Mild Government Intervention: Regulatory Salience and Mandatory ESG Disclosure

(Original title: Externalities of ESG Disclosure)

Yi JIANG (Harbin Institute of Technology, Shenzhen)

Ya KANG (Chinese University of Hong Kong)

Hao LIANG (Singapore Management University)

ESG Disclosures around the World

- Increasing demand for ESG information among regulators, institutional investors, third-party agencies, and corporate stakeholders
  - Global average of listed companies issuing some form of ESG reports: close to 80%.

- Most corporate ESG disclosures are on voluntary basis
  - Following international frameworks or standards such as TCFD, CDP, GRI, SASB, etc.
  - IFRS introduces International Sustainability Standards Board (ISSB) as a global baseline

- More and more jurisdictions have mandating ESG disclosures:
  - US (SEC 2024 mandate), UK (*The Companies Act 2006 - Regulations 2013*), EU (NFRD in 2014, SFDR, CSRD, Taxonomy in 2020), China (ISSB reporting by 2026), Singapore (climate reporting based on TCFD recommendations, ISSB reporting by 2027), etc.

Pathway to ESG disclosure going mainstream

ESG disclosure enhances transparency and comparability of ESG information, and incentivises businesses to embrace sustainable practices.

Empirical evidence shows that mandatory GHG disclosure leads companies to reduce their carbon footprints.
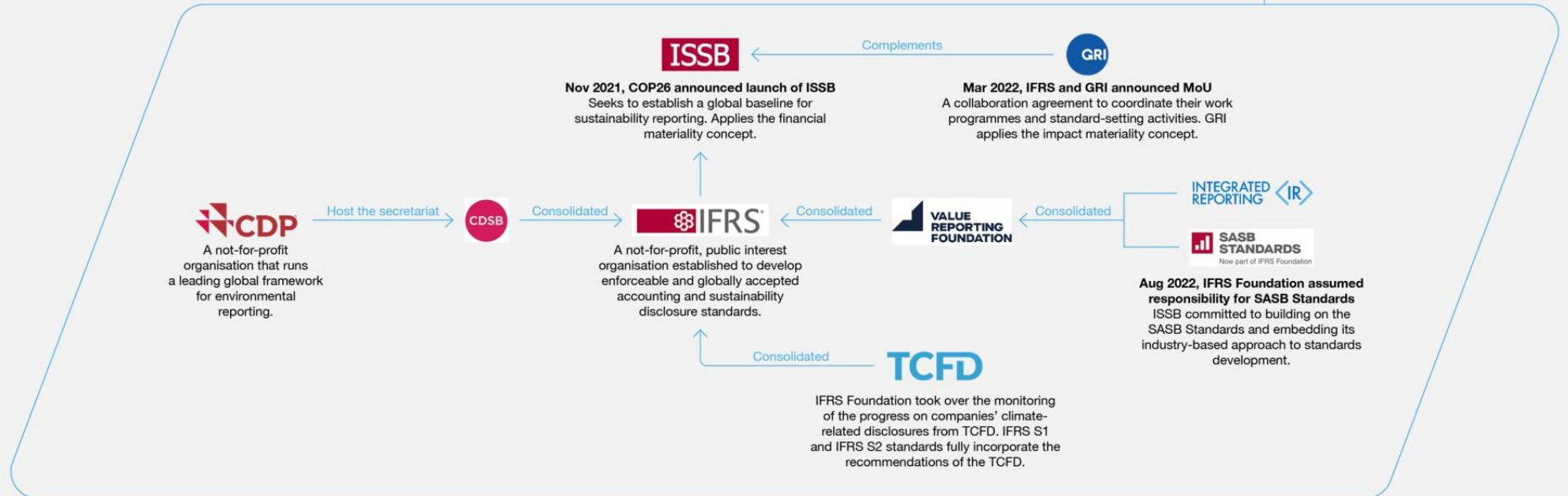
Mandatory Disclosure as a Mild Government Intervention

- Mandatory disclosure is a way for the state and politicians to "mildly" influence firm behavior
    - Intervention through "visible hands": laws, regulations, direct state interference on corporate actions, etc.
    - Intervention through "invisible hands": state ownership, political connections, etc.
    - Disclosure mandate combines visible and invisible hands: government set rules for reporting (but not on actions), corporations react by changing their actions.
- Mandatory disclosures can direct corporate actions toward politically desired outcomes
    - The literature mostly focuses on the informational and incentive roles of mandatory disclosure
    - Mandatory disclosure can also reflect government's political agenda, and engenders regulatory salience on certain issues (especially w.r.t. ESG)

Our Approach

- We explore a Chinese setting of a mandatory reporting regime change from disclosing broad ESG issues to additionally disclosing poverty alleviation spending
  - In 2016, CSRC required all firms to disclose spending on "targeted poverty alleviation" (TPA)
  - Officially adopted in 2014, the TPA is central to China's anti-poverty strategy, and CPC's century goal of building a "moderately prosperous society"
    - Establishment of a national poverty registration system, leading groups on poverty alleviation established at all administrative levels, clear guidelines, and targeted population and timelines
- This policy change provides an ideal setting for testing the role of regulatory salience, as there are already treated and control groups with different exposure to regulatory salience of TPA
  - In 2008, China Securities Regulatory Commission (CSRC) required a subset of companies listed on Shanghai and Shenzhen exchanges to issue CSR reports (with low standards and loose guidelines);
  - In the 2016 TPA mandate, these firms are required to disclosure their TPA information twice: both in annual report and in CSR reports, making TPA more prominent to the company and its stakeholders – treated group

Institutional Background

Introduction of mandatory ESG disclosure by CSRC for listed firms on "Corporate Governance Sector", financial firms as well as firms with overseas listed shares on SSE, as well as firms on "Shenzhen 100 Index" through issues CSR reports

2013

All firms are required to disclose their contributions to targeted poverty alleviation (TPA); firms subject to mandatory CSR reporting are required to additionally include their TPA information in CSR reports.

Under CSRC instructions, companies included in the SSE 180, SSE STAR 50, SZSE 100, and ChiNext indices, as well as companies listed both domestically and internationally, must issue comprehensive ESG reports to fully disclose ESG information. Other listed companies are encouraged to disclose ESG reports voluntarily.

2008

The coverage of firms expanded to include central SOEs

2016

2024

Voluntary ESG disclosure

Mandatory ESG disclosure for a subset of firms; general and qualitative reporting

Mandatory ESG disclosure for a subset of firms; prescriptive and quantitative – from specific issues to comprehensive ESG reporting

The sample period covered in this study: 2013-2019

Regulatory Salience

- The 2016 mandate makes TPA more regulatorily salient than other issues, especially for firms that have to disclose it more prominently

- Firms reallocate their resources to short-term oriented TPA, and away from long-term projects (e.g., environmental protection & pollution abatement)
  - Rational reaction by firms: catering to politicians' agenda, in exchange for favorable treatments from government
  - Environmental outcomes are frequently emphasized (e.g., carbon neutrality by 2060), but they usually go far beyond politicians' life spans

'Lucid waters and lush mountains are invaluable assets'

Share

TOP NEWS

Xi stresses importance of unity in building a modern socialist country

China   22:07, 27-Sep-2022

Lucid waters and lush mountains are invaluable assets

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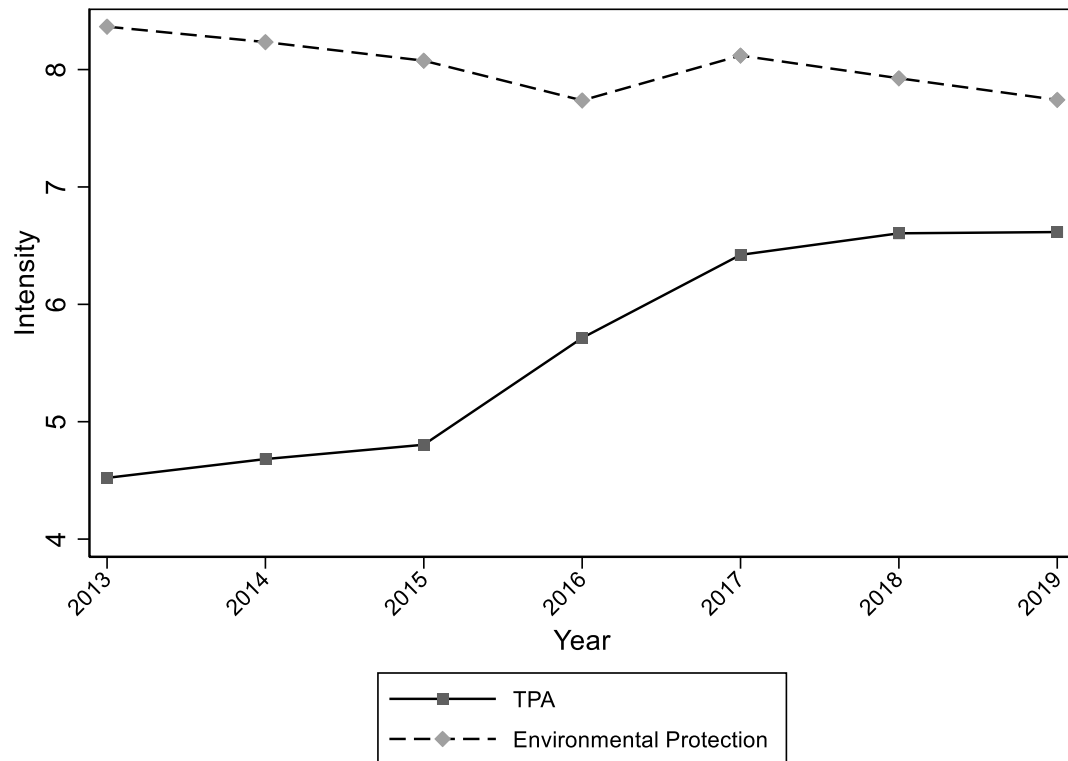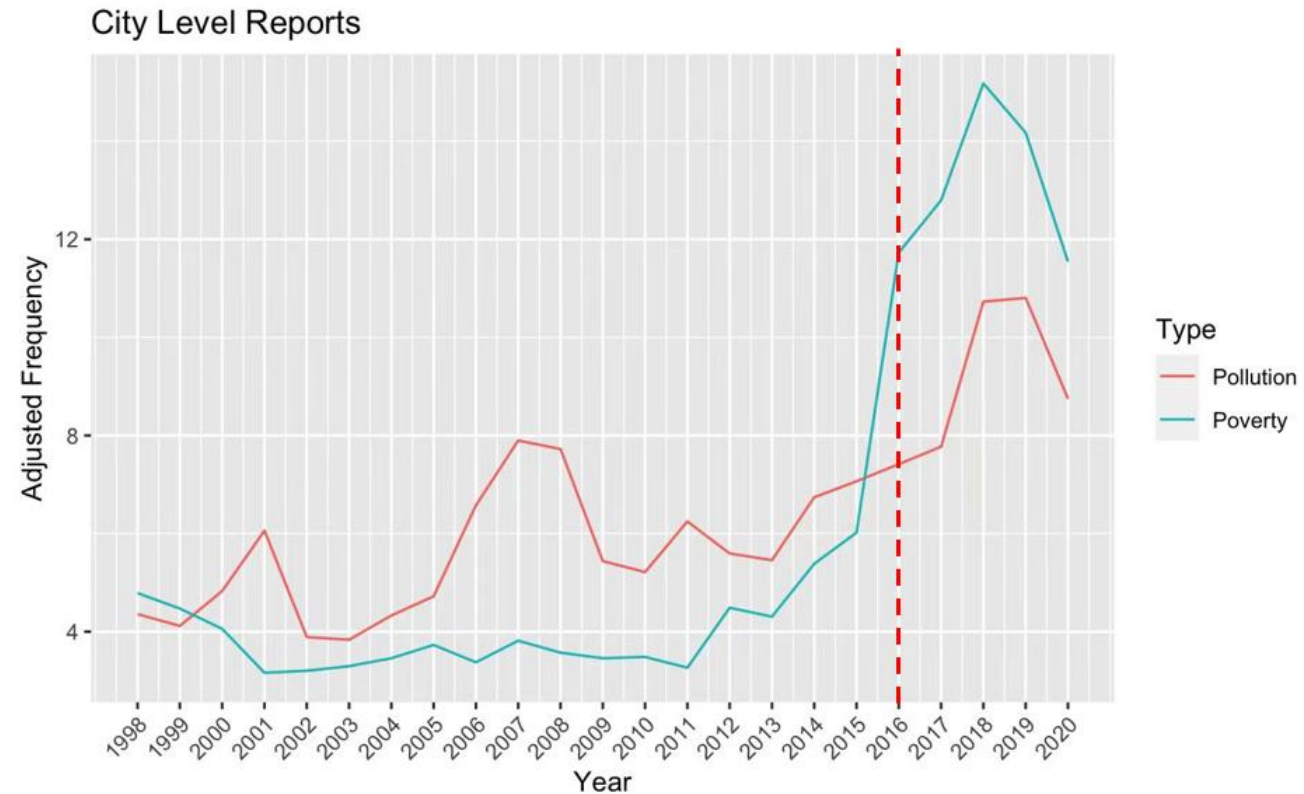
Regulatory Salience of TPA over Environment

Overall media coverage on TPA vs. environmental protection

Regulatory Salience of TPA vs. Environmental Protection in Local Government Working Reports

Preview of Key Findings

- Using a difference-in-differences (DiD), we find that firms report TPA in CSR reports (treated firms) significantly increased their social donations and investment in anti-poverty projects after the passage of the TPA reporting mandate (post-treatment)

- These firms also increased their major pollutants emissions, wastes, and water consumptions more and received more environmental penalties
  - They also made less non-anti-poverty donations

- Treated firms experience lower cost of debt and receive more government subsidies, and achieve greater operating performance and valuation.

- Mild government intervention through mandatory ESG disclosure
  - Firms pander to political agenda to receive government support, at the cost of other stakeholders (e.g., environmental externalities)

Data and Method

- Main datasets for social donations, corporate poverty alleviation contributions as well as pollutant emissions are from CSMAR and CNRDS

- Regional data are from National Bureau of Statistics of China

- Supplemental data on emissions, pollutants, water and natural resources, environmental penalties are from Trucost and regional environmental protection authorities

- Other firm-level financial, ownership, and operational data are from CSMAR

- Main model is difference-in-differences:

$$y = \beta_1 \cdot Treat \times Post + \theta \cdot Controls + FEs + \varepsilon$$

  - y measures donations, TPA contributions, emissions and other ESG indicators
  - *FEs include Firm FE, Year FE, Industry × Year FE*
  - *Controls* include Ln(Assets), Leverage, ROA, cash flow from operations (*CFO*), assets turnover (*ATO*), investment opportunity (*TobinQ*), the percentage hold by top 10 shareholders (*Top10*), an indicator of state-owned entity (*SOE*), and firm age (*FirmAge*)
  - Standard errors clustered at the firm- or city-levels

Summary Statistics

Variables	Treated Firms			Control Firms		
	Obs	Mean	SD	Obs	Mean	SD
TotalDonation	2,588	2.74	3.01	11,555	0.94	2.00
TPADonation	2,588	1.74	2.67	11,555	0.58	1.61
OtherDonation	2,588	1.61	2.53	11,555	0.48	1.46
Pollution	2,588	1.17	3.33	11,555	0.37	1.72
PollutionRev	2,588	2.55	15.56	11,555	0.71	8.64
PollutionCogs	2,588	3.44	21.12	11,555	0.99	11.86
AirPol	2,588	0.91	1.65	11,555	0.19	0.72
GHG	2,588	1.24	2.01	11,555	0.28	0.95
LWP	2,588	0.39	0.95	11,555	0.08	0.39
Waste	2,588	0.46	0.98	11,555	0.07	0.29
ProCon	2,588	0.03	0.16	11,555	0.00	0.05
EmpCon	2,588	0.01	0.07	11,555	0.00	0.03
CgovCon	2,588	0.05	0.22	11,555	0.02	0.13
ROE	2,588	0.07	0.13	11,555	0.01	0.36
OperMargin	2,588	0.09	0.19	11,554	0.04	0.31
LoanAmt	2,588	1.26	3.57	11,555	0.51	2.26
GovSubs	2,588	3.61	4.29	11,555	3.26	3.71
LnAsset	2,588	23.45	1.39	11,555	21.96	1.12
Leverage	2,588	0.51	0.19	11,555	0.42	0.21
ROA	2,588	0.04	0.05	11,555	0.03	0.07
CFO	2,588	0.05	0.07	11,555	0.04	0.07
ATO	2,588	0.65	0.47	11,555	0.60	0.43
TobinQ	2,588	1.85	1.34	11,555	2.39	1.73
Top10	2,588	0.59	0.16	11,555	0.57	0.15
SOE	2,588	0.72	0.45	11,555	0.32	0.47
FirmAge	2,588	2.91	0.31	11,555	2.83	0.35

Pre- and Post-Treatment for key outcome variables

	Treated		Control		Difference
Emission					
Before	0.713		0.107		0.606***
After	1.626		0.628		0.998***
Difference	0.913		0.521		**0.392***
TotalDonation					
Before	1.918	(USD 208,000)	0.414	(USD 29,000)	1.504***
After	3.566	(USD 1.93 mls)	1.459	(USD 390,000)	2.107***
Difference	1.648		1.045		**0.602***
AntiPovertyAmt					
Before	0.583	(USD 20,300)	0.086	(USD 2,500)	0.497***
After	2.905	(USD 1.01 mls)	1.065	(USD 219,000)	1.840***
Difference	2.322		0.979		**1.343***

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Total Donation			*TPA Donation*		
*Treat*Post*	**0.453*****	**0.585*****	**0.468*****	**1.181*****	**1.306*****	**1.185*****
	(0.130)	(0.132)	(0.130)	(0.132)	(0.137)	(0.132)
Treated	1.487***			0.483***		
	(0.112)			(0.058)		
LnAsset		0.200***	0.275***		0.062	0.166***
		(0.066)	(0.063)		(0.061)	(0.058)
Leverage		-0.061	0.022		-0.125	-0.069
		(0.194)	(0.196)		(0.179)	(0.180)
ROA		1.920***	1.544***		1.452***	0.982***
		(0.270)	(0.283)		(0.243)	(0.253)
CFO		0.454*	0.373		0.319	0.273
		(0.268)	(0.268)		(0.230)	(0.230)
ATO		0.012	0.054		-0.053	0.023
		(0.108)	(0.105)		(0.101)	(0.098)
TobinQ		0.031**	0.032**		0.001	0.005
		(0.015)	(0.016)		(0.013)	(0.013)
Top10		0.817***	0.281		0.942***	0.341
		(0.294)	(0.294)		(0.278)	(0.265)
SOE		0.156	0.164		0.166	0.172
		(0.197)	(0.193)		(0.185)	(0.179)
FirmAge		-0.535	-0.373		-0.216	-0.015
		(0.437)	(0.434)		(0.426)	(0.418)
Obs.	14,143	14,143	14,143	14,143	14,143	14,143
Adj R-sq	0.28	0.53	0.54	0.28	0.46	0.49
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	No	Yes	Yes	No	Yes	Yes
Ind*Year FE	Yes	No	Yes	Yes	No	Yes

58.5% increase, i.e., 1.55 mls RMB (approx. 215k USD)

Average annual profit for listed firms in China is about 13.8 mls USD

130.6% increase, i.e., 1.75 mls RMB (approx. 242k USD)

Effect on Emission of major pollutants

34.9% increase, i.e., 4,390 tonnes
(average emission is 12,579 tonnes)

VARIABLES	(1) Pollution	(2) Pollution	(3) Pollution
Treat*Post	0.396***	0.349**	0.384***
	(0.140)	(0.142)	(0.141)
Treated	0.503***		
	(0.097)		
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Firm FE	No	Yes	Yes
Ind*Year FE	Yes	No	Yes
Obs.	14,143	14,143	14,143
Adj R-sq	0.12	0.37	0.39

Alternative Measures of Pollution

Panel A: Alternative Data from Trucost

VARIABLES	(1) AirPol	(2) GHG	(3) LWP	(4) Waste
Treat×Post	0.263***	0.366***	0.137***	0.214***
	(0.059)	(0.069)	(0.032)	(0.035)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Obs.	14,143	14,143	14,143	14,143
Adj R-sq	0.74	0.75	0.74	0.75

Panel B: Effects of Production Scale

VARIABLES	(1) PollutionRev	(2) PollutionCogs
Treat×Post	1.232***	1.740***
	(0.405)	(0.587)
Controls	Yes	Yes
Year FE	Yes	Yes
Firm FE	Yes	Yes
Obs.	14,143	14,143
Adj R-sq	0.16	0.16

Panel C: Effects of Environmental Regulation

	(1) All Period	(2) Excluding Obs. from 2015
Treat×Post	0.265**	0.183*
	(0.108)	(0.104)
Controls	Yes	Yes
Year FE	Yes	Yes
Firm FE	Yes	Yes
Obs.	9,123	7,710
Adj R-sq	0.83	0.84

Robustness

Testing the Pre-Trend

| VARIABLES	(1) TotalDonation	(2) TPADonation	(3) Pollution
$Treat \times Year_{(t-2)}$	0.008	-0.015	0.073
	(0.106)	(0.070)	(0.114)
$Treat \times Year_{(t-1)}$	-0.091	0.002	0.161
	(0.112)	(0.078)	(0.125)
$Treat \times Year_{(t+1)}$	**0.330****	**1.094*****	**0.601*****
	(0.161)	**(0.149)**	**(0.198)**
$Treat \times Year_{(t+2)}$	**0.774*****	**1.310*****	**0.336***
	(0.165)	**(0.158)**	**(0.203)**
$Treat \times Year_{(t+3)}$	**0.562*****	**1.500*****	**0.346***
	(0.166)	**(0.160)**	**(0.204)**
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Obs.	14,143	14,143	14,143
Adj R-sq	0.53	0.46	0.37

Placebo Tests
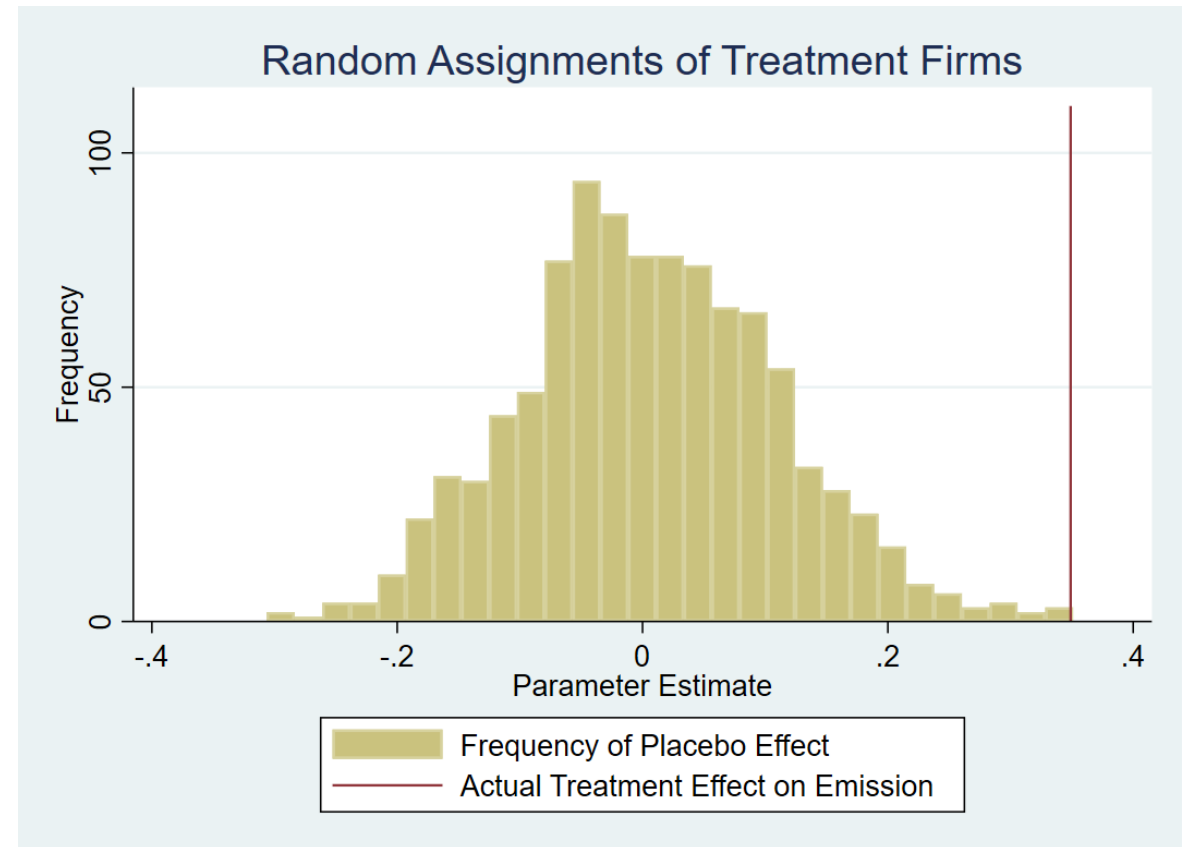
Testing the Regulatory Salience Channel

- We analyze the frequency of the TPA- and environment-related keywords featured in major state-owned newspapers by firm.

- We count the number of relevant keywords for each firm in firm-specific news each year in five newspapers, namely *People's Daily*, *Securities Daily*, *Securities Times*, *China Securities Journal*, and *Shanghai Securities Journal*.

- We define *Firm_TPA_Count* (*Firm_Env_Count*) as the natural logarithm of one plus the total number of keywords related to TPA (environmental protection) included in the firm-level news covered by these newspapers.

Testing Regulatory Salience with Textual Analysis

Panel A. Firm-level Keywords Frequency

VARIABLES	(1) Firm_TPA_Count	(2) Firm_Env_Count
Treat×Post	**0.412*****	-0.025
	(0.045)	(0.047)
Controls	Yes	Yes
Year FE	Yes	Yes
Firm FE	Yes	Yes
Obs.	14,143	14,143
Adj R-sq	0.29	0.54

Panel B. Firm Reaction to TPA News

VARIABLES	(1) Pollution	(3) Pollution
Treat×TPA_News	**0.208****	
	(0.084)	
Treat×NewsDif		**0.148****
		(0.063)
Controls	Yes	Yes
Year FE	Yes	Yes
Firm FE	No	Yes
Ind×Year FE	Yes	Yes
Obs.	14,143	14,143
Adj R-sq	0.37	0.37
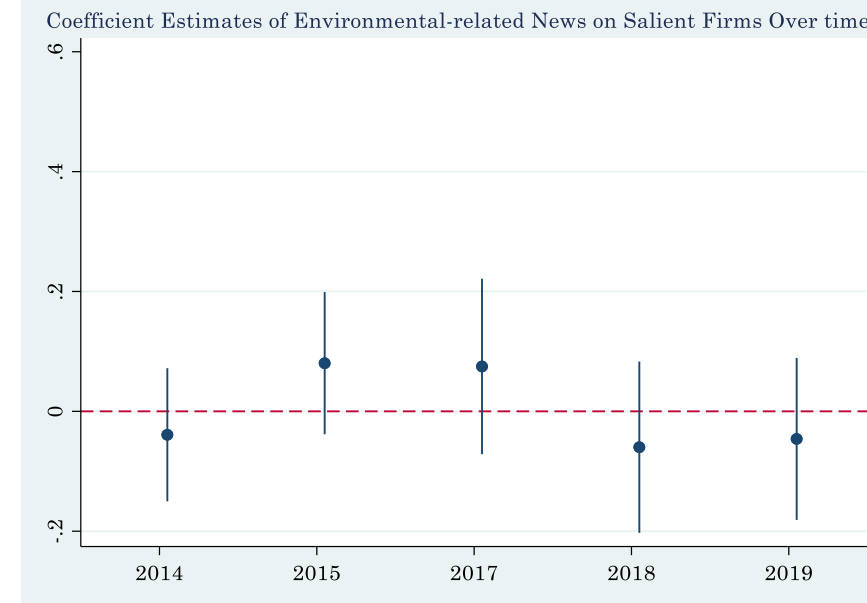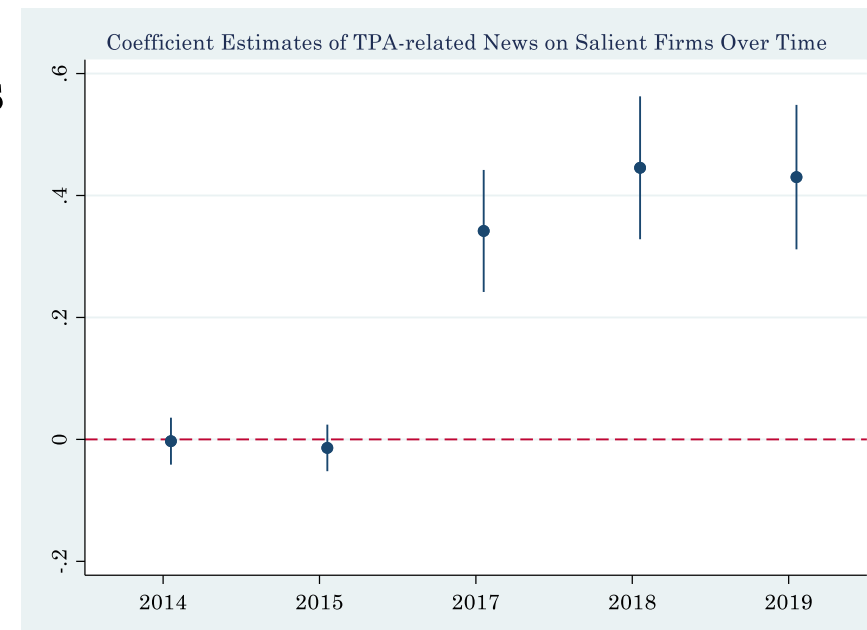
Dynamic effects of firm-level media coverage on TPA vs. environmental protection

Externalities on Other ESG and Non-ESG Activities

Panel A. Externality on Other ESG Activities				
	(1)	(2)	(3)	(4)
VARIABLES	*OtherDonation*	*ProCon*	*EmpCon*	*CgovCon*
Treat ×Post	**-0.280*****	**-0.006**	**-0.002**	**0.015**
	(0.096)	(0.005)	(0.003)	(0.010)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Obs.	14,143	14,143	14,143	14,143
Adj R-sq	0.44	0.17	0.07	0.11
Panel B. Externality on Non-ESG Activities				
		(1)	(2)	(3)
VARIABLES		*OperExp*	*Capx*	*R&D*
Treat ×Post		**-0.010**	**0.002**	**-0.000**
		(0.011)	(0.003)	(0.001)
Controls		Yes	Yes	Yes
Year FE		Yes	Yes	Yes
Firm FE		Yes	Yes	Yes
Obs.		14,143	14,143	14,143
Adj R-sq		0.80	0.11	0.80

- *OtherDonation,* is the logarithm of one plus the amounts of social donations other than all investments in anti-poverty projects.

- *ProCon* is a dummy variable that indicates whether the firm is subject to regulatory actions or lawsuits related to product or services.

- *EmpCon* is a dummy variable that measures whether the firm involves in the disputes or is penalized regarding employee health and safety related issues.

- *CgovCon* captures whether the firm engages in financial misconduct.

Reallocation of resources within fixed budget

Incentive to Compete for Favourable Treatment

Firms facing financial constraints and fierce competition are more incentivized to make such TPA-environment tradeoff in order to receive preferential treatment.

- Financial constraint: firm-level HP Index

- Market competition: industry-level HHI and province-level marketization index

VARIABLES	(1) *Pollution*	(2) *Pollution*
Treat×Post×LowFinCons	**-0.559****	**-0.703****
	(0.239)	(0.351)
Treat×Post	**0.536*****	**0.679****
	(0.192)	(0.321)
Controls	Yes	Yes
Year FE	Yes	Yes
Firm FE	Yes	Yes
Obs.	14,143	13,281
Adj R-sq	0.37	0.37
Middle tercile included	Yes	No

VARIABLES	(1) *Pollution*	(2) *Pollution*	(3) *Pollution*	(4) *Pollution*
Treat×Post×LowIndCom	**-1.212*****	**-1.149*****		
	(0.342)	(0.341)		
Treat×Post×HighMktIndex			**0.754****	**0.648****
			(0.316)	(0.320)
Treat×Post	**0.403*****	**0.425*****	0.116	0.214
	(0.147)	(0.145)	(0.161)	(0.161)
Post*LowIndCom	-0.153			
	(0.173)			
Post*HighMktIndex			0.041	
			(0.080)	
Controls	Yes	Yes	Yes	Yes
Ind×Year FE	No	Yes	No	No
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Province×Year FE	No	No	No	Yes
Obs.	14,143	14,143	14,143	14,143
Adj R-sq	0.37	0.39	0.37	0.37

Favourable Treatment and Firm Performance

Panel A: Firm Performance after Disclosure Mandate

VARIABLES	(1) ROA	(2) ROE	(3) OperMargin	(4) TobinQ
Treat×Post×HighTPA	**0.011*****	**0.025****	**0.029****	**0.497*****
	(0.004)	**(0.010)**	**(0.012)**	**(0.081)**
Treat×Post	0.006*	0.043***	0.022*	0.201***
	(0.003)	(0.011)	(0.012)	(0.076)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Obs.	14,143	14,143	14,143	14,143
Adj R-sq	0.28	0.12	0.22	0.65

VARIABLES	(1) StateBankLoan	(2) GovSubs
Treat×Post×HighTPA	**0.817****	**1.035*****
	(0.400)	(0.243)
Treat×Post	0.535***	0.533***
	(0.200)	(0.135)
Controls	Yes	Yes
Year FE	Yes	Yes
Firm FE	Yes	Yes
Obs.	14,143	14,143
Adj R-sq	0.39	0.83

Conclusions

- We employ a Chinese setting of mandating corporate disclosure of contribution to targeted poverty alleviation, with different firms having varying exposure to the regulatory salience
  - Treated firms after treatment made more donations and TPA spending (but fewer other donations), and emit more pollutants and receive more environmental penalties.
  - These firms receive greater access to capital and government subsidies, and achieve better financial performance

- Mild government intervention through mandatory ESG disclosure – influencing corporate actions toward politically favoured direction without coercing them.

- Important policy implications for regulators mandating ESG disclosure around the world

VARIABLES	(1) Pollution_change	(2) Pollution_change
TotalDonation_change	0.056*	
	(0.031)	
TPADonation_change		0.072*
		(0.038)
LnAsset_change	0.040**	0.039**
	(0.018)	(0.018)
Leverage_change	-1.080**	-1.073**
	(0.439)	(0.439)
ROA_change	1.051	1.145
	(1.148)	(1.141)
CFO_change	2.341**	2.323**
	(0.919)	(0.918)
ATO_change	0.275	0.267
	(0.254)	(0.255)
TobinQ_change	0.037	0.039
	(0.048)	(0.048)
Top10_change	0.260	0.277
	(0.607)	(0.609)
Firm FE	Yes	Yes
Obs.	2,376	2,376
Adj R-sq	0.06	0.06

VARIABLES	(1) Pollution	(2) Pollution	(3) Pollution
Treat×Post	0.371**	0.381**	0.315**
	(0.150)	(0.151)	(0.149)
Treat	0.392***	0.126	
	(0.099)	(0.103)	
Controls	No	Yes	Yes
Year FE	Yes	Yes	Yes
Firm FE	No	No	Yes
Ind×Year FE	Yes	Yes	No
Obs.	8,577	8,577	8,577
Adj R-sq	0.11	0.13	0.38

VARIABLES	(1) Pollution
Treat×Post×SOE	-0.232
	(0.294)
Treat×Post	0.398*
	(0.228)
Post×SOE	0.332***
	(0.104)
Controls	Yes
Year FE	Yes
Firm FE	Yes
Obs.	14,143
Adj R-sq	0.37