

# Does the Nature of Political Connection Matter for Corporate Social Responsibility Engagement? Evidence from China

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# Motivation

- Is CSR consistent with managers' mandate?
  - Socially responsible firms can also maximize shareholders' value
    - CSR is consistent with good governance practice (Deng et al., 2013)
  - CSR distracts managers or induces excessive discretion
    - CSR is associated with agency problem (Jensen, 2001; Krueger, 2015)
- CSR as tools for legitimacy building in emerging economies
  - Government controls critical resources → shape the competition environment encountered by firms → incentive for legitimacy building
  - In emerging economies, greater uncertainty exists about relationship building with government, firms rely more on informal mechanism for legitimacy building
  - **CSR** activities of **Firm** could serve as
    - Tool to gain firm-level legitimacy for favorable environment of firm**
    - VS**
    - Tool to obtain personal-level legitimacy for favorable treatment of the executives (could be external to the firm)**

# Motivation

- Why China?
  - After years of unchecked growth, there has been a shift toward sustainability
    - CSR promoted by various government agencies
    - Increasing number of reporting firms
  - Corporate governance and rules of law are weaker
  - Firms' relationship with the government remains important
    - **Firms' relationship** with the government is a determinant affecting the access (or lack of) to additional resources and market power
    - Strong incentive to build legitimacy
    - **Conforming** to government's signals and guidelines is a useful corporate strategy (Marquis et al., 2011; Zhang et al., 2016) → **Value of CSR**
    - **Firms' relationship** with the government could be built through **personal relationship of the executive** to the government
    - **Variations of executives' / firms' relationship with the government** may also affect CSR activities of **Firm (both in CSR incentives and performance)**

# Literature

- Marquis and Qian (2014)
  - Firms with financial slacks are more likely to issue CSR reports
  - Firms whose CEOs are member of NPC/CPPCC are more likely to issue CSR reports
  - Firms whose CEOs were government officials are more likely to engage in more substantive CSR reporting
  - CSR reporting as a political strategy in China
  - Conforming to gov't signals varies with political dependency and monitoring pressure
- Zheng et al. (2016)
  - Buffering effect from pressure to make charitable donation
    - » Firms whose chairmen have government working experience are less likely to donate; smaller donation
    - » Firms whose chairmen have membership in NPC/CPPCC are more likely to donate; larger donation
  - Buffering is weaker in more state-monopolized industries

# Our study

- Most **previous studies** focus on **ex-post effects of political asset** - *Ferrell et al. (2016)*
  - CSR literature: CSR ranking, donation amount
  - Others: accounting performance, firm value, etc
- **This study:** Relation between CSR engagement and firm characteristics that **capture managerial incentives (ex-ante)**

*Better performance in CSR score / compliance / donation ? (ex-post )*

**VS**

*More CSR is associated with better governance / higher agency cost?  
(ex-ante)*

# Our study

- In the literature, **heterogeneity** of political connections is **rarely considered**.
  - Political assets established through **various channels** are usually considered to have **similar effects** on firms.
- Accounting for different types of connection
  - **“Symbolic”**: managers’ membership in NPC and CPPCC
    - National People’s Congress
    - Chinese People’s Political Consultative Conference
  - **“Material”**: managers’ experience as government official or military officer
  - Different degrees of **political embeddedness, interest alignment, and monitoring pressure**
    - affect managerial incentives in responding to gov’t policies
  - We test
    - (i) whether CSR behavior of firms with Symbolic (Material) Connections is associated more **closely with agency cost view or good governance view**.
    - (ii) whether firms with Symbolic (Material) Connections are more likely to **substitute political assets** for CSR in **reputation building**.

# Hypotheses

- Symbolic connection: managers' membership in NPC/CPPCC
  - “**Outsiders**”: **granted** to elite corporate executives **recognized** by the government
    - » **Short-term** (5-year) appointment and external to firm → Stronger **need to maintain / extend** the political connections
    - » A way for government to co-opt corporate sector into policy compliance
    - » Potentially **weaker** monitoring pressure, political embeddedness, and interest alignment
    - » Potentially greater incentive to have CSR activities that is “**superficial**” or exerts “**negative externalities to other stakeholders**”
- Material connection: managers' experience in gov't or military
  - “**Insiders**”: arises from long tenure in gov't bureaucracy
    - » **Long-term** relationship: Trust and loyalty with gov't bodies and officials
    - » Empirical evidence in **corporate finance: Connections** to political parties would affect the **attitude** of the connected executives
    - » Shared **ideology** and **interest alignment**
    - » Potentially **stronger** monitoring pressure, interest alignment, and political embeddedness

# Hypotheses

- Hypothesis 1: CSR engagement of firms with symbolic connection is associated more with agency problem
  - Managers may **overspend** to show adherence to gov't signal for reputation building or personal gains
  - **For Symbolic Connection:** use CSR for maintaining personal government recognition when **Personal benefit > Personal cost**
  - **For Material Connection:** established relationship that would not disappear, rely less on ongoing gesture of conforming to government
  - **Monitoring:** in China, appointing government officers to be executives is among the methods of government control and monitoring



# Hypotheses

- Hypothesis 2: Firms with symbolic connection are more likely to substitute political assets for CSR engagement
  - Firms with material connection are more likely to treat CSR as a goal rather than a tool to build legitimacy and reputation of the firm
    - » Executives **share the goal** (and the resulted benefit) **of the government** in promoting CSR
    - » **Superficial CSR** activities under material connection are subject to **greater monitoring pressure**

# Data

- CSMAR for accounting data on listed firms 2008-2016
  - State-ownership: Ultimate controlling shareholder is a gov't entity
  - Political connection:
    - *symbolic* = 1 if CEO or chairman's a member in NPC/CPPCC
    - *material* = 1 if CEO or chairman's a gov't official/military officer
  - CSR info: 11 binary indicators consisting of disclosures on relations with various stakeholders
    - *CSRavail* = 1 if any of these indicators is equal 1
    - *CSRscore* = sum of these indicators
  
- CSR performance ratings from Hexun as a robustness check
  - Higher ratings (smaller numerical values) indicates better performance

# Testing Hypothesis I

$$CSR_{it} = \gamma_0 + \gamma_1 agency_{it} + \gamma_2 symbolic_{it} + \gamma_3 material_{it} + \gamma_4 symbolic_{it} \times agency_{it} \\ + \gamma_5 material_{it} \times agency_{it} + x^T \delta + \varepsilon_{it}$$

- CSR = measure of CSR engagement
  - CSRavail or CSRscore
  - Hexun ranking for robustness check (sign reversed for  $\gamma_4$  and  $\gamma_5$ )
  
- Managers in connected firms over-spend resources to show adherence to gov't signals then  $\gamma_4$  or  $\gamma_5$  is positive
  - CSR is associated more with agency problem in these firms
  
- $agency_{it}$  = one of variables representing agency costs
  - Managerial discretion over liquidity
    - cash = cash holdings/total assets
    - capex = capital expenditure/total assets
  - External disciplinary force and Other Robustness Check
    - payout ratio = dividend/net profits
      - » Cash commitment or external discipline (sign reversed for  $\gamma_4$  and  $\gamma_5$ )
    - Free Cash Flows (scaled by total assets)
  
- $x$  = vector of control variables
  - Tobin's q: growth or investment opportunities
  - size: larger firms may have greater need for reputation building
  - soe = dummy variable for state-ownership
  - leverage = debt/total assets Leverage (not considered as agency cost but control var due to dominance of state banks)
  - competition = number of firms in the industry

# Testing Hypothesis 2

$$CSR_{it} = \beta_0 + \beta_1 size_{it} + \beta_2 symbolic_{it} + \beta_3 material_{it} + \beta_4 symbolic_{it} \times size_{it} \\ + \beta_5 material_{it} \times size_{it} + \mathbf{z}' \pi + \eta_{it}$$

- Large firms need to build/protect their reputation
  - $\beta_1$  is expected to be positive
- Firms substitute their political assets for CSR
  - $\beta_4$  or  $\beta_5$  is expected to be negative
- CSR = measure of CSR engagement
  - *CSRavail* or *CSRscore*
  - *Hexun* ranking for robustness check (sign reversed for  $\beta_4$  and  $\beta_5$ )
- $\mathbf{z}$  = vector of control variables
  - Tobin's q: growth or investment opportunities
  - *soe* = dummy variable for state-ownership
  - *leverage* = debt/total assets
  - *competition* = number of firms in the industry

# Summary statistics

	Mean			Standard deviation		
	Unconnected firms	Symbolic connection	Material connection	Unconnected firms	Symbolic connection	Material connection
CSRavail	0.216	0.274	0.335	0.411	0.446	0.472
CSRscore	1.583	2.093	2.442	3.119	3.535	3.549
<b>II CSR items</b>						
Reference to GRI	0.035	0.046	0.090	0.184	0.210	0.286
Shareholders protection disclosure	0.208	0.264	0.330	0.406	0.441	0.470
Creditor protection disclosure	0.116	0.169	0.163	0.320	0.375	0.369
Staff protection disclosure	0.212	0.267	0.333	0.409	0.442	0.471
Delivery protection disclosure	0.145	0.213	0.193	0.353	0.409	0.394
Customer protection disclosure	0.203	0.263	0.324	0.402	0.440	0.468
Environment protection disclosure	0.207	0.266	0.323	0.405	0.442	0.468
Public relations disclosure	0.204	0.263	0.325	0.403	0.440	0.468
System construction disclosure	0.049	0.081	0.074	0.215	0.273	0.262
Work safety disclosure	0.170	0.200	0.242	0.376	0.400	0.429
Deficiency disclosure	0.035	0.062	0.045	0.183	0.241	0.208
Cash	0.203	0.208	0.175	0.165	0.153	0.148
CapEx	0.054	0.062	0.052	0.055	0.057	0.056
Leverage	0.183	0.168	0.223	0.225	0.169	0.677
Size	21.796	21.976	22.508	1.436	1.501	2.058
Tobinq	7.199	2.490	2.130	454.340	2.824	3.908
Competition	267.741	278.060	200.768	191.730	194.440	175.167
SOE	0.460	0.242	0.688	0.498	0.428	0.464
No of observations	13420	3413	1792	13420	3413	1792

	Unconnected firms (1)	Connected firms (2)	Difference (3) = (1) - (2)		Symbolic connection (4)	Material connection (5)	Difference (6) = (4) - (5)
<b>CSRavail</b>	0.216	0.287	-0.071***		0.259	0.335	-0.077***
<b>CSRscore</b>	1.583	2.162	-0.579***		1.997	2.442	-0.445***

# Results: Connection and agency cost (Simple PC)

					Poisson regression		Logit regression	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable →	CSRavail	CSRscore	CSRavail	CSRscore	CSRscore	CSRscore	CSRavail	CSRscore
Agency cost variable →	Cash	Cash	CapEx	CapEx	Cash	CapEx	Cash	CapEx
agency	-0.0308	-0.1824	-0.0220	0.1059	-0.2475***	0.6208***	-1.2928***	1.0924
Political Connections (PC)	0.0187	0.1957***	0.0208**	0.1796**	0.0997***	0.1425***	0.1756	0.3418**
<b>PC x agency</b>	<b>0.0513</b>	<b>0.3307</b>	<b>0.1367</b>	<b>1.4029*</b>	<b>0.3808***</b>	<b>0.3909</b>	<b>1.2716*</b>	<b>0.9335</b>
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	18,578	18,578	18,578	18,578	6,645	6,645	6,218	6,218

# Results: Connection and agency cost

	(1)	(2)	(3)	(4)	Poisson regression		Logit regression	
Dependent variable →	CSRavail	CSRscore	CSRavail	CSRscore	CSRscore	CSRscore	CSRavail	CSRscore
Agency cost variable →	Cash	Cash	CapEx	CapEx	Cash	CapEx	Cash	CapEx
agency	-0.0328	-0.2076	-0.0196	0.1598	-0.2677***	0.6326***	-1.2856***	1.0805
symbolic	-0.0013	0.0746	-0.0009	0.0595	0.0452	0.0787**	0.0198	0.0875
material	0.0272	0.2156*	0.0332**	0.2530**	0.0816*	0.1661***	0.1818	0.4170**
<b>symbolic x agency</b>	<b>0.1014**</b>	<b>0.6957*</b>	<b>0.3478***</b>	<b>2.6765***</b>	<b>0.5334***</b>	<b>1.2042***</b>	<b>1.8743**</b>	<b>5.2742***</b>
<b>material x agency</b>	<b>-0.0689</b>	<b>-0.3906</b>	<b>-0.3548**</b>	<b>-2.1409*</b>	<b>0.0582</b>	<b>-1.5420***</b>	<b>-0.2565</b>	<b>-5.4401**</b>
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	18,578	18,578	18,578	18,578	6,645	6,645	6,218	6,218

# Results: Substitution of connection for CSR

	Basic (1) <i>CSRavail</i>	Basic (2) <i>CSRscore</i>	Logit (3) <i>CSRavail</i>	Poisson (4) <i>CSRscore</i>
size	0.0507***	0.3859***	1.0307***	0.3284***
PC	0.1742	0.8000	4.34577***	1.7999***
<b>PC x size</b>	<b>-0.0066</b>	<b>-0.0244</b>	<b>-0.1708***</b>	<b>-0.0698***</b>
Control variables	Yes	Yes	Yes	Yes
Fixed effect	Yes	Yes	Yes	Yes
Observations	18,578	18,578	6,218	6,645

	Basic (1) <i>CSRavail</i>	Basic (2) <i>CSRscore</i>	Logit (3) <i>CSRavail</i>	Poisson (4) <i>CSRscore</i>
size	0.0602***	0.3905***	1.0328***	0.3274***
symbolic	0.2852**	1.9832*	5.5774***	2.1478***
material	-0.0034	-0.7282	0.6191	0.4179
<b>symbolic x size</b>	<b>-0.0120**</b>	<b>-0.0798*</b>	<b>-0.2274***</b>	<b>-0.0858***</b>
<b>material x size</b>	<b>0.0008</b>	<b>0.0391</b>	<b>-0.0215</b>	<b>-0.0139</b>
Control variables	Yes	Yes	Yes	Yes
Fixed effect	Yes	Yes	Yes	Yes
Observations	18,578	18,578	6,218	6,645



# Robustness check I: Hexun CSR ranking

*smaller coefficient → better CSR ranking*

Panel A: Hypothesis 1	(1)	(2)
	HEXUNrank	HEXUNrank
Agency cost variable →	<b>Cash</b>	<b>CapEx</b>
agency	-0.5526***	-0.9949***
symbolic	0.0121***	0.0028
material	-0.0716***	-0.0574***
<b>symbolic x agency</b>	<b>-0.1296***</b>	<b>-0.3466***</b>
<b>material x agency</b>	<b>0.1012***</b>	<b>0.1761***</b>
<hr/>		
Panel B: Hypothesis 2	(1)	
	HEXUNrank	
symbolic	-1.4787***	
material	0.3147***	
<b>symbolic x size</b>	<b>0.0671***</b>	
<b>material x size</b>	<b>-0.0173***</b>	
Control variables	Yes	Yes
Fixed Effect	Yes	Yes
Observations	11,190	11,190

# Robustness check 2: Alternative agency costs

	(1)	(2)
Dependent variable →	HEXUNrank	HEXUNrank
Agency cost variable →	Free cash flows	Dividends
agency	0.0005***	-0.0007***
symbolic	0.0339***	-0.0278***
material	-0.0651***	-0.0591***
<b>symbolic x agency</b>	<b>-0.6144***</b>	<b>0.0057***</b>
<b>material x agency</b>	<b>-0.0006</b>	<b>0.0009***</b>
Control variables	Yes	Yes
Fixed effect	Yes	Yes
Observations	10,753	11,190

# Addressing Endogeneity Issue: Propensity Score Matching

- **Political connection is not randomly distributed** to firms. Estimates of the causal effects of political connection may be affected by **selection bias** due to the non-random nature of connected firms
- We follow Desai and Olofsgard (2008) and Otchere et al. (2020) and **use propensity score matching (PSM)** to alleviate the endogeneity of political connection.
- The **purpose** of matching is to ensure that our politically **connected firms are as close as possible to unconnected firms** in terms of relevant explanatory covariates
- It **mitigate biases** arising from **self-selection** therefore provides a useful robustness test

# Addressing Endogeneity Issue: Propensity Score Matching

## Step 1:

- We perform matching for each type of political connection: aggregate (*polcon*), *symbolic*, and *material* connection
- We perform **logistic regression of each connection indicator** on firms characteristics including: size, Tobin's  $q$ , leverage, state ownership, competition, and proxies for agency problem

## Step 2:

- **Using matched sample**, we re-estimate equations with Poisson fixed-effect estimator for CSRscore and logit fixed-effect estimator for CSRavail.

Table 8: Univariate  $t$  tests between politically-connected and unconnected firms in (un)matched samples

	aggregate connection ( <i>polcon</i> )		<i>symbolic</i> connection		<i>material</i> connection	
	Unmatched (1)	Matched (2)	Unmatched (3)	Matched (4)	Unmatched (5)	Matched (6)
<i>size</i>	12.21***	-0.88	3.91***	0.04	19.43***	0.80
<i>soe</i>	-10.72***	-1.05	-28.46***	-0.11	23.85***	-0.58
<i>leverage</i>	0.29	-0.07	-3.67***	1.11	6.05***	1.39
<i>competition</i>	-3.29***	1.07	4.58***	-0.39	-15.80***	0.35
<i>tobinq</i>	-0.71	-1.10	-0.56	-0.21	-0.43	0.36
<i>cash</i>	-2.41*	0.11	1.79*	-0.12	-7.55***	-0.31
<i>capex</i>	5.65***	-0.02	8.38***	-0.67	-2.87***	1.24

Notes: This table contains  $t$  test statistics of the difference in the sample means between the group of politically-connected firms and group of unconnected firms for the key variables before and after matching. The treatment is aggregate political connection (either symbolic or material connection) in columns 1-2, *symbolic* connection in columns 3-4, and *material* connection in columns 5-6. \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Table 9: Robustness check for Hypotheses 1 and 2: Propensity score matching (PSM) sample.

<i>Political connection (PC)</i>	(1) <i>polcon</i>	(2) <i>polcon</i>	(3) <i>symbolic</i>	(4) <i>symbolic</i>	(5) <i>material</i>	(6) <i>material</i>
Agency cost →	<i>cash</i>	<i>capex</i>	<i>cash</i>	<i>capex</i>	<i>cash</i>	<i>capex</i>
Panel A: Dependent variable is <i>CSRscore</i> ; Poisson estimation						
<i>PC</i>	-0.013 (0.791)	0.126*** (0.005)	0.016 (0.846)	0.106 (0.122)	0.119 (0.194)	0.106 (0.173)
<i>PC</i> × <i>agency</i>	0.434** (0.026)	-0.220 (0.643)	0.728*** (0.005)	2.147*** (0.000)	-0.180 (0.673)	-1.777** (0.045)
<i>agency</i>	-0.362* (0.052)	0.775* (0.060)	-0.706*** (0.004)	-1.108** (0.027)	-0.035 (0.931)	0.050 (0.947)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,176	3,118	1,640	1,669	950	994
Panel B: Dependent variable is <i>CSRavail</i> ; logit estimation						
<i>PC</i>	-0.081 (0.741)	0.222 (0.322)	-0.081 (0.859)	0.136 (0.708)	0.288 (0.546)	0.267 (0.521)
<i>PC</i> × <i>agency</i>	1.225 (0.200)	-0.015 (0.995)	2.699* (0.064)	4.743* (0.100)	-0.226 (0.928)	-6.911 (0.111)
<i>agency</i>	-1.400 (0.107)	0.893 (0.634)	-2.350* (0.060)	-2.079 (0.364)	-0.420 (0.854)	0.125 (0.971)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,599	2,564	1,282	1,266	711	753

Table 10: Robustness check for Hypothesis 3: Propensity score matching (PSM) sample

<i>Political connection (PC)</i>	(1) <i>polcon</i>	(2) <i>symbolic</i>	(3) <i>material</i>
Panel A: Dependent variable is <i>CSRscore</i> ; Poisson estimation			
<i>PC</i>	1.555*** (0.000)	2.343*** (0.000)	0.882 (0.188)
<i>PC</i> × <i>size</i>	-0.058*** (0.000)	-0.088*** (0.001)	-0.039 (0.151)
<i>size</i>	0.256*** (0.000)	0.256*** (0.000)	0.325*** (0.000)
Control variables	Yes	Yes	Yes
Fixed Effect	Yes	Yes	Yes
Observations	3,146	1,678	998
Panel B: Dependent variable is <i>CSRavail</i> ; logit estimation			
<i>PC</i>	-0.044 (0.286)	9.310** (0.030)	3.945 (0.323)
<i>PC</i> × <i>size</i>	-0.145* (0.028)	-0.369** (0.047)	-0.176 (0.285)
<i>size</i>	3.764* (0.061)	0.984*** (0.000)	1.601*** (0.000)
Control variables	Yes	Yes	Yes
Fixed Effect	Yes	Yes	Yes
Observations	2,594	1,311	737

Notes: *PC* denotes the type of political connection for which the firms are matched in the columns. The control variables are *SOE*, *Tobin's q*, *leverage*, and *competition*. *p*-value are in the parentheses. The symbols \*\*\*, \*\* and, \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

# Conclusion

- CSR engagement is related to managerial **incentives, and heterogeneity of political connection matters**
  - CSR incentive is not fixed but varied with institutional conditions
  - It is more closely associated with agency problem in firms with symbolic connection
    - Managers are probably under greater pressure to show adherence to gov't policies for either firm reputation or personal benefits
  - Firms with symbolic connection are more likely to substitute their political ties for CSR engagement
    - Greater interest alignment and government monitoring in firms with material connection
  - Failure of take into account the effects of different types of political connection can give rise to misleading results
    - Coefficients become insignificant in some cases under a single aggregate indicator for both types of political connections
- Corporate policies that are responses to gov't policies
  - Important to consider political embeddedness, interest alignment and monitoring pressure
- Implications
  - Corporate governance, Institutional development, Designs of policies and guidelines



# Thank you

- Q & A

# Results: Connection and agency cost

					Poisson regression		Logit regression	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CSRavail	CSRscore	CSRavail	CSRscore	CSRscore	CSRscore	CSRavail	CSRscore
Agency cost variable →	Cash	Cash	CapEx	CapEx	Cash	CapEx	Cash	CapEx
symbolic	-0.0013	0.0746	-0.0009	0.0595	0.0452	0.0787**	0.0198	0.0875
material	0.0272	0.2156*	0.0332**	0.2530**	0.0816*	0.1661***	0.1818	0.4170**
<b>symbolic x agency</b>	<b>0.1014**</b>	<b>0.6957*</b>	<b>0.3478***</b>	<b>2.6765***</b>	<b>0.5334***</b>	<b>1.2042***</b>	<b>1.8743**</b>	<b>5.2742***</b>
<b>material x agency</b>	<b>-0.0689</b>	<b>-0.3906</b>	<b>-0.3548**</b>	<b>-2.1409*</b>	<b>0.0582</b>	<b>-1.5420***</b>	<b>-0.2565</b>	<b>-5.4401**</b>
agency	-0.0328	-0.2076	-0.0196	0.1598	-0.2677***	0.6326***	-1.2856***	1.0805
size	0.0579***	0.3785***	0.0586***	0.3864***	0.2990***	0.3150***	0.9578***	1.0116***
soe	0.0105	0.1050	0.0101	0.1033	0.1213**	0.1061*	0.3885	0.3495
tobinq	0.0000	0.0000	0.0000	0.0000	-0.0136***	-0.0129***	-0.0050	-0.0058
leverage	-0.0089	-0.0730	-0.0080	-0.0680	-0.5358***	-0.5195***	-1.3402***	-1.2177***
competition	0.0004**	0.0033**	0.0004**	0.0032**	0.0012***	0.0012***	0.0127**	0.0124**
Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	18,578	18,578	18,578	18,578	6,645	6,645	6,218	6,218

# Results: Substitution of connection for CSR

	Basic (1) <i>CSRavail</i>	Basic (2) <i>CSRscore</i>	Logit (3) <i>CSRavail</i>	Poisson (4) <i>CSRscore</i>
size	0.0602***	0.3905***	1.0328***	0.3274***
symbolic	0.2852**	1.9832*	5.5774***	2.1478***
material	-0.0034	-0.7282	0.6191	0.4179
<b>symbolic x size</b>	<b>-0.0120**</b>	<b>-0.0798*</b>	<b>-0.2274***</b>	<b>-0.0858***</b>
<b>material x size</b>	<b>0.0008</b>	<b>0.0391</b>	<b>-0.0215</b>	<b>-0.0139</b>
tobinq	0.0000	0.0000	-0.0072	-0.0134***
soe	0.0091	0.0972	0.3226	0.1115**
competition	0.0004**	0.0033**	0.0121**	0.0011***
leverage	-0.0073	-0.0602	-1.1550***	-0.4946***
Fixed effect	Yes	Yes	Yes	Yes
Observations	18,578	18,578	6,218	6,645