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Corporate environmental reporting as substantive or symbolic behavior, evidence from China



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Introduction

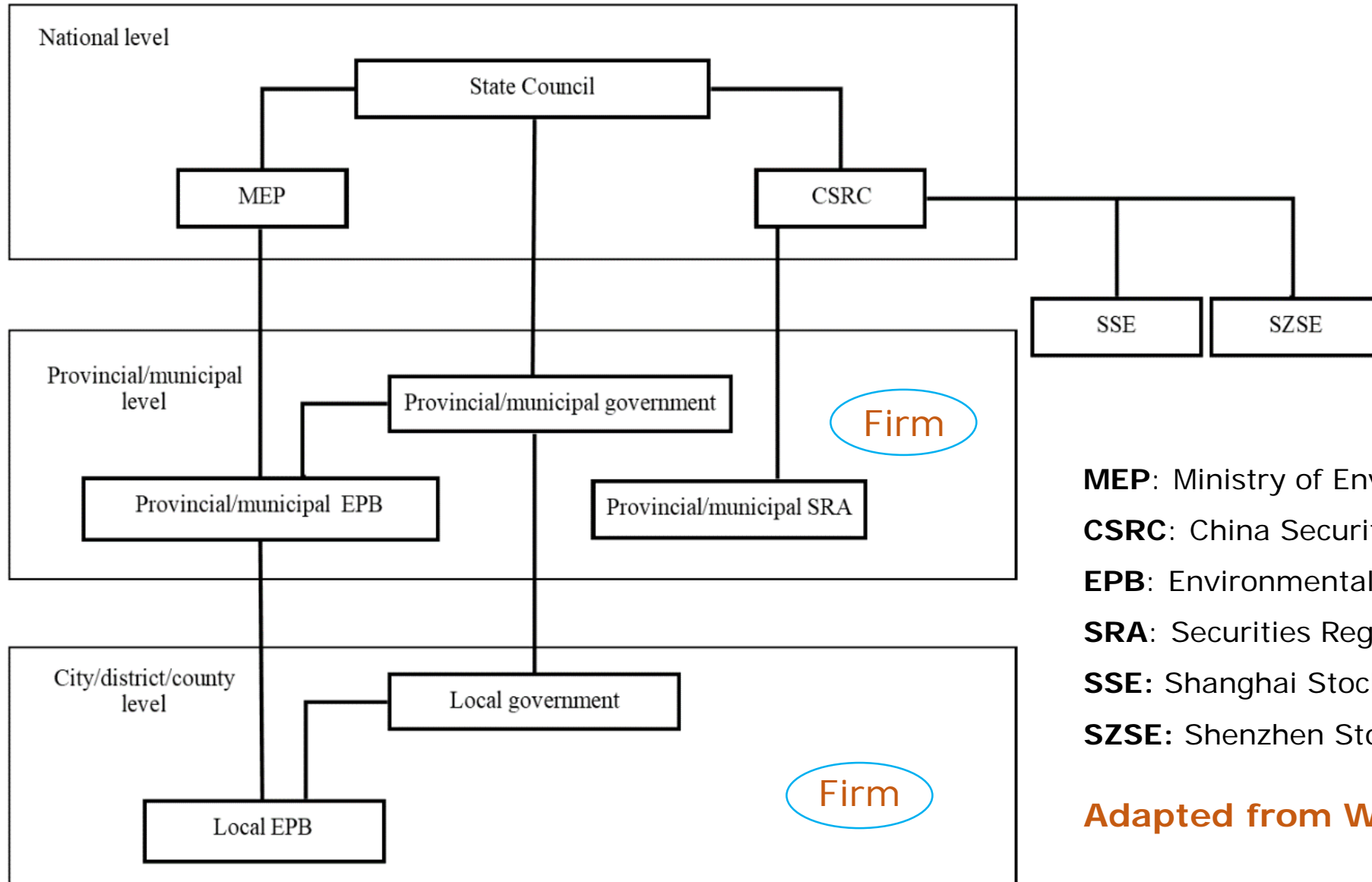
Background

- Government: key driver of environmental reporting and practice
- Political influence:
Coercive & normative forces -> isomorphic pressures
- Firms: legitimacy needs
Political strategies -> e.g., CSR & environmental reporting
- Limited research for emerging & transitional economies:
Strategic management issues in CSR area (Marquis & Raynard, 2015; Marquis & Qian, 2014)
- China: an ideal context to examine political impact on organizational behavior

Research purpose

Examine how and why firms strategically respond to the government's call for better environmental reporting.

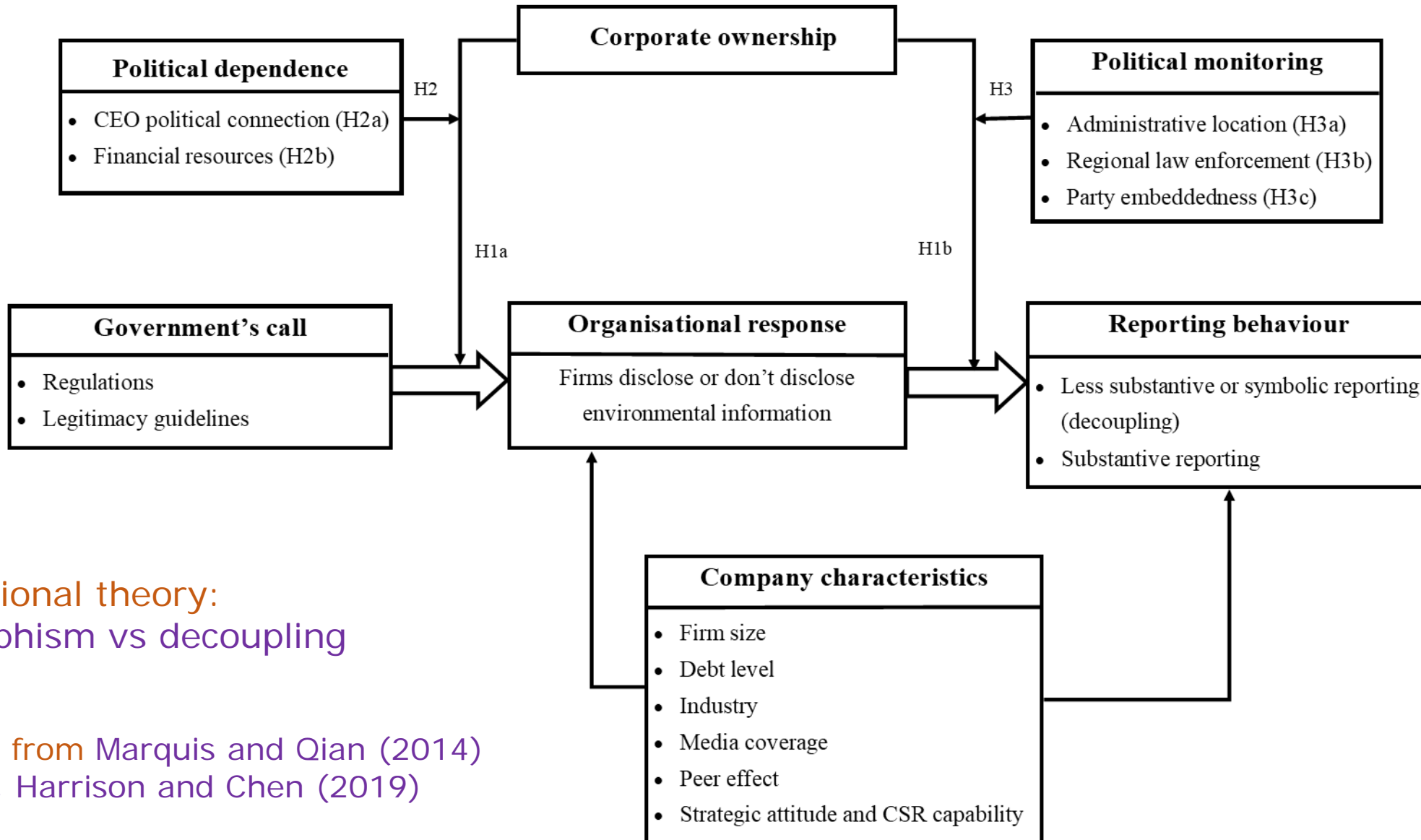
The administrative hierarchy of corporate environmental reporting for Chinese listed companies



MEP: Ministry of Environmental Protection;
CSRC: China Securities Regulatory Commission;
EPB: Environmental Protection Bureau;
SRA: Securities Regulatory Authority
SSE: Shanghai Stock Exchange
SZSE: Shenzhen Stock Exchange

Adapted from Wang et al. (2018)

A general framework of firms' response to government's call for substantive reporting in China



Institutional theory:
isomorphism vs decoupling

Adapted from Marquis and Qian (2014)
and Qin, Harrison and Chen (2019)



Hypotheses (1)

H1a The likelihood of environmental reporting is lower for private firms.

H1b The substantiveness of environmental reporting is lower for private firms.



Hypotheses (2)

H2a The association between a firm's likelihood of environmental reporting and its ownership is moderated by its CEO's political connection.

H2b The association between a firm's likelihood of environmental reporting and ownership is moderated by its financial resources.



Hypotheses (3)

H3a The association between a firm's environmental reporting substantiveness and corporate ownership is moderated by the firm's administrative location.

H3b The association between a firm's environmental reporting substantiveness and corporate ownership is moderated by the level of law enforcement in the area where the firm is located.

H3c The association between a firm's environmental reporting substantiveness and corporate ownership is moderated by the level of party embeddedness in the firm.



Research design (sample)

- Test period: *2014-2015*
- Sample firms: *306 large Chinese listed companies from 15 major industries*

(Energy, biotechnology and pharmaceuticals, chemicals and rubber, textile and clothing, mining, metal and non-metal materials, food and beverage, others)

- ownership: SOE or private control
- subject to compulsory CSR reporting required by stock exchanges
- Two sets of test: env reporting **possibility** and reporting **substantiveness**

Rpt possibility: 612 firm years; 25% private firms

Substantiveness: 526 firm years; 24% private firms

86 firms years (14%) did not disclose env information

Research design (variables)

Type	Variable (reporting possibility)	Variable (reporting substantiveness)
DV	Env reported (yes=1)	# <u>numeric</u> +certificate/rewards disclosures- CSMAR (Van der Laan Smith et al., 2005)
IVs	Private ownership (yes=1)	Private ownership (yes=1)
	Political connection	Administrative location
	ROA (t-1)	Regional law enforcement
	Slack (t-1)	Party embedded (yes=1)
CVs	Environmental value (CSRCMI)	Environmental value (CSRCMI)
	Required env discloser	Required env discloser
	Firm size (t-1)	Firm size (t-1)
	LEV(t-1)	LEV(t-1)
	Year	Year
	Stock exchange (Shenzhen=1)	Stock exchange (Shenzhen=1)
	Industry1-3 (8 combined industries)	Industry1-3 (8 combined industries)
	Media coverage	Media coverage
	# SOEs in region	# SOEs in region
	Administrative location	Political connection
	Regional law enforcement	ROA (t-1)
	Party embedded (yes=1)	Slack (t-1)

Research design (regression 1)

- Env reporting **possibility** test

➤ *Logit regression*

$$Pr (Env\ reported=1)=\beta_0 + \beta_{ik} (IV_{ik}) + \beta'_{ik} (IV_{ik}) \times IV_1 + \beta_j (CV_j) + \varepsilon$$

Where,

*i=1..3 ** refers to hypothesis i=1->H1a; i=2->H2a; i=3->H2b*

*k=1..2 ** refers to independent variables for specific hypothesis*

*j=1..12 ** refers to control variables*

$$\beta'_{1k}=0$$

Research design (regression 2)

- Reporting **substantiveness** test

➤ *OLS regression*

$$\text{Substantiveness} = \beta_0 + \beta_i (IV_i) + \beta'_i (IV_i) \times IV_1 + \beta_j (CV_j) + \varepsilon$$

Where,

*i=1..4 ** refers to hypothesis i=1->H1b; i=2->H3a; i=3->H3b; i=4->H3c*

*j=1..12 ** refers to control variables*

$$\beta'_{1k}=0$$



Research design (method)

- Clustered standard errors by firm and by year;
- Identify symbolic reporting behavior:

A strict test of symbolic reporting based on:

- Low environmental performance
- Lack of numeric disclosure
- Wordy discussion

These are indicative of green-washing or symbolic reporting

Estimates of firm environmental report probability

Dependent variable	Environmental reporting (yes=1; no=0)			
	Model (1)	Model (2)	Model (3)	Model (4)
Independent variables and moderators				
H1a: <i>Private ownership</i>	0.434*** (0.043)	0.514*** (0.103)	0.001 (0.144)	0.064 (0.103)
<i>Political connection</i>		0.659 (0.524)		
H2a: <i>Private ownership</i> × <i>Political connection</i>		-0.650 (0.627)		
<i>ROA (t-1)</i>			1.346* (0.695)	1.165 (1.61)
<i>Slack (t-1)</i>			2.141 (3.330)	2.211 (3.692)
H2b: <i>Private ownership</i> × <i>ROA(t-1)</i>			7.901 (4.899)	8.194* (4.710)
H2b: <i>Private ownership</i> × <i>Slack (t-1)</i>			-5.459*** (1.732)	-5.463*** (1.478)
Control variables				
<i>Environmental value</i>	1.108*** (0.122)	1.112*** (0.125)	1.110*** (0.119)	1.115*** (0.125)
<i>Required discloser</i>	0.235*** (0.020)	0.251*** (0.038)	0.188** (0.079)	0.199*** (0.067)
<i>Firm size (t-1)</i>	0.636*** (0.049)	0.618*** (0.060)	0.598*** (0.031)	0.583*** (0.040)
<i>LEV(t-1)</i>	-1.563*** (0.235)	-1.464*** (0.241)	-0.953*** (0.257)	-0.869*** (0.120)
<i>Year</i>	0.249** (0.123)	0.253** (0.113)	0.271** (0.114)	0.279* (0.154)
<i>Stock exchange</i>	-1.774*** (0.222)	-1.761*** (0.255)	-1.793*** (0.300)	-1.780*** (0.285)
<i>Industry1</i>	-0.412 (0.255)	-0.387*** (0.029)	-0.281 (0.184)	-0.256** (0.124)
<i>Industry2</i>	-0.027 (0.234)	0.008 (0.203)	-0.145 (0.228)	-0.105 (0.242)
<i>Industry3</i>	0.158 (0.164)	0.186** (0.092)	0.108 (0.174)	0.136 (0.171)
<i>Media coverage</i>	-0.127*** (0.034)	-0.100 (0.341)	-0.116 (0.271)	-0.090 (0.225)
<i>SOEs in region</i>	-0.140 (0.110)	-0.108 (0.132)	-0.208 (0.174)	-0.171 (0.151)
<i>Administrative location</i>	0.049 (0.090)	0.053 (0.137)	0.065 (0.198)	0.070 (0.199)
<i>Regional law enforcement</i>	0.011 (0.011)	0.005 (0.019)	-0.022 (0.025)	-0.028** (0.012)
<i>Party embedded</i>	0.090 (0.080)	0.047 (0.169)	0.094 (0.162)	0.049 (0.169)
Constant	-7.300*** (0.895)	-7.514*** (1.847)	-6.517*** (1.370)	-6.783*** (1.413)
Observations	612	612	612	612
Pseudo R ²	0.346	0.349	0.357	0.360

Interpretation

- Private firms: + disclose;
- ROA: SOE + disclose;
- Slack: - moderating on private ownership effect;
- Key predictors of monitoring: insignificant

H1a ×; H2a ×; H2b ×√

Estimates of firm environmental report substantiveness

Dependent variable	Substantiveness				
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Independent variables and moderators of political monitoring					
H1b: <i>Private ownership</i>	-0.465*** (0.017)	-0.657*** (0.059)	-0.635* (0.326)	-0.519*** (0.020)	-1.101*** (0.258)
<i>Administrative location</i>		-0.166*** (0.054)			-0.207*** (0.074)
H3a: <i>Private ownership</i> × <i>Administrative location</i>		0.770*** (0.175)			0.968*** (0.134)
<i>Regional law enforcement</i>			0.047*** (0.014)		0.055*** (0.019)
H3b: <i>Private ownership</i> × <i>Regional law enforcement</i>			0.021 (0.044)		0.045 (0.042)
<i>Party embedded</i>				-0.180*** (0.041)	-0.129*** (0.017)
H3c: <i>Private ownership</i> × <i>Party embedded</i>				1.515*** (0.394)	1.284*** (0.358)
Control variables					
<i>Environmental value</i>	0.463*** (0.097)	0.469*** (0.098)	0.460*** (0.104)	0.458*** (0.092)	0.461*** (0.101)
<i>Required discloser</i>	0.432*** (0.064)	0.432*** (0.065)	0.429*** (0.057)	0.450*** (0.069)	0.446*** (0.055)
<i>Firm size (t-1)</i>	0.257*** (0.017)	0.264*** (0.012)	0.247*** (0.025)	0.261*** (0.019)	0.260*** (0.023)
<i>LEV (t-1)</i>	-0.505* (0.261)	-0.560** (0.230)	-0.456* (0.262)	-0.495* (0.252)	-0.510** (0.242)
<i>Year</i>	0.196** (0.099)	0.199** (0.099)	0.194** (0.097)	0.194** (0.097)	0.196** (0.099)
<i>Stock exchange</i>	0.013 (0.026)	-0.024** (0.010)	0.053*** (0.013)	0.025*** (0.005)	0.025* (0.013)
<i>Industry1</i>	-0.272*** (0.068)	-0.299*** (0.054)	-0.242*** (0.069)	-0.257*** (0.069)	-0.257*** (0.064)
<i>Industry2</i>	0.053 (0.047)	0.020 (0.060)	0.097** (0.049)	0.065 (0.052)	0.075 (0.056)
<i>Industry3</i>	0.391*** (0.035)	0.389*** (0.044)	0.407*** (0.035)	0.348*** (0.030)	0.372*** (0.029)
<i>Media coverage</i>	0.154*** (0.058)	0.182*** (0.060)	0.110 (0.075)	0.161*** (0.056)	0.140* (0.084)
<i>SOEs in region</i>	-0.007 (0.062)	0.007 (0.060)	-0.028 (0.070)	0.005 (0.063)	-0.006 (0.071)
<i>CEO's political connection</i>	-0.064*** (0.016)	-0.083*** (0.025)	-0.071*** (0.009)	-0.063*** (0.019)	-0.095*** (0.018)
<i>ROA (t-1)</i>	-0.565 (1.121)	-0.486 (1.122)	-0.796 (1.078)	-0.455 (1.054)	-0.672 (1.022)
<i>Slack (t-1)</i>	-0.587*** (0.125)	-0.481** (0.196)	-0.553*** (0.130)	-0.663*** (0.132)	-0.479** (0.196)
Constant	-4.223*** (0.259)	-4.398*** (0.110)	-4.151*** (0.208)	-4.375*** (0.279)	-4.462*** (0.196)
# Observations	526	526	526	526	526
Adjusted R ²	0.331	0.338	0.334	0.334	0.347

Interpretation

- Private firms: - substantive;
- Ad Location: SOE - ;
+ moderating private;
- LawEnforcement: SOE + ;
- PartyEmbedded: SOE - ;
+ moderating private
- H1b ✓; H3a ✓; H3b ×; H3c ✓
- Key predictors of dependency:
**Political Connection - ;
Slack -

Firms engage in symbolic reporting

- Most in light polluting industries



Conclusion

● In a context of compulsory CSR reporting where firms perceive legitimacy pressures

- Compared with SOEs, private firms
 - More likely to report driven by legitimacy needs
 - Less likely to pursue substantive reporting but more likely to do under legitimacy pressures imposed by SRAs and CCP
- Symbolic reporting firms: little decoupling risks;
- Firms under high monitoring perceive high decoupling risk hence report only when they engage substantive env activities.

● **Contributions**

- Political perspectives into CSR literature- corporate env reporting and behavior are driven by legitimacy needs;
- Institutional theory- a firm's reporting strategy varies with the type(s) of the isomorphic pressure(s) it suffers and the level of perceived decoupling risk.