Online Appendix

"Leveraging Private Capital for Climate Mitigation: Evidence from the Clean Development Mechanism"

Patrick Bayer
University of Mannheim

Christopher Marcoux
DePauw University

Johannes Urpelainen
Columbia University

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A1 Formal Analysis: Risk Aversion in Investment Decisions

In the main text, we assumed the investors in the capital market are risk-neutral. In this extension, we assume the investors are risk-averse instead. Specifically, suppose that the project is feasible if and only if the following condition is met:

$$pU(\pi - c) + (1 - p)U(-c) \geq 0, \tag{1}$$

where all variables are as defined in the main text. The function $U(.)$ is the investors' utility function. It is increasing ($U'(.) > 0$), strictly concave ($U''(.) < 0$), and twice differentiable. To normalize the outside option of no investment, let $U(0) = 0$.

Given this modified expression, investment is forthcoming whenever

$$p \, \frac{U(\pi - c) - U(-c)}{-U(-c)} \geq 1. \tag{2}$$

The right hand side is constant, and the marginal effect of replacing p_b with p_u on the left hand side is

$$(p_u - p_b) \, \frac{U(\pi - c) - U(-c)}{-U(-c)} > 0. \tag{3}$$

Simplifying and differentiating with respect to c, we obtain

$$(p_u - p_b) \, \frac{-U'(\pi - c)}{U'(-c)}. \tag{4}$$

With $p_u - p_b > 0$ and $U'(.)$ positive, this expression is strictly negative. Therefore, the claim follows: as c increases, the marginal effect of replacing p_b with p_u decreases.

A2 Clean Development Mechanism: Procedures

The Clean Development Mechanism (CDM) was established by the 1997 Kyoto Protocol to the UN Framework Convention on Climate Change (UNFCCC). Along with emissions trading and Joint Implementation (JI), the CDM is one of the main flexibility mechanisms under the Kyoto Protocol. Specifically, the CDM allows greenhouse gas emission reduction projects in developing countries to earn certified emission reduction (CER) credits, such that one CER is equivalent to one ton of carbon dioxide emissions. These CERs can then be traded and sold to developed countries having formal emission reduction obligations under Kyoto (Annex B parties). The primary benefits of the CDM are (1) to enable countries to reduce greenhouse gas emissions as efficiently as possible, and (2) to promote sustainable development more generally by catalyzing the diffusion of clean technologies from developed to developing countries.

The CDM employs a seven-step project cycle.[1] At the first stage, proponents of a particular project complete a project design document (CDM-PDD). This document provides a general description of the project, elaborates and justifies a methodology for establishing baseline greenhouse gas emissions and project-specific reductions, as well as more general information about environmental and stakeholder impacts. Second, the designated national authority for the host country certifies that the country is party to the Kyoto Protocol, and that participation in the project is voluntary. At the third step, a qualified third party reviews the PDD and verifies that it is consistent with CDM policies. Once the PDD has been verified, it is forwarded to the CDM Executive Board for an additional round of vetting. At the conclusion of this fourth stage, the project is formally registered with the CDM. Stages five and six involve implementation monitoring, and verification of emission reductions. Once verification is complete, the project cycle concludes with the seventh and final stage, at which point the CDM Executive Board issues the relevant amount of CERs.

As originally envisioned, the CDM was to promote investment from developed to developing countries. In negotiating the Kyoto Protocol, the G-77 and China strenuously (and successfully) objected to universal emission reduction obligations during the Kyoto Protocol's initial compliance period. Thus, under Kyoto, developed countries' responsibility for creating the problem of climate change is reflected in their commitment to lead the way in reducing greenhouse gas emissions. The purpose of the CDM, under this system,

[1] The following description of the CDM project cycle is abridged from the CDM website, available at http://cdm.unfccc.int/Projects/diagram.html

is to create a "win-win" situation in which developed countries can meet their obligations efficiently, while promoting clean development more generally. For this to be the case, it is essential that participation in CDM projects is voluntary on the part of developing host countries.

However, as Michaelowa (2007) notes, for a variety of reasons, a number of developing countries argued that investment from Annex B parties should not be viewed as essential to the operation of the CDM. Even in the absence of investment from Annex B parties, a developing country could – voluntarily – support emission reduction projects above and beyond a "business-as-usual" baseline. The cost of these investments would be offset through the issuance of CERs under the CDM. Though there is no domestic market for CERs in developing countries – since these parties are not obligated to reduce emissions under Kyoto –, the sale of CERs on international markets remains possible.

The Kyoto Protocol neither expressly permitted nor proscribed so-called "unilateral" project implementation. The legality of this practice remained unclear for several years, as parties to the Kyoto Protocol were concerned chiefly with facilitating the treaty's entry into legal force. When it became clear that the Kyoto Protocol would enter into force, the status of unilateral project implementation was one of the first issues that the CDM Executive Board worked to resolve. At their February 2005 meeting, the Executive Board decided that "registration of a project activity can take place without an Annex [B] Party being involved at the stage of registration" (CDM, 2005).

A3 List of Top 10 CDM Host Countries

Table A1 shows the ten countries with the highest number of CDM projects. For each country, the table gives the number of unilateral and bilateral projects, as well as the mean amount of private capital for each type (log scale) and the country's average carbon intensity in the dataset. Two aspects deserve particular attention. First, the seven leading countries, except for Brazil, have high carbon intensities. These numbers suggest that foreign investors exploit lower marginal abatement costs in developing countries and invest where carbon intensities are high. Second, with respect to the contracting mode, there is a pronounced difference between investments in China and India. While China hosts by far the highest number of projects, virtually all of them are bilateral projects, whereas only 30 percent of Indian CDM projects are of bilateral nature. This finding is interesting against the backdrop that "China opposed unilateral CDM ... because it wanted to benefit from technology transfer in the CDM context and possibly feared that unilateral CDM worsens its comparative CER market advantage" (Michaelowa, 2007, 20). The pattern we find in the data seems to reflect China's preference in favor of bilateral projects, though it is important to recall that many of China's bilateral projects feature only minimal foreign involvement.

#	Country	Unilateral Projects	Bilateral Projects	Total Projects	DV (mean)	CO2 Intensity (mean)
1	China	74	1865	1939	5.51	2.87
2	India	591	232	823	5.76	2.25
3	Brazil	78	83	161	4.53	0.48
4	Malaysia	10	101	111	4.05	1.50
5	Vietnam	6	73	79	5.88	2.23
6	Thailand	20	57	77	5.09	1.71
7	Indonesia	12	63	75	4.34	1.64
8	Mexico	24	48	72	3.78	0.69
9	Korea, Rep.	42	14	56	6.75	0.72
10	Chile	17	29	46	4.99	0.71

Table A1: Top 10 Host Countries.

A4 Summary Statistics and Correlation Matrices

Table A2 shows the summary statistics for all variables that we use for our main specification. Similarly, Table A3 presents the correlation matrices. The two tables show all quantities of interest for the full sample, the unilateral, and the bilateral sample, respectively. Most importantly for our argument, the summary statistics indicate that unilateral projects seem to be more likely in countries with low carbon intensities. On a similar note, unilateral projects are more likely to be implemented in democracies.

From Table A3 we find positive correlations between our dependent variable, investment per ton of carbon, and carbon intensity as well as unilateral implementation. Both are as expected. For high carbon intensity project implementation is expected to be particularly lucrative. For unilateral contract mode, we outlined that investments should be higher because domestic project developers are likely to face higher success probabilities for projects implemented "at home." They can better assess project risks that result from political, cultural, and social determinants. To account for rather high correlations across other variables we use Coarsened Exact Matching (Iacus, King, and Porro, 2012) to safeguard our analysis against bias from non-linearities and heterogeneity across observations. Please find a detailed discussion in Section A7 below.

Full sample

	count	mean	sd	min	max
Investment/tCO2 (log)	3749	5.39	1.26	0.00	10.50
Unilateral	3749	0.26	0.44	0.00	1.00
CO2 Intensity (3yr moving)	3749	2.28	0.81	0.17	6.50
Unilateral x CO2 Intensity	3749	0.48	0.89	0.00	4.03
Corruption (3yr moving)	3749	2.92	0.39	0.50	4.35
Democracy	3749	0.40	0.49	0.00	1.00
GDP (3yr moving, log)	3749	27.32	1.32	19.99	28.41

Unilateral sample

	count	mean	sd	min	max
Investment/tCO2 (log)	967	5.77	1.28	0.01	9.31
CO2 Intensity (3yr moving)	967	1.84	0.75	0.36	4.03
Corruption (3yr moving)	967	2.75	0.41	0.50	4.35
Democracy	967	0.87	0.34	0.00	1.00
GDP (3yr moving, log)	967	26.93	0.97	21.71	28.41

Bilateral sample

	count	mean	sd	min	max
Investment/tCO2 (log)	2782	5.26	1.22	0.00	10.50
CO2 Intensity (3yr moving)	2782	2.43	0.78	0.17	6.50
Corruption (3yr moving)	2782	2.98	0.36	0.50	4.00
Democracy	2782	0.23	0.42	0.00	1.00
GDP (3yr moving, log)	2782	27.46	1.40	19.99	28.41

Table A2: Summary statistics by sample.

Full sample

	Investment/tCO2 (log)	Unilateral	CO2 Intensity (3yr moving)	Unilateral x CO2 Intensity	Corruption (3yr moving)	Democracy	GDP (3yr moving, log)
Investment/tCO2 (log)	1.00						
Unilateral	0.18***	1.00					
CO2 Intensity (3yr moving)	0.20***	-0.31***	1.00				
Unilateral x CO2 Intensity	0.17***	0.90***	-0.08***	1.00			
Corruption (3yr moving)	0.06***	-0.27***	0.49***	-0.16***	1.00		
Democracy	-0.03	0.57***	-0.66***	0.47***	-0.35***	1.00	
GDP (3yr moving, log)	0.15***	-0.18***	0.66***	-0.08***	0.28***	-0.46***	1.00

Unilateral sample

	Investment/tCO2 (log)	CO2 Intensity (3yr moving)	Corruption (3yr moving)	Democracy	GDP (3yr moving, log)
Investment/tCO2 (log)	1.00				
CO2 Intensity (3yr moving)	0.04	1.00			
Corruption (3yr moving)	-0.09**	0.33***	1.00		
Democracy	0.06	-0.26***	-0.25***	1.00	
GDP (3yr moving, log)	0.09**	0.47***	0.13***	-0.02	1.00

Bilateral sample

	Investment/tCO2 (log)	CO2 Intensity (3yr moving)	Corruption (3yr moving)	Democracy	GDP (3yr moving, log)
Investment/tCO2 (log)	1.00				
CO2 Intensity (3yr moving)	0.36***	1.00			
Corruption (3yr moving)	0.20***	0.49***	1.00		
Democracy	-0.23***	-0.71***	-0.26***	1.00	
GDP (3yr moving, log)	0.21***	0.69***	0.28***	-0.52***	1.00

Table A3: Correlation matrices by sample.

A5 Distribution of Project Types by Contracting Mode

Table A4 shows project shares by project type, separately for unilateral and bilateral implementation. In line with the coding in the CDM Pipeline's guidance document we aggregated projects into nine main categories. First, the table illustrates that for unilateral and bilateral implementation more than 90 percent of all projects fall into three categories: renewables; CH4, cement, and coal; and supply side energy efficiency measures. Second, the distribution of project types are virtually identical across contracting mode. Hence, our results are not driven by systematically different distributions of project shares in unilateral and bilateral implementation.

#	**Project Type**	**Shares by Contracting Mode**	
		Unilateral	Bilateral
1	CH4, cement, and coal	12.51	18.30
2	CO2 usage	0.10	0.00
3	Energy efficiency (demand side)	5.79	1.22
4	Energy efficiency (supply side)	10.24	12.04
5	Reforestation	0.41	0.25
6	Fuel switch	2.69	2.34
7	HFCs and N2O	0.83	1.08
8	Renewables	67.11	64.52
9	Transport	0.31	0.25
	Total	100.00	100.00

Table A4: Distribution of project types by contracting mode.

A6 Further Data Description

The following figures further illustrate distributions, frequencies, and time trends for key variables used in our paper. Figures A1- A9 summarize the most important aspects of our analyzed data.

- Figure A1 shows the distribution of investment USD/tCO2 (logged).
- Figure A2 shows the distribution of investment USD/tCO2 (logged) among unilateral projects only.
- Figure A3 shows the distribution of investment USD/tCO2 (logged) among bilateral projects only.
- Figure A4 shows the distribution of CO2 intensity (3yr moving).
- Figure A5 shows the distribution of corruption (3yr moving).
- Figure A6 shows the distribution of GDP (logged, 3yr moving).
- Figure A7 shows the annual number of projects.
- Figure A8 shows the annual number of unilateral projects.
- Figure A9 shows the annual number of bilateral projects.

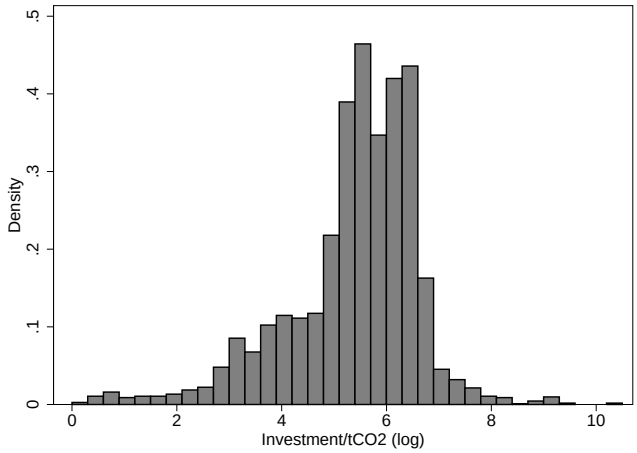

Figure A1: Histogram of investment in USD/tCO2 (log).

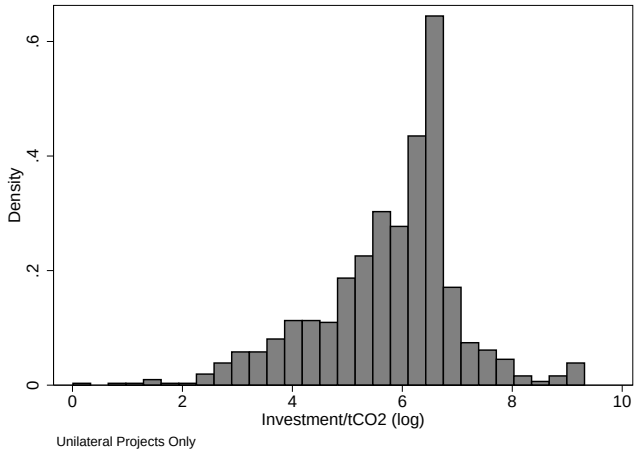

Figure A2: Histogram of unilateral investment in USD/tCO2 (log).

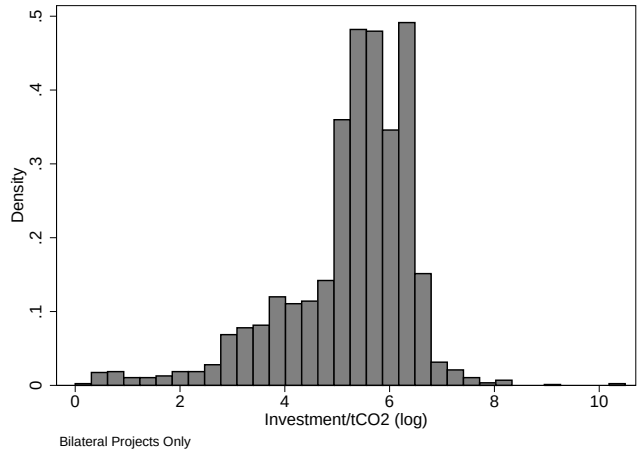

Figure A3: Histogram of bilateral investment in USD/tCO2 (log).

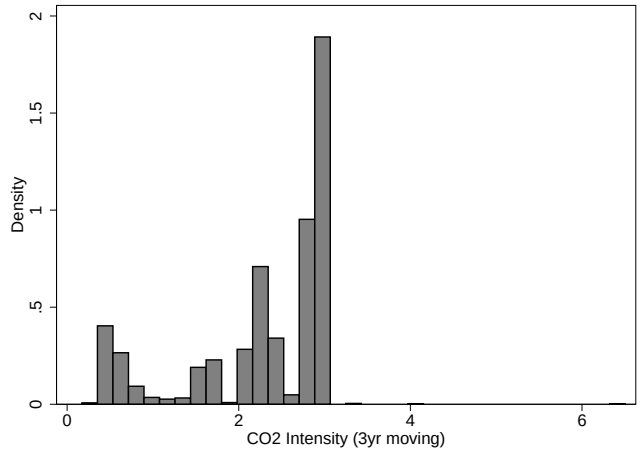

Figure A4: Histogram of carbon intensity.

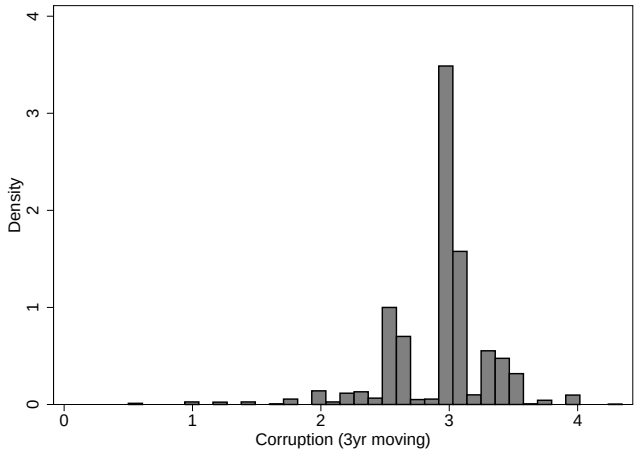

Figure A5: Histogram of corruption variable.

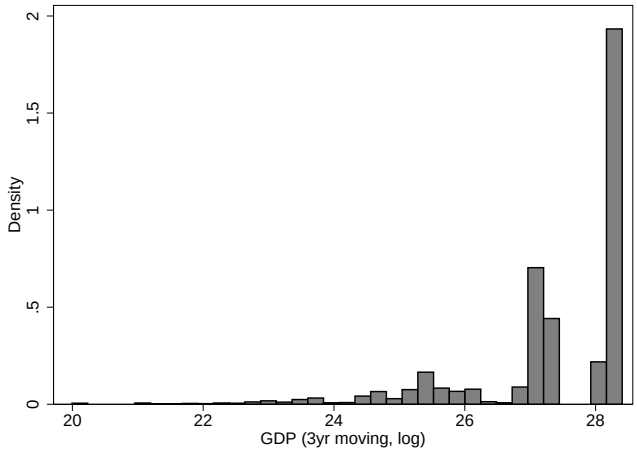

Figure A6: Histogram of GDP (log).

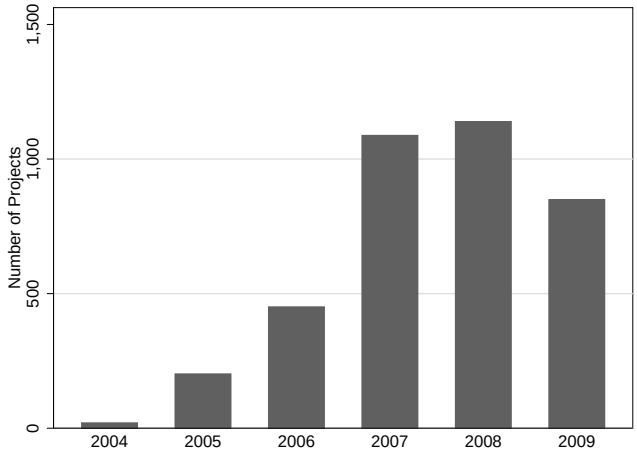

Figure A7: Annual number of projects.

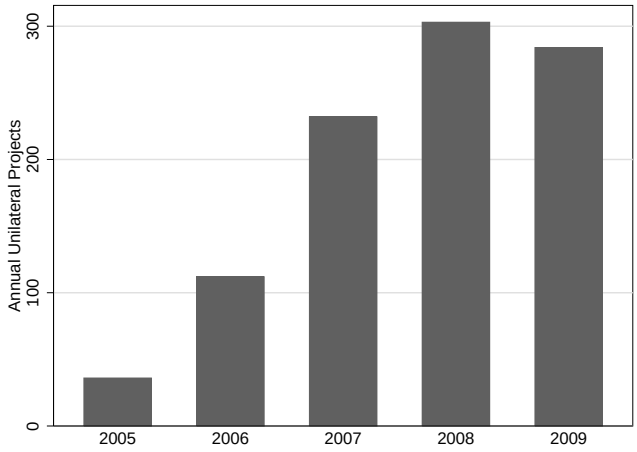

Figure A8: Annual number of unilateral projects.

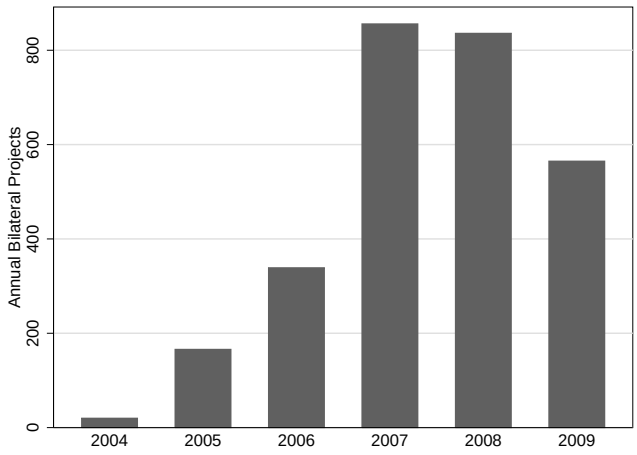

Figure A9: Annual number of bilateral projects.

A7 Robustness: Matching Analysis

We further test the robustness of our inferences concerning the causal effect of unilateral implementation and carbon intensity by implementing Coarsened Exact Matching (CEM) for implementation mode (Iacus, King, and Porro, 2012). As described in the main paper, we match on the dichotomous "unilateral" variable to improve the balance between other covariates of unilateral and bilateral projects, using Sturges' rule for determining value cutpoints. As Table A5 shows, this procedure produced a relatively small number of unmatched observations. However, it yielded substantial reduction in both univariate and multivariate distance. This suggests that matching can substantially strengthen causal inference.

Table A6 replicates our main results. As before, we find a significant, negative interaction between unilateral implementation and carbon intensity (though this effect is smaller in magnitude). Since the confidence intervals around the interaction term are somewhat wider than in the main models, Figure A10 shows the marginal effect of unilateral implementation on investment, conditional on carbon intensity.

L1 distance

Matching	Intensity	Corruption	GDP (moving, log)	Democracy	Multivariate
Pre	0.648	0.598	0.655	0.631	0.720
Post	0.051	0.064	0.021	0.000	0.114

Matched 3597; Unmatched 152

Table A5: Matching diagnostics.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.60***	0.58***	0.61***	0.59***	0.38**	0.38**
	(0.22)	(0.21)	(0.22)	(0.21)	(0.17)	(0.17)
CO2 Intensity (3yr moving)	-0.01	-0.01	-0.00	-0.01	-0.09	0.03
	(0.10)	(0.13)	(0.11)	(0.13)	(0.09)	(0.09)
Unilateral x CO2 Intensity	-0.13	-0.12	-0.15	-0.14	-0.10	-0.10
	(0.09)	(0.08)	(0.09)	(0.09)	(0.10)	(0.10)
Corruption (3yr moving)		0.16		0.15		-0.08
		(0.14)		(0.13)		(0.12)
Democracy		-0.03		-0.14		0.11
		(0.08)		(0.17)		(0.21)
GDP (3yr moving, log)		-0.08		-0.06		-0.09
		(0.07)		(0.08)		(0.05)
Constant	3.61***	5.46***	3.60***	5.00**	3.33***	5.77***
	(0.19)	(1.93)	(0.19)	(2.15)	(0.29)	(1.53)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3597	3597	1675	1675	2779	2779
R^2	0.529	0.532	0.535	0.538	0.627	0.632

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A6: Main results after matching.

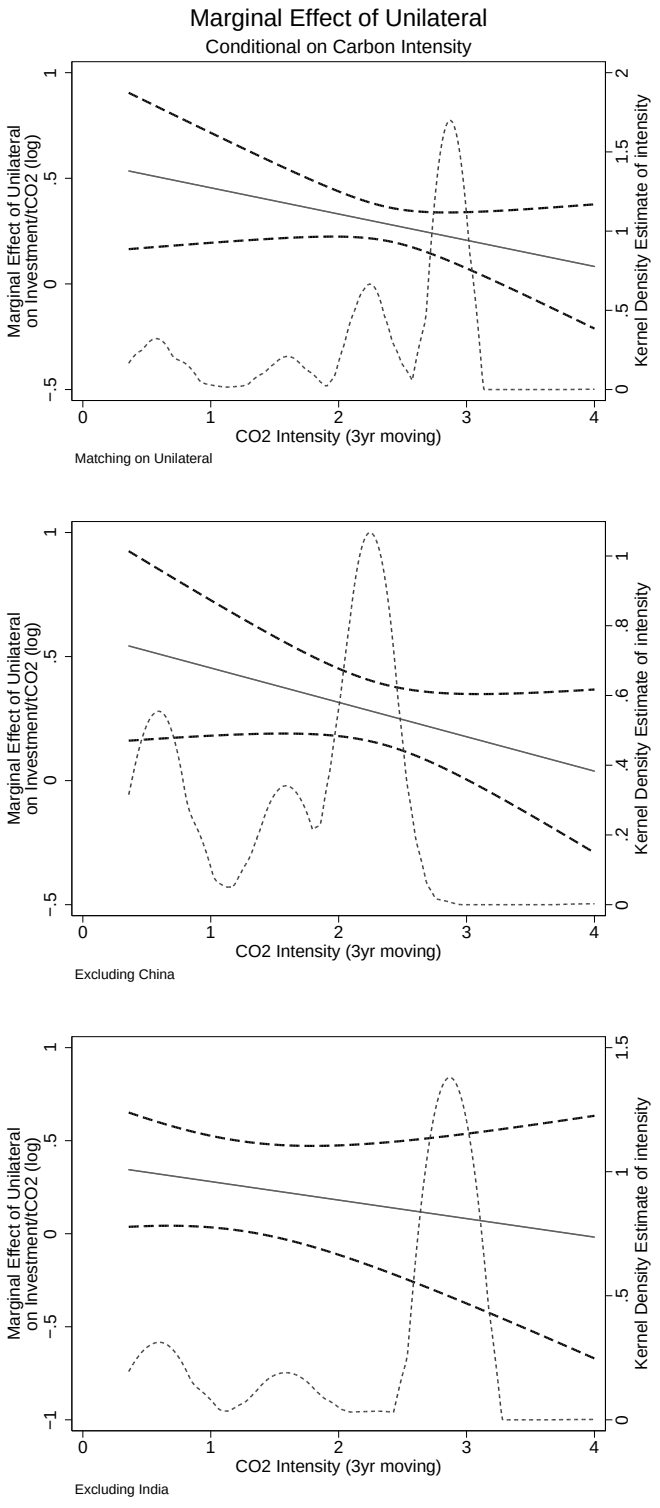

Figure A10: Marginal effects with matched sample.

A8 Robustness: Extra Interaction Models

Tables A7 to A11 add further interaction effects to our main model specification. In particular, we include interactions of the unilateral dummy variable with corruption (Table A7), democratic regime type (Table A8), GDP (Table A9), a project size dummy (Table A10) as well as with expected certified emissions reductions (CERs) by 2020 (Table A11).

Except for the specifications with corruption and the democracy interactions, for which two out of six models fail to obtain statistical significance at conventional levels, all other specifications receive full support: all six models produce negative and statistically significant interaction effects between unilateral implementation and carbon intensity – as it is expected by our theory. The additional interactions with regime type, project size, and expected emissions reductions do not show any systematic effects at all. For bilateral projects, higher GDP and more corruption seem to be positively associated with private investment; this relationship reverses for unilateral implementation. Since the assessment of interactive effects in non-linear models is difficult (Brambor, Clark, and Golder, 2006), we caution against a too literal interpretation of these results. The more so as the effects are not particularly strong.

Unilateral x Corruption Interaction

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	1.74***	1.74***	1.37**	1.43**	1.51**	1.55**
	(0.56)	(0.57)	(0.53)	(0.58)	(0.62)	(0.65)
CO2 Intensity (3yr moving)	0.01	0.11	0.20***	0.20***	-0.01	0.05
	(0.06)	(0.10)	(0.06)	(0.07)	(0.06)	(0.11)
Unilateral x CO2 Intensity	-0.13	-0.19*	-0.37***	-0.35***	-0.12	-0.16**
	(0.11)	(0.11)	(0.12)	(0.13)	(0.10)	(0.08)
Corruption (3yr moving)	0.32*	0.29	0.17	0.18	0.25	0.24
	(0.19)	(0.18)	(0.18)	(0.18)	(0.19)	(0.18)
Unilateral x Corruption	-0.39**	-0.35*	-0.18	-0.20	-0.32	-0.30
	(0.18)	(0.19)	(0.17)	(0.20)	(0.20)	(0.21)
Democracy		0.05		-0.02		-0.05
		(0.11)		(0.18)		(0.20)
GDP (3yr moving, log)		-0.07		-0.04		-0.06
		(0.05)		(0.07)		(0.05)
Constant	2.94***	4.60***	2.91***	3.81**	3.00***	4.61***
	(0.42)	(1.22)	(0.40)	(1.66)	(0.43)	(1.22)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3749	3749	1810	1810	2926	2926
R^2	0.507	0.510	0.536	0.537	0.549	0.552

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A7: Results with an additional interaction between unilateral dummy and corruption.

Unilateral x Regime Type Interaction

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.94***	0.92***	0.88***	0.81***	0.74**	0.68*
	(0.30)	(0.30)	(0.24)	(0.24)	(0.37)	(0.40)
CO2 Intensity (3yr moving)	0.13	0.16	0.25***	0.22***	0.05	0.07
	(0.08)	(0.11)	(0.07)	(0.07)	(0.09)	(0.11)
Unilateral x CO2 Intensity	-0.26**	-0.27**	-0.42***	-0.39***	-0.20	-0.19
	(0.12)	(0.12)	(0.12)	(0.12)	(0.15)	(0.17)
Democracy	0.13	0.09	-0.06	-0.03	-0.01	-0.06
	(0.11)	(0.11)	(0.17)	(0.19)	(0.17)	(0.18)
Unilateral x Democracy	-0.11	-0.02	0.09	0.15	-0.01	0.12
	(0.10)	(0.11)	(0.18)	(0.18)	(0.37)	(0.37)
Corruption (3yr moving)		0.17		0.12		0.16
		(0.13)		(0.12)		(0.14)
GDP (3yr moving, log)		-0.07		-0.04		-0.07
		(0.05)		(0.07)		(0.05)
Constant	3.37***	4.83***	3.27***	3.98**	3.47***	4.84***
	(0.25)	(1.23)	(0.16)	(1.65)	(0.28)	(1.18)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3749	3749	1810	1810	2926	2926
R^2	0.503	0.508	0.535	0.537	0.546	0.551

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A8: Results with an additional interaction between unilateral dummy and democratic regime type.

Unilateral x GDP Interaction

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	-4.56**	-4.34**	-3.04	-3.14	-3.79	-3.73
	(2.12)	(2.13)	(2.47)	(2.39)	(2.33)	(2.33)
CO2 Intensity (3yr moving)	0.23***	0.20*	0.27***	0.23***	0.18**	0.12
	(0.08)	(0.10)	(0.07)	(0.07)	(0.08)	(0.11)
Unilateral x CO2 Intensity	-0.42***	-0.41***	-0.48***	-0.46***	-0.37**	-0.37**
	(0.14)	(0.15)	(0.14)	(0.14)	(0.15)	(0.15)
GDP (3yr moving, log)	-0.12**	-0.11**	-0.08	-0.08	-0.11*	-0.10*
	(0.06)	(0.05)	(0.07)	(0.08)	(0.05)	(0.05)
Unilateral x GDP (moving, log)	0.21**	0.21**	0.16	0.16	0.18*	0.18*
	(0.09)	(0.09)	(0.10)	(0.10)	(0.10)	(0.10)
Democracy		0.06		-0.01		-0.07
		(0.09)		(0.18)		(0.19)
Corruption (3yr moving)		0.16		0.11		0.15
		(0.12)		(0.12)		(0.14)
Constant	6.40***	5.89***	5.20***	4.99**	6.01***	5.73***
	(1.35)	(1.28)	(1.73)	(1.89)	(1.29)	(1.24)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3749	3749	1810	1810	2926	2926
R^2	0.510	0.512	0.538	0.539	0.553	0.555

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A9: Results with an additional interaction between unilateral dummy and GDP.

Unilateral x Project Size Interaction

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.80***	0.87***	1.02***	1.02***	0.65***	0.74***
	(0.23)	(0.21)	(0.23)	(0.21)	(0.15)	(0.14)
CO2 Intensity (3yr moving)	0.12	0.16	0.22***	0.20***	0.04	0.07
	(0.08)	(0.11)	(0.07)	(0.07)	(0.08)	(0.11)
Unilateral x CO2 Intensity	-0.24*	-0.27**	-0.40***	-0.37***	-0.18**	-0.23***
	(0.12)	(0.11)	(0.14)	(0.14)	(0.08)	(0.07)
Small Project	-0.06	-0.08	0.24**	0.24**	-0.09	-0.11
	(0.17)	(0.15)	(0.11)	(0.11)	(0.16)	(0.15)
Unilateral x Small	0.02	0.05	-0.19	-0.19	0.15	0.15
	(0.17)	(0.16)	(0.15)	(0.16)	(0.33)	(0.34)
Democracy	0.10	0.10	-0.03	0.02	-0.02	-0.05
	(0.10)	(0.10)	(0.16)	(0.17)	(0.17)	(0.19)
Corruption (3yr moving)		0.17		0.10		0.16
		(0.13)		(0.12)		(0.14)
GDP (3yr moving, log)		-0.08		-0.04		-0.07
		(0.05)		(0.07)		(0.05)
Constant	3.43***	4.92***	3.23***	4.08**	3.50***	4.90***
	(0.25)	(1.24)	(0.14)	(1.61)	(0.28)	(1.24)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3749	3749	1810	1810	2926	2926
R^2	0.503	0.509	0.538	0.539	0.547	0.553

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A10: Results with an additional interaction between unilateral dummy and project size.

Unilateral x CER 2020 Interaction

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.84***	0.92***	0.96***	0.95***	0.77***	0.86***
	(0.26)	(0.24)	(0.26)	(0.25)	(0.28)	(0.24)
CO2 Intensity (3yr moving)	0.09	0.16	0.26***	0.22***	0.07	0.09
	(0.06)	(0.10)	(0.07)	(0.07)	(0.07)	(0.11)
Unilateral x CO2 Intensity	-0.23**	-0.27**	-0.43***	-0.40***	-0.19**	-0.24***
	(0.10)	(0.11)	(0.12)	(0.12)	(0.09)	(0.08)
CER until 2020	-0.00***	-0.00***	-0.00	-0.00	-0.00*	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Unilateral X CER until 2020	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Corruption (3yr moving)		0.17		0.11		0.17
		(0.12)		(0.12)		(0.14)
Democracy		0.07		0.01		-0.05
		(0.10)		(0.17)		(0.20)
GDP (3yr moving, log)		-0.07		-0.04		-0.07
		(0.05)		(0.07)		(0.05)
Constant	3.55***	4.84***	3.24***	3.97**	3.47***	4.82***
	(0.20)	(1.23)	(0.19)	(1.67)	(0.26)	(1.22)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3749	3749	1810	1810	2926	2926
R^2	0.505	0.510	0.536	0.538	0.548	0.553

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A11: Results with an additional interaction between unilateral dummy and expected emissions reductions by 2020.

A9 Robustness: Rejected and Terminated Projects

Since rejected and terminated projects may be systematically different from approved and currently implemented projects, we investigate rejected and terminated projects in greater detail. First, we exclude them from our models to check the robustness of our results. And second, we examine only rejected and terminated projects to see if the same findings hold or if private capital investment in these projects follows different rules.

In Table A12, we replicate our main results, but excluding projects that were rejected, or that have had validation terminated. We still find a strongly positive effect for unilateral implementation, while the interaction effect is only statistically significant in two out of all six models. However, the sign is consistently negative as our theory expects. Moreover, simulations show that the marginal effect of moving from bilateral to unilateral implementation is statistically significant for low levels of carbon intensity.

Excluding Rejected and Terminated Projects

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.70**	0.79**	0.86**	0.85**	0.64*	0.74**
	(0.33)	(0.31)	(0.33)	(0.32)	(0.32)	(0.29)
CO2 Intensity (3yr moving)	0.09	0.18*	0.29***	0.25***	0.06	0.11
	(0.06)	(0.11)	(0.08)	(0.08)	(0.06)	(0.11)
Unilateral x CO2 Intensity	-0.15	-0.20	-0.39**	-0.34**	-0.11	-0.16
	(0.14)	(0.14)	(0.15)	(0.17)	(0.12)	(0.11)
Corruption (3yr moving)		0.21		0.13		0.19
		(0.13)		(0.13)		(0.15)
Democracy		0.10		0.01		-0.02
		(0.10)		(0.17)		(0.19)
GDP (3yr moving, log)		-0.09		-0.05		-0.09
		(0.06)		(0.08)		(0.06)
Constant	3.48***	5.22***	3.10***	4.17**	3.46***	5.26***
	(0.23)	(1.38)	(0.21)	(1.94)	(0.27)	(1.37)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3101	3101	1492	1492	2446	2446
R^2	0.538	0.547	0.580	0.583	0.565	0.572

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A12: Results excluding rejected and terminated projects.

Analysis of only Rejected and Terminated Projects

As suggested above, rejected and terminated projects might be expected to differ from those that got approved by the CDM's Executive Board and are still operational. To further examine these potential differences, we replicated our main analysis on a dataset that only contains projects that have either been rejected by the Executive Board (153 projects in the full sample) or whose validation was terminated by the Designated Operational Entities (495 projects in the full sample).

The results of this analysis are shown in Table A13. The results are broadly similar, though statistical significance decreases somewhat, at least in part due to a smaller sample.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.86**	0.75**	0.85**	0.71**	0.62	0.57
	(0.35)	(0.31)	(0.35)	(0.33)	(0.39)	(0.34)
CO2 Intensity (3yr moving)	-0.01	-0.11	0.00	-0.16	-0.03	-0.08
	(0.11)	(0.13)	(0.12)	(0.15)	(0.12)	(0.16)
Unilateral x CO2 Intensity	-0.27**	-0.22	-0.30**	-0.19	-0.25	-0.22
	(0.12)	(0.14)	(0.13)	(0.17)	(0.15)	(0.14)
Corruption (3yr moving)		0.01		0.05		0.01
		(0.17)		(0.17)		(0.18)
Democracy		-0.02		-0.11		-0.02
		(0.16)		(0.23)		(0.26)
GDP (3yr moving, log)		0.07		0.09*		0.03
		(0.05)		(0.05)		(0.04)
Constant	4.08***	2.25	4.03***	1.59	2.70***	1.84
	(0.77)	(1.42)	(0.85)	(1.38)	(0.57)	(1.33)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	648	648	402	402	505	505
R^2	0.371	0.374	0.363	0.368	0.494	0.495

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A13: Results for only rejected and terminated projects.

A10 Robustness: Renewable Energy Projects

To ensure that our main results are not driven by renewable energy projects only, we implement various robustness checks for renewable energy projects. First, we replicate our main analyses excluding hydroelectricity, wind, biomass, and solar projects. Hydroelectricity (33 percent of the data), wind (21 percent of the data), and biomass (10 percent of the data) are the largest project categories we find in our dataset and are characterized by extreme variance in project costs. Even though we have only very few solar projects in our dataset, we also exclude them because solar projects are known to be extremely expensive. In addition, we examine if the same effects that we identify in the main text hold for the three largest categories of renewable energy projects, i.e., for hydroelectricity, wind, and biomass projects.

In Tables A14, A15, A16, and A17, we reestimate our main models, excluding hydroelectricity, wind, biomass, and solar projects, respectively. Even though excluding hydroelectricity, wind, and biomass projects reduces the sample size considerably, our results continue to hold. The interaction effect between unilateral project implementation and GDP is negative and highly statistically significant across all models. The same is true when we exclude solar projects.

Excluding Hydroelectricity, Wind, Biomass, and Solar Projects Separately

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.91***	0.93***	1.03***	1.01***	0.76***	0.80***
	(0.29)	(0.26)	(0.28)	(0.26)	(0.27)	(0.22)
CO2 Intensity (3yr moving)	0.25***	0.23*	0.35***	0.30***	0.21***	0.17
	(0.07)	(0.13)	(0.10)	(0.10)	(0.07)	(0.15)
Unilateral x CO2 Intensity	-0.30**	-0.30**	-0.45***	-0.41***	-0.24**	-0.26**
	(0.13)	(0.13)	(0.14)	(0.14)	(0.11)	(0.10)
Corruption (3yr moving)		0.21		0.14		0.20
		(0.14)		(0.14)		(0.17)
Democracy		-0.00		0.01		-0.08
		(0.12)		(0.21)		(0.24)
GDP (3yr moving, log)		-0.04		-0.03		-0.03
		(0.07)		(0.09)		(0.07)
Constant	3.21***	3.73**	3.12***	3.55	3.21***	3.60**
	(0.22)	(1.69)	(0.21)	(2.21)	(0.27)	(1.65)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2517	2517	1499	1499	1804	1804
R^2	0.528	0.532	0.516	0.518	0.571	0.574

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A14: Results excluding hydroelectricity projects.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.91***	1.03***	1.04***	1.05***	0.79***	0.93***
	(0.27)	(0.25)	(0.25)	(0.24)	(0.26)	(0.22)
CO2 Intensity (3yr moving)	0.08	0.16	0.26***	0.20***	0.04	0.12
	(0.06)	(0.11)	(0.08)	(0.07)	(0.06)	(0.12)
Unilateral x CO2 Intensity	-0.29**	-0.35***	-0.50***	-0.45***	-0.24**	-0.32***
	(0.11)	(0.11)	(0.12)	(0.13)	(0.10)	(0.09)
Corruption (3yr moving)		0.15		0.12		0.12
		(0.12)		(0.13)		(0.14)
Democracy		0.01		-0.07		-0.02
		(0.10)		(0.18)		(0.20)
GDP (3yr moving, log)		-0.10*		-0.06		-0.09*
		(0.06)		(0.08)		(0.05)
Constant	3.64***	5.70***	3.31***	4.83**	3.51***	5.59***
	(0.23)	(1.35)	(0.23)	(1.90)	(0.27)	(1.35)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2948	2948	1437	1437	2440	2440
R^2	0.475	0.484	0.495	0.499	0.531	0.539

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A15: Results excluding wind projects.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.93***	1.03***	1.12***	1.10***	0.85***	0.96***
	(0.26)	(0.25)	(0.25)	(0.24)	(0.25)	(0.23)
CO2 Intensity (3yr moving)	0.00	0.10	0.25***	0.18**	-0.03	-0.01
	(0.07)	(0.11)	(0.09)	(0.08)	(0.08)	(0.11)
Unilateral x CO2 Intensity	-0.23**	-0.30**	-0.53***	-0.49***	-0.21**	-0.27***
	(0.11)	(0.12)	(0.13)	(0.12)	(0.09)	(0.08)
Corruption (3yr moving)		0.21		0.15		0.17
		(0.12)		(0.12)		(0.13)
Democracy		0.12		-0.12		-0.10
		(0.12)		(0.15)		(0.17)
GDP (3yr moving, log)		-0.09		-0.01		-0.08
		(0.06)		(0.07)		(0.05)
Constant	3.59***	5.15***	3.11***	3.13*	3.51***	5.20***
	(0.24)	(1.30)	(0.21)	(1.76)	(0.28)	(1.27)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3372	3372	1512	1512	2709	2709
R^2	0.583	0.591	0.649	0.652	0.611	0.617

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A16: Results excluding biomass projects.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.64***	0.73***	0.78***	0.78***	0.56***	0.66***
	(0.17)	(0.17)	(0.17)	(0.16)	(0.16)	(0.13)
CO2 Intensity (3yr moving)	0.10*	0.20**	0.27***	0.25***	0.07	0.11
	(0.05)	(0.09)	(0.07)	(0.06)	(0.05)	(0.10)
Unilateral x CO2 Intensity	-0.14**	-0.20**	-0.35***	-0.32***	-0.14**	-0.19***
	(0.07)	(0.08)	(0.09)	(0.08)	(0.06)	(0.07)
Corruption (3yr moving)		0.15		0.09		0.16
		(0.13)		(0.12)		(0.14)
Democracy		0.10		0.04		-0.05
		(0.10)		(0.17)		(0.18)
GDP (3yr moving, log)		-0.08*		-0.05		-0.08
		(0.05)		(0.06)		(0.05)
Constant	3.53***	5.09***	3.22***	4.40***	3.45***	5.06***
	(0.21)	(1.10)	(0.18)	(1.52)	(0.26)	(1.09)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3722	3722	1789	1789	2901	2901
R^2	0.508	0.515	0.537	0.540	0.554	0.561

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A17: Results excluding solar projects.

Analysis of Hydroelectricity, Wind, and Biomass Projects

In Tables A18, A19, and A20, we replicate our main results separately for only hydroelectricity projects (1,232 projects in the full sample), wind projects (801 projects in the full sample), and biomass projects (377 projects in the full sample). For hydroelectricity projects, we find the same pattern as hypothesized. Specifically, we reveal a positive effect of unilateral implementation that is statistically significantly decreasing in the cost of project implementation. While this is true for hydroelectricity projects, we cannot identify our hypothesized effect for model specifications that use only wind or biomass projects. Yet, we do not interpret this as strong evidence against our theory because the sample size is reduced for wind projects to about 20 percent and for biomass projects to about 10 percent of the sample size of our original dataset. Also, as shown above, our main results hold if we exclude wind and biomass projects from our full sample.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.58**	0.65***	0.75***	0.75***	0.61**	0.68***
	(0.26)	(0.22)	(0.22)	(0.23)	(0.26)	(0.20)
CO2 Intensity (3yr moving)	-0.25***	-0.05	0.03	0.03	-0.24***	-0.08
	(0.07)	(0.07)	(0.07)	(0.08)	(0.07)	(0.11)
Unilateral x CO2 Intensity	-0.18*	-0.24**	-0.40***	-0.38***	-0.22**	-0.26***
	(0.10)	(0.09)	(0.11)	(0.12)	(0.10)	(0.07)
Corruption (3yr moving)		-0.03		-0.06		-0.04
		(0.08)		(0.08)		(0.08)
Democracy		0.14		-0.08		0.04
		(0.10)		(0.12)		(0.24)
GDP (3yr moving, log)		-0.11***		-0.01		-0.11***
		(0.04)		(0.03)		(0.04)
Constant	6.50***	8.90***	5.96***	6.48***	6.27***	8.87***
	(0.23)	(1.04)	(0.18)	(0.88)	(0.23)	(1.08)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1232	1232	311	311	1122	1122
R^2	0.252	0.296	0.153	0.157	0.257	0.302

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A18: Results for hydroelectricity projects.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	-0.11	-0.18	0.04	0.01	-0.08	-0.14
	(0.21)	(0.23)	(0.19)	(0.22)	(0.19)	(0.21)
CO2 Intensity (3yr moving)	-0.28***	-0.38***	-0.31***	-0.30**	-0.29***	-0.23
	(0.06)	(0.12)	(0.09)	(0.12)	(0.07)	(0.18)
Unilateral x CO2 Intensity	0.03	0.09	-0.03	-0.03	0.08	0.10
	(0.09)	(0.09)	(0.09)	(0.10)	(0.07)	(0.08)
Corruption (3yr moving)		-0.16		-0.24		-0.28**
		(0.14)		(0.15)		(0.13)
Democracy		-0.12*		-0.08		0.16
		(0.06)		(0.24)		(0.28)
GDP (3yr moving, log)		0.07		0.07		0.06
		(0.06)		(0.07)		(0.07)
Constant	7.15***	5.99***	7.20***	6.20***	7.19***	6.14***
	(0.20)	(1.48)	(0.20)	(1.52)	(0.23)	(1.42)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	801	801	373	373	486	486
R^2	0.130	0.143	0.144	0.158	0.238	0.265

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A19: Results for wind projects.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.09	0.02	0.08	-0.13	0.11	0.10
	(0.35)	(0.44)	(0.35)	(0.43)	(0.38)	(0.45)
CO2 Intensity (3yr moving)	0.12	0.11	0.18	0.05	0.08	0.07
	(0.11)	(0.18)	(0.14)	(0.19)	(0.11)	(0.19)
Unilateral x CO2 Intensity	-0.04	-0.04	-0.06	0.04	-0.14	-0.16
	(0.13)	(0.19)	(0.15)	(0.19)	(0.15)	(0.19)
Corruption (3yr moving)		0.26		0.29		0.30
		(0.24)		(0.25)		(0.23)
Democracy		0.22		0.27		0.11
		(0.15)		(0.27)		(0.39)
GDP (3yr moving, log)		-0.02		-0.02		-0.02
		(0.06)		(0.06)		(0.06)
Constant	5.23***	4.97***	5.07***	4.82***	5.01***	4.70***
	(0.27)	(1.58)	(0.34)	(1.56)	(0.29)	(1.54)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	377	377	298	298	217	217
R^2	0.015	0.035	0.021	0.043	0.018	0.042

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A20: Results for biomass energy projects.

A11 Robustness: Analysis of Other Project Types

As other projects may also influence our main finding, we provide some additional robustness checks. In Tables A21 to A23 we re-estimate our six key models while excluding projects targeting industrial gases, such as HFC and N2O (38 projects, or about 1.0% of the sample), methane avoidance (319 projects, or about 8.5% of the sample), and energy efficiency improvement (90 projects on the demand and 434 projects on the supply side, or about 2.4% and 11.6% of the sample, respectively). As the tables below show, the results are robust even to the exclusion of these project types. Specifically, we continue to find a positive and statistically significant effect for our unilateral project dummy, while the interaction effect is negative in statistically significant in basically all models. This aligns nicely with the findings presented in the main text.

Excluding Industrial Gas, Methane Avoidance, and Energy Efficiency Projects

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.83***	0.91***	0.95***	0.95***	0.74**	0.84***
	(0.27)	(0.25)	(0.27)	(0.26)	(0.28)	(0.24)
CO2 Intensity (3yr moving)	0.09	0.16	0.26***	0.23***	0.06	0.08
	(0.06)	(0.10)	(0.07)	(0.07)	(0.06)	(0.11)
Unilateral x CO2 Intensity	-0.23*	-0.28**	-0.43***	-0.40***	-0.21**	-0.26***
	(0.11)	(0.11)	(0.12)	(0.13)	(0.10)	(0.09)
Corruption (3yr moving)		0.17		0.11		0.17
		(0.13)		(0.12)		(0.14)
Democracy		0.10		0.01		-0.05
		(0.10)		(0.17)		(0.20)
GDP (3yr moving, log)		-0.07		-0.03		-0.07
		(0.05)		(0.07)		(0.05)
Constant	3.54***	4.84***	3.21***	3.88**	3.46***	4.82***
	(0.21)	(1.26)	(0.18)	(1.70)	(0.26)	(1.26)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3711	3711	1777	1777	2893	2893
R^2	0.479	0.485	0.515	0.516	0.526	0.532

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A21: Results excluding industrial gas projects (HFC and N2O).

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.73**	0.73***	0.82***	0.80***	0.69**	0.67***
	(0.29)	(0.26)	(0.29)	(0.27)	(0.29)	(0.24)
CO2 Intensity (3yr moving)	0.04	0.04	0.13**	0.11	0.03	0.04
	(0.05)	(0.09)	(0.06)	(0.08)	(0.06)	(0.12)
Unilateral x CO2 Intensity	-0.19	-0.20*	-0.34**	-0.33**	-0.16	-0.16*
	(0.12)	(0.12)	(0.13)	(0.14)	(0.11)	(0.09)
Corruption (3yr moving)		0.11		0.05		0.10
		(0.10)		(0.10)		(0.11)
Democracy		0.08		-0.00		0.08
		(0.11)		(0.24)		(0.27)
GDP (3yr moving, log)		-0.00		0.03		0.00
		(0.06)		(0.07)		(0.06)
Constant	3.80***	3.54**	3.49***	2.70	3.70***	3.41**
	(0.18)	(1.39)	(0.20)	(1.65)	(0.28)	(1.39)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3430	3430	1525	1525	2633	2633
R^2	0.424	0.425	0.444	0.445	0.467	0.468

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A22: Results excluding methane avoidance projects.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.73**	0.80***	0.83***	0.82***	0.69**	0.76***
	(0.29)	(0.27)	(0.29)	(0.28)	(0.28)	(0.25)
CO2 Intensity (3yr moving)	0.10*	0.19*	0.27***	0.25***	0.07	0.10
	(0.06)	(0.11)	(0.08)	(0.07)	(0.06)	(0.11)
Unilateral x CO2 Intensity	-0.18	-0.24**	-0.36***	-0.34**	-0.21**	-0.24***
	(0.13)	(0.12)	(0.13)	(0.15)	(0.10)	(0.09)
Corruption (3yr moving)		0.13		0.07		0.13
		(0.13)		(0.13)		(0.14)
Democracy		0.14		0.05		-0.01
		(0.09)		(0.17)		(0.19)
GDP (3yr moving, log)		-0.06		-0.02		-0.06
		(0.06)		(0.08)		(0.06)
Constant	3.49***	4.57***	3.18***	3.58**	3.46***	4.63***
	(0.21)	(1.30)	(0.20)	(1.78)	(0.26)	(1.29)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3225	3225	1589	1589	2554	2554
R^2	0.538	0.543	0.572	0.572	0.571	0.575

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A23: Results excluding energy efficiency improvement projects.

Analysis of Methane Avoidance and Energy Efficiency Projects

For further robustness, we also check if our results are maintained if we re-estimate our models for two additional subsamples, i.e., when we only consider methane and energy efficiency projects. As Tables A24 and A25 show, we obtain the same statistical results even though we discard 91.5% (methane avoidance projects) and 86% (energy efficiency improvement projects) of our sample, respectively. It is correct that statistical significance for the negative interaction effect attenuates a bit, but given the large reductions in sample size this is not worrisome at all. These findings reassure us that our empirical results are not an artifact of "lucky" sample selection, but hold also across various subsamples of the data.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.87**	1.07***	1.05**	0.89**	1.20***	1.47***
	(0.35)	(0.32)	(0.38)	(0.32)	(0.42)	(0.31)
CO2 Intensity (3yr moving)	0.37*	0.67***	0.66**	0.58**	0.30*	0.53***
	(0.19)	(0.14)	(0.28)	(0.23)	(0.18)	(0.16)
Unilateral x CO2 Intensity	-0.20	-0.32	-0.33	-0.13	-0.70***	-0.88***
	(0.22)	(0.24)	(0.29)	(0.25)	(0.23)	(0.19)
Corruption (3yr moving)		0.07		0.09		0.13
		(0.26)		(0.24)		(0.27)
Democracy		0.32		0.31		0.10
		(0.22)		(0.21)		(0.23)
GDP (3yr moving, log)		-0.32***		-0.33***		-0.32***
		(0.08)		(0.06)		(0.08)
Constant	2.86***	10.47***	2.68***	10.90***	2.90***	10.70***
	(0.11)	(1.96)	(0.17)	(1.57)	(0.11)	(2.03)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	319	319	285	285	293	293
R^2	0.391	0.468	0.457	0.514	0.436	0.523

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A24: Results for methane projects.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	1.49***	1.92***	1.96***	2.27***	1.28**	1.50***
	(0.52)	(0.57)	(0.44)	(0.49)	(0.49)	(0.44)
CO2 Intensity (3yr moving)	-0.20*	-0.05	0.01	0.09	-0.13	-0.17
	(0.11)	(0.21)	(0.18)	(0.13)	(0.12)	(0.23)
Unilateral x CO2 Intensity	-0.52**	-0.65**	-0.85***	-0.90***	-0.16	-0.28*
	(0.24)	(0.29)	(0.21)	(0.20)	(0.18)	(0.16)
Corruption (3yr moving)		0.19		0.14		0.28
		(0.34)		(0.40)		(0.43)
Democracy		-0.24		-0.08		-0.26
		(0.23)		(0.40)		(0.42)
GDP (3yr moving, log)		-0.19*		-0.22*		-0.06
		(0.11)		(0.12)		(0.08)
Constant	5.93***	10.86***	5.89***	11.50***	5.49***	6.60**
	(0.19)	(2.96)	(0.19)	(3.42)	(0.41)	(2.80)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	524	524	221	221	372	372
R^2	0.150	0.179	0.130	0.167	0.294	0.304

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A25: Results for energy efficiency improvement projects.

A12 Robustness: Control for GDP Squared

In Table A26, we add squared GDP (3yr moving, log) as an additional control variable to capture potential environmental Kuznets curve effects. First and foremost, our hypothesized effects continue to hold. Our unilateral dummy is positive and statistically significant, while the interaction effect with CO2 intensity is negative and statistically significant. We also find evidence for a quadratic effect of GDP on private capital investment. For low levels of GDP the effect is decreasing, but starts to increase for sufficiently high levels of GDP. This could be interpreted as support for an inverted u-shape as claimed by the Kuznets curve literature.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.82***	0.78***	0.96***	0.79***	0.73***	0.70***
	(0.25)	(0.20)	(0.25)	(0.20)	(0.25)	(0.19)
CO2 Intensity (3yr moving)	0.08	0.31***	0.26***	0.37***	0.05	0.26**
	(0.06)	(0.09)	(0.07)	(0.10)	(0.06)	(0.12)
Unilateral x CO2 Intensity	-0.22**	-0.23**	-0.43***	-0.29***	-0.19**	-0.20**
	(0.11)	(0.10)	(0.12)	(0.09)	(0.09)	(0.08)
Corruption (3yr moving)		0.05		-0.02		0.04
		(0.11)		(0.11)		(0.12)
Democracy		0.05		0.08		-0.00
		(0.10)		(0.19)		(0.21)
GDP (3yr moving, log)		-10.94***		-14.02**		-10.10**
		(3.44)		(5.59)		(3.88)
GDP squared (3 yr moving, log)		5.46***		6.99**		5.04**
		(1.73)		(2.80)		(1.95)
Constant	3.54***	3.87***	3.22***	4.08**	3.46***	3.94***
	(0.21)	(1.35)	(0.18)	(1.63)	(0.27)	(1.41)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3749	3749	1810	1810	2926	2926
R^2	0.503	0.515	0.535	0.543	0.546	0.557

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A26: Results with squared GDP as control.

A13 Robustness: Disaggregated Project Type Fixed Effects

In Table A27, we use a more nuanced classification for our project fixed effects. Instead of the nine project types that we use in our main analysis (CH4, cement, and coal; CO2 usage; energy efficiency (demand side); energy efficiency (supply side); reforestation; fuel switch; HFCs and N2Os; renewable energy; transport), we now use 23 project types instead. These project types include the following: biomass energy; CO2 usage; cement; coal bed/ mine methane; energy efficiency (households); energy efficiency (industry); energy efficiency (service sector); energy efficiency (supply side); energy efficiency (own generation); energy distribution; fuel switch; fugitive emissions; geothermal energy; HFCs; hydroelectricity; landfill gases; methane avoidance; N2Os; PFCs and SF6; reforestation; solar; transport; wind. This disaggregation allows us to more specifically control for the heterogeneity of project costs and posits a more stringent test of our theory.

Inspection of Table A27 shows, all six models testify to the validity of our hypothesis. We find a positive and highly statistically significant effect for our unilateral dummy. In line with our theory, this effect decreases as CO2 intensity increases. This interaction effect is negative and statistically significant at the $\alpha = 0.01$ level in five out of six models.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.62***	0.73***	0.74***	0.74***	0.52***	0.64***
	(0.17)	(0.15)	(0.14)	(0.14)	(0.18)	(0.15)
CO2 Intensity (3yr moving)	0.03	0.13	0.24***	0.20***	-0.01	0.03
	(0.06)	(0.09)	(0.07)	(0.06)	(0.07)	(0.10)
Unilateral x CO2 Intensity	-0.18***	-0.24***	-0.40***	-0.36***	-0.14*	-0.20***
	(0.06)	(0.07)	(0.07)	(0.05)	(0.07)	(0.05)
Corruption (3yr moving)		0.18		0.13		0.16
		(0.13)		(0.13)		(0.15)
Democracy		0.09		-0.03		-0.07
		(0.10)		(0.13)		(0.15)
GDP (3yr moving, log)		-0.10*		-0.04		-0.10*
		(0.05)		(0.06)		(0.05)
Constant	5.06***	7.06***	4.71***	5.61***	4.97***	7.16***
	(0.18)	(1.24)	(0.14)	(1.46)	(0.26)	(1.29)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3749	3749	1810	1810	2926	2926
R^2	0.601	0.610	0.641	0.643	0.639	0.648

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A27: Results for disaggregated project fixed effects.

A14 Robustness: Political Economy Controls

We purposefully chose a very parsimonious model specification for our main results. Here we, however, present an additional robustness check that includes prominent variables from the political economy literature. In particular, we add three year moving averages of the following variables to our model: total population, investment profile, trade as share of GDP, industry production as share of GDP, inward FDI as share of GDP, and number of internet users. Interestingly, we find no support for the influence of trade, industry production, or inward FDI on investments per ton of CO2. Yet, as in our main model, GDP has a strong and negative effect at high levels of statistical significance. In addition, corruption and the number of internet users as a proxy for a country's technological advancement are both positively correlated with investment in CDM projects. Most importantly for our analysis, our hypothesized effects continue to hold even when controlling for these political-economic variables.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.82***	0.66***	0.96***	0.62***	0.73***	0.56***
	(0.25)	(0.14)	(0.25)	(0.14)	(0.25)	(0.11)
CO2 Intensity (3yr moving)	0.08	0.21**	0.26***	0.29***	0.05	0.17*
	(0.06)	(0.10)	(0.07)	(0.10)	(0.06)	(0.10)
Unilateral x CO2 Intensity	-0.22**	-0.17**	-0.43***	-0.21***	-0.19**	-0.13***
	(0.11)	(0.07)	(0.12)	(0.07)	(0.09)	(0.05)
Corruption (3yr moving)		0.42***		0.37***		0.46***
		(0.13)		(0.13)		(0.16)
Democracy		0.07		0.14		0.02
		(0.12)		(0.13)		(0.13)
GDP (3yr moving, log)		-0.29***		-0.24***		-0.29***
		(0.07)		(0.06)		(0.07)
Population (3yr moving)		0.00*		0.00*		0.00
		(0.00)		(0.00)		(0.00)
Investment Profile (3yr moving)		0.05		0.02		0.05
		(0.04)		(0.04)		(0.04)
Pct Trade of GDP (3yr moving)		-0.00*		-0.00*		-0.01**
		(0.00)		(0.00)		(0.00)
Pct Industry of GDP (3yr moving)		-0.01		-0.01		-0.00
		(0.01)		(0.01)		(0.01)
Pct FDI of GDP (3yr moving)		0.02		0.05		0.04
		(0.03)		(0.04)		(0.04)
Internet users (3yr moving)		0.03***		0.03***		0.03***
		(0.00)		(0.01)		(0.00)
Constant	3.54***	9.48***	3.22***	8.45***	3.46***	9.28***
	(0.21)	(2.14)	(0.18)	(1.84)	(0.27)	(2.17)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3749	3716	1810	1777	2926	2893
R^2	0.503	0.531	0.535	0.565	0.546	0.582

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A28: Results with additional political economy controls.

A15 Robustness: Outlier Analysis

We also address the possibility that outliers have driven our main findings. We address this in our main model by logarithmizing the dependent variable and host country GDP. Here, we compute Cook's distance for our main model. We then generate a dummy variable (outlier) that is equal to one if Cook's distance is higher than $4/n$, but zero otherwise. In determining influential observations this way, we follow the approach recommended by Bollen and Jackman (1990). This process identifies 311 potential outliers. We then reestimate our models excluding these cases. Results are presented below in Table A29.

We also computed the studentized residuals for our main models. Table A30 presents results when we replicate all our models, excluding observations where the studentized residual has an absolute value greater than 2 (Ruppert, 2004). Again, our findings continue to hold.

Outlier Analysis Using Cook's Distance

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.47**	0.57***	0.62***	0.61***	0.48***	0.60***
	(0.18)	(0.17)	(0.18)	(0.17)	(0.18)	(0.16)
CO2 Intensity (3yr moving)	-0.03	0.09	0.14***	0.13***	-0.03	0.00
	(0.03)	(0.06)	(0.04)	(0.05)	(0.04)	(0.07)
Unilateral x CO2 Intensity	-0.07	-0.13*	-0.25***	-0.22**	-0.10	-0.16**
	(0.08)	(0.07)	(0.09)	(0.09)	(0.07)	(0.06)
Corruption (3yr moving)		0.14		0.10		0.21*
		(0.12)		(0.10)		(0.12)
Democracy		0.11		0.06		-0.07
		(0.09)		(0.12)		(0.15)
GDP (3yr moving, log)		-0.08***		-0.05*		-0.08***
		(0.02)		(0.03)		(0.02)
Constant	3.77***	5.21***	3.37***	4.35***	3.63***	5.15***
	(0.19)	(0.59)	(0.13)	(0.63)	(0.18)	(0.63)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3438	3438	1529	1529	2683	2683
R^2	0.624	0.632	0.700	0.703	0.650	0.659

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A29: Results without potential outliers (Cook's distance).

Outlier Analysis Using Studentized Residuals

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.50***	0.61***	0.65***	0.65***	0.51***	0.62***
	(0.14)	(0.13)	(0.13)	(0.13)	(0.14)	(0.12)
CO2 Intensity (3yr moving)	-0.01	0.13**	0.18***	0.17***	-0.02	0.06
	(0.03)	(0.05)	(0.04)	(0.04)	(0.03)	(0.06)
Unilateral x CO2 Intensity	-0.08	-0.15**	-0.26***	-0.22***	-0.12*	-0.17***
	(0.06)	(0.06)	(0.07)	(0.07)	(0.06)	(0.05)
Corruption (3yr moving)		0.13		0.08		0.17
		(0.11)		(0.10)		(0.12)
Democracy		0.13*		0.07		-0.02
		(0.07)		(0.11)		(0.12)
GDP (3yr moving, log)		-0.10***		-0.07***		-0.10***
		(0.02)		(0.03)		(0.02)
Constant	3.65***	5.65***	3.36***	5.02***	3.55***	5.65***
	(0.21)	(0.54)	(0.16)	(0.68)	(0.26)	(0.57)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3507	3507	1611	1611	2744	2744
R^2	0.666	0.675	0.710	0.713	0.684	0.695

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A30: Results without potential outliers (studentized residuals).

A16 Robustness: Regional Sensitivity

To check the sensitivity of our results to particular countries or regions, we first re-estimate our main models while excluding China and India at the same time. This is a hard test for our model as the sample size reduces to about one quarter of the original dataset; despite this considerable reduction, Table A31 shows that our main results hold.

Additionally, we exclude every region (Asia and Pacific, Latin America, Africa, Europe and Central Asia, Middle-East) one by one in descending order. The results are presented in Tables A32 to A36. Impressively, our results remain strong even when the sample size reduces to only 543 cases when we exclude the Asian and Pacific region with its 3206 projects, or about 85% of the entire dataset. This result suggests that our results are neither driven by China and India nor by a specific region.

	(1) Model	(2) Model
Unilateral	0.85***	0.85***
	(0.25)	(0.21)
CO2 Intensity (3yr moving)	0.25***	0.26***
	(0.08)	(0.08)
Unilateral x CO2 Intensity	-0.46***	-0.45***
	(0.16)	(0.16)
Corruption (3yr moving)		0.00
		(0.12)
Democracy		0.06
		(0.21)
GDP (3yr moving, log)		-0.02
		(0.09)
Constant	3.21***	3.59
	(0.27)	(2.29)
Year Effects	Yes	Yes
Project Type Effects	Yes	Yes
Observations	987	987
R^2	0.586	0.586

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China

Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A31: Results without CDM projects from China and India.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.60***	0.65***	0.60***	0.65***	0.60***	0.65***
	(0.15)	(0.14)	(0.15)	(0.14)	(0.15)	(0.14)
CO2 Intensity (3yr moving)	0.28**	0.24	0.28**	0.24	0.28**	0.24
	(0.12)	(0.15)	(0.12)	(0.15)	(0.12)	(0.15)
Unilateral x CO2 Intensity	-0.39**	-0.39**	-0.39**	-0.39**	-0.39**	-0.39**
	(0.19)	(0.17)	(0.19)	(0.17)	(0.19)	(0.17)
Corruption (3yr moving)		-0.10		-0.10		-0.10
		(0.13)		(0.13)		(0.13)
Democracy		0.03		0.03		0.03
		(0.26)		(0.26)		(0.26)
GDP (3yr moving, log)		-0.07		-0.07		-0.07
		(0.06)		(0.06)		(0.06)
Constant	2.91***	4.95***	2.91***	4.95***	2.91***	4.95***
	(0.13)	(1.53)	(0.13)	(1.53)	(0.13)	(1.53)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	543	543	543	543	543	543
R^2	0.611	0.615	0.611	0.615	0.611	0.615

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A32: Results without CDM projects from the Asian and Pacific region.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	1.38***	1.32***	1.65***	1.62***	1.39**	1.26***
	(0.50)	(0.43)	(0.49)	(0.43)	(0.51)	(0.38)
CO2 Intensity (3yr moving)	0.02	-0.04	0.14	0.09	0.02	-0.04
	(0.09)	(0.18)	(0.12)	(0.14)	(0.10)	(0.18)
Unilateral x CO2 Intensity	-0.47**	-0.45**	-0.68***	-0.69***	-0.46**	-0.41**
	(0.22)	(0.21)	(0.22)	(0.22)	(0.21)	(0.17)
Corruption (3yr moving)		0.07		0.06		0.02
		(0.17)		(0.18)		(0.19)
Democracy		0.06		0.02		0.13
		(0.13)		(0.25)		(0.28)
GDP (3yr moving, log)		0.04		0.07		0.05
		(0.08)		(0.11)		(0.08)
Constant	4.12***	3.04	3.80***	1.91	4.22***	2.92
	(0.16)	(1.87)	(0.19)	(2.55)	(0.16)	(1.82)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3327	3327	1388	1388	2504	2504
R^2	0.475	0.476	0.497	0.500	0.531	0.533

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A33: Results without CDM projects from the Latin American region.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.82***	0.94***	0.97***	0.96***	0.71**	0.85***
	(0.26)	(0.25)	(0.26)	(0.26)	(0.26)	(0.23)
CO2 Intensity (3yr moving)	0.08	0.18*	0.27***	0.23***	0.05	0.09
	(0.06)	(0.09)	(0.08)	(0.07)	(0.07)	(0.09)
Unilateral x CO2 Intensity	-0.22*	-0.28**	-0.44***	-0.38***	-0.17*	-0.24***
	(0.11)	(0.11)	(0.12)	(0.12)	(0.10)	(0.09)
Corruption (3yr moving)		0.19		0.13		0.18
		(0.13)		(0.13)		(0.14)
Democracy		0.06		0.04		-0.09
		(0.11)		(0.17)		(0.22)
GDP (3yr moving, log)		-0.12***		-0.09*		-0.11***
		(0.04)		(0.05)		(0.04)
Constant	3.55***	5.97***	3.21***	5.36***	3.46***	5.95***
	(0.21)	(0.93)	(0.19)	(1.18)	(0.27)	(0.98)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3673	3673	1734	1734	2850	2850
R^2	0.501	0.511	0.535	0.540	0.549	0.559

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A34: Results without CDM projects from the African region.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.81***	0.87***	0.94***	0.92***	0.72***	0.80***
	(0.26)	(0.23)	(0.25)	(0.23)	(0.25)	(0.21)
CO2 Intensity (3yr moving)	0.08	0.13	0.25***	0.20**	0.05	0.04
	(0.06)	(0.11)	(0.07)	(0.08)	(0.06)	(0.12)
Unilateral x CO2 Intensity	-0.21*	-0.25**	-0.41***	-0.38***	-0.18*	-0.22***
	(0.11)	(0.11)	(0.12)	(0.12)	(0.09)	(0.08)
Corruption (3yr moving)		0.20		0.14		0.19
		(0.13)		(0.12)		(0.15)
Democracy		0.07		-0.05		-0.08
		(0.10)		(0.18)		(0.20)
GDP (3yr moving, log)		-0.06		-0.01		-0.05
		(0.06)		(0.08)		(0.06)
Constant	3.52***	4.48***	3.22***	3.17*	3.43***	4.44***
	(0.21)	(1.37)	(0.19)	(1.85)	(0.28)	(1.36)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3732	3732	1793	1793	2909	2909
R^2	0.506	0.511	0.538	0.539	0.549	0.554

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A35: Results without CDM projects from the European and Central Asian region.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.82***	0.90***	0.96***	0.95***	0.73***	0.82***
	(0.26)	(0.24)	(0.26)	(0.25)	(0.26)	(0.23)
CO2 Intensity (3yr moving)	0.09	0.17	0.28***	0.24***	0.06	0.09
	(0.06)	(0.10)	(0.07)	(0.07)	(0.06)	(0.11)
Unilateral x CO2 Intensity	-0.22*	-0.28**	-0.44***	-0.41***	-0.20**	-0.24***
	(0.11)	(0.11)	(0.12)	(0.13)	(0.10)	(0.09)
Corruption (3yr moving)		0.17		0.11		0.16
		(0.13)		(0.13)		(0.15)
Democracy		0.11		0.02		-0.01
		(0.10)		(0.17)		(0.20)
GDP (3yr moving, log)		-0.07		-0.03		-0.07
		(0.05)		(0.07)		(0.05)
Constant	3.53***	4.79***	3.19***	3.79**	3.46***	4.77***
	(0.21)	(1.26)	(0.18)	(1.70)	(0.26)	(1.26)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3721	3721	1782	1782	2898	2898
R^2	0.499	0.505	0.532	0.534	0.542	0.547

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A36: Results without CDM projects from the Middle East region.

A17 Robustness: Cross-sectional Analysis

To further test the robustness of our findings, we aggregate the CDM project data to the country level and run a cross-sectional analysis. We use the same model specifications as in our main models with project as unit of analysis, but take country averages for all our variables. Table A37 presents estimation results from standard OLS models, while Table A38 shows estimation results from models in which we re-weighted each country's variance with the inverse of the number of CDM projects implemented in the respective country. All models are estimated with robust standard errors.

For the unweighted sample, we find a strong positive effect for unilaterally implemented projects. As expected, the interaction effect is negative, but lacks statistical significance, which may be either due to the small sample size of only 55 countries or due to discarding a lot of information in estimating unweighted variances. In contrast, when weighting variances with the inverse of CDM project counts, three out of six models have a statistically significant interaction effect. This implies that our findings are considerably robust even when aggregating data to the cross-sectional level.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	1.395*	1.223*	1.392*	1.247**	1.455*	1.232**
	(0.733)	(0.610)	(0.741)	(0.604)	(0.728)	(0.604)
CO2 Intensity (3yr moving)	0.156	0.234	0.142	0.205	0.160	0.234
	(0.198)	(0.147)	(0.213)	(0.156)	(0.196)	(0.147)
Unilateral x CO2 Intensity	-0.438	-0.214	-0.418	-0.150	-0.568	-0.230
	(0.448)	(0.362)	(0.468)	(0.381)	(0.460)	(0.404)
Corruption (3yr moving)		-0.292*		-0.300*		-0.292*
		(0.156)		(0.157)		(0.157)
Democracy		0.577**		0.603**		0.571*
		(0.280)		(0.287)		(0.293)
GDP (3yr moving)		-0.008		-0.039		-0.009
		(0.136)		(0.154)		(0.144)
Constant	4.602***	5.111	4.605***	5.854	4.604***	5.144
	(0.360)	(3.390)	(0.365)	(3.813)	(0.358)	(3.591)
Observations	55	55	54	54	54	54
R^2	0.066	0.154	0.066	0.164	0.064	0.148

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All standard errors are robust standard errors.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A37: Cross-sectional analysis with unweighted variances.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	3.156**	3.848***	2.860**	3.572**	3.234**	4.337***
	(1.323)	(1.401)	(1.395)	(1.404)	(1.319)	(1.402)
CO2 Intensity (3yr moving)	0.766***	0.940***	0.617*	0.483	0.765***	0.930***
	(0.167)	(0.279)	(0.351)	(0.302)	(0.169)	(0.290)
Unilateral x CO2 Intensity	-0.947*	-1.203*	-0.708	-0.511	-1.150	-1.947*
	(0.542)	(0.618)	(0.718)	(0.673)	(0.915)	(1.082)
Corruption (3yr moving)		-0.060		0.062		0.010
		(0.170)		(0.151)		(0.194)
Democracy		-0.094		-0.146		-0.206
		(0.376)		(0.291)		(0.397)
GDP (3yr moving)		-0.097		-0.249**		-0.115
		(0.083)		(0.103)		(0.086)
Constant	3.281***	5.691**	3.453***	9.644***	3.303***	6.085***
	(0.478)	(2.161)	(0.537)	(2.551)	(0.508)	(2.258)
Observations	55	55	54	54	54	54
R^2	0.488	0.512	0.467	0.546	0.417	0.452

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All standard errors are robust standard errors.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A38: Cross-sectional analysis with weighted variances.

A18 Robustness: Availability of Domestic Capital

As our argument is about investment in climate mitigation, availability of domestic capital may affect the relationship between contracting type and climate mitigation investments. To ensure that our results are not biased due to omitting control variables, we use gross domestic savings (% of GDP) and a country's real interest rate as proxies for the availability of domestic capital. Data comes from the *World Development Indicators*, and for consistency, we calculate again three year moving averages for these additional control variables.

Tables A39 and A40 show the results from these additional checks. As we see, our main results are by no means affected and seem not to be driven by excluding controls for the availability of domestic capital. Also, the coefficients are never statistically significant except for one model. Interestingly, the one statistically significant model suggests preliminary evidence to a domestic capital story as with higher gross domestic savings, climate mitigation investments are found to be higher.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.82***	0.94***	0.97***	0.99***	0.72***	0.87***
	(0.25)	(0.24)	(0.25)	(0.24)	(0.25)	(0.22)
CO2 Intensity (3yr moving)	0.08	0.10	0.22**	0.17*	0.00	0.01
	(0.14)	(0.12)	(0.09)	(0.09)	(0.13)	(0.14)
Unilateral x CO2 Intensity	-0.22**	-0.29**	-0.44***	-0.41***	-0.19**	-0.26***
	(0.10)	(0.11)	(0.12)	(0.12)	(0.09)	(0.08)
Domestic Savings (3yr moving)	0.00	0.02	0.01	0.02	0.00	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Corruption (3yr moving)		0.20		0.15		0.20
		(0.14)		(0.13)		(0.14)
Democracy		0.28*		0.19		0.14
		(0.15)		(0.17)		(0.23)
GDP (3yr moving, log)		-0.15***		-0.11**		-0.15***
		(0.05)		(0.04)		(0.05)
Constant	3.53***	6.26***	3.05***	5.22***	3.41***	6.33***
	(0.23)	(1.12)	(0.30)	(1.00)	(0.30)	(1.25)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3741	3741	1802	1802	2918	2918
R^2	0.504	0.514	0.539	0.544	0.549	0.560

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A39: Results with gross domestic savings (% GDP) as control.

	(1) Model	(2) Model	(3) Model	(4) Model	(5) Model	(6) Model
Unilateral	0.97***	1.00***	1.09***	1.07***	0.89***	0.93***
	(0.28)	(0.25)	(0.27)	(0.26)	(0.27)	(0.24)
CO2 Intensity (3yr moving)	0.04	0.11	0.22**	0.19	0.00	0.02
	(0.08)	(0.16)	(0.10)	(0.12)	(0.09)	(0.16)
Unilateral x CO2 Intensity	-0.28**	-0.32***	-0.49***	-0.47***	-0.27**	-0.29***
	(0.12)	(0.12)	(0.12)	(0.14)	(0.10)	(0.09)
Real Interest Rate (3yr moving)	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Corruption (3yr moving)		0.17		0.11		0.16
		(0.12)		(0.12)		(0.13)
Democracy		0.13		0.04		-0.00
		(0.11)		(0.18)		(0.23)
GDP (3yr moving, log)		-0.05		-0.01		-0.04
		(0.07)		(0.09)		(0.07)
Constant	3.72***	4.38***	3.36***	3.26	3.67***	4.33***
	(0.23)	(1.53)	(0.20)	(1.98)	(0.24)	(1.55)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
Project Type Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3697	3697	1758	1758	2874	2874
R^2	0.506	0.511	0.540	0.541	0.552	0.555

Standard errors in parentheses

Dependent Variable: Investment/tCO2

Models (3-4) exclude China. Models (5-6) exclude India

All models: Robust SEs clustered by country

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A40: Results with real interest rates as control.

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