Supplementary Material

Sceptic priors and climate consensus

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Table SM1: TCR efficacies

Forcing agent	Mean	95% C.I.
Aerosols	1.55	(1.05, 2.05)
GHGs	1.17	(1.07, 1.28)
Land use	3.82	(-2.16, 9.80)
Ozone	0.66	(0.34, 0.98)
Solar	1.68	(-1.27, 4.63)
Volcanic	0.61	(0.33, 0.89)

Adapted from Table S1 of Marvel et al. [2016]. Confidence intervals on the sample means are constructed from a t distribution with 4 degrees of freedom.

Table SM2: Covariate vectors for prediction in the year 2100

	RCP 2.6	RCP 4.5	RCP 6.0	RCP 8.5
RF_{2100}	2.626	4.281	5.522	8.340
CO_2 component	85%	83%	86%	78%
Solar component	7%	4%	3%	2%
$\overline{VOLC}$	0.017	0.017	0.017	0.017
$\overline{SOI}$	-0.079	-0.079	-0.079	-0.079
$\overline{AMO}$	-0.002	-0.002	-0.002	-0.002

Notes: Covariates are used to predict the global mean surface temperature anomaly in the year 2100. The Representative Concentration Pathways (RCPs) are a family of forcing scenarios developed for the IPCC Van Vuuren et al. [2011]. Each RCP has a core component of atmospheric CO_2 concentrations, measured in parts per million volume (ppmv). With regard to the covariates in the regression model, total radiative forcing (RF) and volcanic aerosols ($VOLC$) are measured in Wm^{-2}. The Southern Oscillation Index (SOI) and Atlantic Multidecadal Oscilliation (AMO) are measured as scaled indices. Future values for RF are taken from the RCP database. For the rest, historical mean values are used.

Figures

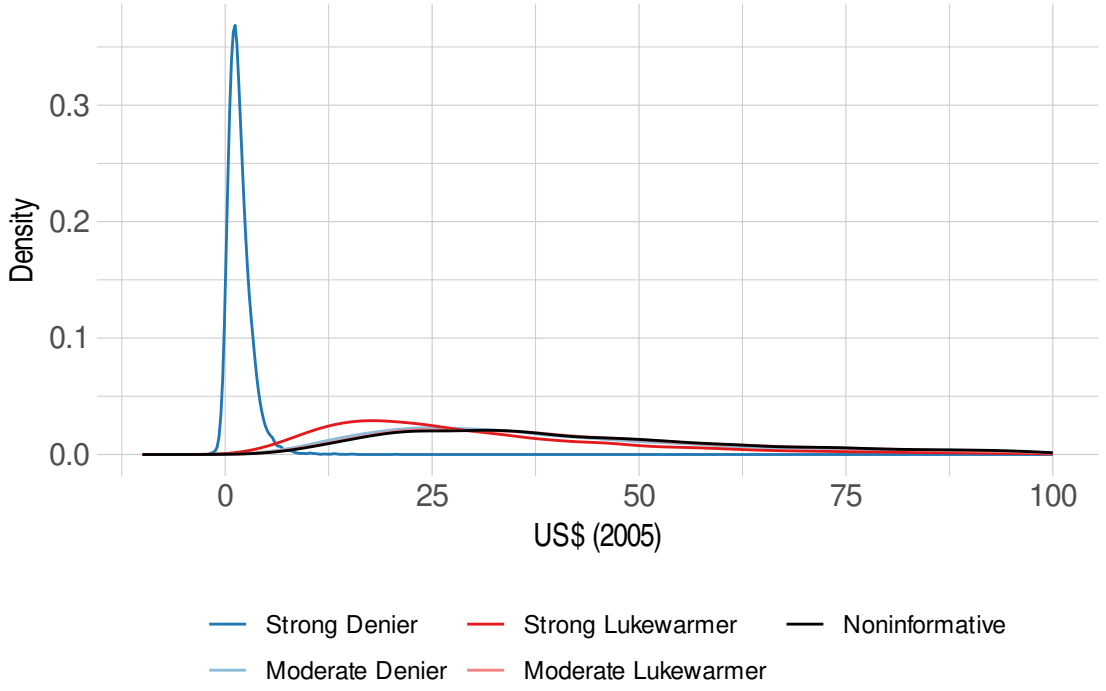

Figure SM1: Social cost of carbon (US$2005 per ton). The results for each agent type are obtained from 10,000 simulation runs of PAGE09 Hope [2011]. Posterior TCR distributions serve as key inputs to the model, while the remaining parameters are set to the PAGE09 model defaults. The x-axis is truncated at 100 to aid visual inspection; the uppermost tails of the distributions being well in excess of the range given here.

References

Chris Hope. The PAGE09 Integrated Assessment Model: A Technical Description. Cambridge Judge Business School, Working Paper Series (4/2011). Available: http://www.jbs.cam.ac.uk/fileadmin/user_upload/research/workingpapers/wp1104.pdf., April 2011. URL http://www.jbs.cam.ac.uk/fileadmin/user_upload/research/workingpapers/wp1104.pdf.

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