline simulation and scenarios from a one-at-a-time sensitivity analysis. In each scenario, one model parameter was varied by ±33% while all others were held constant.

Supplementary Figure 4. Stability analysis results for country-specific agent-based models
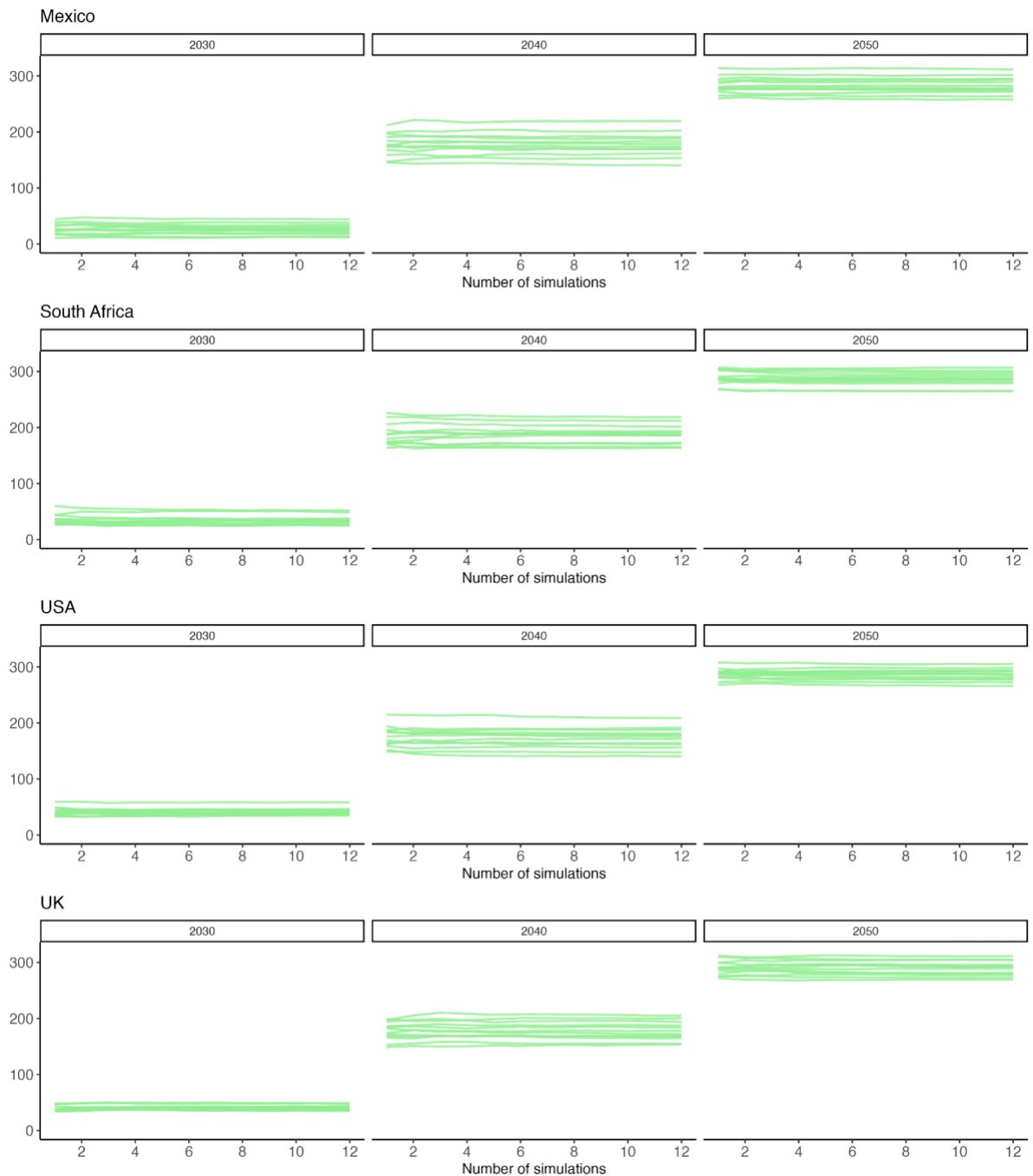
Note. The figure shows the mean EV adoption outcomes across increasing numbers of simulation repetitions (1–12) for each scenario. Stability analysis results indicate that using 12 repetitions was sufficient to ensure consistency in outcomes across scenarios.

Supplementary Figure 5. Uncertainty analysis results for country-specific agent-based models
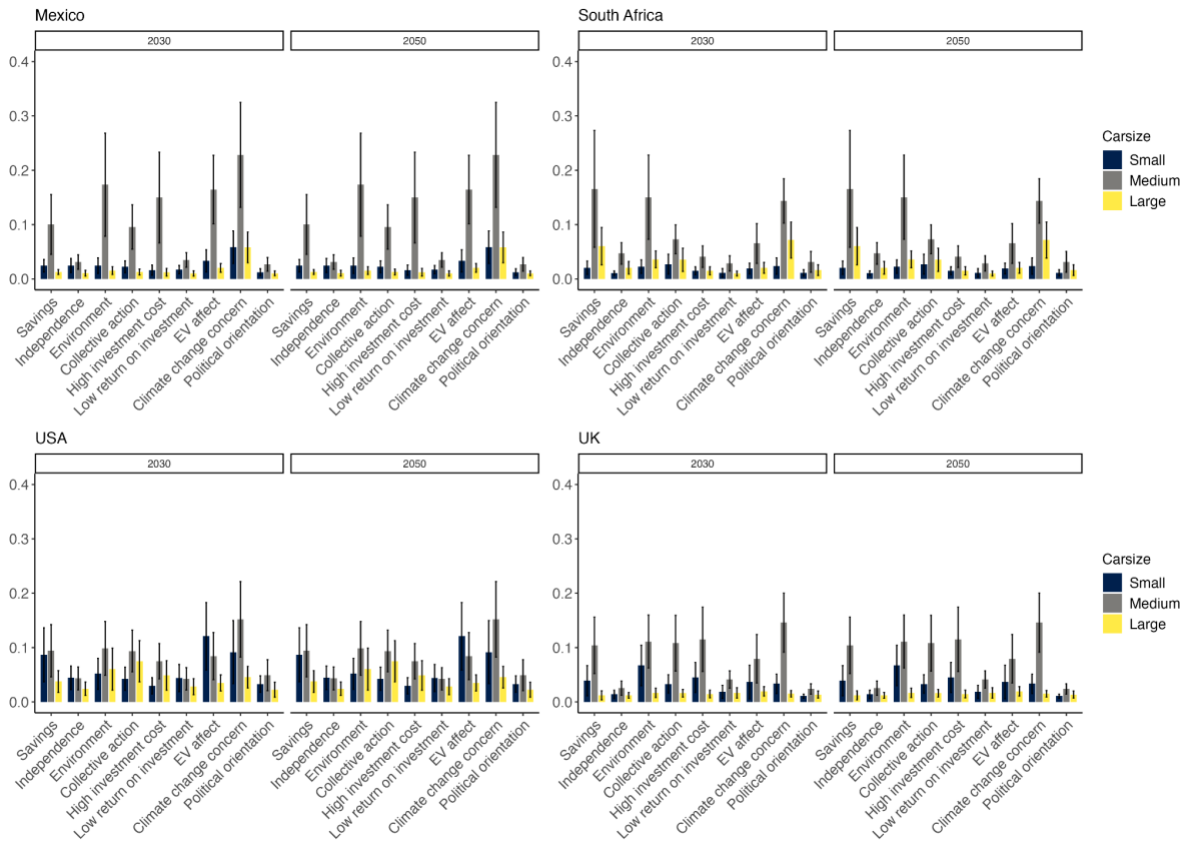
Note. The figure presents Sobol total sensitivity indices for EV adoption in 2030 and 2050. Each bar indicates the influence of a behavioural parameter on EV adoption, disaggregated by car size. Behavioural parameters include the subjective probabilities for benefits and risks from adopting EVs, affect toward EVs, and political orientation. Error bars represent CIs derived from the Sobol sensitivity analysis. Input parameter distributions were specified as normal distributions using regression coefficient estimates and standard errors from the regression models.

Supplementary Table 1. Multilevel logistic regression results for EV adoption decisions including attention to GHG emissions and savings information, additional vehicle attributes and covariates as fixed effects

Fixed effects	EV adoption decision		
	OR	CI	p
(Intercept)	0.38	0.28 – 0.51	**<0.001**
Car size [medium]	1.75	1.40 – 2.19	**<0.001**
Car size [small]	2.06	1.62 – 2.64	**<0.001**
Price [medium]	0.28	0.21 – 0.36	**<0.001**
Price [high]	0.08	0.05 – 0.13	**<0.001**
Savings [medium]	1.11	0.98 – 1.25	**0.093**
Savings [high]	1.18	1.04 – 1.33	**0.009**
Battery range [medium]	5.48	4.85 – 6.19	**<0.001**
Battery range [high]	13.72	12.13 – 15.51	**<0.001**
Emissions [medium]	0.80	0.71 – 0.91	**<0.001**
Emissions [high]	0.54	0.48 – 0.61	**<0.001**
Neighbourhood [medium]	1.24	1.09 – 1.39	**0.001**
Neighbourhood [high]	1.60	1.41 – 1.80	**<0.001**
Attention to GHG emissions (z-scaled)	1.03	1.01 – 1.05	**0.001**
Attention to savings (z-scaled)	1.09	1.08 – 1.12	**<0.001**
Carbon tax [low]	1.04	1.00 – 1.09	**0.046**
Carbon tax [high]	1.40	1.34 – 1.46	**<0.001**
Information intervention [yes]	1.26	1.22 – 1.30	**<0.001**
Age	0.76	0.70 – 0.83	**<0.001**
Income	1.19	1.09 – 1.29	**<0.001**
Political orientation	0.84	0.78 – 0.91	**<0.001**

Random effects			
σ^2	3.29		
τ_{00} participant_id	2.49		
τ_{00} current_task	0.01		
τ_{00} country	0.02		
τ_{11} country.price medium	0.05		
τ_{11} country.price_high	0.21		
ρ_{01} country.price_medium	-0.21		
ρ_{01} country.price_high	-0.00		
ICC	0.44		
N participant_id	1589		
N current_task	18		
N country	4		
Observations	110978		
Marginal R^2 / Conditional R^2	0.305 / 0.612		

Supplementary Table 2. Multilevel regression results for attention allocation as a function of interventions and national context

	Frequency of savings		Likelihood of viewing savings first		Frequency emissions		Likelihood of viewing emissions first	
	b [CI]	*p*	*OR* [CI]	*p*	*b* [CI]	*p*	*OR* [CI]	*p*
Fixed effects								
Intercept	16.97 [15.94, 17.99]		0.19 [0.18, 0.21]		17.96 [16.87, 19.05]		0.19 [0.17, 0.21]	
Carbon tax [Yes]	0.38 [0.11, 0.65]	**0.006**	1.04 [0.98, 1.10]	0.219	-0.06 [-0.20, 0.07]	0.361	1.02 [0.99, 1.05]	0.309
Country [South Africa]	0.96 [0.05, 1.87]	**0.040**	1.08 [0.99, 1.17]	0.089	0.42 [-0.55, 1.39]	0.394	1.09 [1.00, 1.20]	**0.055**
Country [UK]	-0.58 [-1.53, 0.36]	**0.226**	0.94 [0.86, 1.03]	0.173	-2.88 [-3.88, -1.87]	**<0.001**	0.85 [0.77, 0.93]	**0.001**
Country [USA]	-0.18 [-1.14, 0.77]	0.711	0.96 [0.88, 1.05]	0.369	-1.98 [-2.99, -0.96]	**<0.001**	0.89 [0.81, 0.98]	**0.018**
Information intervention [Yes]	-0.19 [-0.32, -0.05]	**0.007**	0.99 [0.96, 1.03]	0.743	0.09 [-0.19, 0.36]	**0.530**	1.04 [0.98, 1.10]	**0.231**
Car [medium]	0.71 [-0.15, 1.57]	0.106	1.05 [0.97, 1.12]	0.225	0.18 [-0.74, 1.10]	**0.706**	1.04 [0.96, 1.13]	0.311
Car [small]	1.51 [0.56, 2.45]	**0.002**	1.14 [1.06, 1.24]	**0.001**	0.83 [-0.18, 1.84]	**0.107**	1.10 [1.00, 1.20]	**0.038**
Price [medium]	-0.15 [-0.31, 0.02]	0.084	0.99 [0.95, 1.02]	0.465	-0.17 [-0.34, -0.00]	**0.049**	0.99 [0.95, 1.03]	0.545
Price [high]	-0.28 [-0.44, -0.11]	**0.001**	0.98 [0.94, 1.02]	0.250	-0.22 [-0.39, -0.06]	**0.008**	0.97 [0.93, 1.01]	0.121
Savings [medium]	0.05 [-0.12, 0.21]	0.584	0.98 [0.95, 1.02]	0.351	-0.08 [-0.25, 0.09]	**0.347**	1.03 [1.00, 1.07]	0.086
Savings [high]	-0.02 [-0.18, 0.15]	0.845	0.99 [0.96, 1.03]	0.683	0.00 [-0.16, 0.17]	**0.974**	1.02 [0.98, 1.06]	0.355
Range [medium]	0.55 [0.38, 0.72]	**<0.001**	1.02 [0.99, 1.06]	0.231	0.25 [0.09, 0.42]	**0.003**	1.01 [0.97, 1.05]	0.567
Range [high]	0.68 [0.52, 0.85]	**<0.001**	1.05 [1.01, 1.09]	**0.015**	0.36 [0.19, 0.53]	**<0.001**	1.04 [1.00, 1.08]	**0.049**
Emissions [medium]	-0.03 [-0.20, 0.14]	0.706	1.02 [0.98, 1.05]	0.417	0.06 [-0.11, 0.22]	0.506	1.01 [0.98, 1.05]	0.463
Emissions [high]	0.04 [-0.13, 0.21]	**0.630**	1.01 [0.97, 1.05]	0.539	0.06 [-0.10, 0.23]	**0.466**	1.00 [0.96, 1.04]	0.979
Neighbourhood [medium]	0.02 [-0.15, 0.19	0.806	1.01 [0.97, 1.05]	0.590	-0.14 [-0.31, 0.02]	0.090	0.99 [0.96, 1.03]	0.690
Neighbourhood [high]	-0.01 [-0.18, 0.16]	0.914	0.98 [0.95, 1.02]	0.364	0.02 [-0.15, 0.19]	0.831	1.01 [0.97, 1.05]	0.761

	Frequency of savings		Likelihood of viewing savings first		Frequency emissions		Likelihood of viewing emissions first	
	b [CI]	p	OR [CI]	p	b [CI]	p	OR [CI]	p
Age	-0.09 [-0.41, 0.24]	**0.610**	1.00 [0.98, 1.03]	0.797	0.44 [0.09, 0.79]	**0.014**	1.03 [1.00, 1.06]	**0.043**
Income	0.09 [-0.24, 0.41]	**0.592**	1.00 [0.97, 1.03]	0.904	-0.00 [-0.35, 0.35]	**0.998**	1.00 [0.97, 1.03]	**0.817**
Political orientation	-0.12 [-0.43, 0.19]	0.464	0.99 [0.97, 1.02]	0.468	-0.17 [-0.50, 0.16]	0.319	0.99 [0.96, 1.01]	0.304
Tax [Yes] × country [South Africa]	0.26 [-0.13, 0.65]	0.192	1.02 [0.93, 1.11]	0.696				
Tax [Yes] × country [UK]	0.33 [-0.06, 0.71]	0.095	1.01 [0.93, 1.11]	0.750				
Tax [Yes] × country [USA]	0.32 [-0.07, 0.70]	0.109	1.00 [0.92, 1.09]	0.996				
Information [Yes] × country [South Africa]					1.08 [0.69, 1.46]	**<0.001**	1.04 [0.95, 1.13]	**0.433**
Information [Yes] × country [UK]					1.30 [0.91, 1.68]	**<0.001**	1.03 [0.94, 1.12]	0.529
Information [Yes] × country [USA]					0.65 [0.26, 1.03]	**0.001**	1.01 [0.93, 1.11]	0.780

Random effects

σ^2	134.61	3.29	134.28	3.29
$\tau_{00\ participant\_id}$	37.28	0.17	42.81	0.22
ICC	0.22	0.05	0.24	0.06
N $_{participant\_id}$	1589	1589	1589	1589
Observations	110978	110978	110978	110978
Marginal R^2 / Conditional R^2	0.004 / 0.220	0.002 / 0.051	0.011 / 0.250	0.003 / 0.067

Supplementary Table 3. Multilevel logistic regression results for EV adoption decisions including additional vehicle attributes and covariates

Fixed effects	OR	CI	p
		EV adoption decision	
(Intercept)	0.36	0.27, 0.49	**<0.001**
Car size [medium]	1.80	1.44, 2.26	**<0.001**
Car size [small]	2.20	1.72, 2.82	**<0.001**
Price [medium]	0.28	0.22, 0.36	**<0.001**
Price [high]	0.08	0.05, 0.13	**<0.001**
Savings [medium]	1.11	0.98, 1.26	0.089
Savings [high]	1.17	1.04, 1.33	**0.011**
Battery range [medium]	5.40	4.77, 6.10	**<0.001**
Battery range [high]	13.39	11.83, 15.16	**<0.001**
Neighbourhood [medium]	1.23	1.09, 1.39	**0.001**
Neighbourhood [high]	1.60	1.41, 1.81	**<0.001**
Emissions [medium]	0.80	0.71, 0.91	**<0.001**
Emissions [high]	0.54	0.48, 0.61	**<0.001**
Information intervention [yes]	1.26	1.22, 1.29	**<0.001**
Carbon tax [low]	1.05	1.00, 1.09	**0.029**
Carbon tax [high]	1.40	1.34, 1.46	**<0.001**
Age	0.75	0.69, 0.82	**<0.001**
Income	1.17	1.08, 1.28	**<0.001**

Random effects

σ^2	3.29
τ_{00} participant_id	2.52
τ_{00} current_task	0.01
τ_{00} country	0.02
τ_{11} country.price_medium	0.05
τ_{11} country.price_high	0.21
ρ_{01} country.price_medium	-0.12
ρ_{01} country.price_high	0.07
ICC	0.45
N participant_id	1589
N current_task	18
N country	4
Observations	114408
Marginal R^2 / Conditional R^2	0.296 / 0.610

Supplementary Table 4. Multilevel logistic regression results for EV adoption decisions by national context

	USA		UK		South Africa		Mexico	
	OR	*p*	*OR*	*p*	*OR*	*p*	*OR*	*p*
Fixed effects								
(Intercept)	0.19 [0.12, 0.29]		0.12 [0.06, 0.24]		0.92 [0.71, 1.20]		0.70 [0.45, 1.07]	
Car size [medium]	2.58 [1.60, 4.17]	**<0.001**	4.28 [2.18, 8.40]	**<0.001**	0.95 [0.70, 1.27]	0.716	1.37 [0.90, 2.07]	0.141
Car size [small]	4.98 [2.85, 8.71]	**<0.001**	3.79 [1.90, 7.54]	**<0.001**	1.11 [0.79, 1.56]	0.559	1.52 [0.98, 2.34]	0.061
Price [medium]	0.25 [0.21, 0.29]	**<0.001**	0.22 [0.17, 0.27]	**<0.001**	0.46 [0.43, 0.50]	**<0.001**	0.22 [0.20, 0.25]	**<0.001**
Price [high]	0.07 [0.06, 0.08]	**<0.001**	0.04 [0.04, 0.06]	**<0.001**	0.21 [0.19, 0.22]	**<0.001**	0.06 [0.05, 0.06]	**<0.001**
Savings [medium]	1.10 [0.95, 1.27]	0.217	1.23 [0.99, 1.53]	0.060	1.04 [0.97, 1.12]	0.244	1.11 [0.98, 1.26]	0.102
Savings [high]	1.04 [0.90, 1.20]	0.607	1.19 [0.96, 1.47]	0.113	1.19 [1.11, 1.28]	**<0.001**	1.34 [1.18, 1.51]	**<0.001**
Range [medium]	6.52 [5.61, 7.56]	**<0.001**	11.25 [9.07, 13.95]	**<0.001**	3.36 [3.14, 3.59]	**<0.001**	4.61 [4.08, 5.20]	**<0.001**
Range [high]	14.74 [12.65, 17.16]	**<0.001**	30.70 [24.63, 38.26]	**<0.001**	7.65 [7.10, 8.24]	**<0.001**	12.86 [11.33, 14.60]	**<0.001**
Neighbourhood [medium]	1.20 [1.04, 1.39]	**0.015**	1.12 [0.91, 1.39]	0.286	1.35 [1.26, 1.44]	**<0.001**	1.22 [1.08, 1.37]	**0.001**
Neighbourhood [high]	1.72 [1.48, 2.00]	**<0.001**	1.35 [1.09, 1.68]	**0.006**	1.63 [1.52, 1.75]	**<0.001**	1.60 [1.41, 1.81]	**<0.001**
Emissions [medium]	0.92 [0.80, 1.07]	0.302	0.97 [0.79, 1.21]	0.813	0.68 [0.63, 0.73]	**<0.001**	0.70 [0.62, 0.80]	**<0.001**
Emissions [high]	0.62 [0.54, 0.72]	**<0.001**	0.62 [0.50, 0.77]	**<0.001**	0.51 [0.48, 0.55]	**<0.001**	0.46 [0.41, 0.52]	**<0.001**
Information [yes]	1.26 [1.18, 1.35]	**<0.001**	1.16 [1.08, 1.23]	**<0.001**	1.24 [1.17, 1.31]	**<0.001**	1.37 [1.29, 1.45]	**<0.001**
Carbon tax [low]	1.07 [0.98, 1.16]	0.138	1.00 [0.92, 1.10]	0.966	1.03 [0.96, 1.10]	0.456	1.09 [1.01, 1.18]	**0.030**

	USA		UK		South Africa		Mexico	
	OR	*p*	*OR*	*p*	*OR*	*p*	*OR*	*p*
Carbon tax [high]	1.48 [1.36, 1.62]	**<0.001**	1.51 [1.38, 1.66]	**<0.001**	1.24 [1.16, 1.33]	**<0.001**	1.45 [1.34, 1.57]	**<0.001**
Age	0.62 [0.52, 0.75]	**<0.001**	0.81 [0.68, 0.97]	**0.024**	0.89 [0.78, 1.02]	0.103	0.89 [0.75, 1.07]	0.212
Income	1.62 [1.31, 2.00]	**<0.001**	1.27 [1.01, 1.61]	**0.043**	1.00 [0.90, 1.12]	0.940	1.03 [0.90, 1.18]	0.639
Political orientation	0.61 [0.50, 0.75]	**<0.001**	0.84 [0.69, 1.02]	0.079	0.96 [0.85, 1.09]	0.557	0.94 [0.83, 1.07]	0.379

Random effects

	USA	UK	South Africa	Mexico
σ^2	3.29	3.29	3.29	3.29
τ_{00}	3.74 participant_id	3.82 participant_id	1.36 participant_id	1.51 participant_id
	0.01 current_task	0.03 current_task		0.01 current_task
ICC	0.53	0.54	0.29	0.32
N	402 participant_id	398 participant_id	392 participant_id	397 participant_id
	18 current_task	18 current_task	*	18 current_task
Observations	28944	28656	28224	28584
Marginal R^2/ Conditional R^2	0.338 / 0.691	0.364 / 0.707	0.213 / 0.444	0.360 / 0.562

Note. * Random intercept for choice task was removed from the logistic regression model in South Africa due to a singular fit. The model converged after removing this random effect.

Supplementary Table 5. Multilevel logistic regression results for EV adoption decisions including intervention x political orientation interaction by national context

	USA			UK			South Africa			Mexico		
	OR	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*
Fixed effects												
(Intercept)	0.19	0.12, 0.29	**<0.001**	0.12	0.06, 0.24	**<0.001**	0.92	0.71, 1.20	0.539	0.70	0.45, 1.07	0.100
Car size [medium]	2.58	1.60, 4.17	**<0.001**	4.29	2.18, 8.41	**<0.001**	0.95	0.70, 1.27	0.717	1.37	0.90, 2.08	0.142
Car size [small]	4.98	2.85, 8.71	**<0.001**	3.79	1.90, 7.55	**<0.001**	1.11	0.79, 1.56	0.559	1.52	0.98, 2.34	0.061
Price [medium]	0.25	0.21, 0.29	**<0.001**	0.22	0.17, 0.27	**<0.001**	0.46	0.43, 0.50	**<0.001**	0.22	0.20, 0.25	**<0.001**
Price [high]	0.07	0.06, 0.08	**<0.001**	0.04	0.04, 0.06	**<0.001**	0.21	0.19, 0.22	**<0.001**	0.06	0.05, 0.06	**<0.001**
Savings [medium]	1.10	0.95, 1.27	0.216	1.23	0.99, 1.53	0.060	1.04	0.97, 1.12	0.243	1.11	0.98, 1.26	**0.102**
Savings [high]	1.04	0.90, 1.20	0.605	1.19	0.96, 1.47	0.113	1.19	1.11, 1.28	**<0.001**	1.34	1.18, 1.51	**<0.001**
Range [medium]	6.52	5.62, 7.57	**<0.001**	11.25	9.07, 13.96	**<0.001**	3.36	3.14, 3.59	**<0.001**	4.61	4.09, 5.21	**<0.001**
Range [high]	14.75	12.66, 17.18	**<0.001**	30.71	24.64, 38.27	**<0.001**	7.65	7.11, 8.24	**<0.001**	12.88	11.34, 14.62	**<0.001**
Neighbourhood [medium]	1.20	1.04, 1.39	**0.015**	1.12	0.91, 1.39	0.286	1.35	1.26, 1.44	**<0.001**	1.22	1.08, 1.37	**0.001**
Neighbourhood [high]	1.72	1.48, 2.00	**<0.001**	1.35	1.09, 1.68	**0.006**	1.63	1.52, 1.75	**<0.001**	1.60	1.41, 1.81	**<0.001**
Emissions [medium]	0.92	0.80, 1.07	0.300	0.97	0.79, 1.21	0.813	0.68	0.63, 0.73	**<0.001**	0.70	0.62, 0.80	**<0.001**
Emissions [high]	0.62	0.54, 0.72	**<0.001**	0.62	0.50, 0.77	**<0.001**	0.51	0.48, 0.55	**<0.001**	0.46	0.41, 0.52	**<0.001**
Information [yes]	1.26	1.18, 1.34	**<0.001**	1.15	1.08, 1.23	**<0.001**	1.24	1.17, 1.31	**<0.001**	1.37	1.29, 1.45	**<0.001**
Political orientation	0.64	0.52, 0.78	**<0.001**	0.86	0.70, 1.06	0.162	1.00	0.88, 1.13	0.944	1.00	0.87, 1.14	0.990
Carbon tax [low]	1.07	0.98, 1.16	0.127	1.00	0.92, 1.10	0.970	1.03	0.96, 1.10	0.462	1.09	1.01, 1.18	**0.030**

	USA			UK			South Africa			Mexico		
	OR	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*
Carbon tax [high]	1.48	1.36, 1.61	**<0.001**	1.51	1.38, 1.66	**<0.001**	1.24	1.16, 1.33	**<0.001**	1.45	1.34, 1.57	**<0.001**
Age	0.62	0.52, 0.75	**<0.001**	0.81	0.68, 0.97	**0.024**	0.89	0.78, 1.02	0.103	0.89	0.75, 1.07	0.213
Income	1.62	1.31, 1.99	**<0.001**	1.27	1.01, 1.61	**0.043**	1.00	0.90, 1.12	0.941	1.03	0.90, 1.18	0.638
Information [yes] x Political orientation	0.93	0.87, 0.99	**0.024**	0.96	0.90, 1.03	0.274	0.96	0.90, 1.01	0.128	0.89	0.84, 0.95	**<0.001**
Carbon tax [low] x Political orientation	1.03	0.95, 1.11	0.500	0.98	0.90, 1.06	0.650	0.98	0.92, 1.05	0.647	0.99	0.92, 1.06	0.726
Carbon tax [high] x Political orientation	0.97	0.89, 1.05	0.422	0.96	0.89, 1.05	0.370	0.98	0.91, 1.05	0.518	1.01	0.94, 1.09	0.756

Random effects

σ^2	3.29			3.29			3.29			3.29		
τ_{00}	3.74 participant_id			3.82 participant_id			1.36 participant_id			1.51 participant_id		
	0.01 current_task			0.03 current_task						0.01 current_task		
ICC	0.53			0.54			0.29			0.32		
N	402 participant_id			398 participant_id			392 participant_id			397 participant_id		
	18 current_task			18 current_task			*			18 current_task		

Observations	28944			28656			28224			28584		
Marginal R^2/ Conditional R^2	0.338 / 0.691			0.364 / 0.707			0.213 / 0.444			0.360 / 0.562		

Note. * Random intercept for choice task was removed from the regression model in South Africa due to a singular fit. The model converged after removing this random effect.

Supplementary Table 6. Linear regression results on simulated EV adoption (from ABM) in 2030, 2040, 2050, by national context, showing the effects of a high carbon tax, information intervention and interaction of policies

	2030		2040		2050	
	Estimate	CI	Estimate	CI	Estimate	CI
Mexico						
(Intercept)	17.75	15.48, 20.02	161.50	157.83, 165.17	272.33	269.88, 274.79
Information [yes]	13.75	10.54, 16.96	21.58	16.40, 26.77	17.33	13.86, 20.80
Tax [high]	9.83	6.63, 13.04	26.83	21.65, 32.02	22.08	18.61, 25.55
Information [yes] × tax [high]	2.83	-1.70, 7.37	9.58	2.25, 16.92	0.08	-4.82, 4.99
South Africa						
(Intercept)	26.17	23.81, 28.52	172.67	169.09, 176.24	291.25	289.37, 293.13
Information [yes]	8.33	5.00, 11.66	20.67	15.61, 25.73	9.92	7.26, 12.57
Tax [high]	5.83	2.50, 9.16	17.58	12.52, 22.64	7.00	4.35, 9.65
Information [yes] × tax [high]	11.33	6.62, 16.04	7.75	0.59, 14.91	-1.58	-5.33, 2.17
USA						
(Intercept)	36.25	34.28, 38.22	164.08	160.88, 167.28	282.83	280.99, 284.68
Information [yes]	4.17	1.39, 6.95	14.67	10.14, 19.19	10.17	7.56, 12.77
Tax [high]	10.00	7.22, 12.78	27.75	23.22, 32.28	15.33	12.73, 17.94
Information [yes] × tax [high]	7.92	3.99, 11.85	2.17	-4.23, 8.57	-3.08	-6.77, 0.60
UK						
(Intercept)	37.75	35.57, 39.93	169.92	166.35, 173.48	281.67	279.21, 284.12
Information [yes]	3.83	0.75, 6.92	14.00	8.96, 19.04	11.92	8.45, 15.39
Tax [high]	10.92	7.83, 14.00	30.50	25.46, 35.54	23.08	19.61, 26.55
Information [yes] × tax [high]	-4.25	-8.61, 0.11	-9.50	-16.63, -2.37	-5.25	-10.16, -0.34

Note. The intercept reflects the baseline level of absolute EV adoption in the absence of any policy. Main effects represent the change in EV adoption when the respective policy is implemented alone, relative to the baseline. The interaction effect reflects the additional change in EV adoption when the two policies are implemented together, beyond the sum of their individual main effects.

Supplementary Table 7. Linear regression results on simulated EV adoption (from ABM) in 2030, 2040, 2050, by national context, showing the effects of a low carbon tax, information intervention and interaction of policies

	2030		2040		2050	
	Estimate	CI	Estimate	CI	Estimate	CI
Mexico						
(Intercept)	17.75	15.44, 20.06	161.50	157.79, 165.21	272.33	270.17, 274.50
Information [yes]	13.75	10.49, 17.01	21.58	16.34, 26.82	17.33	14.27, 20.40
Tax [low]	1.92	-1.35, 5.18	8.92	3.68, 14.16	5.92	2.85, 8.98
Information [yes] × tax [low]	0.75	-3.86, 5.36	-0.75	-8.16, 6.66	-1.25	-5.58, 3.08
South Africa						
(Intercept)	26.17	24.01, 28.32	172.67	168.83, 176.50	291.25	288.94, 293.56
Information [yes]	8.33	5.29, 11.38	20.67	15.24, 26.09	9.92	6.66, 13.18
Tax [low]	1.17	-1.88, 4.21	-1.50	-6.93, 3.93	-5.08	-8.34, -1.82
Information [yes] × tax [low]	-0.92	-5.23, 3.39	9.75	2.08, 17.42	-1.25	-5.86, 3.36
USA						
(Intercept)	36.25	34.23, 38.27	164.08	160.66, 167.51	282.83	281.07, 284.60
Information [yes]	4.17	1.32, 7.02	14.67	9.82, 19.51	10.17	7.67, 12.66
Tax [low]	0.08	-2.77, 2.93	8.08	3.24, 12.93	3.75	1.26, 6.24
Information [yes] × tax [low]	2.75	-1.28, 6.78	-5.67	-12.52, 1.19	-4.92	-8.44, -1.39
UK						
(Intercept)	37.75	35.54, 39.96	169.92	166.73, 173.10	281.67	278.71, 284.62
Information [yes]	3.83	0.71, 6.96	14.00	9.49, 18.51	11.92	7.74, 16.10
Tax [low]	1.67	-1.46, 4.79	-2.17	-6.67, 2.34	7.17	2.99, 11.35
Information [yes] × tax [low]	-3.08	-7.50, 1.33	-3.83	-10.21, 2.54	-8.25	-14.16, -2.34

Note. The intercept reflects the baseline level of EV adoption in the absence of any policy. Main effects represent the change in EV adoption when the respective policy is implemented alone, relative to the baseline. The interaction effect reflects the additional change in EV adoption when the two policies are implemented together, beyond the sum of their individual main effects.

Supplementary Table 8. Multilevel logistic regression results for policy support including additional policy attributes and covariates

	Policy support		
	OR	CI	*p*
Fixed effects			
(Intercept)	0.52	0.46, 0.59	
Carbon tax [low]	0.38	0.36, 0.41	**<0.001**
Carbon tax [high]	0.17	0.16, 0.18	**<0.001**
Climate label [voluntary]	1.36	1.27, 1.45	**<0.001**
Climate label [mandatory]	1.65	1.54, 1.76	**<0.001**
Subsidy [medium]	3.12	2.91, 3.34	**<0.001**
Subsidy [high]	4.53	4.23, 4.86	**<0.001**
Neighbourhood [medium]	1.34	1.26, 1.44	**<0.001**
Neighbourhood [high]	1.49	1.39, 1.59	**<0.001**
Age	0.86	0.82, 0.91	**<0.001**
Income	1.06	1.01, 1.12	**0.019**
Random effects			
σ^2	3.29		
τ_{00} participant_id	0.72		
τ_{00} country	0.01		
ICC	0.18		
N participant_id	1589		
N country	4		
Observations	28602		
Marginal R^2 / Conditional R^2	0.205 / 0.349		

Supplementary Table 9. Multilevel logistic regression results for policy support by national context

	USA			UK			Mexico			South Africa		
	OR	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*
Fixed effects												
(Intercept)	0.67	0.55, 0.81		0.44	0.36, 0.53		0.45	0.37, 0.54		0.62	0.52, 0.74	
Carbon tax [low]	0.28	0.25, 0.32	**<0.001**	0.35	0.30, 0.40	**<0.001**	0.49	0.43, 0.55	**<0.001**	0.43	0.38, 0.49	**<0.001**
Carbon tax [high]	0.14	0.12, 0.16	**<0.001**	0.15	0.13, 0.18	**<0.001**	0.22	0.20, 0.26	**<0.001**	0.16	0.14, 0.19	**<0.001**
Climate label [voluntary]	1.22	1.07, 1.40	**0.003**	1.24	1.08, 1.42	**0.002**	1.55	1.36, 1.76	**<0.001**	1.44	1.26, 1.64	**<0.001**
Climate label [mandatory]	1.47	1.28, 1.68	**<0.001**	1.45	1.26, 1.66	**<0.001**	2.29	2.01, 2.61	**<0.001**	1.48	1.30, 1.69	**<0.001**
Subsidy [low]	2.99	2.60, 3.43	**<0.001**	3.98	3.45, 4.58	**<0.001**	2.73	2.40, 3.10	**<0.001**	3.09	2.71, 3.53	**<0.001**
Subsidy [high]	4.14	3.59, 4.77	**<0.001**	7.39	6.38, 8.57	**<0.001**	3.16	2.77, 3.60	**<0.001**	4.71	4.11, 5.41	**<0.001**
Neighbourhood [medium]	1.33	1.16, 1.52	**<0.001**	1.38	1.21, 1.58	**<0.001**	1.39	1.22, 1.58	**<0.001**	1.29	1.13, 1.47	**<0.001**
Neighbourhood [high]	1.36	1.19, 1.56	**<0.001**	1.52	1.33, 1.75	**<0.001**	1.59	1.40, 1.81	**<0.001**	1.51	1.32, 1.72	**<0.001**
Age	0.79	0.71, 0.88	**<0.001**	0.87	0.79, 0.96	**0.005**	0.99	0.87, 1.11	0.817	0.87	0.78, 0.98	**0.016**
Income	1.12	0.99, 1.26	0.072	1.13	1.00, 1.28	0.051	1.02	0.94, 1.12	0.606	1.00	0.92, 1.09	0.996
Random Effects												
σ^2	3.29			3.29			3.29			3.29		
τ_{00}	1.04 participant_id			0.81 participant_id			0.47 participant_id			0.62 participant_id		
ICC	0.24			0.20			0.12			0.16		
N	402 participant_id			398 participant_id			397 participant_id			392 participant_id		
Observations	7236			7164			7146			7056		
Marginal R^2 / Conditional R^2	0.210 / 0.400			0.252 / 0.400			0.173 / 0.277			0.212 / 0.337		

Supplementary Table 10. Multilevel logistic regression results for policy support including the three-way-interaction between tax x climate impact label x political orientation by national context

	USA			UK			Mexico			South Africa		
	OR	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*
Fixed effects												
(Intercept)	0.64	0.52, 0.79		0.45	0.37, 0.56		0.43	0.35, 0.53		0.62	0.51, 0.75	
Carbon tax [low]	0.29	0.22, 0.38	**<0.001**	0.33	0.25, 0.44	**<0.001**	0.46	0.35, 0.59	**<0.001**	0.45	0.34, 0.58	**<0.001**
Carbon tax [high]	0.16	0.12, 0.21	**<0.001**	0.12	0.09, 0.16	**<0.001**	0.25	0.19, 0.32	**<0.001**	0.17	0.13, 0.22	**<0.001**
Climate label [voluntary]	1.26	0.96, 1.65	0.094	1.05	0.80, 1.38	0.733	1.37	1.06, 1.78	**0.017**	1.44	1.09, 1.89	**0.009**
Climate label [mandatory]	1.77	1.34, 2.32	**<0.001**	1.40	1.07, 1.85	**0.015**	2.84	2.18, 3.70	**<0.001**	1.64	1.25, 2.15	**<0.001**
Political orientation	1.23	1.01, 1.49	**0.035**	1.20	0.99, 1.44	0.057	1.26	1.06, 1.49	**0.009**	1.04	0.87, 1.24	0.690
Subsidy [low]	2.80	2.35, 3.34	**<0.001**	4.05	3.38, 4.85	**<0.001**	2.41	2.05, 2.84	**<0.001**	3.02	2.56, 3.57	**<0.001**
Subsidy [high]	3.91	3.30, 4.64	**<0.001**	7.90	6.61, 9.44	**<0.001**	3.02	2.58, 3.54	**<0.001**	4.52	3.83, 5.33	**<0.001**
Neighbourhood [medium]	1.34	1.13, 1.59	**0.001**	1.46	1.23, 1.74	**<0.001**	1.50	1.28, 1.78	**<0.001**	1.27	1.07, 1.51	**0.005**
Neighbourhood [high]	1.47	1.24, 1.76	**<0.001**	1.52	1.27, 1.82	**<0.001**	1.82	1.54, 2.13	**<0.001**	1.54	1.30, 1.82	**<0.001**
Age	0.80	0.72, 0.89	**<0.001**	0.88	0.80, 0.97	**0.013**	0.99	0.88, 1.12	0.881	0.87	0.78, 0.97	**0.014**
Income	1.14	1.01, 1.29	**0.034**	1.17	1.03, 1.32	**0.013**	1.03	0.94, 1.12	0.596	1.00	0.92, 1.09	0.999
Tax [low] × label [voluntary]	1.05	0.69, 1.58	0.828	1.10	0.72, 1.67	0.658	1.33	0.90, 1.96	0.155	1.04	0.69, 1.56	0.846
Tax [high] × label [voluntary]	0.88	0.58, 1.33	0.533	1.55	1.02, 2.37	0.042	1.08	0.73, 1.61	0.697	0.96	0.64, 1.44	0.830
Tax [low] × Label [mandatory]	0.81	0.54, 1.22	0.313	0.96	0.64, 1.46	0.855	0.87	0.59, 1.29	0.487	0.84	0.56, 1.24	0.380
Tax [high] × label [mandatory]	0.70	0.46, 1.07	0.097	1.16	0.76, 1.77	0.497	0.63	0.43, 0.94	**0.023**	0.90	0.60, 1.35	0.604
Tax [low] × political orientation	0.61	0.48, 0.77	**<0.001**	0.56	0.44, 0.71	**<0.001**	0.73	0.59, 0.91	**0.005**	1.04	0.84, 1.30	0.708
Tax [high] × political orientation	0.59	0.47, 0.75	**<0.001**	0.66	0.52, 0.83	**<0.001**	0.65	0.51, 0.81	**<0.001**	0.93	0.75, 1.17	0.540

	USA			UK			Mexico			South Africa		
	OR	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*	*OR*	CI	*p*
Label [voluntary] × political orientation	0.97	0.77, 1.22	0.798	1.06	0.84, 1.34	0.640	0.92	0.74, 1.15	0.472	0.95	0.75, 1.20	0.684
Label [mandatory] × political orientation	0.63	0.49, 0.80	**<0.001**	0.72	0.56, 0.92	**0.008**	1.00	0.79, 1.27	0.990	0.71	0.56, 0.91	**0.006**
(Tax [low] × label [voluntary]) × political orientation	0.86	0.62, 1.20	0.378	1.07	0.77, 1.49	0.691	1.04	0.76, 1.41	0.805	0.90	0.65, 1.23	0.500
(Tax [high] × label [voluntary]) × Political orientation	1.18	0.84, 1.66	0.335	0.87	0.62, 1.22	0.415	1.10	0.79, 1.52	0.568	1.17	0.84, 1.62	0.346
(Tax [low] × label [mandatory]) × political orientation	1.40	1.00, 1.97	0.050	1.40	1.00, 1.97	0.053	0.90	0.65, 1.24	0.517	1.29	0.93, 1.79	0.131
(Tax [high] × label [mandatory]) × political orientation	1.74	1.23, 2.44	**0.002**	1.31	0.93, 1.85	0.119	1.08	0.78, 1.51	0.641	1.42	1.01, 1.98	**0.041**

Random effects

σ^2	3.29			3.29			3.29			3.29		
τ_{00}	1.05 participant_id			0.81 participant_id			0.48 participant_id			0.62 participant_id		
ICC	0.24			0.20			0.13			0.16		
N	402 participant_id			398 participant_id			397 participant_id			392 participant_id		
Observations	7236			7164			7146			7056		
Marginal R^2 / Conditional R^2	0.227 / 0.413			0.267 / 0.411			0.183 / 0.287			0.215 / 0.340		

Supplementary Table 11. Sample characteristics compared to national benchmarks

Variable	Our sample	National distribution	Source
Mexico (*N*=397)			
Age (median)	34	29	ref.[2]
Gender (female in %)	44.8	51.2	ref.[2]
Median disposable household income in $MXN	120,001 to 400,000	171,330 (per capita household income)	ref.[3]
Education (low / medium / high education in %)	1.62 / 21.02 / 77.36	56.22 / 23.15 / 20.64	ref.[4]
South Africa (*N*=392)			
Age (median)	37	28	ref.[5]
Gender (female in %)	51.0	51.1	ref.[6]
Median disposable household income in R	60,001 to 130,000	95,770	ref.[3]
Education (low / medium / high education in %)	2.48 / 27.33 / 70.19	54.73 / 31.35 / 13.91	ref.[4]
United States (*N*=402)			
Age (median)	45	39.2	ref.[7]
Gender (female in %)	48.5	50.5	ref.[8]
Median disposable household income in $	55,001 to 90,000	74,580	ref.[9]
Education (low / medium / high education in %)	0.6 / 30.24 / 69.16	8.16 / 41.82 / 50.32	ref.[4]
United Kingdom (*N*=398)			
Age (median)	44	40.7	ref.[10]
Gender (female in %)	49.0	51.0	ref.[11]
Median disposable household income in £	15,001 to 30,000	36,663	ref.[12]
Education (low / medium / high education in %)	18.02 / 16.22 / 65.77	18.56 / 30.12 / 51.32	ref.[4]

Supplementary Table 12. Attributes and levels of the EV choice experiment by country

Country	Car size	Attribute	Attribute levels	Reference
Mexico	Small	Investment costs	155; 223; 291 k MXN	ref.[13]
		Savings on driving	155; 170; 185 $MXN / 100km	Own calculation (see table note)
		Lifecycle GHG emissions	15; 25; 35 tCO_2e	ref.[1]
		Battery range	240; 420; 600 km	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
	Medium	Investment costs	261; 350; 436 k $MXN	ref.[13]
		Savings on driving	175; 195; 215 $MXN / 100km	Own calculation (see table note)
		Lifecycle GHG emissions	15; 25; 35 tCO_2e	ref.[1]
		Battery range	300; 480; 660 km	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
	Large	Investment costs	688; 805; 950 k $MXN	ref.[13]
		Savings on driving	205; 225; 245 $MXN / 100km	Own calculation (see table note)
		Lifecycle GHG emissions	15; 25; 35 tCO_2e	ref.[1]
		Battery range	370; 550; 730 km	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
South Africa	Small	Investment costs	112; 161; 210 k R	ref.[17]
		Savings on driving	130; 145; 160 R / 100km	Own calculation (see table note)
		Lifecycle GHG emissions	15; 40; 50 tCO_2e	ref.[1]
		Battery range	240; 420; 600 km	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
	Medium	Investment costs	189; 252; 315 k R	ref.[17]
		Savings on driving	150; 165; 180 R / 100km	Own calculation (see table note)
		Lifecycle GHG emissions	15; 40; 50 tCO_2e	ref.[1]
		Battery range	300; 480; 660 km	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
	Large	Investment costs	497; 581; 686 k R	ref.[17]
		Savings on driving	175; 195; 215 R / 100km	Own calculation (see table note)
		Lifecycle GHG emissions	15; 40; 50 tCO_2e	ref.[1]
		Battery range	370; 550; 730 km	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
USA	Small	Investment costs	16; 23; 30 k $	ref.[18]
		Savings on driving	6.7; 7.4; 8.1 $ / 100 miles	Own calculation (see table note)
		Lifecycle GHG emissions	11; 19; 30 tCO_2e	ref.[1]

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Country	Car size	Attribute	Attribute levels	Reference
		Battery range	150; 260; 370 miles	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
	Medium	Investment costs	27; 36; 45 k $	ref.[18]
		Savings on driving	7.2; 8; 8.8 $ / 100 miles	Own calculation (see table note)
		Lifecycle GHG emissions	11; 19; 30 tCO_2e	ref.[1]
		Battery range	190; 300; 410 miles	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
	Large	Investment costs	71; 83; 98 k $	ref.[18]
		Savings on driving	8.7; 9.6; 10.5 $ / 100 miles	Own calculation (see table note)
		Lifecycle GHG emissions	11; 19; 30 tCO_2e	ref.[1]
		Battery range	230; 340; 450 miles	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
UK	Small	Investment costs	11.2; 16; 21 k £	ref.[19]
		Savings on driving	9.9; 10.8; 11.7 £ / 100 miles	Own calculation (see table note)
		Lifecycle GHG emissions	13; 19; 30 tCO_2e	ref.[1]
		Battery range	150; 260; 370 miles	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
	Medium	Investment costs	18.9; 25.2; 31.5 k £	ref.[19]
		Savings on driving	11.5; 12.8; 14.1 £ / 100 miles	Own calculation (see table note)
		Lifecycle GHG emissions	13; 19; 30 tCO_2e	ref.[1]
		Battery range	190; 300; 410 miles	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario
	Large	Investment costs	49.7; 58; 68 k £	ref.[19]
		Savings on driving	13.8; 15.4; 17 £ / 100 miles	Own calculation (see table note)
		Lifecycle GHG emissions	13; 19; 30 tCO_2e	ref.[1]
		Battery range	230; 340; 450 miles	refs.[14–16]
		EV adopters in neighbourhood	8; 40; 72 %	Own scenario

Note. *Savings of driving an EV compared to an ICEV for 100 km (miles) were calculated as follows: (ICEV fuel consumption [litre/100 km (miles)] * price of gasoline [local currency/litre]) - (EV fuel consumption [kWh/100 km (miles)] * price of electricity [local currency/kWh]). Local gasoline and electricity prices at the time of data collection were used as baseline values. Energy consumption depended on car size and type: small car (7.35 litre or 16 kWh), medium (8.4 litre or 19 kWh), large (9.8 litre or 22 kWh)[20,21].

Supplementary Table 13. Attributes and levels of the policy support experiment by country

Country	Attribute	Attribute levels	Reference
Mexico	Carbon tax on gasoline	no tax; 550; 2200 $MXN	ref.[22]
	Climate impact label	no label; voluntary; mandatory	Own scenario
	Subsidy on investment cost	no subsidy; 24.25; 48.5 k $MXN	ref.[16]
	Adopters in neighbourhood	11; 47; 83 %	Own scenario
South Africa	Carbon tax on gasoline	no tax; 400; 1600 R	ref.[22]
	Climate impact label	no label; voluntary; mandatory	Own scenario
	Subsidy on investment cost	no subsidy; 17.5; 35 k R	ref.[16]
	Adopters in neighbourhood	11; 47; 83 %	Own scenario
USA	Carbon tax on gasoline	no tax; 60; 240 $	ref.[22]
	Climate impact label	no label; voluntary; mandatory	Own scenario
	Subsidy on investment cost	no subsidy; 2.5; 5 k $	ref.[16]
	Adopters in neighbourhood	11; 47; 83 %	Own scenario
UK	Carbon tax on gasoline	no tax; 40; 160 £	ref.[22]
	Climate impact label	no label; voluntary; mandatory	Own scenario
	Subsidy on investment cost	no subsidy; 1.75; 3.5 k £	ref.[16]
	Adopters in neighbourhood	11; 47; 83 %	Own scenario

Supplementary Table 14. Preregistered hypotheses and corresponding manuscript hypotheses numbering

Manuscript numbering	Preregistered hypothesis	Expected effect	Deviation from preregistration
Hypothesis 1	Hypothesis 5	Main effect of tax on attention to savings	-
Hypothesis 2	Hypothesis 6	Main effect of information intervention on attention to emissions	-
Hypothesis 3	Hypothesis 7	Negative interaction effect between tax and information on attention to savings	-
Hypothesis 4	Hypothesis 8	Negative interaction effect between tax and label on attention to emissions	-
Hypothesis 5	Hypothesis 1	Main effect of tax on EV choice	-
Hypothesis 6	Hypothesis 2	Main effect of attribute translation on EV choice	-
Hypothesis 7a Hypothesis 7b	Hypothesis 3a Hypothesis 3b	a) Main effect of political orientation b) interaction of political orientation with tax on EV choice	Additionally tested interaction of political orientation and information intervention
Hypothesis 8a Hypothesis 8b	Hypothesis 4a Hypothesis 4b	a) Main effect of country on EV choice b) interaction of country with tax and information intervention	-
Hypothesis 9	Hypothesis 12	Main effect of tax on policy support	-
Hypothesis 10	Hypothesis 11	Main effect of climate information label on policy support	-
Hypothesis 11a Hypothesis 11b	Hypothesis 13a Hypothesis 13b	a) Main effect political orientation b) interaction political orientation and carbon tax on policy support	Additionally tested interaction of political orientation and climate information label
Hypothesis 12a Hypothesis 12b	Hypothesis 14a Hypothesis 14b	a) Interaction tax and climate information label on policy support b) three-way-interaction with political orientation	-
Hypothesis 13a Hypothesis 13b	Hypothesis 15a Hypothesis 15b	a) Main effect of country and b) interaction of country with interventions on policy support	-

Manuscript numbering	Preregistered hypothesis	Expected effect	Deviation from preregistration
-	Hypothesis 9a	a) Main effect of political orientation on total attribute acquisitions and	Reported in the supplementary material, not in the main text (Supplementary Figure 1)
	Hypothesis 9b	b) main effect on attention to emissions	
-	Hypothesis 10a	a) Higher decision threshold for yes-decisions in information intervention conditions compared to without the intervention and	Not reported here
	Hypothesis 10b	b) interaction with political orientation on decision threshold.	

Supplementary Table 15. Sensitivity analysis: Multilevel regression results for attention allocation excluding trials with a response time above a cut-off value of three median absolute deviations above the median, as preregistered

	Frequency of savings		Likelihood of viewing savings first		Frequency emissions		Likelihood of viewing emissions first	
	b [CI]	p	OR [CI]	p	b [CI]	p	OR [CI]	p
Fixed effects								
Intercept	17.00 [16.02, 17.97]		0.19 [0.18, 0.21]		16.87 [15.22, 18.52]		0.18 [0.16, 0.20]	
Car size [medium]	0.70 [-0.18, 1.58]	0.118	1.05 [0.97, 1.13]	0.230	0.10 [-0.84, 1.04]	0.832	1.04 [0.96, 1.13]	0.317
Car size [large]	1.45 [0.49, 2.41]	**0.003**	1.14 [1.05, 1.23]	**0.002**	0.81 [-0.22, 1.83]	0.124	1.10 [1.00, 1.20]	**0.043**
Price [medium]	-0.13 [-0.31, 0.04]	0.141	0.99 [0.95, 1.03]	0.515	-0.19 [-0.37, - 0.02]	**0.032**	0.99 [0.95, 1.03]	0.488
Price [high]	-0.26 [-0.44, - 0.09]	**0.004**	0.98 [0.94, 1.02]	0.365	-0.24 [-0.42, - 0.06]	**0.008**	0.96 [0.92, 1.00]	0.055
Savings [medium]	0.07 [-0.11, 0.24]	0.472	0.98 [0.94, 1.02]	0.327	-0.09 [-0.27, 0.09]	0.310	1.03 [0.99, 1.08]	0.091
Savings [high]	-0.03 [-0.21, 0.14]	0.709	1.00 [0.96, 1.04]	0.901	0.02 [-0.15, 0.20]	0.784	1.01 [0.97, 1.05]	0.511
Range [medium]	0.58 [0.40, 0.76]	**<0.001**	1.02 [0.98, 1.06]	0.365	0.28 [0.10, 0.46]	**0.002**	1.02 [0.98, 1.06]	0.353
Range [high]	0.67 [0.50, 0.85]	**<0.001**	1.04 [1.00, 1.08]	0.069	0.37 [0.19, 0.54]	**<0.001**	1.05 [1.01, 1.09]	**0.019**
Emissions [medium]	-0.03 [-0.20, 0.15]	0.765	1.00 [0.96, 1.04]	0.953	0.08 [-0.09, 0.26]	0.350	1.02 [0.98, 1.06]	0.366
Emissions [high]	0.03 [-0.14, 0.21]	0.704	1.00 [0.96, 1.04]	0.982	0.06 [-0.12, 0.23]	0.537	1.00 [0.97, 1.05]	0.821
Neighbourhood [medium]	0.02 [-0.16, 0.20]	0.818	1.01 [0.97, 1.05]	0.693	-0.16 [-0.34, 0.01]	0.072	0.98 [0.94, 1.02]	0.332
Neighbourhood [high]	-0.02 [-0.20, 0.16]	0.831	0.98 [0.94, 1.02]	0.357	-0.01 [-0.19, 0.17]	0.932	1.00 [0.96, 1.04]	0.929
Carbon tax [Yes]	0.60 [0.46, 0.75]	**<0.001**	1.05 [1.02, 1.09]	**0.002**	-0.08 [-0.23, 0.06]	0.266	1.01 [0.98, 1.04]	0.571
Information intervention [Yes]	-0.23 [-0.37, - 0.08]	**0.002**	0.99 [0.96, 1.02]	0.497	0.89 [0.75, 1.04]	**<0.001**	1.06 [1.03, 1.10]	**<0.001**
Age	-0.12 [-0.45, 0.20]	0.457	1.00 [0.97, 1.03]	0.990	0.39 [0.04, 0.75]	**0.030**	1.03 [1.00, 1.06]	0.098
Income	0.11 [-0.22, 0.44]	0.519	1.00 [0.98, 1.03]	0.804	0.01 [-0.34, 0.37]	0.944	1.00 [0.97, 1.03]	0.931
Political orientation	-0.13 [-0.45, 0.19]	0.432	0.99 [0.96, 1.02]	0.506	-0.15 [-0.49, 0.19]	0.389	0.99 [0.96, 1.02]	0.471
Random effects								
σ^2	139.47		3.29		75.09		3.29	
τ_{00} participant_id	38.91		0.19		39.73		0.24	

τ_{00} country	0.32	0.00	0.12	0.01
ICC	0.22	0.05	0.35	0.07
N participant_id	1589	1589	1589	1589
N country	4	4	4	4
Observations	101982	101982	101982	101982
Marginal R^2 / Conditional R^2	0.003 / 0.222	0.001 / 0.055	0.003 / 0.252	0.001 / 0.071

Supplementary Table 16. Sensitivity analysis: Multilevel regression results for attention allocation with excluding trials with a response time above a cut-off value of three median absolute deviations above the median, as preregistered, including the interaction between interventions

	Frequency of savings		Likelihood of viewing savings first		Frequency emissions		Likelihood of viewing emissions first	
	b [CI]	p	OR [CI]	p	b [CI]	p	OR [CI]	p
Fixed effects								
Intercept	16.92 [15.95, 17.90]		0.19 [0.17, 0.21]		17.01 [15.37, 18.66]		0.18 [0.16, 0.21]	
Car size [medium]	0.70 [-0.18, 1.58]	0.118	1.05 [0.97, 1.13]	0.229	0.10 [-0.84, 1.04]	0.832	1.04 [0.96, 1.13]	0.317
Car size [large]	1.45 [0.49, 2.41]	0.003	1.14 [1.05, 1.23]	0.002	0.81 [-0.22, 1.83]	0.124	1.10 [1.00, 1.20]	0.043
Price [medium]	-0.13 [-0.31, 0.04]	0.142	0.99 [0.95, 1.03]	0.516	-0.19 [-0.37, -0.02]	0.032	0.99 [0.95, 1.03]	0.486
Price [high]	-0.26 [-0.44, -0.09]	0.004	0.98 [0.94, 1.02]	0.365	-0.24 [-0.42, -0.06]	**0.008**	0.96 [0.92, 1.00]	0.055
Savings [medium]	0.07 [-0.11, 0.24]	0.473	0.98 [0.94, 1.02]	0.326	-0.09 [-0.27, 0.09]	0.312	1.04 [0.99, 1.08]	**0.090**
Savings [high]	-0.03 [-0.21, 0.14]	0.708	1.00 [0.96, 1.04]	0.900	0.03 [-0.15, 0.20]	0.782	1.01 [0.97, 1.05]	0.509
Range [medium]	0.58 [0.40, 0.76]	**<0.001**	1.02 [0.98, 1.06]	0.367	0.28 [0.10, 0.46]	**0.002**	1.02 [0.98, 1.06]	0.349
Range [high]	0.67 [0.50, 0.85]	<0.001	1.04 [1.00, 1.08]	0.069	0.37 [0.19, 0.54]	**<0.001**	1.05 [1.01, 1.09]	0.019
Emissions [medium]	-0.03 [-0.21, 0.15]	0.761	1.00 [0.96, 1.04]	0.956	0.09 [-0.09, 0.26]	0.346	1.02 [0.98, 1.06]	0.361
Emissions [high]	0.03 [-0.14, 0.21]	0.704	1.00 [0.96, 1.04]	0.982	0.06 [-0.12, 0.23]	0.537	1.00 [0.97, 1.05]	0.820
Neighbourhood [medium]	0.02 [-0.16, 0.20]	0.816	1.01 [0.97, 1.05]	0.692	-0.16 [-0.34, 0.01]	0.072	0.98 [0.94, 1.02]	0.330
Neighbourhood [high]	-0.02 [-0.20, 0.16]	0.830	0.98 [0.94, 1.02]	0.356	-0.01 [-0.18, 0.17]	0.935	1.00 [0.96, 1.04]	0.931
Carbon tax [Yes]	0.75 [0.55, 0.96]	**<0.001**	1.08 [1.03, 1.13]	0.001	-0.37 [-0.57, -0.16]	**<0.001**	0.95 [0.90, 0.99]	0.021
Information intervention [Yes]	-0.08 [-0.29, 0.12]	0.441	1.02 [0.97, 1.06]	0.480	0.61 [0.40, 0.81]	<0.001	1.00 [0.95, 1.05]	0.939
Age	-0.12 [-0.45, 0.20]	0.457	1.00 [0.97, 1.03]	0.990	0.39 [0.04, 0.75]	0.030	1.03 [1.00, 1.06]	0.098
Income	0.11 [-0.22, 0.44]	0.520	1.00 [0.98, 1.03]	0.806	0.01 [-0.34, 0.37]	0.942	1.00 [0.97, 1.03]	0.936
Political orientation	-0.13 [-0.45, 0.19]	0.432	0.99 [0.96, 1.02]	0.506	-0.15 [-0.49, 0.19]	0.389	0.99 [0.96, 1.02]	0.471

Carbon tax [Yes] × Information intervention [Yes]	-0.29 [-0.58, -0.00]	**0.049**	0.95 [0.89, 1.01]	0.096	0.58 [0.29, 0.87]	**<0.001**	1.13 [1.06, 1.21]	**<0.001**

Random effects

σ^2	139.47	3.29	139.28	3.29
τ_{00} participant_id	38.91	0.19	44.37	0.24
τ_{00} country	2.08	0.01	0.12	0.01
ICC	0.22	0.05	0.25	0.07
N participant_id	1598	1598	1598	1598
N country	4	4	4	4
Observations	101982	101982	101982	101982
Marginal R^2 / Conditional R^2	0.003 / 0.222	0.001 / 0.055	0.003 / 0.252	0.001 / 0.071

Supplementary Table 17. Adoption thresholds for EV adoption in ABM simulations based on Matthews Correlation Coefficient (MCC)

	Threshold	Small EV	Medium EV	Large EV
Mexico	0.05	0.47567866	0.43875093	0.56678438
	0.1	0.5648422	0.53295209	0.64968551
	0.15	0.62070837	0.59374456	0.69967399
	0.2	0.66082575	0.64095843	0.73916518
	0.25	0.69508298	0.67846265	0.77454744
	0.3	0.72587821	0.70400995	0.79235492
	0.35	0.74305651	0.72349457	0.79452467
	0.4	0.75721786	0.73306422	0.81170732
	0.45	0.76865893	0.74289365	0.81331915
	0.5	**0.77696061**	**0.74857129**	**0.81930663**
	0.55	0.76987475	0.74649088	0.81412754
	0.6	0.7669583	0.73825378	0.80702052
	0.65	0.75496686	0.72313551	0.79658968
	0.7	0.74021297	0.70417223	0.78266502
	0.75	0.71491783	0.67905498	0.76678095
	0.8	0.68631987	0.64609415	0.73609905
	0.85	0.65174069	0.6040703	0.69840469
	0.9	0.59773049	0.54204377	0.66081908
	0.95	0.50911657	0.44483082	0.57718263
	1	0	0	0
South Africa	0.05	0.38879624	0.40120483	0.3584761
	0.1	0.48950369	0.49990976	0.4610751
	0.15	0.55444263	0.55984481	0.53243295
	0.2	0.60532447	0.6098948	0.5706388
	0.25	0.6465513	0.64140061	0.60178198
	0.3	0.67727657	0.66928424	0.6386677
	0.35	0.69913906	0.69214806	0.66013338
	0.4	0.71087168	0.70500715	0.67277017
	0.45	0.71904016	0.71709103	0.67928782
	0.5	0.72139414	0.7214309	0.68387725
	0.55	**0.7224669**	**0.7233394**	**0.69373363**
	0.6	0.71846014	0.71992668	0.68773568
	0.65	0.70941916	0.70802977	0.6772074
	0.7	0.68390597	0.68946273	0.65851262
	0.75	0.6668481	0.6642268	0.63763607
	0.8	0.63854098	0.62852808	0.59452617
	0.85	0.59606413	0.58267425	0.54949447
	0.9	0.52588893	0.51876043	0.48799149
	0.95	0.42837165	0.43022575	0.39798969
	1	0	0	0
USA	0.05	0.55460343	0.57945057	0.61343626
	0.1	0.62697642	0.64581391	0.68352051
	0.15	0.67046848	0.68712438	0.73242232
	0.2	0.70838706	0.72299471	0.76180624

	Threshold	Small EV	Medium EV	Large EV
	0.25	0.73504721	0.74660398	0.78408462
	0.3	0.76061421	0.76706248	0.79678171
	0.35	0.77606226	0.77921651	0.81062427
	0.4	0.78764054	0.79222763	0.81583766
	0.45	0.79590034	**0.79583958**	0.81669057
	0.5	**0.79730212**	0.79492529	**0.81872465**
	0.55	0.79233213	0.79212102	0.81481377
	0.6	0.78646969	0.7864248	0.80321809
	0.65	0.77715431	0.77185337	0.78742852
	0.7	0.76369067	0.75216938	0.76365388
	0.75	0.74614329	0.72648083	0.74060351
	0.8	0.71720597	0.69098026	0.70397319
	0.85	0.68462228	0.64677254	0.65917957
	0.9	0.63288442	0.59432304	0.58887414
	0.95	0.55799056	0.50135042	0.49085536
	1	0	0	0
UK	0.05	0.62320844	0.61572794	0.64515784
	0.1	0.7024404	0.696631	0.7255681
	0.15	0.74762113	0.7444894	0.77192039
	0.2	0.77917982	0.77905882	0.8026893
	0.25	0.80059787	0.80154085	0.81832201
	0.3	0.81702424	0.81760165	0.83263736
	0.35	0.82885721	0.8265217	0.84258824
	0.4	0.83893928	0.83403107	0.84349237
	0.45	0.84735386	0.84061966	0.84355094
	0.5	0.84749874	**0.84235024**	**0.84851609**
	0.55	**0.84795189**	0.83997959	0.8453183
	0.6	0.84330429	0.83752957	0.83714381
	0.65	0.83310563	0.83181661	0.82470228
	0.7	0.82100676	0.8216776	0.80934147
	0.75	0.80107834	0.80384873	0.78226806
	0.8	0.77216056	0.78054366	0.7501613
	0.85	0.73769078	0.75237928	0.70618452
	0.9	0.695018	0.70368485	0.64715655
	0.95	0.60241514	0.62688248	0.56810984
	1	0	0	0

Note. For each country and car size, the threshold that maximizes the MCC is selected. An MCC of 1.0 indicates perfect classification, 0.0 indicates performance no better than chance. MCC for binary classification of electric vehicle choices, based on model-predicted probabilities across varying thresholds.

Supplementary Table 18. Agent-based model: Agent-level variables

Name	Description	Domain
General		
Survey profile	One row of the survey data corresponding to one respondent	survey data row (list)
ID number	ID number of the agent, correspond to survey respondent number	integer ≥ 0
Region	In which type of region the agent lives	{0=urban, 0.5=suburban, 1=rural}
Education level	Education level (coded from obligatory school to doctorate)	[0, 1]
Income level	Income level (coded from lowest to highest income category)	[0, 1]
Car		
Car ownership	Whether the agent owns a car	{true, false}
Current car	Link to the agent's current car (ICE, EV, or HEV)	agent reference
Car size	Size of the car the agent is interested in buying	{"small", "medium", "large"}
Car replacement time	After how many years the car will be replaced	{1, 4, 8, 12, random (12–20)}
Car age	Age of the car	integer ≥ 0 years
Adoption status	Whether an agent without a car will adopt in the future	{"current-adopter", "future-adopter", "never-adopter"}
Future adoption year	Year (relative to simulation start) when future adopters evaluate EVs	integer (0–9)
Opinion EV	Opinion on EVs after adoption	{"positive", "neutral", "negative"}
Social network		
Number of peers	Number of links to peers an agent has	integer (0–10)
Homophily preference: region	Degree to which the agent prefers connecting with others from the same region type	[0, 1]
Homophily preference: education	Degree to which the agent prefers connecting with others with similar education	[0, 1]
Homophily preference: income	Degree to which the agent prefers connecting with others with similar income	[0, 1]
Homophily preference: political orientation	Degree to which the agent prefers connecting with others with similar political orientation	[0, 1]
Psychological characteristics		
Affect EV	How the agent feels about EVs from very negative to very positive	[0, 1]
Political orientation	Political orientation of agent from left to right	[0, 1]
Climate change concern	Climate change concern from low to high	[0, 1]
Adoption model		
Subjective probabilities (SP)		
SP: savings	Reported perceived probability that EV adoption reduces agents' expenses	[0, 1]
SP: collective action	Reported perceived probability that EV adoption contributes to collective action	[0, 1]

Name	Description	Domain
SP: independence	Reported perceived probability that EV adoption increases the agents' independence	[0, 1]
SP: investment costs	Reported perceived probability that the investment cost for an EV is too high	[0, 1]
SP: return on investment	Reported perceived probability that the return on investment for an EV is too low	[0, 1]

Regression model: intercept and coefficients

Name	Description	Domain
Intercept	Value of choice function when all other variables are set to zero	Dimensionless
Betas: investment costs	Change in choice function associated with the importance the agent attributes to investment cost	$10,000 (USA); £10,000 (UK); R10,000 (ZA); MXN$10,000 (MX)
Betas: savings	Change in choice function associated with the importance the agent attributes to operating cost savings after adoption	$ / 100 miles (USA); £10 / 100 miles (UK); R10 / 100km (ZA); MXN$10 / 100 km (MX)
Betas: life cycle greenhouse gas emissions	Change in choice function associated with the importance the agent attributes to lifecycle GHG emissions	10t GHG lifetime emissions (USA, UK) 1t GHG lifetime emissions (ZA, MX)
Betas: battery range	Change in choice function based on importance the agent attributes to independence	100 miles
Betas: Indirect peer effect	Change in choice function based on importance the agent attributes to the percentage of other agents that have adopted EVs	10% of other adopters (USA, UK) 1% of other adopters (MX, ZA)
Betas: subjective probabilities	Change in choice function based on subjective probability values	Dimensionless
Betas: Affect towards EVs	Change in choice function based on agents' affect toward EVs	Dimensionless
Betas: Political orientation	Change in choice function based on agents' political orientation	Dimensionless
Betas: Climate change concern	Change in choice function based on agents' climate change concern	Dimensionless
Betas: Carbon tax [low tax]	Change in choice function based on the importance the agent attributes to the implementation of a low carbon tax	Dimensionless
Betas: Carbon tax [high tax]	Change in choice function based on the importance the agent attributes to the implementation of a high carbon tax	Dimensionless
Betas: Climate impact information	Change in choice function based on the importance the agent attributes to the implementation of a climate impact information intervention	Dimensionless
Betas: Carbon tax [low tax] x Climate impact information	Change in choice function based on the importance the agent attributes to the joint implementation of low carbon tax and climate impact information intervention	Dimensionless
Betas: Carbon tax [high tax] x Climate impact information	Change in choice function based on the importance the agent attributes to the joint implementation of high carbon tax and climate impact information intervention	Dimensionless

Supplementary Table 19. Agent-based model: State variables of the environment

Name	Description	Unit
General		
Year	Year in the simulation, starts in 2024	Years
Adoption thresholds	Threshold values to adopt EV (for each car size)	[0, 1]
EV attributes		
Price	Price of EVs before subsidy (for each car size)	Local currency
Learning rate	Yearly decrease in EV price before subsidy	%
Minimum price	Minimum price for EVs (for each EV car size)	Local currency
Life cycle GHG emissions	Life cycle greenhouse gas emissions of EVs	tCO_2-eq / lifetime
EV range	Range of EVs (for each car size)	Miles or km
Range increase	Yearly increase in EV range (linear increase)	Miles or km / year
Policies		
Gasoline tax	Tax imposed on gasoline	{none, low, high}
Climate label on cars	Manufacturer label on cars	{true, false}

Supplementary Table 20. Agent-based model: Technology-related variables fixed at initialization

Variable		Initial value	Source
Adoption threshold	Mexico	Small EV: 0.50 Medium EV: 0.50 Large EV: 0.50	Own calculation (see Table S17)
	South Africa	Small EV: 0.55 Medium EV: 0.55 Large EV: 0.55	Own calculation (see Table S17)
	USA	Small EV: 0.5 Medium EV: 0.45 Large EV: 0.5	Own calculation (see Table S17)
	UK	Small EV: 0.55 Medium EV: 0.50 Large EV: 0.50	Own calculation (see Table S17)
Price	Mexico	Small EV: $MXN291,000 Medium EV: $MXN436,000 Large EV: $MXN950,000	Same as EV choice experiment (see Table S12)
	South Africa	Small EV: R210,000 Medium EV: R315,000 Large EV: R686,000	Same as EV choice experiment (see Table S12)
	USA	Small EV: $30,000 Medium EV: $45,000 Large EV: $98,000	Same as EV choice experiment (see Table S12)
	UK	Small EV: £21,000 Medium EV: £31,500 Large EV: £68,000	Same as EV choice experiment (see Table S12)
Learning rate price	All countries	Small EV: 0.976 Medium EV: 0.981 Large EV: 0.988	Calculated based on price data (see Table S12) using learning curve function (see Note [a])
Life cycle greenhouse gas emissions	Mexico	Current trajectory: 29.6 tCO_2e 2°C policy scenario: 25.0 tCO_2e	Calculation based on ref.[1]
	South Africa	Current trajectory: 45.1 tCO_2e 2°C policy scenario: 47.1 tCO_2e	Calculation based on ref.[1]
	USA	Current trajectory: 30.2 tCO_2e 2°C policy scenario: 23.7 tCO_2e	Calculation based on ref.[1]
	UK	Current trajectory: 26.4 tCO_2e 2°C policy scenario: 22.3 tCO_2e	Calculation based on ref.[1]
EV range	Mexico	Small EV: 156 km Medium EV: 352 km Large EV: 392 km	ref.[15]
	South Africa	Small EV: 156 km Medium EV: 352 km Large EV: 392 km	ref.[15]
	USA	Small EV: 97 miles Medium EV: 219 miles Large EV: 244 miles	ref.[15]
	UK	Small EV: 97 miles Medium EV: 219 miles Large EV: 244 miles	ref.[15]

Variable		Initial value	Source
Range increase	Mexico	Small EV: 1.41 km / year Medium EV: 23.6 km / year Large EV: 13.8 km / year	Calculation based on ref.[15] (see Note [b])
	South Africa	Small EV: 1.41 km / year Medium EV: 23.6 km / year Large EV: 13.8 km / year	Calculation based on ref.[15] (see Note [b])
	USA	Small EV: 0.9 miles / year Medium EV: 14.7 miles / year Large EV: 8.5 miles / year	Calculation based on ref.[15] (see Note [b])
	UK	Small EV: 0.9 miles / year Medium EV: 14.7 miles / year Large EV: 8.5 miles / year	Calculation based on ref.[15] (see Note [b])

Note. [a] The annual price reduction factor was calculated as $(\frac{P_{final}}{P_{initial}})^{\frac{1}{t}}$, where $P_{initial}$ is the starting EV price, P_{final} is the assumed minimum price (equal to the current price of an equivalent ICEV), and t is the number of years until the minimum price is reached. EV prices were multiplied by this factor each year, producing a stronger decline in the beginning that slows as prices approach the minimum. [b] EV range increases were projected using a linear trend based on sales-weighted average range data for battery electric vehicles from 2015 to 2024[15]. Linear regressions were fitted to these data, and resulting coefficients were used as estimated annual increase in battery range.

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