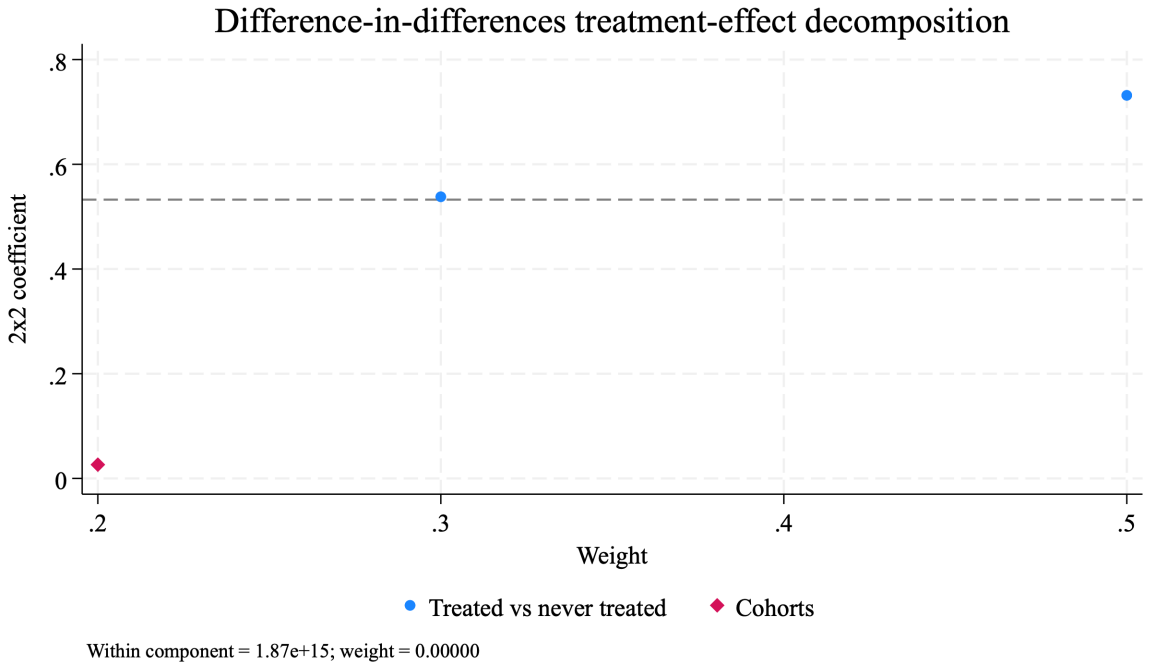
Appendix – Big Data Project

A.1 – Goodman-Bacon Decomposition



Cohorts represents the forbidden comparison between early and late treated observations. Since almost no weight is assigned to it (due to the shortness of our panel) we can infer that the estimates are robust with regards to this concern. The decomposition corresponds to the following model:

$$Sentiment_{i,c,s,t} = a_i + \beta_c + \gamma_s + \theta_t + \delta Dis.Exposure_{i(c),t} + e_{i,t}$$

The model is slightly different from the one we estimate because here we use Year Fixed Effects rather than a linear time trend.

A2. – Additional Specifications: Regression Analysis

All Baseline Estimates without control

	Affected t-1	Affected t-1 (County)	Affected t	Affected t-1 (County)
treated	0.322			
	(0.94)			
treated_county		0.157		
		(0.42)		
treat			0.460	
			(1.24)	
treat_county				0.468
				(1.04)
_cons	-1.562***	-1.274***	-1.550***	-1.418***
	(-18.87)	(-15.27)	(-14.90)	(-20.95)
N	87	120	93	120
R^2	0.80	0.82	0.79	0.78

t statistics in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Including Linear Time Trends

	Affected t-1	Affected t-1 (County)	Affected t	Affected t-1 (County)
treated	0.348			
	(1.11)			
treated_county		0.0249		
		(0.09)		
treat			0.616*	
			(1.98)	
treat_county				0.470
				(1.56)
_cons	-1.533***	-1.421***	-1.386***	-1.416***
	(-5.98)	(-6.54)	(-5.99)	(-6.44)
Time Trend	Yes	Yes	Yes	Yes
N	87	120	93	120
R^2	0.800	0.818	0.794	0.776

t statistics in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Including County Specific Time Trends

	Affected t-1	Affected t-1 (County)	Affected t	Affected t (County)
treated	-0.462			
	(-0.85)			
treated_county		-0.387		
		(-0.91)		
treat			0.204	
			(0.41)	
treat_county				0.374
				(0.85)
N	87	120	93	120
R^2	0.899	0.905	0.868	0.848

t statistics in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Including Year Fixed Effects instead of linear time trend

	Affected t-1	Affected t-1 (County)	Affected t	Affected t (County)
treated	0.348			
	(1.11)			
treated_county		0.0249		
		(0.09)		
treat			0.616*	
			(1.98)	
treat_county				0.470
				(1.56)
_cons	-1.533***	-1.421***	-1.386***	-1.416***
	(-5.98)	(-6.54)	(-5.99)	(-6.44)
Time FE	Yes	Yes	Yes	Yes
N	87	120	93	120
R^2	0.800	0.818	0.794	0.776

t statistics in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Controlling for Beliefs

	Affected t-1	Affected t-1	Affected t-1	Affected t-1
treated	0.369			
	(1.19)			
beliefs	0.127	0.110		
	(1.62)	(1.66)		
treated_county		0.0146		
		(0.05)		
treat			0.515*	
			(1.98)	
believer			-0.170**	-0.233***
			(-2.30)	(0.07)
treat_county				0.289
				(0.289)
_cons	-10.34*	-9.125*	10.15*	19.87***
	(-1.88)	(-1.95)	(2.00)	(3.24)
Time Trend	Yes	Yes	Yes	Yes
N	87	120	93	120
R^2	0.810	0.825	0.813	0.805

t statistics in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Heterogenous Treatment Effects (Interaction Treatment dummy and climate beliefs)

	Affected t-1	Affected t-1 (County)	Affected t	Affected t (County)
1.treated	7.537**			
	(2.37)			
t	0.108	0.208	-0.223	-0.155
	(0.69)	(1.57)	(-1.53)	(-1.34)
1.treated_county		1.517		
		(0.77)		
1.treat			-0.484	
			(-0.24)	
1.treat_county				2.563
				(1.01)
N	87	120	93	120
R^2	0.818	0.826	0.813	0.805

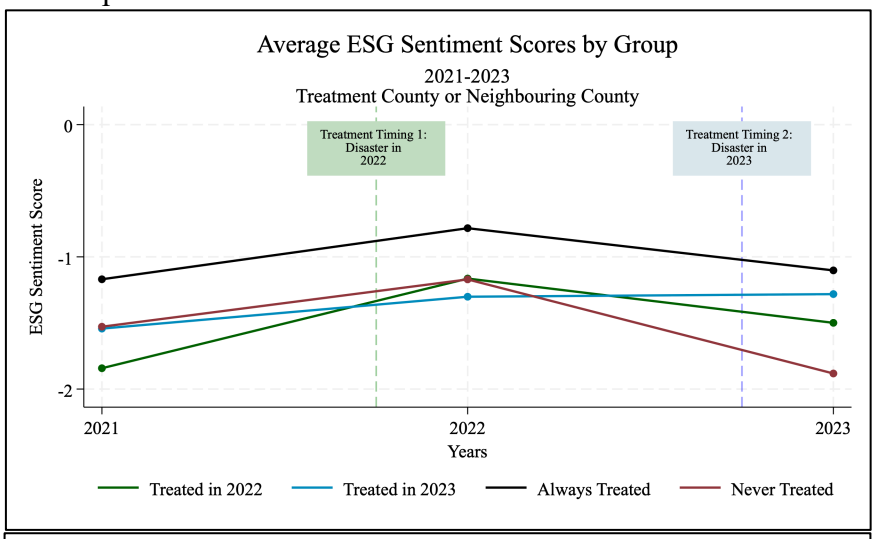
t statistics in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

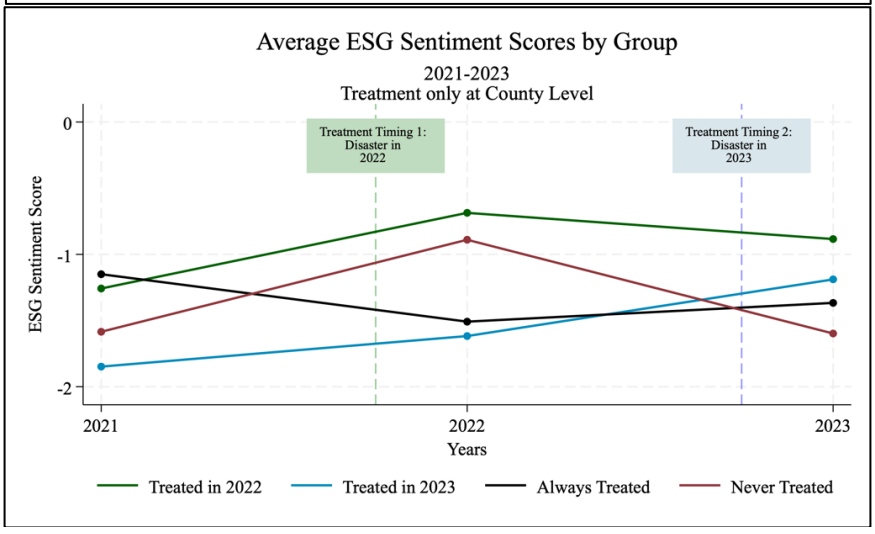
Heterogenous Treatment Effects 2 (Interaction Treatment dummy and Number of press articles in State)

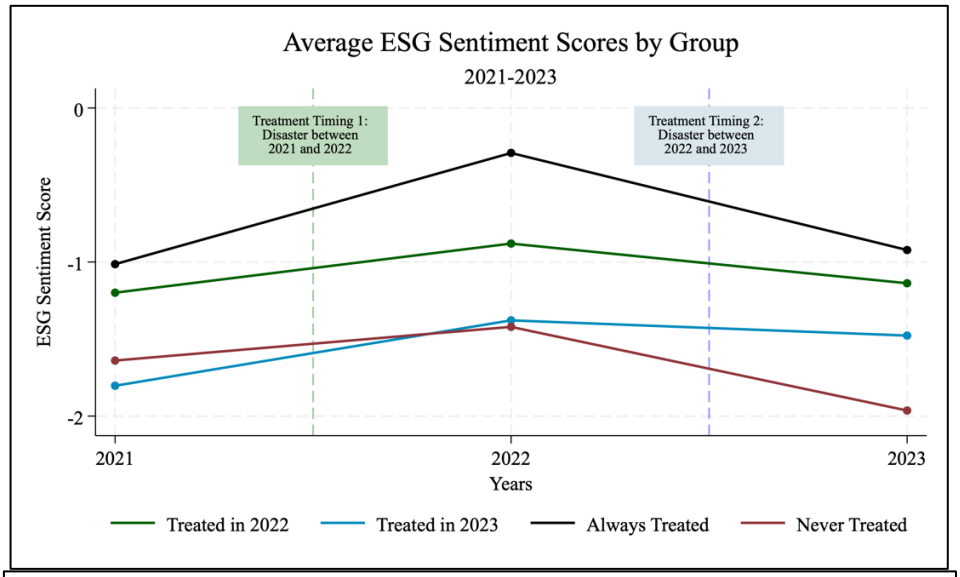
	Affected t-1	Affected t-1 (County)	Affected t	Affected t (County)
1.treated	0.489			
	(1.36)			
nb_articles_state	0.101	0.0413	0.269	0.310
	(0.42)	(0.21)	(0.96)	(1.36)
t	-0.0506	0.0713	-0.167	-0.0581
	(-0.35)	(0.63)	(-1.19)	(-0.53)
1.treated_county		0.123		
		(0.43)		
1.treat			0.724**	
			(2.28)	
1.treat_county				0.613**
				(2.22)
N	87	120	93	120
R^2	0.801	0.819	0.800	0.784

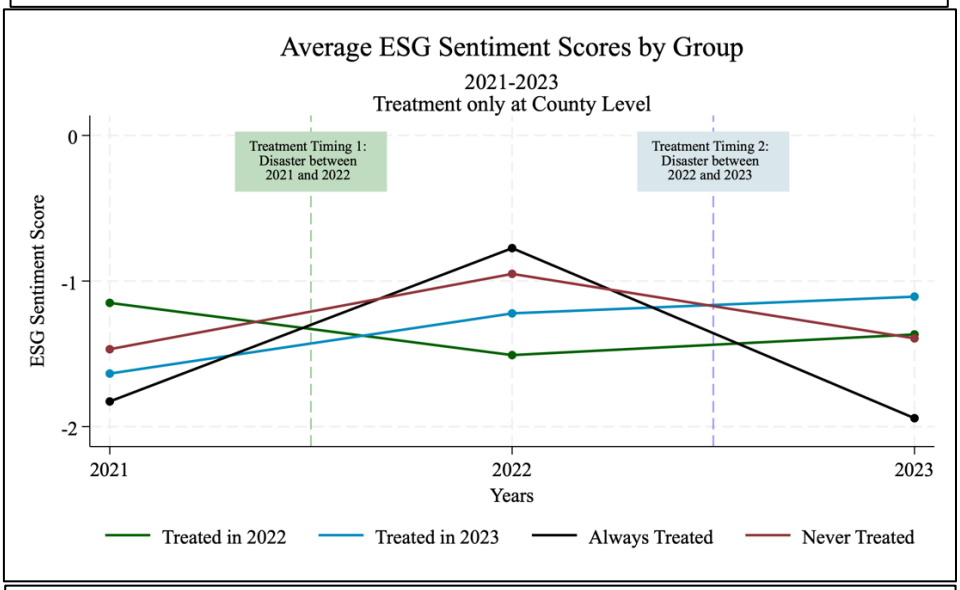
t statistics in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

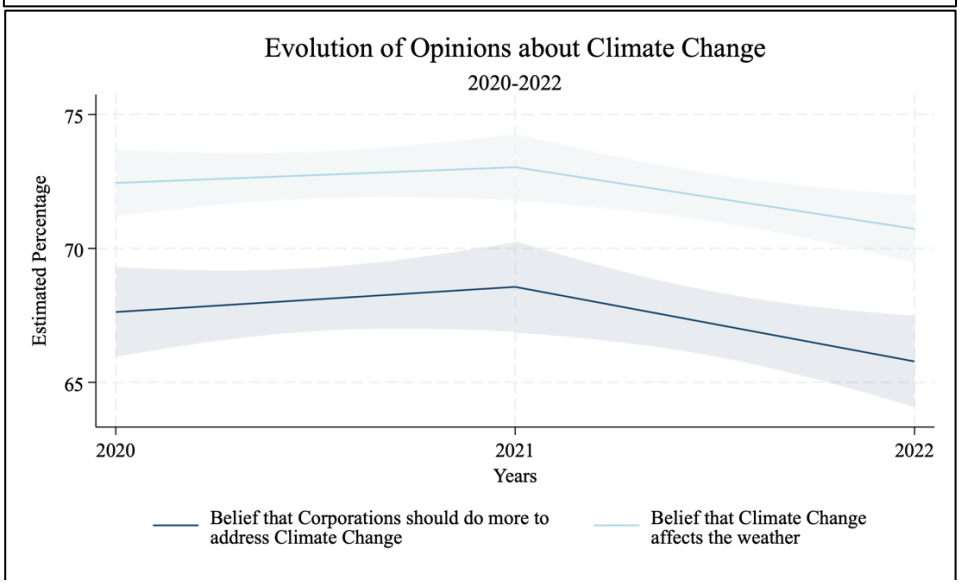
A3. – Additional Graphs: Time Trends



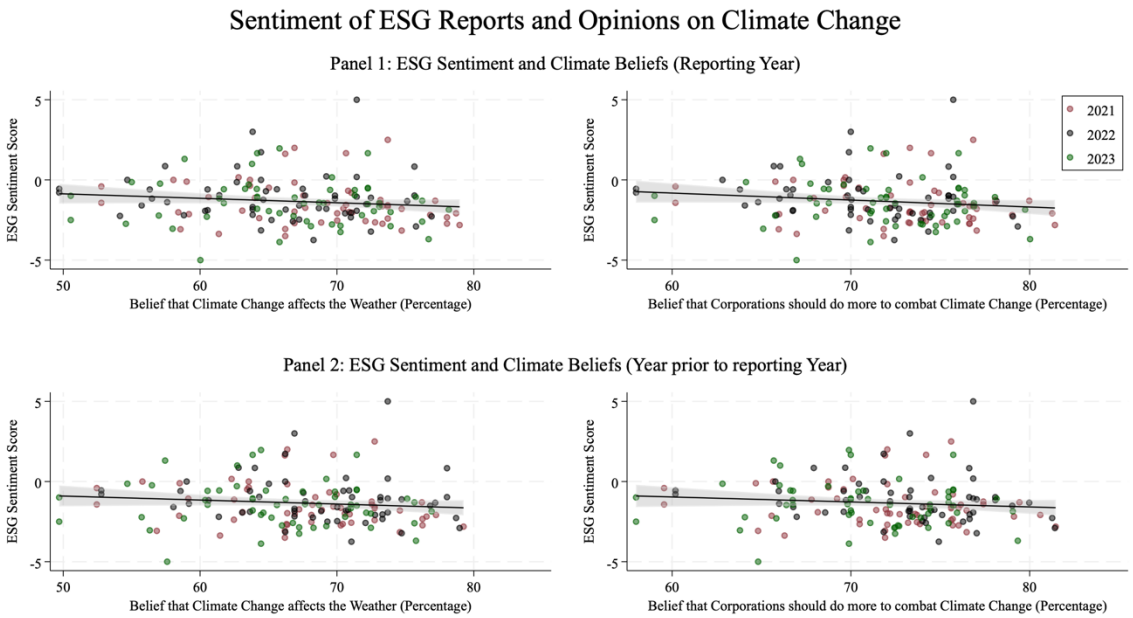



Average ESG Sentiment Scores by Group
2021-2023
Treatment Timing 1: Disaster between 2021 and 2022
Treatment Timing 2: Disaster between 2022 and 2023
ESG Sentiment Score
0
-1
-2
2021
2022
2023
Years
Treated in 2022
Treated in 2023
Always Treated
Never Treated


Average ESG Sentiment Scores by Group
2021-2023
Treatment only at County Level
Treatment Timing 1: Disaster between 2021 and 2022
Treatment Timing 2: Disaster between 2022 and 2023
ESG Sentiment Score
0
-1
-2
2021
2022
2023
Years
Treated in 2022
Treated in 2023
Always Treated
Never Treated


Evolution of Opinions about Climate Change
2020-2022
Estimated Percentage
75
70
65
2020
2021
2022
Years
Belief that Corporations should do more to address Climate Change
Belief that Climate Change affects the weather

A4. – Additional Graphs: ESG Sentiment and Climate Beliefs



Note: This graph shows the stylized relationship between climate beliefs at the county level and ESG sentiment across the Firms' locations. Panel 1 uses the values for climate beliefs of the ESG reporting year. Panel 2 uses the values for the year prior to the reporting year. All Diagrams additionaly show a fitted linear function including the 95% confidence band. The datapoints refer to the repsective ESG reporting year. Data: Climate beliefs from Howe et al. (2015), Sentiment Scores from textual analysis.