Political Economy and Empirical Corporate Finance

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How to spend your 2/5 years as a master/PhD student

- **If you are interested in an industry job**

→ **Accumulating necessary skills (Finance, CS)**

- **If you are interested in an academic job**

→ **Reading/Thinking**

A summary of my own research

Part 1. Existence of favoritism/corruption, its financial impact, and social impact

1. Profiting from government stakes (with C. Calomiris, R. Fisman, *Journal of Financial Economics*, 2010)

2. Corruption in Chinese privatizations (with R. Fisman, *Journal of Law, Economics, and Organization*, 2015)

3. Trading favors in Chinese business groups (with R. Fisman, AER P&P, 2010)

4. Coinsurance within business group (with N. Jia and J. Shi, *Management Science*, 2012)

5. The Dynamics of Political Enbeddedness in China (with H. Haveman, N. Jia and J. Shi, *Administrative Science Quarterly*, 2017)

A summary of my own research

Part 1. Existence of favoritism/corruption, its financial impact, and social impact

6. **The mortality cost of political connections** (with R. Fisman, *Review of Economic Studies*, 2015)

7. **Social ties and favoritism in Chinese science** (with R. Fisman, J. Shi and R. Xu, *Journal of Political Economy*, 2018)

8. Social Ties and the Selection of China's Political Elite (with R. Fisman, J. Shi and W. Wu, *AER, R&R*)

1. A summary of my research

Part 2. The impact of the state on the economy

- 1. The discretionary effects of incentives in government (with R. Fisman, *American Economic Journal: Applied Economics*, 2017)

- **2.** Access to migration for rural households (with C. Kinnan and SY. Wang) (*American Economic Journal: Applied Economics*, 2018)

- 3. Nationalism and economic exchange (with R. Fisman and Y. Hamao, *Review of Financial Studies*, 2014)

1. A summary of my research

Part 2. The impact of the state on the economy

- 4. Land Misallocation, Property Rights and Agricultural Efficiency in China (with A.V. Chari, E. Liu and SY Wang，*RES, R&R*)

- 5. Target Setting and Allocative Inefficiency in Lending: Evidence from Two Chinese Banks (with Y. Cao, R. Fisman and H. Lin, NBER Working Paper, 2019)

- The Effect of Mandatory CSR Disclosure on Firm Profitability and Social Externalities: Evidence from China (with Y. Chen and M. Hung, 2018, *Journal of Accounting and Economics*)

Part 3. Behavioral Economics/Finance

- 1. Something in the air: Pollution and the demand for health insurance (with T. Chang and W. Huang, *RES, 2018*)

- 2. Air Pollution, Affect, and Forecasting Bias: Evidence from Chinese Financial Analysts (with R. Dong, R. Fisman and N. Xu), Forthcoming at *Journal of Financial Economics*)

- 3. Superstition and Risk-taking: Evidence from "Zodiac Year" Investment in China (with R. Fisman, W.Huang and Y. Pan, Working Paper, 2019)

- Animal Spirits: Stock Market Volatility and Risk Aversion (with T. Chang and W. Huang), May 2019

A few questions to ask before starting any project

1. **Why is it an important question?**

2. **How does it contribute to our understanding of the research field**

3. **Relatedly, how novel is this project?**

The Mortality Costs of Political Connections

Raymond Fisman, Boston University
Yongxiang Wang, Marshall School, USC

China's production safety record

- Death rate among Chinese coal miners is 100 times higher than U.S. miners (per ton of coal extracted; 30 times that of South African miners

- Similar issues in construction, chemical and other industries (International Labour Organization, 2012)

- This reflects wider problems of safety regulation compliance and enforcement (International Labour Organization, 2012; Phillips, 2010)

On the mortality costs of connections

"Corruption is one major reason why accidents happen again and again…It is high time that we took a careful look at connections between local coal mine owners, local officials and the safety watchdog. These links have set up barriers against strict safety supervision."

Li Yizhong, Minister of Production Safety, 2005

Political connections and worker mortality in China

- Are political ties broadly associated with more workplace deaths and less enforcement?

- What are the market and regulatory responses to worker deaths?

- Are the effects of connections limited by regulator incentives?

Outline

- Background: On the costs and benefits of political connections

- Methodology and Data

- Results
  - The mortality cost of connections
  - Connection and enforcement
  - Market and regulator reaction to worker deaths
  - Preliminary results on regulatory reforms

- Further work-in-progress

On the virtues of efficient corruption

"Yes, there was corruption.
Yes, he gave favours to his family
and his friends, But there was real
growth and real progress. I think
the people of Indonesia are lucky."
(Lee Kwan Yew, 2008)

Political Connections help get around regulation, but regulation has social benefits

Lotus Riverside Shanghai collapse: Corruption in building codes

"Corruption fuels China mine disasters"

Are political connections associated with higher worker deaths?

- For company c in year y:

$$Deaths_{cy} = a + \beta_1 * PoliticallyConnected_{cy} + Controls + \varepsilon_{cy}$$

Requisite data

- Political connections

- Worker fatalities

- Safety Enforcement and Environmental Violations

Measuring political connections

- Based on employment histories of corporate executives of publicly traded companies

- *PoliticallyConnection*$_{cy}$ = 1 if "C-suite" executive at company *c* at the beginning of year *y* held a position of Mayor or Vice-Mayor, or equivalent grade.

- Data availability limits sample to publicly traded firms

Measuring worker deaths

- Primary sources:
  - Company reports (CSR; annual; etc)
  - State Administration of Work Safety (SAWS)
  - Ministry of Housing and Urban-Rural Development (for construction)

- Sample:
  - Industry-focus of SAWS: chemicals, coal and other mining, construction
  - 2008 – 2013, owing to new data disclosure requirements and punishment for non-disclosure

Measuring worker deaths

- $Deaths_{cy}$ = Total accidental deaths in year y

- $I(Deaths_{cy} > 0) = 1 \leftrightarrow$ at least one death in year y

- $Severe = I(Deaths_{cy} \geq 3) = 1 \leftrightarrow$ at least major accident in year y

- $DeathRate_{cy} = 1000 * Deaths_{cy} / Employment_{cy}$

Measuring Enforcement/Violations

- *SafetyViol=1* ↔ workplace safety violations investigated by the government

  Data Source: Newspaper Searching

- *Pollute=1* ↔ fined for environmental violations

  Data source: A not-for-profit organization in Beijing which collected info from Ministry of Environmental Protection and its local branches.

Final sample for main analysis

- Total firm-year observations: 1475

- Unique firms: 276

- Total worker deaths: 1332

- Accidents with identifiable date*: 284

- Deaths in these identifiable accidents: 1146

Distribution of firms by industry

- Coal mining: 25
- Petroleum and gas extraction: 2
- Ferrous metals mining: 2
- Non-ferrous metals mining: 8
- Construction: 35
- Petroleum refining: 5
- Chemicals: 124
- Smelting ferrous metals: 34
- Smelting non-ferrous metals: 41

Summary statistics: Connected VS Non-Connected
Sample: Full

Variable	PoliticallyConnected=0	PoliticallyConnected=1	Difference	(Std Error)
log(1+Deaths)	0.155	0.790	0.635***	(0.054)
I(Deaths>0)	0.110	0.395	0.285***	(0.031)
DeathRate	0.024	0.084	0.060***	(0.008)
Severe	0.027	0.163	0.135***	(0.018)
NSNP	0.417	0.349	-0.068	(0.045)
State Ownership	0.169	0.301	0.133***	(0.022)
log(Sales)	21.871	23.388	1.517***	(0.158)
CapInt	14.132	14.211	0.079	(0.077)
ROA	0.036	0.067	0.031***	(0.006)
log(Employment)	8.039	9.386	1.347***	(0.134)
Investment	0.077	0.091	0.014**	(0.006)
SafetyViol	0.022	0.078	0.055***	(0.015)
Pollute	0.119	0.123	0.004	(0.031)

Summary statistics: Connected VS Non-Connected
Sample: Var(Connected)>0

Variable	PoliticallyConnected=0	PoliticallyConnected=1	Difference	(Std Error)
log(1+Deaths)	0.345	0.732	0.387***	(0.104)
I(Deaths>0)	0.224	0.373	0.148***	(0.053)
DeathRate	0.039	0.099	0.060***	(0.014)
Severe	0.049	0.176	0.127***	(0.033)
NSNP	0.422	0.441	0.020	(0.059)
State Ownership	0.220	0.287	0.066**	(0.032)
log(Sales)	22.629	22.772	0.143	(0.202)
CapInt	14.057	14.114	0.057	(0.116)
ROA	0.051	0.063	0.012*	(0.007)
log(Employment)	8.772	8.864	0.092	(0.184)
Investment	0.090	0.085	-0.005	(0.008)
SafetyViol	0.072	0.059	-0.013	(0.030)
Pollute	0.171	0.071	-0.099**	(0.042)

Death Rate at Connected VS Non-Connected Firms: By Industry
Sample: Var(Connected)>0
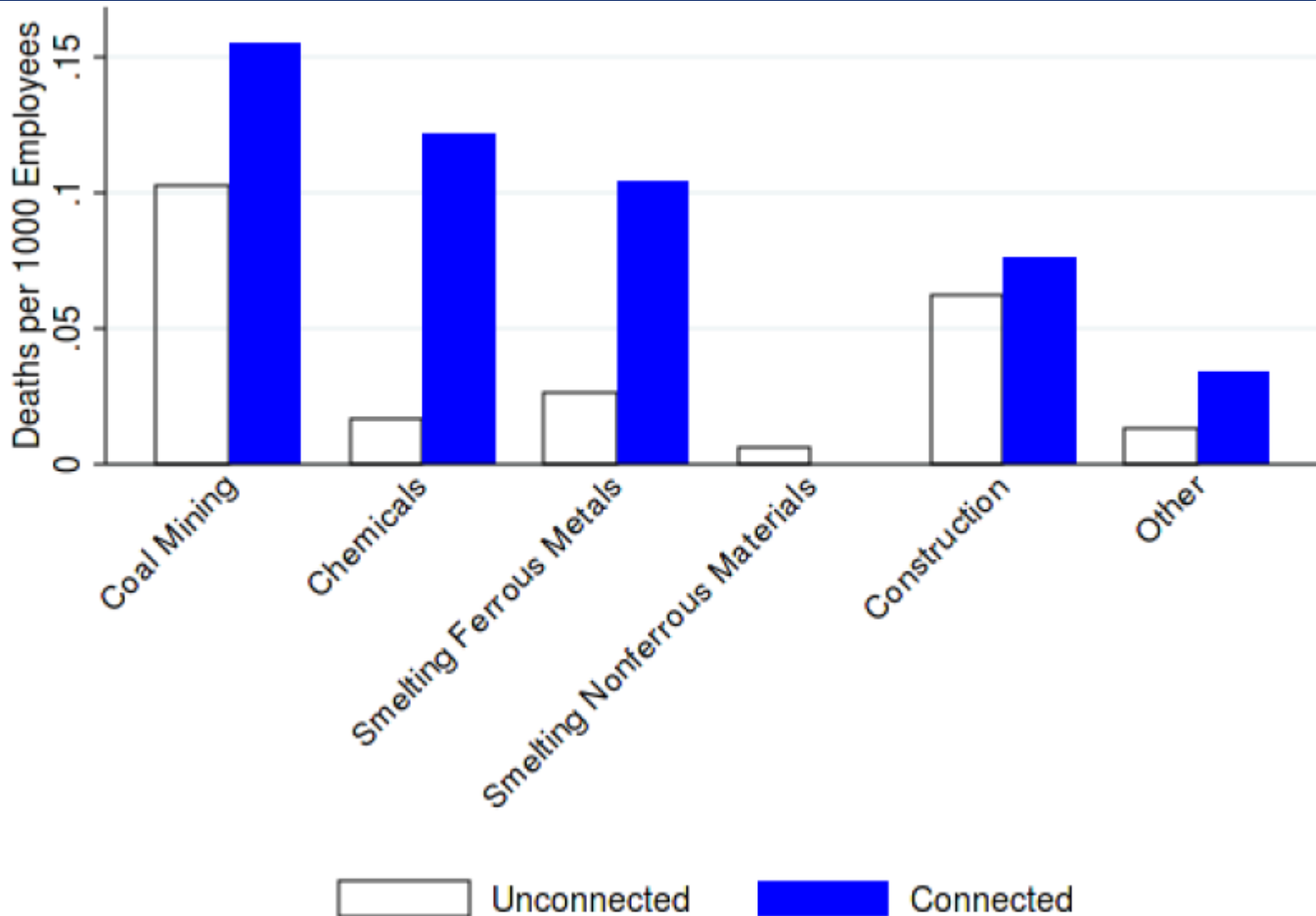
Political connections and worker mortality

Table 2: The impact of political connections on workplace deaths: negative binomial regression

	(1)	(2)	(3)	(4)	(5)	(6)
			Columns 1 - 6: Deaths			
Connected	1.953***	1.754***	1.697***	0.772***	1.521***	0.855***
	(0.393)	(0.318)	(0.328)	(0.212)	(0.398)	(0.222)
log(Sales)		0.665***	0.725***	0.134*	1.210***	0.329**
		(0.068)	(0.096)	(0.074)	(0.298)	(0.133)
ROA		4.626***	-1.259	0.267	1.514	2.731
		(1.675)	(2.094)	(1.709)	(5.451)	(2.936)
CapInt		-0.256**	0.093	-0.351**	-0.066	-0.372*
		(0.111)	(0.146)	(0.150)	(0.332)	(0.216)
StateOwnership		1.671***	1.238**	0.477	-0.401	0.680
		(0.429)	(0.588)	(0.368)	(1.027)	(0.610)
Investment		0.304	0.519	-2.610	3.551	-2.216
		(1.562)	(1.885)	(1.720)	(3.957)	(2.561)
Constant	-0.527***	-12.939***	-17.487***	0.210	-24.789***	-4.045
	(0.120)	(1.843)	(2.762)	(2.077)	(7.802)	(3.446)
$\ln(\alpha)$						
Constant	2.881***	2.278***	1.786***		1.278***	
	(0.090)	(0.099)	(0.103)		(0.153)	
Fixed Effects	-	-	Year; Industry; Province	Firm; Year	Year; Industry; Province	Firm; Year
Sample	Full	Full	Full	Full	Var(Ct'd)>0	Var(Ct'd)>0
Observations	1475	1475	1475	524	325	198
Log pseudolikelihood	-1095	-1014	-933	-506	-379	-223

Political connections and worker mortality

Table 3: The impact of political connections on workplace deaths: OLS regression

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Columns 1 - 3: $\log(1 + death)$			Columns 4 - 6: DeathRate			Columns 7 - 9: $I(\text{Deaths} > 0)$		
Connected	0.282***	0.283**	0.370**	0.048***	0.050**	0.063***	0.109**	0.088	0.121**
	(0.106)	(0.138)	(0.150)	(0.017)	(0.020)	(0.021)	(0.049)	(0.056)	(0.060)
log(Sales)	0.096***	0.013	-0.181	0.006***	-0.009	-0.050**	0.052***	-0.046	-0.069
	(0.017)	(0.166)	(0.137)	(0.002)	(0.025)	(0.024)	(0.009)	(0.082)	(0.070)
ROA	-0.038	-0.318	1.555	-0.015	-0.075	0.219	-0.035	-0.192	0.808*
	(0.204)	(0.969)	(1.220)	(0.036)	(0.108)	(0.155)	(0.117)	(0.350)	(0.457)
CapInt	-0.064**	0.112	0.158	0.001	0.019	0.031	-0.038**	0.108	0.105**
	(0.030)	(0.134)	(0.109)	(0.004)	(0.020)	(0.022)	(0.016)	(0.068)	(0.050)
StateOwnership	0.149*	-0.007	0.363	0.013	-0.034	0.001	0.094**	-0.009	0.239**
	(0.083)	(0.213)	(0.248)	(0.012)	(0.026)	(0.034)	(0.047)	(0.115)	(0.113)
Investment	0.074	-0.556	0.484	-0.007	-0.127	0.008	0.051	-0.344	0.251
	(0.239)	(0.621)	(0.639)	(0.045)	(0.105)	(0.117)	(0.155)	(0.343)	(0.352)
Constant	-0.779*	-2.949	1.941	-0.074	-0.044	0.717	-0.302	-1.301	0.186
	(0.415)	(1.828)	(3.480)	(0.072)	(0.247)	(0.543)	(0.230)	(0.850)	(1.758)
Fixed Effects	Year; Industry; Province	Year; Industry; Province	Year; Firm	Year; Industry; Province	Year; Industry; Province	Year; Firm	Year; Industry; Province	Year; Industry; Province	Year; Firm
Sample	Full	Var(Ct'd)>0	Var(Ct'd)>0	Full	Var(Ct'd)>0	Var(Ct'd)>0	Full	Var(Ct'd)>0 0	Var(Ct'd)>0
Observations	1475	325	325	1475	325	325	1475	325	325
R-Squared	.28	.36	.493	.138	.322	.45	.268	.406	.512

Political connections and Workplace Safety Violations

Table 4: Crosstab of Connected and I(Deaths>0) for average safety violation rate (*SafetyViol*)

	Deaths=0	Deaths>0
Connected=0	0.046	0.160
Connected=1	0.000	0.158
Difference	0.046	0.002

Political connections and Environmental Violations

Table 5: The impact of political connections on environmental noncompliance

	(1)	(2)	(3)
		Columns 1 - 3: Pollute	
Connected	-0.099***	-0.093**	-0.071*
	(0.036)	(0.040)	(0.038)
log(Sales)		0.031*	0.007
		(0.017)	(0.018)
ROA		0.143	-0.152
		(0.439)	(0.276)
Investment		0.212	-0.130
		(0.332)	(0.257)
CapInt		-0.016	0.021
		(0.025)	(0.018)
StateOwnership		-0.115	0.199*
		(0.080)	(0.102)
Constant	0.171***	-0.315	-0.456
	(0.040)	(0.525)	(0.522)
Fixed Effects	-	-	Year; Industry; Province
Sample		Var(Ct'd)>0	
Observations	315	315	315
R-Squared	.0175	.0418	.398

Connection, Deaths and Performance: I

Table 6: Political connections, deaths and firm performance

	(1)	(2)	(3)	(4)
	Columns 1 - 2: ROA		Columns 3 - 4: ROA F1	
Connected	0.017***	0.011*	0.015***	0.016**
	(0.006)	(0.006)	(0.006)	(0.007)
log(Sales)	0.004**	0.007	0.001	0.002
	(0.002)	(0.005)	(0.002)	(0.004)
Investment	0.146***	0.069	0.070**	0.029
	(0.035)	(0.074)	(0.030)	(0.044)
CapInt	0.008**	0.008	0.006**	0.007
	(0.004)	(0.010)	(0.003)	(0.007)
StateOwnership	-0.011	-0.001	-0.003	-0.020
	(0.009)	(0.027)	(0.008)	(0.017)
I(Deaths> 0)			0.005	0.005
			(0.004)	(0.008)
Connected * I(Deaths> 0)			-0.017**	-0.030***
			(0.008)	(0.010)
ROA			0.358***	0.155
			(0.057)	(0.095)
Constant	-0.106	-0.120	-0.050	0.004
	(0.065)	(0.160)	(0.050)	(0.139)
Fixed Effects	Year; Industry; Province			
Sample	Full	Var(Ct'd)>0	Full	Var(Ct'd)>0
Observations	1475	325	1199	268
R-Squared	.259	.477	.362	.601

Market response to worker deaths

Figure 3: Market reaction to fatal accidents, Connected versus Unconnected firms
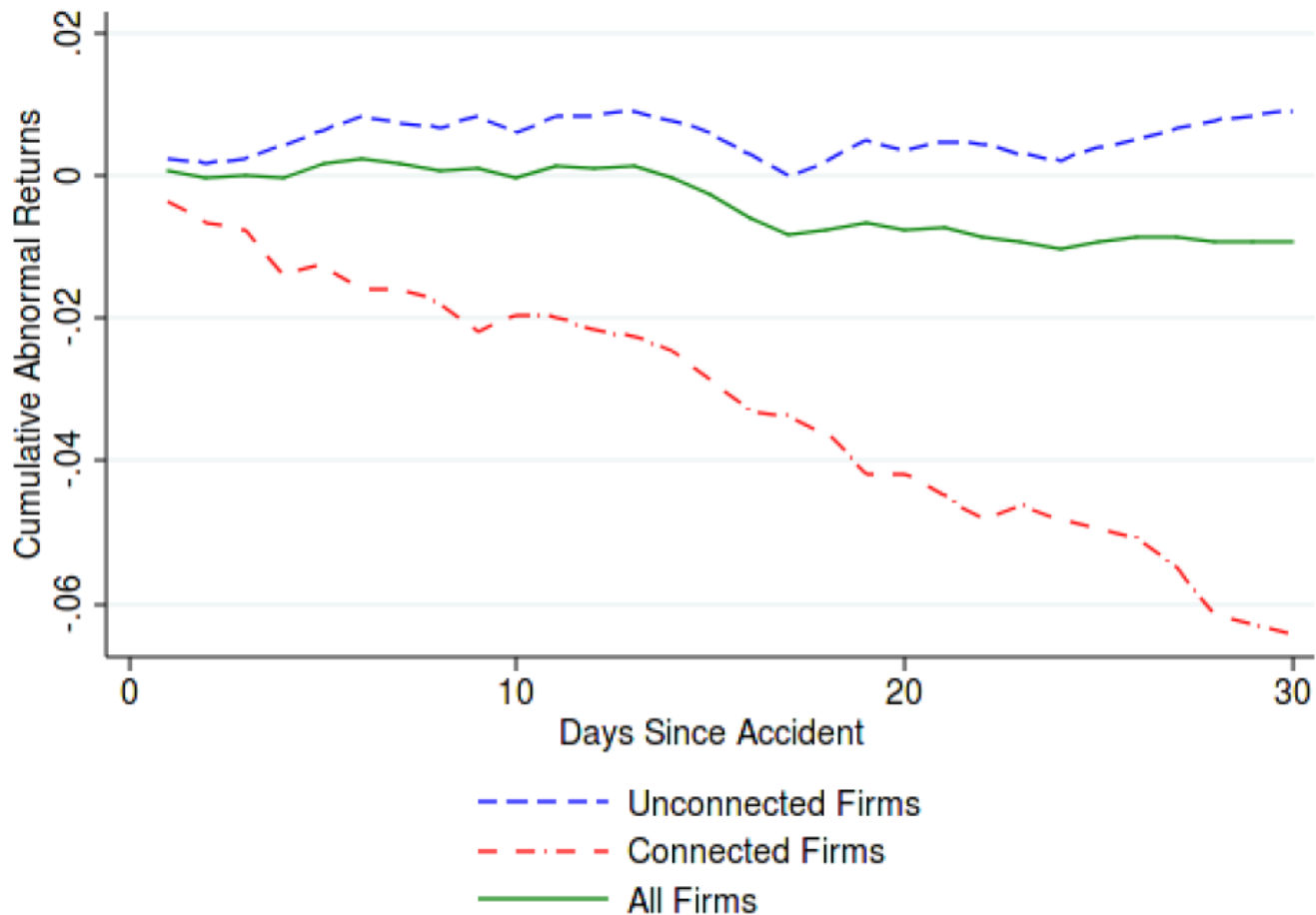
Connection, Deaths and Performance: II

Table 7: The impact of political connections on cumulative abnormal event returns (CARs): OLS regression

	(1) CARs[1,3]	(2) CARs[1,5]	(3) CARs[1,10]	(4) CARs[1,15]	(5) CARs[1,20]	(6) CARs[1,25]	(7) CARs[1,30]
Connected	-0.014**	-0.027***	-0.034*	-0.042**	-0.048*	-0.059*	-0.087**
	(0.007)	(0.010)	(0.018)	(0.018)	(0.027)	(0.032)	(0.036)
log(MonthlyDeaths)	-0.004	-0.003	-0.003	-0.007	-0.012	-0.008	-0.004
	(0.003)	(0.004)	(0.007)	(0.007)	(0.009)	(0.011)	(0.013)
log(Sales)	-0.002	-0.001	0.005	0.016**	0.009	0.012	0.008
	(0.005)	(0.007)	(0.007)	(0.007)	(0.011)	(0.014)	(0.014)
ROA	-0.059	-0.026	-0.147	-0.151	-0.185	-0.251	-0.196
	(0.083)	(0.107)	(0.121)	(0.128)	(0.193)	(0.225)	(0.240)
Constant	0.075	0.037	-0.109	-0.358**	-0.202	-0.279	-0.184
	(0.113)	(0.152)	(0.171)	(0.179)	(0.271)	(0.328)	(0.350)
Fixed Effects	Province, Industry & Year						
Observations	210	210	210	210	210	210	210
Adjusted R-Squared	.0671	.0946	.0649	.0635	.0752	.0362	.062

→Hiring a connected manager, in anticipation of accidents, to deal with the mess?

Connection, Deaths and Performance: III

Table 8: The effect of workplace deaths on political connections

	(1)	(2)	(3)
		Columns 1 - 3: Connected F1	
I(Deaths> 0)	-0.073***	-0.248***	-0.244***
	(0.024)	(0.064)	(0.078)
Connected	0.401***	0.103*	0.046
	(0.049)	(0.057)	(0.064)
StateOwnership	0.047	0.310**	0.328
	(0.041)	(0.147)	(0.210)
log(Sales)	0.009	-0.047	-0.177
	(0.007)	(0.030)	(0.151)
CapInt	-0.008	-0.048	-0.157
	(0.012)	(0.039)	(0.118)
ROA	0.128	0.566	0.194
	(0.095)	(0.635)	(0.928)
Investment	0.137	-0.171	-0.285
	(0.123)	(0.507)	(0.586)
Constant	0.037	1.978***	6.434**
	(0.168)	(0.731)	(2.939)
Fixed Effects	Year; Industry; Province	Year; Industry; Province	Firm
Sample	Full	Var(Ct'd)>0	Var(Ct'd)>0
Observations	1199	268	268
R-Squared	.351	.244	.332

"No safety, no promotion"

- Historically, the Chinese government has emphasized economic growth over other welfare inputs

- 2004 – Central government assigns a "death ceilings" to each province

- In subsequent years, provinces have in turn provided their own incentives to local regulators

- H1: Safety incentives attenuate the willingness of regulators to overlook safety lapses, and hence reduce the relationship between connections and safety

"No safety, no promotion" - implementation

	All Firms	Unconnected	Connected
NSNP=0	0.035	0.025	0.166
NSNP=1	0.018	0.017	0.027
Difference		0.008	0.139

Table 9: Crosstab of Connected and NSNP for Deathrate

Regulator incentives and worker mortality

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Columns 1 - 3: DeathRate			Columns 4 - 6: ROA			Columns 7 - 9: Pollute	
Connected	0.079***	0.093***	0.104***	0.013*	0.011	0.009	0.020	0.002	0.015
	(0.024)	(0.027)	(0.028)	(0.007)	(0.008)	(0.010)	(0.049)	(0.048)	(0.056)
NSNP	0.000	0.012	0.010	-0.004	-0.005	-0.006	0.008	0.047	0.025
	(0.008)	(0.028)	(0.029)	(0.006)	(0.011)	(0.013)	(0.031)	(0.079)	(0.083)
Connected * NSNP	-0.087***	-0.113***	-0.110***	0.010	0.001	-0.001	-0.150**	-0.189**	-0.143
	(0.029)	(0.033)	(0.034)	(0.012)	(0.011)	(0.013)	(0.066)	(0.086)	(0.091)
log(Sales)	0.005***	0.007	-0.046*	0.004**	0.007	0.035	0.039***	0.006	0.016
	(0.002)	(0.006)	(0.024)	(0.002)	(0.005)	(0.024)	(0.009)	(0.017)	(0.074)
CapInt	0.001	0.000	0.027	0.008**	0.008	-0.022	0.002	0.018	0.009
	(0.004)	(0.011)	(0.020)	(0.004)	(0.010)	(0.019)	(0.014)	(0.017)	(0.035)
StateOwnership	0.012	-0.032	0.001	-0.011	-0.001	-0.010	-0.063	0.190*	0.039
	(0.012)	(0.027)	(0.031)	(0.009)	(0.028)	(0.025)	(0.054)	(0.099)	(0.115)
ROA	-0.012	-0.082	0.209				-0.074	-0.141	-0.051
	(0.035)	(0.111)	(0.146)				(0.143)	(0.281)	(0.414)
Investment	-0.007	-0.113	0.005	0.146***	0.068	0.022	0.085	-0.133	-0.049
	(0.045)	(0.101)	(0.123)	(0.035)	(0.075)	(0.081)	(0.135)	(0.249)	(0.290)
Constant	-0.065	0.010	0.686	-0.107*	-0.116	-0.396	-0.761***	-0.421	-0.419
	(0.071)	(0.249)	(0.552)	(0.065)	(0.162)	(0.496)	(0.279)	(0.502)	(1.443)
Fixed Effects	Year; Industry; Province	Year; Industry; Province	Year; Firm Firm	Year; Industry; Province	Year; Industry; Province	Year; Firm Firm	Year; Industry; Province	Year; Industry; Province	Year; Firm Firm
Sample	Full	Var(Ct'd)>0	Var(Ct'd)>0	Full	Var(Ct'd)>0	Var(Ct'd)>0	Full	Var(Ct'd)>0	Var(Ct'd)>0
Observations	1475	325	325	1475	325	325	1388	315	315
R-Squared	.152	.361	.486	.26	.477	.623	.152	.412	.524

Under-reporting of worker deaths

Under-reporting?

	(1)	(2)	(3)
		Columns 1 - 3: Severe	
Connected	0.100***	0.144***	0.159***
	(0.038)	(0.052)	(0.057)
log(Sales)	0.020***	0.040***	-0.032
	(0.004)	(0.012)	(0.059)
ROA	0.027	-0.167	0.270
	(0.053)	(0.235)	(0.361)
Investment	0.006	0.055	0.253
	(0.072)	(0.281)	(0.350)
CapInt	-0.011	-0.026	0.019
	(0.008)	(0.022)	(0.052)
State Ownership	-0.005	-0.043	-0.006
	(0.025)	(0.064)	(0.081)
Constant	-0.232**	-0.364	0.487
	(0.111)	(0.463)	(1.519)
Fixed Effects	Year; Industry; Province	Year; Industry; Province	Year; Firm
Sample	Full	Var(Ct'd)>0	Var(Ct'd)>0
Observations	1475	325	325
R-Squared	.1	.186	.248

Conclusions

- Regulations have benefits, political connection has social costs

- Results – at least at face value – are hard to reconcile with optimal development policy