



# Motivation

- The benefits and costs of political network in US literature
  - Benefits: better firm performance, lower cost of capital, greater gov't investment and preferable policy, etc.
  - Costs: political contribution and lobbying
- The situation can be subtle in China: no political campaign and explicit political contribution
  - The manager-politician partnership in China relies on the long-term cultivation and reciprocity
  - Benefits and costs of political network in the context of insider trading

# Research Question

- The benefits and costs of political network in the context of insider trading in China
  - Ⅰ Political connection: enhances insider trading (legal protection story), or discourages the insider trading (potential negative reputational/career impact on connected politicians)?
  - Ⅱ How are the effects different in state-owned firms or non-state-owned firms?

# Preview of findings

- New measure of political network

- Averagely for a listed-firm chairman: 36 politicians via education, and 21 politicians via work experience

- Stronger political networks discourage insider trading

- One  $\sigma$  increase in total network link (164 politicians) → 21.8% decrease in trading shares
- More prominent effect for long-standing and high-level connections

- The effect is mitigated for central and local SOEs

- Political network is more valuable for non-SOEs

- When there is private information

- Right before M&As
- Shortly after the announcement of “*Four trillion*” stimulus plan (potentially being informed from politician)
- Stronger political network → choose not to trade on private information

- Identification

- Chairman turnover
- Increases of high-level political connections
- Turnover of provincial leaders (governors and party-secretaries)

- Mechanism

- Rewarding or disciplining

# Insider trading enforcement in China

Year	No. Cases	Profit/Loss (Median)	Tipper Fine (Median)	Tippee Fine (Median)
2004	2	90,000	25,000	N/A
2007	1	N/A	200,000	N/A
2008	4	41,357	52,553	N/A
2009	4	21,110	67,023	40,000
2010	11	98,632	60,000	118,204
2011	11	25,693	N/A	110,000
2012	14	96,194	75,000	167,600
2013	35	54,632	30,000	164,096
2014	47	171,013	67,900	200,000
2015	20	223,337	150,000	262,204
2016	55	320,391	100,000	616,748
2017	32	644,693	2,748,649	921,159
2018	44	30,376	333,555	400,000
2019	54	118,640	594,566	200,000

*Note:* The SEC reported 51 insider trading cases in 2018.

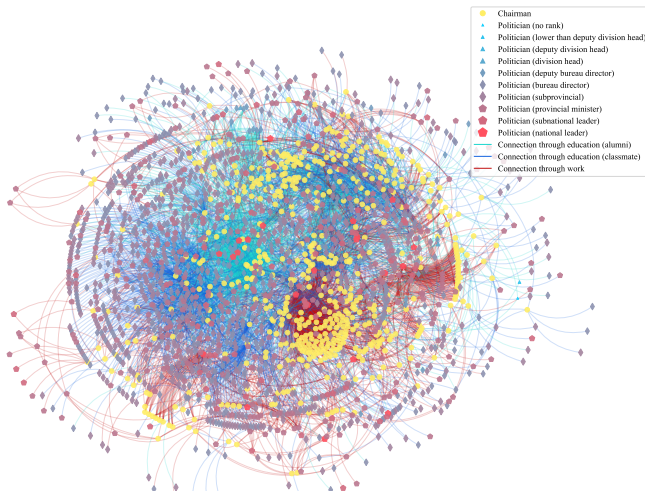
# Data

- Chinese Political Elite Database (CPED)
  - Including politicians' personal features, education background, and work experience
- iFinD
  - Chairmen's CVs
- CSMAR and WIND
  - Firm financial information
  - Insider trading information
- 4,057 politicians
- 74,397 transactions for 2,687 listed firms
  - 61% of the transactions are sales; 39% are purchases
- Firm-year panel of 2,216 listed firms in China from 2007 to 2017

# New measure of political network

- We use chairmen's network as the firm's political connections
- Education link: attended the same university, with overlapped years (school friends) or without (alumni)
- Work link: overlapped working years in the same place
- Over 2.3 million links from 1990 to 2015 for 2,834 firms
- Each firm has on average 36 connections via education and 21 connections via work

# Chairman's political network





# Difference in political network:

Central SOE / local SOEs vs. non-SOEs

	Central SOE		Local SOE		Non-SOE		Diff: Central-NonSOE	Diff: Local-NonSOE
	Mean (std. dev.)	Obs.	Mean (std. dev.)	Obs.	Mean (std. dev.)	Obs.	Mean (std. err.)	Mean (std. err.)
Education link	75.900 (228.614)	2,478	46.346 (179.323)	4,447	23.758 (84.775)	11,622	-52.1422*** (2.7196)	-22.5884*** (2.0935)
Work link	62.431 (111.311)	2,478	21.638 (59.588)	4,447	12.705 (50.465)	11,622	-49.7260*** (1.4469)	-8.9329*** (0.9371)
Network link	138.331 (269.121)	2,478	67.984 (199.991)	4,447	36.463 (101.305)	11,622	-101.8682*** (3.2205)	-31.5213*** (2.3977)

# Baseline results

- One  $\sigma$  increase in network link ( $\approx 164$  politicians)  $\rightarrow$  21.8% decrease in trading shares

Dep. Var.	Log trading shares			Log trading amount			Log trading permille		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Log educ link	-0.0462** (0.0200)			-0.0781*** (0.0268)			-0.0201*** (0.00597)		
Log work link		-0.0611** (0.0261)			-0.0735** (0.0361)			-0.0245*** (0.00757)	
Log network link			-0.0765*** (0.0223)			-0.118*** (0.0301)			-0.0298*** (0.00682)
Central SOE	-1.641*** (0.118)	-1.578*** (0.125)	-1.566*** (0.121)	-1.955*** (0.163)	-1.894*** (0.172)	-1.845*** (0.168)	-0.426*** (0.0314)	-0.402*** (0.0330)	-0.399*** (0.0321)
Local SOE	-1.497*** (0.0963)	-1.461*** (0.0969)	-1.463*** (0.0967)	-1.844*** (0.131)	-1.802*** (0.132)	-1.792*** (0.132)	-0.421*** (0.0269)	-0.407*** (0.0271)	-0.408*** (0.0269)
Obs.	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547
adj. R-sq	0.182	0.182	0.183	0.190	0.189	0.190	0.156	0.156	0.156

Cons./Firm Controls/Chairman Controls/Industry FE/Province FE/Year FE: YES

## Baseline results (*continued*): Chairman's characteristics

Dep. Var.	Log trading shares (3)	Log trading amount (6)	Log trading permille (9)
List 985	0.327** (0.134)	0.469*** (0.178)	0.104** (0.0403)
Education abroad	-0.664*** (0.253)	-0.901*** (0.344)	-0.191*** (0.0648)
Work abroad	0.164 (0.179)	0.330 (0.229)	-0.0371 (0.0540)
Female	0.0250 (0.160)	-0.0697 (0.207)	-0.0188 (0.0515)
Log age	0.321 (0.263)	0.482 (0.353)	0.0142 (0.0838)
Foreign citizenship	-1.053*** (0.236)	-1.518*** (0.310)	-0.303*** (0.0730)
Educational level	0.0176 (0.0449)	0.0335 (0.0602)	-0.0129 (0.0138)
Obs.	18,547	18,547	18,547
adj. R-sq	0.183	0.190	0.156

Cons./Firm Controls/Industry FE/Province FE/Year FE: YES

# Education connection and insider trading: Alumni vs school friends

- Decomposing education links to *Log school friends link* and *Log alumni link*

Dep. Var.	Log trading shares		Log trading amount		Log trading permille	
	(1)	(2)	(3)	(4)	(5)	(6)
Log alumni link	-0.0487** (0.0199)		-0.0814*** (0.0267)		-0.0205*** (0.00595)	
Log school friends link		-0.101** (0.0511)		-0.114* (0.0678)		-0.0522*** (0.0149)
Central SOE	-1.640*** (0.118)	-1.651*** (0.118)	-1.954*** (0.163)	-1.982*** (0.163)	-0.426*** (0.0314)	-0.429*** (0.0314)
Local SOE	-1.497*** (0.0963)	-1.499*** (0.0963)	-1.844*** (0.131)	-1.848*** (0.131)	-0.421*** (0.0269)	-0.422*** (0.0270)
Obs.	18,547	18,547	18,547	18,547	18,547	18,547
adj. R-sq	0.182	0.182	0.190	0.189	0.156	0.156

Cons./Firm Controls/Chairman Controls/Industry FE/Province FE/Year FE: YES

# Influence of the connections:

Long-standing connections, and connections to high-level politicians

- One  $\sigma$  increase in *Network link (long)* or *Network link (high)*  $\rightarrow$  22.2% or 23.2% decrease in trading shares

Dep. Var.	Trading Shares	Trading Amount	Trading Per mille	Trading Shares	Trading Amount	Trading Per mille	Trading Shares	Trading Amount	Trading Per mille
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Long-term connections</b>									
Log network link (long)	-0.0789*** (0.022)	-0.119*** (0.0295)	-0.0286*** (0.0067)				-0.0780*** (0.024)	-0.113*** (0.032)	-0.0286*** (0.00729)
Log network link (short)				-0.0598** (0.0293)	-0.107** (0.0429)	-0.0200*** (0.00761)	-0.00469 (0.032)	-0.0265 (0.0459)	0.000246 (0.00837)
Chi-sq (P-value)							2.361 (0.1244)	1.75 (0.1858)	4.656** (0.031)
Obs.	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547
adj. R-sq	0.183	0.19	0.156	0.182	0.189	0.155	0.183	0.19	0.156
<b>High-level connections</b>									
Log network link (high)	-0.0735*** (0.0191)	-0.110*** (0.0258)	-0.0248*** (0.00584)				-0.0790*** (0.0208)	-0.114*** (0.0283)	-0.0242*** (0.00624)
Log network link (low)				-0.0268 (0.0333)	-0.0546 (0.0449)	-0.0186** (0.00891)	0.0246 (0.0364)	0.0197 (0.0493)	-0.00287 (0.00949)
Chi-sq (P-value)							4.561** (0.0327)	4.101** (0.0429)	2.675 (0.102)
Obs.	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547
adj. R-sq	0.183	0.191	0.156	0.181	0.189	0.155	0.183	0.191	0.156
Cons./Firm Controls/Chairman Controls/Industry FE/Province FE/Year FE: YES									

# Heterogeneity: state ownership

- The effect of political network on insider trading is mitigated for central and local SOEs.

Dep. Var.	Log trading shares			Log trading amount			Log trading permille		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Log educ link	-0.0572** (0.0291)			-0.0955** (0.0383)			-0.0283*** (0.00935)		
Log work link		-0.128*** (0.0402)			-0.156*** (0.0532)			-0.0469*** (0.0128)	
Log network link			-0.108*** (0.0311)			-0.164*** (0.0407)			-0.0436*** (0.0100)
Central SOE	-1.751*** (0.141)	-1.812*** (0.201)	-1.879*** (0.222)	-2.143*** (0.200)	-2.235*** (0.279)	-2.391*** (0.320)	-0.485*** (0.0383)	-0.511*** (0.0520)	-0.572*** (0.0581)
Local SOE	-1.500*** (0.116)	-1.743*** (0.150)	-1.657*** (0.160)	-1.842*** (0.157)	-2.115*** (0.207)	-2.029*** (0.218)	-0.434*** (0.0331)	-0.481*** (0.0408)	-0.475*** (0.0457)
Link×Central SOE (edu/work/network)	0.0550 (0.0478)	0.115* (0.0611)	0.0950* (0.0550)	0.0930 (0.0660)	0.160* (0.0852)	0.163** (0.0784)	0.0298** (0.0127)	0.0488*** (0.0170)	0.0513*** (0.0148)
Link×Local SOE (edu/work/network)	0.00437 (0.0401)	0.161*** (0.0599)	0.0770* (0.0462)	0.00263 (0.0555)	0.181** (0.0851)	0.0965 (0.0643)	0.0104 (0.0114)	0.0441*** (0.0163)	0.0275** (0.0130)
Obs.	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547
adj. R-sq	0.182	0.183	0.183	0.190	0.190	0.191	0.156	0.156	0.157

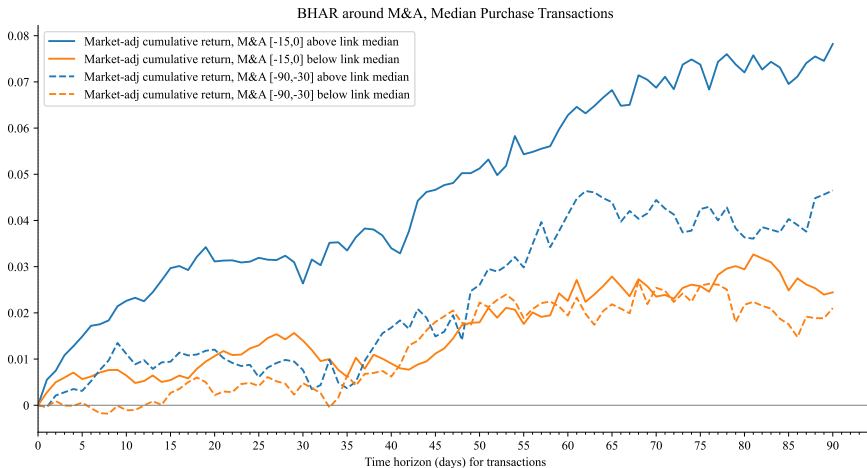
- Cons./Firm Controls/Chairman Controls/Industry FE/Province FE/Year FE: YES

- Columns of the SOE interaction: (1) (4) (7) for education link, (2) (5) (8) for work link, (3) (6) (9) for network link

# Insider trading when there is *private* information

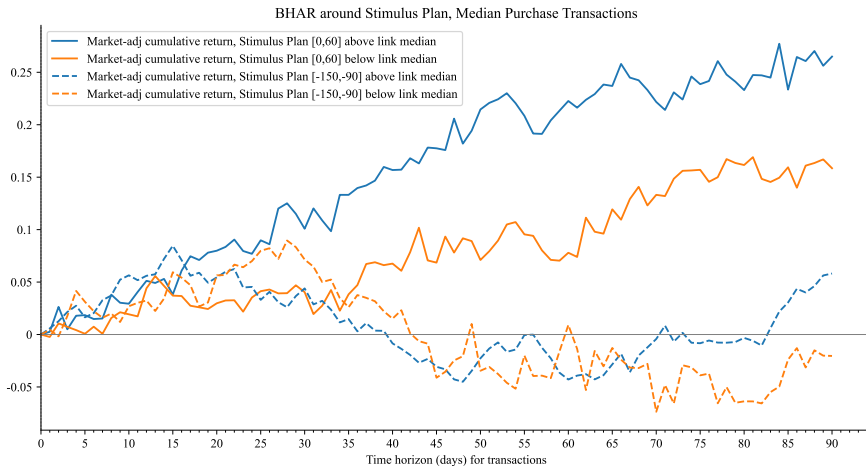
- Firm-related private information: M&A
  - *M&A*: = 1 if within 15 days before M&A announcements, = 0 if within 30-90 days before announcements
  - Insiders with more political connections trade less right before M&A announcements (*Log network link*  $\times$  *M&A* is negatively correlated with trading measures)
  - Such trading concealment is more prominent for non-SOEs
- Macro-level private information: “*Four-trillion*” Stimulus in 2008
  - *Stimulus*: = 1 for 60 days (i.e. [0,60]) after November 8, 2008, = 0 for the 90 to 150 days before that (i.e. [-150, -90])
  - Insiders with more political connections trade less after the initial stage of the announcement (*Log network link*  $\times$  *Stimulus* is negatively correlated with *Log trading permille*)
  - More prominent for non-SOEs

# Buy-and-hold abnormal return for M&As





# Buy-and-hold abnormal return for the Stimulus Plan



# Identification strategies

- Identification 1: Chairman's turnover
  - *Link increase*: treatment indicator = 1 for a firm's turnover generates high-level work link increase, = 0 otherwise
  - *Turnover* is a time indicator, = 1 for the two years after the chairman turnover, = 0 for the two years before
  - Link increase induced by chairman turnover leads to less trading (*Link increase  $\times$  Turnover is negatively correlated with trading measures*)
- Identification 2: Increases of high-level political network
  - *Treated\_chairman*: = 1 for the chairmen whose high-level network increased in the sample, = 0 otherwise
  - *Post high-level increase*: time indicator = 1 for the two years after the increase of high-level political network, = 0 for the two years before
  - Increase in high-level links (politicians being promoted or newly connected) leads to less trading (*Treated\_chairman  $\times$  Post high level increase is negatively correlated with trading measures*)

## Identification strategies (*continued*)

- Identification 3: Provincial leader turnovers
  - Turnover of political leadership is less likely driven by a firm's political network; and can bring political uncertainty a firm's network → more cautious in opportunistic behaviors
  - *P\_Turnover*: a time indicator, = 1 for the two years after the turnovers of provincial governors or party secretaries, = 0 for the two years before
  - Firms with large political network tend to act more cautious after the provincial leader turnovers (*Log network link × P\_turnover* is negatively correlated with trading measures)

# Mechanisms: “Carrot” and “Stick”

- Reward channel

- Insiders might trade less to preserve the firm’s political connections, especially when political connections are not strong
- Firms with large political network and high future government subsidy tend to trade less  
(*Log network link*  $\times$  *Future gov’t subsidy* is negatively correlated with trading measures)

- Disciplining channel

- *Marketization*, is an index for market versus government force (Wang et al. 2021). *Law institutions* = 1 if the number of law institutions in a province is at the top 33% of the sample, = 0 if at the bottom 33%
- Both legal enforcement measures focus on province level (local government)
- *Local SOEs with large political network and high province-level legal enforcement tend to trade less*

# Additional tests

- The network of CEO/CFO and insider trading
  - Construct the political network using the same method for 4,952 CEOs and 4,361 CFOs in our sample
  - Very limited significance for CEO links on insider trading; no results for CFO
- Managers' work experience in public sectors
  - Investigate whether managers have prior work experience in public sectors is related with their connections to politicians
  - *Chairman\_Pol* is defined as one for chairmen who have worked in public sectors at the county, city, provincial, or higher levels, or zero otherwise
  - *Chairman\_Pol* is not significant when using as network measures in our baseline regressions
  - Similar non-significant results for CEOs/CFOs

# Key takeaways

- New measure of political network of the private sector (i.e. listed firms)
- New evidence of potential *costs* of political connections
- *Political networks discourage insider trading*, in contrary to the findings in western countries where political connections reduce litigation risk and increase insider trading
  - The effect is more pronounced for long-standing connections and high-level connections
  - The muted effect is mitigated in SOEs
  - “Carrot” and “Stick”: a combination of reward and discipline
    - Insiders with stronger political network may trade less in exchange for more preferable policy and financial support
    - Insider trading, solicits public attentions, and may cause unwanted reputation damage to themselves/to their connected politicians

# Political network, insider trading and M&As

- $M\&A = 1$  if within 15 days before M&A announcements, = 0 if within 30-90 days before announcements

Dep. Var.	Log trading shares		Log trading amount		Log trading permille	
	(1)	(2)	(3)	(4)	(5)	(6)
Log network link	0.042 (0.0331)	0.029 (0.042)	0.0192 (0.0441)	0.00145 (0.0554)	0.0157 (0.0114)	-0.00123 (0.0148)
<b>M&amp;A</b>	<b>1.762***</b> <b>(0.138)</b>	<b>1.999***</b> <b>(0.156)</b>	<b>2.026***</b> <b>(0.178)</b>	<b>2.296***</b> <b>(0.2)</b>	<b>0.807***</b> <b>(0.0532)</b>	<b>0.882***</b> <b>(0.0619)</b>
Log network link×M&A	-0.244*** (0.0469)	-0.221*** (0.0608)	-0.300*** (0.0615)	-0.255*** (0.0781)	-0.101*** (0.0169)	-0.0790*** (0.0229)
Central SOE		-0.812** (0.367)		-0.913* (0.517)		-0.341*** (0.109)
Local SOE		-0.382 (0.24)		-0.334 (0.335)		-0.192** (0.0754)
Log network link×M&A×Central SOE		0.242* (0.144)		0.208 (0.198)		0.0975** (0.0407)
Log network link×M&A×Local SOE		0.244** (0.114)		0.265* (0.158)		0.0472 (0.033)
Obs.	10,778	10,778	10,778	10,778	10,778	10,778
adj. R-sq	0.0728	0.077	0.0655	0.0695	0.112	0.118

- Cons./Firm Controls/Chairman Controls/Industry FE/Province FE: YES; Year FE: NO

- The coefficients of the two-way interaction terms are not presented in this table

# The “Four-trillion” Stimulus in 2008

- *Stimulus*: = 1 for 60 days (i.e. [0,60]) after November 8, 2008, = 0 for the 90 to 150 days before that (i.e. [-150, -90])

Dep. Var.	Log trading shares		Log trading amount		Log trading permille	
	(1)	(2)	(3)	(4)	(5)	(6)
Log network link	0.125 (0.146)	0.203 (0.237)	0.0565 (0.186)	0.0387 (0.294)	0.0738 (0.0529)	0.0933 (0.084)
<i>Stimulus</i>	2.236*** (0.692)	2.876*** (0.898)	2.541*** (0.849)	3.213*** (1.072)	0.769*** (0.23)	0.973*** (0.319)
Log network link× <i>Stimulus</i>	-0.332 (0.212)	-0.648* (0.335)	-0.314 (0.247)	-0.608 (0.382)	-0.140** (0.0612)	-0.221** (0.103)
Central SOE		-0.325 (1.637)		-1.035 (2.318)		-0.273 (0.37)
Local SOE		-1.37 (0.974)		-2.11 (1.311)		-0.461 (0.316)
<i>Log network link×Stimulus×Central SOE</i>		1.095* (0.607)		1.198 (0.768)		0.300** (0.122)
<i>Log network link×Stimulus×Local SOE</i>		0.531 (0.459)		0.453 (0.566)		0.166 (0.122)
Obs.	300	300	300	300	300	300
adj. R-sq	0.0729	0.0626	0.0706	0.0587	0.0952	0.0793

- Cons./Firm Controls/Chairman Controls/Industry FE/Province FE: YES; Year FE: NO

- The coefficients of the two-way interaction terms are not presented in this table



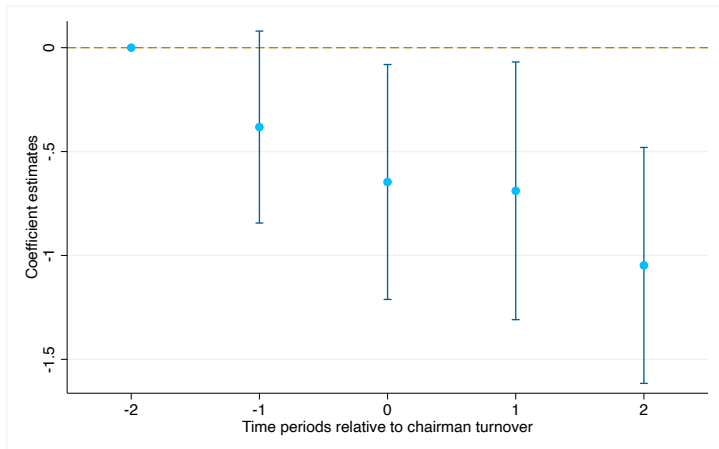
# Identification 1: Chairman's turnover

- *Link increase*: treatment indicator = 1 for a firm's turnover when the chairman's high-level work connections in the two years after a turnover is higher than those in the two years before the turnover, = 0 otherwise
- *Turnover* is a time indicator, = 1 for the two years after the chairman turnover, = 0 for the two years before

Dep. Var.	Log trading shares		Log trading amount		Log trading permille	
	(1)	(2)	(3)	(4)	(5)	(6)
Link increase	0.108 (0.26)	-0.217 (0.378)	0.06 (0.349)	-0.259 (0.518)	0.0502 (0.0721)	0.0462 (0.105)
Turnover	0.0384 (0.148)	0.367** (0.151)	-0.0215 (0.196)	0.336* (0.201)	-0.0382 (0.0445)	0.056 (0.0453)
Link increase×Turnover	-0.670** (0.28)	-0.543* (0.282)	-0.906** (0.375)	-0.758** (0.358)	-0.137* (0.0771)	-0.093 (0.0746)
Firm FE	NO	YES	NO	YES	NO	YES
Industry FE	YES	NO	YES	NO	YES	NO
Province FE	YES	NO	YES	NO	YES	NO
Obs.	2,879	2,879	2,879	2,879	2,879	2,879
adj. R-sq	0.163	0.0359	0.165	0.0454	0.127	0.0155

Cons./Firm Controls/Chairman Controls/Year FE: YES

# Dynamic effects of political network on insider trading around chairman turnover



## Identification 2: Increases of high-level political network

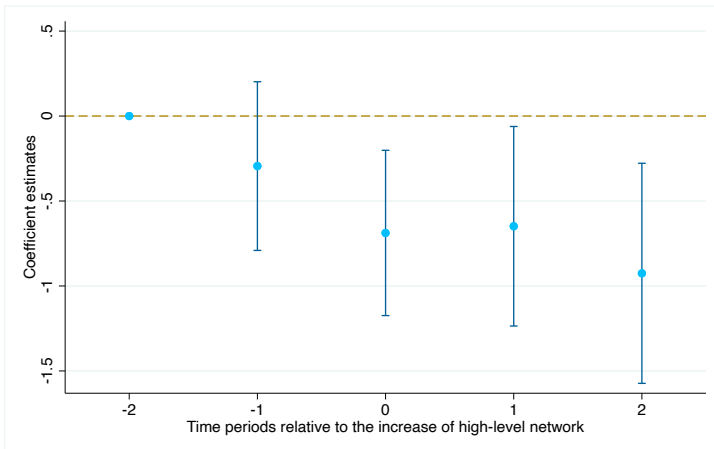
- Increases of high-level political network
  - When there is a promotion for the connected politicians to a high-level rank position
  - When there is a new high-level political connection created
- *Treated\_chairman*: = 1 for the chairmen whose high-level network increased in the sample, = 0 otherwise
- Define control group of chairmen: one-to-one propensity score matching with the caliper of 0.015 based on chairman and firm characteristics

## Identification 2: Increases of high-level political network (*continued*)

- *Post high-level increase*: time indicator = 1 for the two years after the increase of high-level political network, = 0 for the two years before

Dep. Var.	Log trading shares	Log trading amount	Log trading permille
	(1)	(2)	(3)
Treated_chairman	0.0206 (0.193)	-0.109 (0.262)	0.00885 (0.0569)
Post high-level increase	0.260 (0.199)	0.155 (0.266)	0.0732 (0.0619)
Treated_chairman×Post high-level increase	-0.576** (0.244)	-0.543* (0.329)	-0.151** (0.0736)
Obs.	1,878	1,878	1,878
adj. R-sq	0.182	0.176	0.165
Cons./Firm Controls/Chairman Controls/Industry FE/Province FE/Year FE: YES			

# Dynamic effects of increased high-level political network within a chairman's tenure on insider trading



## Identification 3: Provincial leader turnovers

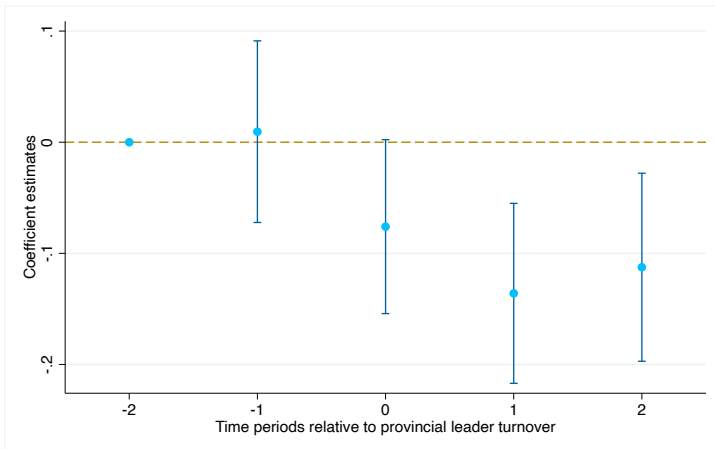
- Turnover of political leadership is less likely driven by a firm's political network; and can bring political uncertainty a firm's network
- In our sample: 102 turnovers of local provincial leaders (governors and party secretaries) in 28 provinces
- Firm, especially those with strong network before turnovers are likely to be more cautious in opportunistic behaviors (including their insider trading) in the first few years following the turnover

## Identification 3: Provincial leader turnovers (*continued*)

- *P\_Turnover*: a time indicator, = 1 for the two years after the turnovers of provincial governors or party secretaries, = 0 for the two years before

Dep. Var.	Log trading shares	Log trading amount	Log trading permille
	(1)	(2)	(3)
Log network link	-0.0278 (0.0295)	-0.0702* (0.041)	-0.00371 (0.00933)
P_Turnover	0.383*** (0.117)	0.409*** (0.154)	0.142*** (0.0396)
Log network link×P_Turnover	-0.120*** (0.0323)	-0.125*** (0.0432)	-0.0458*** (0.0105)
Obs.	11,045	11,045	11,045
adj. R-sq	0.177	0.183	0.153
Cons./Firm Controls/Chairman Controls/Industry FE/Province FE/Year FE: YES			

# Dynamic effects of political network on insider trading around provincial leader turnover





## “Carrot” - Preferable support

- Future gov't subsidy* is the amount of government subsidy that the firm receives in year  $t+1$ , scaled by firms' total assets

Dep. Var.	Log trading shares			
	(1)	(2)	(3)	(4)
Log network link	-0.107*** (0.0248)	-0.135*** (0.0355)	-0.0632*** (0.023)	-0.0876*** (0.0323)
Future gov't subsidy			2.382*** (0.695)	2.931*** (1.034)
Log network link×Future gov't subsidy			-0.402*** (0.153)	-0.508** (0.214)
Log network link×Future gov't subsidy×Central SOE				0.689 (0.576)
Log network link×Future gov't subsidy×Local SOE				0.116 (0.31)
Obs.	17,324	17,324	18,547	18,547
adj. R-sq	0.206	0.221	0.184	0.184

- Cons./Firm Controls/Chairman Controls/Industry FE/Province FE/Year FE: YES

- The coefficients of other two-way interaction terms are not presented in this table

## “Stick” - Disciplining effect

- *Marketization*, is an index for market versus government force, from Wang et al. (2021). *Law institutions* = 1 if the number of law institutions in a province is at the top 33% of the sample, = 0 if at the bottom 33%

Dep. Var.	Log trading shares			
	(1)	(2)	(3)	(4)
Log network link	-0.0686 (0.0745)	-0.310*** (0.112)	-0.0992*** (0.0325)	-0.191*** (0.0485)
Marketization	0.177*** (0.0361)	0.153*** (0.0469)		
Log network link×Marketization	-0.00583 (0.00956)	0.0241* (0.0141)		
Law institutions			0.502*** (0.163)	0.294 (0.209)
Log network link×Law institutions			-0.0197 (0.0498)	0.134* (0.0736)
Log network link×Marketization×Central SOE		-0.0185 (0.0252)		
Log network link×Marketization×Local SOE		-0.0601*** (0.0206)		
Log network link×Law institutions×Central SOE				-0.210 (0.129)
Log network link×Law institutions×Local SOE				-0.275** (0.113)
Obs.	14,807	14,807	12,038	12,038
adj. R-sq	0.127	0.129	0.135	0.137

- Cons./Firm Controls/Chairman Controls/Industry FE: YES; Province FE/Year FE: NO

- The coefficients of other two-way interaction terms are not presented in this table

## Additional tests: The network of CEO/CFO and insider trading

- The information of CEOs and CFOs are also collected, with 4,952 CEOs and 4,361 CFOs in our sample
- Constructing the network following the same methodology

Dep. Var.	Log trading shares			Log trading amount			Log trading permille		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Log educ link (CEO)	-0.0293 (0.0787)			-0.108 (0.106)			-0.00215 (0.0238)		
Log work link (CEO)		-0.0300* (0.0171)			-0.0422* (0.0226)			-0.0045 (0.00537)	
Log network link (CEO)			-0.0295* (0.0172)			-0.0420* (0.0227)			-0.00415 (0.00537)
Central SOE	-1.627*** (0.118)	-1.620*** (0.118)	-1.620*** (0.118)	-1.959*** (0.163)	-1.953*** (0.163)	-1.953*** (0.163)	-0.425*** (0.0311)	-0.423*** (0.0312)	-0.423*** (0.0312)
Local SOE	-1.503*** (0.0954)	-1.500*** (0.0955)	-1.500*** (0.0955)	-1.851*** (0.13)	-1.848*** (0.13)	-1.848*** (0.13)	-0.419*** (0.0266)	-0.418*** (0.0266)	-0.418*** (0.0266)
Obs.	19,170	19,170	19,170	19,170	19,170	19,170	19,170	19,170	19,170
adj. R-sq	0.176	0.176	0.176	0.182	0.182	0.182	0.149	0.149	0.149

Cons./Firm Controls/CEO Controls/Industry FE/Province FE/Year FE: YES



## Additional tests: Managers' work experience in public sectors

- *Chairman\_Pol* is defined as one for chairmen who have worked in public sectors at the county, city, provincial, or higher levels, or zero otherwise
- We also control for the work experience for CEOs/CFOs in public sectors, and the results are similar

Dep. Var.	Log trading shares			Log trading amount			Log trading permille		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Central SOE	-1.669*** (0.118)		-1.571*** (0.122)	-2.004*** (0.163)		-1.852*** (0.168)	-0.439*** (0.0314)		-0.400*** (0.0322)
Local SOE	-1.500*** (0.0964)		-1.461*** (0.0967)	-1.849*** (0.131)		-1.789*** (0.132)	-0.423*** (0.027)		-0.408*** (0.0269)
Chairman_Pol		0.127 (0.251)	0.193 (0.252)		0.218 (0.321)	0.289 (0.327)		0.0511 (0.0625)	0.0636 (0.0617)
Log network link			-0.0765*** (0.0223)			-0.118*** (0.0301)			-0.0297*** (0.00681)
Obs.	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547	18,547
adj. R-sq	0.182	0.145	0.183	0.189	0.158	0.19	0.155	0.129	0.156

Cons./Firm Controls/CEO&CFO Controls/Industry FE/Province FE/Year FE: YES