

# Managerial Career Concerns and Corporate Environmental Policies

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# Two-sided managerial career concerns

- Managerial career concerns influence corporate activities by providing implicit incentives (Fama 1980; Holmström 1999)
- CEOs have two-sided career concerns (Ali et al. 2019):
  1. **Upside** concerns: **advancements** to more prestigious positions
  2. **Downside** concerns: **dismissals** from current positions

# Two-sided career concerns and ESG

- (*Upside*) Reputational capital raised by corporate ESG engagements promotes CEOs' career advancements (Hubbard et al. 2017, Gao et al. 2022, Dai et al. 2023)
- (*Downside*) Financial performance is the primary determinant of CEO dismissals; performance-induced CEO turnover is prevalent (Jenter & Lewellen 2022)
- Implementing ESG initiatives requires substantial corporate spendings (Xu & Kim 2022; Thomas et al. 2022)
- Upside career concern tend to promote corporate ESG engagements; Downside concerns make financial performance prioritized over social value

# Research questions

1. Do upside/downside career concerns affect corporate ESG engagements?
2. Is the effect of career concerns originated from the trade-off between enhancing short-term performance and raising long-term reputational capital?
3. What mitigates or amplifies the effect of career concerns?

# Empirical Settings and Hypotheses

# Key challenges to empirical tests

1. Measurement of corporate ESG engagements:
  - We need a “reliable” measure of corporate ESG engagements that require substantial “spendings”
2. Endogeneity:
  - We need an exogenous shock to managerial career concerns

# Solution 1: Toxics Release Inventory data

- We use the Toxics Release Inventory (TRI) program data provided by the US Environmental Protection Agency (EPA)
- Facilities exceeding 10 employees and EPA-prescribed chemical thresholds must submit TRI report, including the TRI-prescribed chemicals' emission quantity
- EPA conducts quality analyses on the report and rectifies errors with facilities
- Reducing TRI-prescribed chemical emissions needs substantial spendings (Xu & Kim 2022; Thomas et al. 2022)

# Solution 2: Inevitable Disclosure Doctrine

- We use staggered adoptions/rejections of **Inevitable Disclosure Doctrine (IDD)** by the court in the state where CEOs are working (i.e., headquarters is located)
- IDD grants a court the authority to prohibit employees from taking up a new position if they are deemed to inevitably disclose or utilize trade secrets acquired from their former employer during their tenure
- IDD offers a company the means to assert a claim, even when direct evidence of misconduct may be lacking
- IDD adoption constrains executives' job mobility, enhancing internal promotions (Chen et al. 2022)



# Exogeneity of IDD adoptions/rejections

- IDD adoption/rejection years differ across states:
  - From 1993-2015, 21 states had once adopted the IDD
  - During this period, 10 states rejected the IDD
- They are quasi-exogenous to firms (Klasa et al. 2018; Chen et al. 2022):
  - Court rulings are largely determined by merits of each case and judgment of court judges
  - Court rulings are unlikely to be driven by local economic conditions or corporate lobbying efforts

# IDD and managerial career concerns

- The job mobility restrictions induced by the IDD reduce upside career concerns and enhance downside concerns (Ali et al. 2019):
  - (Upside) CEOs may not transition to firms that offer better packages
  - (Downside) Dismissals from current firms become more costly to CEOs
- IDD does not affect managerial entrenchment:
  - Forced CEO turnover does not change with IDD adoptions/rejections
  - Internal promotion cases increase after IDD adoptions (Chen et al. 2022)

# Main Hypothesis

*Firms increase emissions after IDD adoption in headquartered states.*

(Economic rationales)

- Weaker upside concerns reduce managerial incentives to raise reputational capital or long-term value by enhancing corporate environmental responsibility (CER)
- Stronger downside concerns incentivize the CEO to enhance short-term earnings rather than spending on CER

# Empirical specification

Difference-in-Differences (DiD) regressions:

$$\ln(\text{Toxic})_{i,j,t} = \alpha + \beta \text{IDD}_{j,t} + \delta \text{Ctrls} + \text{Plant FE} + \text{HQ State FE} + \text{Ind-year FE} + \varepsilon_{i,j,t}$$

for facility  $i$ , firm  $j$ , and year  $t$ .

(Explanatory variables)

- $\text{IDD}_{j,t}$  is an indicator for the applicability of IDD
- Controls (*Ctrls*) include facility-level sales, book assets, Tobin's Q, cash holdings, capital investments, tangibility, and financial constraint measures
- As robustness checks, we use stacked DiD method (Cengiz et al. 2019)

# Results

# Data

- EPA TRI database: facility-level TRI chemicals emission quantity
- Compustat: financial/accounting information
- CRSP: historical stock return information
- Thomson Reuters 13F: institutional ownership details
- Execucomp: CEO tenure and age
- 10-K header data: historical headquarters state

# Sample construction

- The sample spans from 1994 to 2015
- We match names of parent companies in TRI database with those of Compustat
- We construct the sample following the procedure of Chen et al. (2022):
  1. Facility-years where the headquartered state adopted or rejected within preceding or subsequent five years, excluding the decision years
  2. Facility-years of firms that did not alter IDD status during the sample period (i.e., never adopted, adopted before 1994 and not rejected until 2015, or rejected before 1994)

# IDD-induced effect on Toxic release

	(1)	(2)	(3)
<b>Firm IDD</b>	<b>0.223***</b>	<b>0.265***</b>	<b>0.128**</b>
	(2.98)	(4.27)	(2.38)
Plant IDD	0.0489	0.0543	-0.0519
	(0.35)	(0.40)	(-0.55)
N	33376	33266	32303
adj. R-sq	0.467	0.466	0.875
Controls	Yes	Yes	Yes
Firm FE	Yes	Yes	No
Plant FE	No	No	Yes
Year FE	Yes	No	No
Ind*Year FE	No	Yes	Yes
Firm State FE	Yes	Yes	Yes
Plant State FE	Yes	Yes	Subsumed



# Hypothesis 2

*The IDD-induced effect is stronger in firms where IDD adoption effectively increases CEO career concerns.*

(Firms where IDD adoption enhances CEO career concerns effectively)

1. Trailing industry peers in financial performance (Jenter and Lewellen 2022)
2. In sectors where hiring external CEO is common (Cremers and Grinstein 2014)
3. Having CEOs with shorter tenure (Gibbons and Murphy 1992)

## H2. Role of managerial career concerns

	More Career Concerns			Less Career Concerns		
	Low ROA	High Outside Hire	Low Tenure	High ROA	Low Outside Hire	High Tenure
	(1)	(2)	(3)	(4)	(5)	(6)
Firm IDD	0.259*** (2.92)	0.200** (2.116)	0.129** (2.015)	-0.0338 (-0.40)	0.042 (0.547)	0.063 (0.642)
Plant IDD	0.00556 (0.03)	-0.085 (-0.701)	-0.075 (-0.586)	-0.146 (-1.46)	-0.007 (-0.061)	-0.098 (-0.776)
N	13226	14951	13533	17481	17322	13118
adj. R-sq	0.884	0.876	0.891	0.879	0.877	0.886
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Plant FE	Yes	Yes	Yes	Yes	Yes	Yes
Ind*Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm State FE	Yes	Yes	Yes	Yes	Yes	Yes

# Stacked DiD

	Full sample	Low ROA	High Outside Hire	Low Tenure
	(1)	(2)	(3)	(4)
T-4	0.164 (0.87)	0.377 (0.66)	-0.0414 (-0.18)	0.130 (0.54)
T-3	0.119 (0.55)	0.201 (0.32)	-0.119 (-0.59)	-0.069 (-0.21)
T-2	0.0430 (0.17)	0.608 (0.95)	-0.0142 (-0.06)	0.007 (0.02)
T-1	0.317 (1.26)	0.593 (0.95)	0.197 (0.91)	-0.241 (-0.73)
T+1	0.538* (1.95)	1.352* (1.92)	0.401** (2.18)	0.569 (1.60)
T+2	0.665** (2.46)	1.349* (1.96)	0.609*** (3.70)	0.672** (2.01)
T+3	0.589** (2.11)	1.418** (2.00)	0.692*** (4.26)	0.675* (1.94)
T+4	0.573** (2.08)	1.525** (2.19)	0.715*** (3.64)	0.835** (2.35)
T+5	0.546** (1.97)	1.489** (2.12)	0.689*** (3.77)	0.775** (2.08)
N	93829	32502	41439	30720
adj. R-sq	0.902	0.917	0.905	0.922
Controls	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes

# Hypothesis 3

*The IDD-induced effect is stronger in firms where CEOs face higher dismissal risks.*

(Two-stage estimation)

- 1<sup>st</sup> stage: Use industry-level stock return volatility as an instrument variable for forced turnover (Peters and Wagner 2014)
- 2<sup>nd</sup> stage: Divide the sample based on the predicted likelihood of forced turnover; then, estimate the DiD model for each subsample

# 1st stage

Dependent Var. =	Forced Turnover	
	(1)	(2)
Ind Volatility	2.335***	2.637***
	(2.96)	(2.89)
Idio Ret	-0.0202***	-0.0212***
	(-4.69)	(-4.54)
Mkt Adj Idio Ret	-0.0289**	-0.0259**
	(-2.52)	(-2.13)
Ind-Adj Volatility	0.299	0.218
	(1.50)	(1.03)
Log Assets	0.0222	0.0287
	(1.54)	(1.60)
Tobin Q	-0.00514*	-0.00419
	(-1.94)	(-1.19)
Age $\geq$ 60		-0.0110**
		(-2.43)
Ln(Tenure)		-0.00368
		(-1.32)
Ln(Delta)		-0.00225
		(-0.96)
Equity Pay		-0.00992
		(-0.62)
Constant	-0.0285	-0.0198
	(-0.92)	(-0.58)
Observations	4875	4206
Adjusted R-squared	0.012	0.016
Year FE	Yes	Yes

# H3. Role of CEO dismissal risks (2<sup>nd</sup> Stage)

Dependent Var. =	Ln(TRI Release)	
	High turnover	Low turnover
	(1)	(2)
Firm IDD	0.229***	0.005
	(2.93)	(0.06)
Ind Volatility	-13.642	0.892
	(-0.99)	(0.06)
Idio Ret	-0.064	0.047
	(-0.58)	(0.89)
Mkt-Adj Idio Ret	0.018	0.045
	(0.14)	(0.45)
Ind-Adj Volatility	-4.719*	-5.127
	(-1.85)	(-1.41)
Observations	16084	15707
Adjusted R-squared	0.875	0.876
Control	Yes	Yes
Plant FE	Yes	Yes
Ind*Year FE	Yes	Yes
Firm State FE	Yes	Yes

# Robustness checks

1. IDD-induced effect is stronger for firms with the following characteristics:
  - Tight financial constraints
  - Significant trade secrets (higher R&D expenditures)
  - Heavy polluters (toxic chemical emissions)
  - Market pressure on financial performance (transient/hedge funds' holdings)
  - Weak managerial monitoring (board co-option or shareholder distraction)
2. Firms strategically increase emissions in environmentally less regulated counties
3. Short-term financial performance is positively correlated to emissions post-IDD
4. IDD adoptions exert stronger influence on toxic emissions than IDD rejections

# Conclusions

- Firms increase toxic emissions by 14% after IDD is adopted in headquartered states
- This is more pronounced when CEOs face greater career concerns or dismissal risks
- Financial constraints, market pressures, and internal governance structures are key moderators
- Firms strategically increase emissions in states with less stringent environmental regulations
- Overall, our findings underscore that managerial career concerns and dismissal risks influence CER engagements