

POLITICALLY MOTIVATED CORPORATE DECISIONS:
EVIDENCE FROM CHINA

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POLITICAL TOURNAMENTS & ECONOMIC ACTIVITY

- Increase in political uncertainty reduces economic activity [investments (Bernanke, 1983)]
- Incentives to maximize winning chances motivate fiscal and monetary policy manipulations improving macroeconomic fundamentals (Rogoff, 1990)
- Democratic elections – the latter [Julio and Yook (2012)]
Autocratic promotions – the former

CHINA: A GOOD LABORATORY

- China uniquely combines a market economy with a communist system
- This is a good laboratory for our study:
 - Are there cyclical effects of **political incentives** on aggregate corporate decisions?
 - These effects are also present in democracies, but expected to be smaller
 - Absence of elections (and presence of more continuity in policy) suggests a relatively smaller effect of increased **political uncertainty** on corporate decisions in China

CHINA'S POLITICAL PROMOTION CALENDAR

- China partitioned into 31 provinces
- Elections for China's National Congress take place every 5 years^{1,2}
- These elections provide (the only) promotion opportunity for provincial party secretaries (head of province) to move to central government positions
 - e.g., Promotion to Chairman of the China Banking Regulatory Commission

¹ There are three of these: China Party's Congress, Chinese People's Political Consultative Conference, China People's Congress

² October-November, and March respectively

MOTIVATION

- Chinese province heads have considerable control on province corporations (state and not-state owned)
- Compete for political promotions for national positions by economic performance every 5 years
- The major (formal) criterion for such promotions is **economic performance** of the province
 - Additional criteria: science, education, health, culture...
- Recent performance important

HYPOTHESIS

⇒ Cyclical in corporate decisions and aggregate economic activity synchronized with political calendar

(Corporate decisions should tilt in the direction predicted by the promotion criteria of Politicians)

ANECDOTE

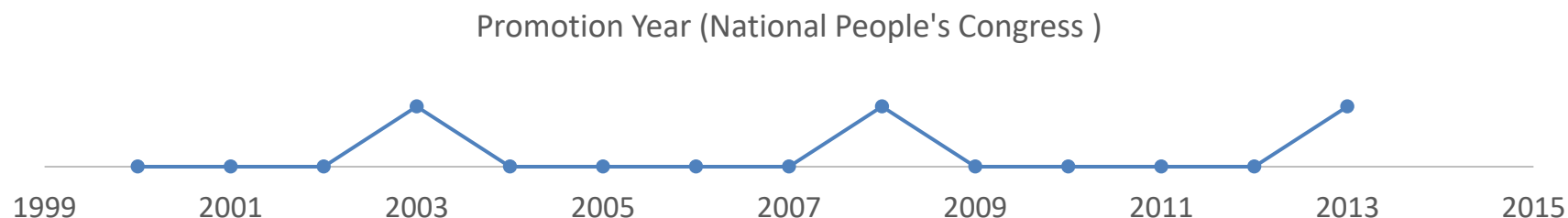
China will undergo its once-in-five-years political transition later this year, so the Chinese economy in 2017 is relatively easy to forecast.

-Credit Suisse analyst report

RESEARCH QUESTION

Does the political cycle induce economic and financial cycles at the 5-year frequency?

Cyclicity in multiple variables - is the direction consistent with political incentives?



- Economic variables: tax, investment, unemployment
- Financial variables: volatility, returns, price premium (A & H shares)

ECONOMIC CYCLES

- Due to the promotion incentives of provincial party secretaries:
 - Corporate **taxes** and **employment** should increase in the year before national promotions
 - Corporate **investment** increases more than one year before national promotions
 - Investment outcomes help promotions
 - This takes time to build
 - Assume the time is greater than 1 year
 - Increase in investments two year before (“offset”, and “catch up” story suggest same effect)

FINANCIAL CYCLES

- Stock returns and volatility
 - Difficult to predict sign without a model
- We analyze the **price premium** for Chinese firms listed in China and Hong-Kong [Sun and Tong (2000)]
 - Factor influencing this premium depend less on dynamics of fundamentals which are almost identical for dual-listed firms
 - Two mechanisms predict the same direction
 - Information asymmetry: the difference in prices demanded by insiders (domestic?) and outsiders (HK?) should increase in tournament years
 - Intermediary incentives? [Ma et al (2010)]

RELATED QUESTION – CARROT OR STICK?

- Mechanism: **aversion to penalty** (for not complying)
More powerful firms \Rightarrow *lower effects*
Better performing politicians \Rightarrow *lower effects*
- We do not focus on the “quid pro quo” mechanism:
 - A favor granted to the provincial party secretary in return for something in the tournament year
 - Politically connected firms and corporate political donations should have larger effects (e.g., Piotroski and Zhang, 2013; An et al., 2016; Cao et al., 2015)

DATA

- National-Level and Province-Level Data (13 years, 31 provinces)
- National Bureau of Statistics of China (NBSC) Firm-Level Data (>16000 firm-year observations)
- China Stock Market and Accounting Research (CSMAR) database
- RESSET database
- CV of all Provincial Party Secretaries (after 1949)

OVERVIEW OF RESULTS

- China's 31 mainland provinces, 2000–2013
- Promotion years 2003, 2008, 2013
- Average tax payments $\uparrow\uparrow$ 4.1% one year prior
- Average investment $\uparrow\uparrow$ 7.0% – two years prior, and $\downarrow\downarrow$ 2.4% one year prior
- Unemployment $\downarrow\downarrow$ and Price Premium $\uparrow\uparrow$ one year prior
- SOEs same as “privately owned” firms
- Simultaneity in determining investments, tax, cash holdings, debt, employees, stock returns, stock volatility

SIMULTANEOUS EQUATIONS ESTIMATION (2SLS)

Stage 1

$$Y_{ijt} = \alpha_0 + \gamma Instrument + \beta_1 Tournament_{t+2} + \beta_2 Tournament_{t+2} * SOE_{ij} + \beta_3 Tournament_{t+1} + \beta_4 Tournament_{t+1} * SOE_{ij} + \delta Exogenous + \varepsilon_{ijt},$$

- Y_{ij} : firm level investment, tax, employee growth, wage growth, cash, debt, stock returns, and volatility
- $Tournament_{t+1}$: Equal to 1 when the NPC is next year
- Instruments: lagged values of Y_{ij}
- Exogenous: GDP growth, unemployment growth, inflation growth, annual market return, annual market volatility, Tobin's Q, cash flow

SIMULTANEOUS EQUATIONS ESTIMATION (2SLS)

Stage 2

$$Y_{ijt} = \alpha_0 + \gamma \hat{Y}_{ijt} + \beta_1 \text{Tournament}_{t+2} + \beta_2 \text{Tournament}_{t+2} * \text{SOE}_{ij} + \beta_3 \text{Tournament}_{t+1} + \beta_4 \text{Tournament}_{t+1} * \text{SOE}_{ij} + \delta \text{Exogenous} + \varepsilon_{ijt}.$$

Note that:

- Tournament_{t+1} is a deterministic variable (Endogeneity not an issue!)
- To influence results, omitted variable should be:
 - Correlated across firms as well as across time
 - Have a five-year frequency
 - Influence multiple time-series: Investments, taxes, employment etc
 - Have signs consistent with promotion criteria
- Sample size (issues?): 13 years, >16000 firm-year observations, 4 series

UNIVARIATE ANALYSIS

	1	2	3	4	5	6	7	8
	Δ Investment	Δ Employee Growth	Δ Wage Growth	Δ Cash	Δ Debt	Δ Tax	Δ Volatility	Δ Return
2yrs before Tournament	0.003** (2.02)	0.009 (0.54)	0.067 (1.48)	-0.004*** (-2.97)	-0.005 (-1.55)	0.016*** (2.90)	0.002*** (7.63)	0.113*** (3.91)
1yr before Tournament	-0.002 (-1.14)	0.046*** (3.04)	0.234*** (5.81)	0.008*** (6.07)	0.001 (0.17)	0.043*** (8.50)	0.006*** (27.10)	0.763*** (30.06)
Y(t-1)	-0.300*** (-36.32)	-0.523*** (-63.92)	-0.503*** (-66.54)	-0.434*** (-55.73)	-0.324*** (-38.14)	-0.427*** (-52.21)	-0.045*** (-13.22)	-0.535*** (-74.46)
Constant	-0.005*** (-5.52)	0.000 (-0.05)	-0.112*** (-4.76)	-0.003*** (-3.31)	-0.003 (-1.56)	-0.005* (-1.75)	-0.002*** (-17.04)	-0.266*** (-17.94)
adj. R ²	0.097	0.251	0.268	0.204	0.105	0.177	0.066	0.356
Observations	12310	12221	12187	12357	12346	12992	13011	12248
Fixed effects	No	No	No	No	No	No	No	No

SIMULTANEOUS EQUATION MODEL

	Investment	Employee	Wage	Cash	Debt	Tax	Volatility	Return
1yr before Tournament	-0.095*** (-4.84)	1.024*** (6.20)	-1.778** (-2.66)	0.022*** (5.75)	-0.709*** (-16.28)	0.422*** (7.29)	-0.005*** (-3.44)	-0.330*** (-3.75)
1yr before Tournament*SOE	0.022*** (4.06)	-0.213*** (-5.41)	0.516*** (3.47)	-0.005** (-2.17)	0.165*** (13.45)	-0.097*** (-7.04)	0.001** (2.65)	0.077** (2.42)
2yrs before Tournament	0.020*** (3.04)	-0.088* (-1.90)	-0.287** (-2.26)	-0.001 (-0.17)	0.016 (1.48)	0.005 (0.25)	0.001 (0.54)	0.015 (0.25)
2yrs before Tournament*SOE	-0.002 (-0.89)	0.029 (0.80)	-0.083 (-1.52)	0.001 (0.26)	-0.022*** (-3.84)	0.01 (0.91)	0 (-0.71)	-0.009 (-0.39)
Investment		2.469*** (5.06)	0.185 (0.15)	0.015 (0.32)	-0.510*** (-3.03)	0.033 (0.17)	-0.007 (-0.96)	-0.378 (-0.60)
Employee	0.079*** (8.15)		-0.041 (-0.13)	-0.006 (-0.72)	0.211*** (11.05)	-0.063** (-2.16)	0.002*** (2.98)	0.098 (1.33)
Wage	0.001 (0.22)	-0.005 (-0.14)		0.001 (0.34)	-0.039*** (-4.48)	0.013 (1.11)	0 (-0.38)	-0.019 (-0.49)
Cash	3.385*** (3.97)	-40.455*** (-5.86)	88.718*** (3.22)		32.373*** (15.78)	-19.675*** (-6.36)	0.240*** (2.93)	14.872*** (6.02)
Debt	-0.081*** (-2.82)	1.047*** (4.34)	-1.622** (-2.37)	0.022* (1.70)		0.400*** (4.91)	-0.005 (-1.58)	-0.339** (-2.41)
Tax	0.006 (0.24)	-0.372* (-1.92)	0.649 (1.06)	-0.016 (-0.77)	0.479*** (11.49)		0.003 (1.15)	0.219 (1.30)
	Investment	Employee	Wage	Cash	Debt	Tax	Volatility	Return

Volatility	-23.273*** (-7.08)	183.218*** (7.50)	-149.387 (-1.49)	3.248** (2.39)	-103.338*** (-14.29)	55.989*** (6.25)		-50.899*** (-5.10)
Return	-0.369*** (-6.55)	2.998*** (6.16)	-4.865** (-2.70)	0.063*** (3.85)	-2.078*** (-14.91)	1.122*** (5.92)	-0.016*** (-3.47)	
Promoted in 1yr	0.023*** (4.89)	-0.194*** (-5.73)	0.259 (1.66)	-0.004** (-2.06)	0.124*** (11.03)	-0.077*** (-6.09)	0.001** (2.59)	0.06 (1.59)
Promoted in 2yrs	-0.020*** (-4.84)	0.171*** (5.70)	-0.164 (-1.57)	0.004 (1.53)	-0.119*** (-12.90)	0.066*** (4.80)	-0.001 (-1.54)	-0.056* (-1.91)
GDP Growth	-0.897*** (-4.30)	8.409*** (5.71)	-7.398 (-1.25)	0.175* (1.72)	-5.465*** (-12.32)	2.564*** (4.09)	-0.050*** (-5.76)	-2.730** (-2.59)
Unemployment growth	-4.413*** (-3.49)	40.823*** (4.08)	-10.633 (-0.29)	0.93 (1.41)	-27.487*** (-8.71)	15.494*** (4.59)	-0.294*** (-4.73)	-14.545 (-1.61)
Inflation growth	1.651*** (4.36)	-18.238*** (-6.16)	41.378*** (3.35)	-0.433*** (-6.90)	14.098*** (15.51)	-7.706*** (-5.39)	0.105** (2.73)	6.476*** (5.51)
Market return	0.438*** (6.68)	-3.550*** (-6.50)	5.435** (2.62)	-0.073*** (-3.90)	2.382*** (14.89)	-1.268*** (-5.88)	0.019*** (4.22)	1.149*** (29.32)
Market volatility	29.762*** (7.23)	-226.681*** (-7.51)	129.841 (1.05)	-3.816* (-1.99)	120.528*** (13.45)	-64.827*** (-6.17)	1.226*** (20.96)	60.513*** (4.59)
Tobin's Q	-0.050*** (-6.68)	0.425*** (6.46)	-0.500* (-1.94)	0.008** (2.61)	-0.270*** (-14.52)	0.134*** (5.50)	-0.002*** (-3.73)	-0.131*** (-8.75)
Cash flow	0.092 (0.93)	4.208*** (5.81)	-8.631*** (-2.78)	0.110*** (2.76)	-3.508*** (-14.97)	2.675*** (7.63)	-0.024* (-1.84)	-1.492** (-2.10)
2yrs before Tournament*Cum Investment	0.265** (2.24)	-3.471*** (-3.93)	8.805*** (3.06)	-0.085 (-1.37)	2.860*** (11.65)	-1.753*** (-4.76)	0.018 (1.00)	1.304 (1.38)

	Investment	Employee	Wage	Cash	Debt	Tax	Volatility	Return
1yr before Tournament*Cum Investment	0.532*** (3.64)	-6.796*** (-4.83)	14.728*** (2.77)	-0.154*** (-2.90)	5.061*** (14.96)	-2.883*** (-6.15)	0.037* (2.04)	2.352** (2.31)
Cum Investment	-0.871*** (-3.55)	11.275*** (5.68)	-23.797*** (-3.19)	0.268*** (4.02)	-8.612*** (-14.97)	5.001*** (6.41)	-0.066** (-2.39)	-4.055*** (-4.10)
Constant	0.320*** (6.94)	-2.530*** (-6.65)	2.536 (1.69)	-0.046** (-2.08)	1.550*** (15.34)	-0.591*** (-4.09)	0.014*** (6.49)	0.738*** (5.10)
adj. R ²	0.41	0.015	0.024	0.34	0.56	0.234	0.434	0.643
Observations	13335	13337	13287	13337	13337	13337	13337	13337
Fixed effects	Firm	Firm	Firm	Firm	Firm	Firm	Firm	Firm

PRICING OF DUAL-LISTED FIRMS

Price Premium	1
1yr before Tournament	0.029** (2.03)
Year of Tournament	-0.029* (-1.86)
1yr after Tournament	-0.148*** (-8.32)
Premium(t-1)	0.774*** (70.44)
Outstanding shares	-0.030** (-2.49)
Market value	0.000*** (4.50)
Trading volume	0.010*** (3.93)
Volatility	-0.003* (-1.95)
Trading volume (Red Chip)	-0.182*** (-4.65)
Inflation growth	4.751*** (5.84)
Foreign reserve growth	-0.733*** (-2.70)
Promoted in 1yr	-0.01 (-0.71)
Promoted this year	0.132*** (6.62)
Promoted last year	0.096*** (5.45)
Constant	0.188*** (4.44)
adj. R ²	0.909
Observations	2736
Fixed effects	Firm

Mean values over the 5-year cycle

	2yr before Tournament		Tournament Year		2yr after Tournament
Year	-2	-1	0	1	2
Tax	0.2157	0.2439	0.2136	0.2247	0.2187
Investment	0.0758	0.0712	0.0746	0.0700	0.0713

HETEROGENEITY IN INVESTMENT CYCLES ACROSS PROVINCES?

- No significant associations with
 - firm characteristics
 - Central vs provincial SOEs
 - Industry
 - Provincial characteristics
 - Autonomous
 - Coastal
 - Greater minority population
 - Located in municipalities

SUMMARY

- Document a cyclicality in corporate decision-making in China synchronized with political promotion cycles
- Broad economic impact on investments, taxes, cash holdings, debt, stock returns, and stock volatility

HETEROGENEITY IN INVESTMENT CYCLES ACROSS PROVINCES?

- No significant associations with
 - firm characteristics (central vs provincial SOEs, industry)
 - provincial characteristics (autonomous, coastal)

	SOE	Industry
2yrs before Tournament	0.005** (2.45)	0.005** (2.36)
2yrs before Tournament*SOE		-0.002 (-1.12)
SOE		0.000 (-0.07)
2yrs before Tournament*Provincial SOE	-0.003 (-1.43)	
2yrs before Tournament*Central SOE	0.002 (0.43)	
Provincial SOE	0.000 (0.02)	
Central SOE	0.000 (0.05)	
2yrs before Tournament*Conglomerates		-0.001 (-0.26)
2yrs before Tournament*Property		0.001 (0.16)
2yrs before Tournament*Commerce		0.001 (0.21)
Conglomerates		-0.015*** (-6.76)
Property		-0.045*** (-14.68)
Commerce		-0.012** (-2.50)
Promoted in 2yrs	-0.002 (-0.78)	-0.002 (-0.62)
Unemployment growth	-0.121** (-2.70)	-0.087* (-1.89)
GDP growth	1.954*** (3.69)	2.178*** (4.28)
Inflation growth	0.177*** (5.69)	0.166*** (5.44)
Tobin's Q	-0.005*** (-5.61)	-0.005*** (-5.32)
Cash flow	0.362*** (20.95)	0.344*** (20.42)
Constant	0.064*** (13.86)	0.069*** (15.59)
adj. R ²	0.141	0.166
Fixed effects	Province	Province

	Minority	Coastal	Firm Count
2yrs before Tournament	0.007*** (3.35)	0.007*** (2.79)	0.002 (0.35)
2yrs before Tournament*SOE	-0.002 (-0.99)	-0.002 (-1.06)	-0.002 (-1.08)
2yrs before Tournament*Minority	-0.01 (-1.62)		
2yrs before Tournament*Municipality	-0.003 (-1.08)		
Minority	0.015** (2.62)		
Municipality	-0.005 (-1.06)		
2yrs before Tournament*Coastal		0.000 (-0.02)	
Coastal		-0.004 (-1.14)	
2yrs before Tournament*Large			0.006 (1.44)
2yrs before Tournament*Medium			0.010* (1.95)
Large			0.000 (-0.12)
Medium			0.005 (0.85)
SOE	0.000 (-0.03)	0.000 (-0.09)	0.000 (-0.12)
Promoted in 2yrs	-0.005 (-1.28)	-0.007** (-2.11)	-0.008** (-2.36)
Unemployment growth	-0.099** (-2.11)	-0.098** (-2.12)	-0.095** (-2.06)
GDP growth	2.112*** (4.16)	2.137*** (4.20)	2.143*** (4.17)
Inflation growth	0.170*** (5.88)	0.172*** (6.02)	0.170*** (6.02)
Tobin's Q	-0.005*** (-5.60)	-0.005*** (-6.04)	-0.005*** (-5.90)
Cash glow	0.350*** (21.17)	0.350*** (21.50)	0.350*** (22.18)
Constant	0.062*** (12.82)	0.064*** (13.68)	0.061*** (12.22)
adj. R ²	0.16	0.158	0.158
Observations	15534	15534	15534
Fixed effects	Province	Province	Province

Table I: Descriptive Statistics on Chinese Provinces

Province	2003	2008	2013	Total	Coastal	SOE	GDP	Unemployment	Inflation	Investment
Anhui	0	0	0	0	0	36	9.1	4.0	3.0	9.3
Beijing	1	0	1	2	0	40	10.7	1.6	2.2	7.1
Chongqing	1	1	1	3	0	11	5.9	3.9	2.7	7.1
Fujian	0	0	1	1	1	27	10.9	3.9	2.7	5.8
Gansu	0	0	0	0	0	13	3.1	3.3	3.4	6.2
Guangdong	1	1	0	2	1	67	34.8	2.6	2.6	7.0
Guangxi	0	0	0	0	1	15	7.0	3.8	3.2	8.6
Guizhou	0	0	1	1	0	12	3.5	3.9	3.1	6.9
Hainan	0	0	0	0	1	6	1.5	3.1	3.2	4.6
Hebei	0	0	1	1	1	21	15.5	3.9	3.1	7.3
Heilongjiang	0	1	1	2	0	18	8.1	4.3	3.1	5.1
Henan	1	0	1	2	0	22	17.1	3.4	3.3	9.1
Hubei	1	0	0	1	0	20	11.6	4.2	3.3	7.5
Hunan	0	0	1	1	0	32	11.7	4.2	3.2	7.5
Inner Mongolia	0	0	1	1	0	8	8.1	4.1	3.1	7.3
Jiangsu	1	1	0	2	1	46	30.4	3.4	2.9	7.5
Jiangxi	0	1	1	2	0	15	7.0	3.4	2.8	7.4
Jilin	0	0	1	1	0	14	6.4	4.0	3.0	6.9
Liaoning	0	1	0	1	1	27	13.6	4.7	2.8	6.7
Ningxia	0	0	0	0	0	8	1.2	4.4	3.6	8.5
Qinghai	0	0	0	0	0	7	1.0	3.8	4.1	7.4
Shaanxi	0	0	1	1	0	20	7.3	3.8	3.2	7.0
Shandong	1	1	0	2	1	54	29.3	3.4	2.7	8.9
Shanghai	1	1	1	3	1	82	13.3	4.2	2.4	5.0
Shanxi	0	0	0	0	0	15	6.9	3.3	3.2	7.6
Sichuan	1	1	1	3	0	30	12.7	4.3	3.3	6.8
Tianjin	0	1	1	2	1	17	6.7	3.7	2.6	5.8
Tibet	0	0	0	0	0	39	0.4	3.7	2.9	6.1
Xinjiang	0	0	0	0	0	23	4.1	3.6	3.4	10.2
Yunnan	0	0	0	0	0	19	5.6	4.2	3.4	9.0
Zhejiang	1	0	0	1	1	33	20.8	3.5	2.7	8.5
Total	10	10	15	35	11					
Mean	0.32	0.32	0.48	0.38	0.35	24	10.5	3.7	3.0	7.3

Table II: Descriptive statistics on Chinese firms

Panel A reports summary statistics for national Tournaments held between 2000 and 2013. Panel B reports their correlation matrix. See Appendix A for variable descriptions.

Panel A

Firm Level Characteristics

Variable	N	Mean	Median	Standard Deviation
Investment	16380	0.0725	0.0454	0.0817
Tax	16965	0.2257	0.1703	0.2351
Employment Growth	16162	0.1264	0.0181	0.5605
Wages Growth	16156	0.4268	0.1085	1.5668
Cash	16305	0.0208	0.0202	0.0643
Debt	16305	0.2494	0.2260	0.2022
SOE	17527	0.4314	0	0.4953
Tobin's Q	17360	1.6891	1.3484	1.0569
Cash Flow	16378	0.0629	0.0567	0.0792
Market Return	16965	0.2649	-0.1209	0.7440
Market Volatility	16965	0.0058	0.0044	0.0042

Table III: Impact of impending political tournament on firm investments

Non-SOE	0.0730	0.0453	0.0825
SOE	0.0718	0.0454	0.0807
Difference	0.0011		
Difference (t-stat)	(0.8772)		

Table V: Impact of political tournament cycles on corporate tax payments

Mean Tax Rates in Tournament Years vs. Non-Tournament Years					
	N	Mean	Median	Std.	
Tournament	5138	0.2439	0.0034	0.2467	
Non-Tournament	16057	0.2147	0.0018	0.2236	
Difference		0.0292			
Difference (t-stat)		(7.9555)			
 Mean Tax Rates around Tournament Years					
	2yr before	Tournament	Tournament Year	Tournament Year	2yr after Tournament
Year	-2	-1	0	1	2
Tax	0.2157	0.2439	0.2136	0.2247	0.2187
 Mean Tax Rates: SOE vs. non-SOE					
	N	Mean	Median	Std.	
Non-SOE	11952	0.2059	0.1552	0.2194	
SOE	9243	0.2422	0.1917	0.2409	
Difference		-0.0363			
Difference (t-stat)		(-11.4387)			

Table VI: Impact of political tournament cycles on pricing of dual-listed firms

Price Premium	1
1yr before Tournament	0.029** (2.03)
Year of Tournament	-0.029* (-1.86)
1yr after Tournament	-0.148*** (-8.32)
Premium(t-1)	0.774*** (70.44)
Outstanding shares	-0.030** (-2.49)
Market value	0.000*** (4.50)
Trading volume	0.010*** (3.93)
Volatility	-0.003* (-1.95)
Trading volume (Red Chip)	-0.182*** (-4.65)
Inflation growth	4.751*** (5.84)
Foreign reserve growth	-0.733*** (-2.70)
Promoted in 1yr	-0.01 (-0.71)
Promoted this year	0.132*** (6.62)
Promoted last year	0.096*** (5.45)
Constant	0.188*** (4.44)
adj. R ²	0.909
Observations	2736
Fixed effects	Firm

Table VII: Broad economic impact of political tournament cycles

This table analyzes how various firm-level variables respond to impending political promotions. It presents single-variable estimates from the estimation of the following equation:

$$Y_{ijt} = \alpha_0 + \beta_1 \text{Tournament}_{t+2} + \beta_2 \text{Tournament}_{t+1} + \beta_3 Y_{ij,t-1} + \varepsilon_{ijt}$$

where i indexes the firm, j indexes the province, and t indexes the year. The dependent variables are the changes of investment, employee growth, wage growth, cash, debt, tax, volatility, and stock return, respectively. Promotion_{t+2} is a dummy variable set to 1 if there are national Tournaments in two years. $Y_{ij,t-1}$ is the lagged values of the dependent variables. See Appendix A for variable descriptions. Standard errors are clustered by province. The brackets report t-statistics. *, **, *** represent statistical significance at the 10%, 5%, and 1% level, respectively.

	1	2	3	4	5	6	7	8
	Δ Investment	Δ Employee Growth	Δ Wage Growth	Δ Cash	Δ Debt	Δ Tax	Δ Volatility	Δ Return
2yrs before Tournament	0.004** (2.51)	-0.01 (-0.56)	0.080* (1.71)	0.000 (-0.19)	0.002 (0.64)	0.018*** (3.32)	0.001* (1.88)	0.298*** (10.09)
1yr before Tournament	-0.002 (-1.62)	0.037** (2.38)	0.216*** (4.77)	0.011*** (7.40)	0.003 (1.05)	0.040*** (7.83)	0.007*** (12.86)	0.789*** (27.91)
Constant	-0.005*** (-5.56)	-0.003 (-0.31)	0.109*** (-4.03)	-0.002*** (-2.81)	-0.003* (-1.91)	-0.007** (-2.44)	-0.007*** (-20.94)	-0.313*** (-18.54)
adj. R ²	0.001	0.000	0.001	0.004	0.000	0.004	0.011	0.052
Observations	14285	14189	14161	14331	14323	14969	14988	14164
Fixed effects	No	No	No	No	No	No	No	No

Table III: Impact of political tournament cycles on corporate tax payments

Mean Tax Rates in Tournament Years vs. Non-Tournament Years

	N	Mean	Median	Std.
Tournament	5138	0.2439	0.0034	0.2467
Non-Tournament	16057	0.2147	0.0018	0.2236
Difference		0.0292		
Difference (t-stat)		(7.9555)		

Mean Tax Rates around Tournament Years

	2yr before	Tournament	Tournament Year	1	2yr after Tournament
Year	-2	-1	0	1	2
Tax	0.2157	0.2439	0.2136	0.2247	0.2187

Tax	1	2	3	4
1yr before Tournament		0.041*** (5.84)		0.052*** (4.97)
1yr before Tournament*SOE		-0.003 (-0.37)		-0.004 (-0.49)
2yr before Tournament	-0.011 (-1.40)	-0.004 (-0.60)	-0.011* (-1.91)	-0.003 (-0.59)
2yr before Tournament*SOE	0.004 (0.69)	0.006 (0.85)	0.002 (0.36)	0.003 (0.42)
SOE	0.031*** (4.45)	0.032*** (4.45)	0.012*** (3.06)	0.013*** (3.34)
Promoted in 1yr		0.012 (1.26)		-0.013 (-0.91)
Promoted in 2yr	0.008 (0.67)	0.01 (0.91)	0.009 (1.13)	0.009 (1.17)
GDP Growth	0.375* (1.81)	-0.281 (-1.10)		
Unemployment Growth	-0.75 (-0.48)	-4.769*** (-2.99)		
Inflation Growth	0.431** (2.62)	0.422** (2.54)		
Cash Flow	0.242*** (4.23)	0.237*** (4.15)		
Tobin's Q	-0.023*** (-8.81)	-0.024*** (-9.35)	-0.009*** (-3.62)	-0.010*** (-4.19)
ROA			0.648*** (11.97)	0.639*** (11.76)
Firm Size			0.018*** (6.68)	0.017*** (6.53)
Leverage			0.002*** (7.53)	0.002*** (7.40)
Tax(t-1)			0.364*** (18.80)	0.364*** (19.04)
Constant	0.188*** (8.66)	0.253*** (9.79)	-0.316*** (-5.47)	-0.342*** (-5.91)
adj. R ²	0.037	0.039	0.179	0.183
Fixed Effects	Province	Province	Province	Province

	Mean	Median	Std.
Tournament (t-2)	0.0758	0.0482	0.0839
Non-Tournament	0.0714	0.0444	0.0809
Difference	-0.0045		
Difference (t-stat)	(-2.993)		

Sensitivity of firm investments to political tournament cycles

Investment	1	2	8	9
2yrs before Tournament	0.004*** (2.99)	0.004*** (3.95)	0.005** (2.44)	0.005** (2.14)
2yrs before Tournament *SOE			-0.003 (-1.18)	-0.004 (-1.53)
1yr before Tournament				0.000 (-0.26)
1yr before Tournament *SOE				-0.004** (-2.03)
SOE			0.000 (0.03)	0.001 (0.49)
Tobin's Q			-0.005*** (-5.63)	-0.005*** (-5.53)
Cash flow			0.362*** (21.13)	0.362*** (21.17)
Promoted in 1yr				-0.001 (-0.52)
Promoted in 2yrs			-0.002 (-0.77)	-0.002 (-0.78)
Unemployment growth			1.955*** (3.70)	-0.117*** (-2.58)
GDP growth			-0.121** (-2.70)	2.011*** (3.83)
Inflation growth			0.176*** (5.70)	0.177*** (5.70)
Constant	0.071*** (97.41)	0.071*** (267.59)	0.064*** (13.95)	0.063*** (13.35)
adj. R ²	0.000	0.023	0.141	0.141
Fixed effects	No	Province	Province	Province