

Politics and Financial Flexibility: an Empirical Investigation



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Influence from Politics

- Macro

- Brexit
- U.S. Presidential election
- North Korea's test of nuclear warhead

- Micro

- Apple's tax bill from EU
- Shanghai's property conundrum
- Both dirty and clean firms are active in lobbying, related to climate change regulations

- Macro

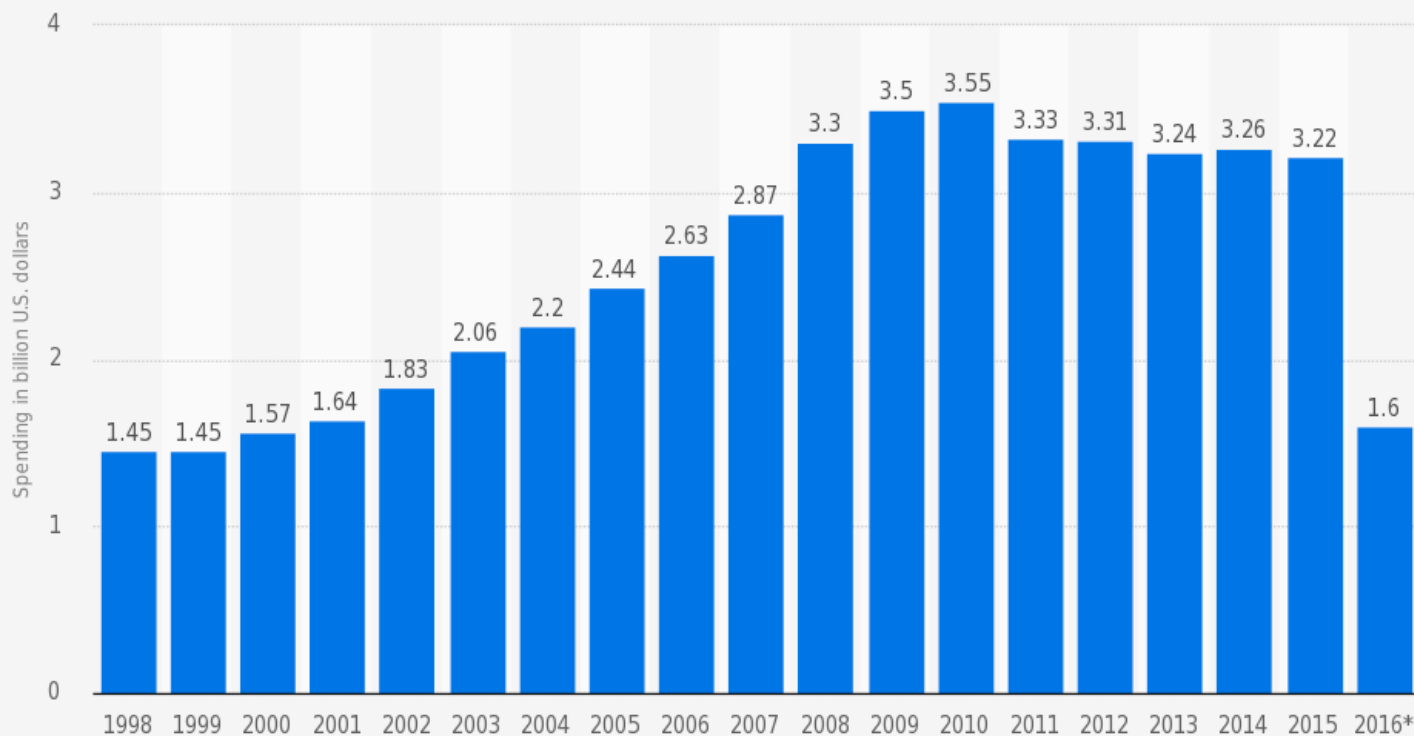
- Monetary policy, fiscal policy, legal environment, foreign affairs, etc.(Nordhaus 1975 RES; Alesina 1987 QJE; Snowberg, Wolfers & Zitzewitz 2007 QJE, etc.)
- Financial market (Bloom, Bond & Van Reenen 2007 RES, Knight 2006; Houston, Jiang, Lin & Ma, 2014 JAR, etc.)

- Micro

- Performance (Faccio, 2006 AER; Cooper, Gulen & Ovtchinnikov, 2010 JF)
- Cost of capital (Houston, Jiang, Lin & Ma, 2014 JAR)
- Government funding (Duchin & Sosyura, 2012 JFE; Cohen, Coval & Malloy, 2010; Goldman, Rocholl & So, 2009 JF).
- Bailout (Faccio, Masulis & McConnell, 2006 JF)

Lobby Spending

Total lobbying spending in the United States from 1998 to 2016* (in billion U.S. dollars)



Source:
opensecrets.org
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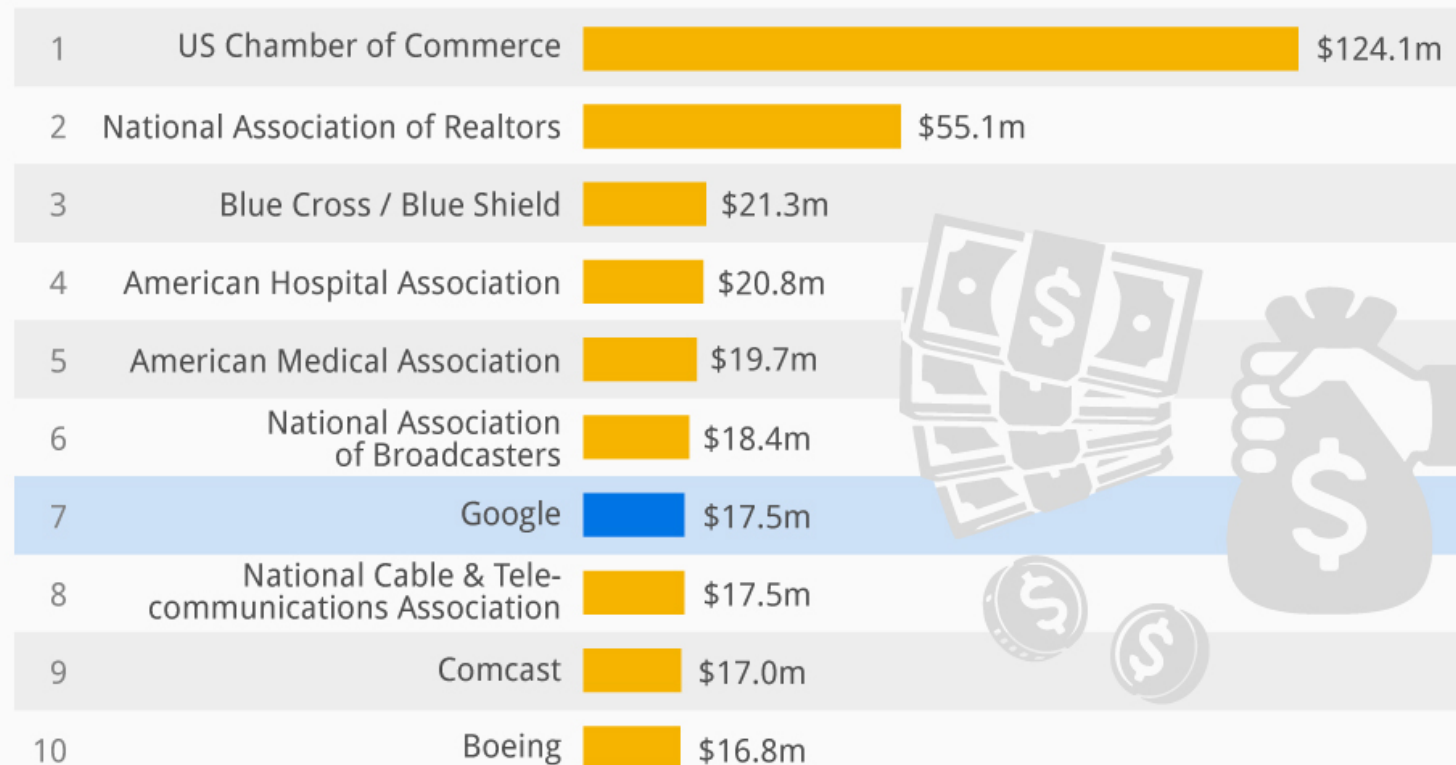
Additional Information:
United States; 1998 to July 28, 2015

statista

Lobby Spending

Google Among Top Lobbying Spenders in 2014

Lobbying expenditure in the United States in 2014



@StatistaCharts Source: Center for Responsive Politics

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Collective Effect on Capital Structure

- Politics impact
 - Investment (Julio & Yook, 2012 JF)
 - Financing (Houston, Jiang, Lin & Ma, 2014 JAR; Bradley, Pantzalis & Yuan, 2015; Gao & Qi, 2013; Qi, Roth & Wald, 2010 JFE)
 - Cost of capital
 - Timing of financing
 - Dividend policy
 - Government spending (Belo, Gala & Li, 2013 JFE; Duchin & Sosyura, 2012 JFE)

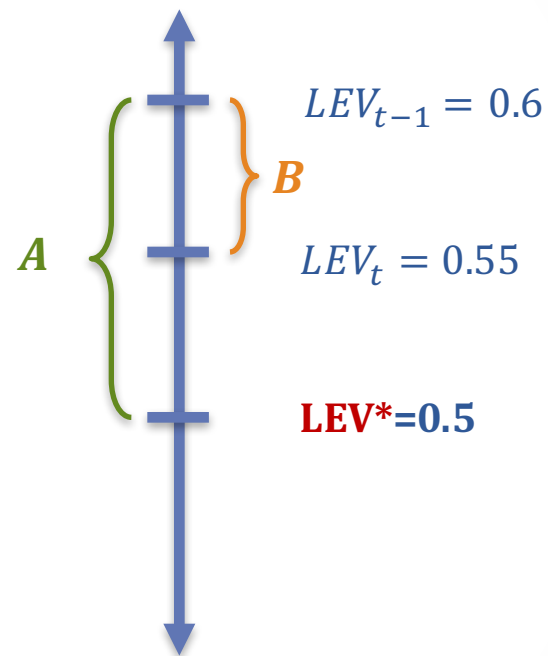
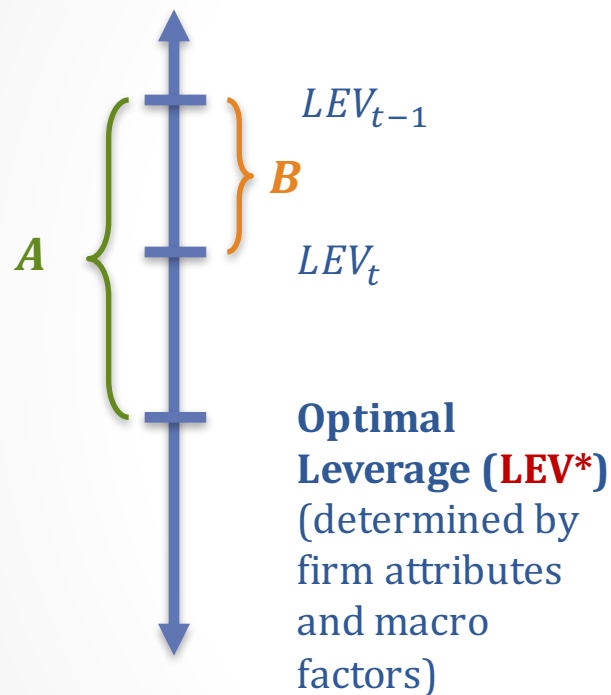
Capital Structure and Financial Flexibility

- Capital structure is one of the most important decision makings of the corporation
 - Classical Modigliani–Miller theorem
 - Theories: trade-off; pecking order; market timing
 - Optimal capital structure (Bradley, Jarrell & Kim 1984; Titman 1984)
- Speed of Adjustment (SOA) of Capital Structure
 - How fast can/should a firm adjust the capital structure to its optimal level (Flannery & Rangan 2006; Huang & Ritter 2007)

Research Question

- What's the collective impact of politics on firm's speed of adjustment of capital structure?

SOA of Capital Structure



$$SOA = \frac{0.6 - 0.55}{0.6 - 0.5} = 50\%$$

Mechanism – Positive

- Stronger political connection may leads to **higher** speed of adjustment via:
 - Flexible access to financing
 - Lower cost of capital
 - More government purchase/investment
 - Bailout

Mechanism - Negative

- Stronger political connection may leads to **lower** speed of adjustment via:
 - Lower legal risk
 - Lower cost of financial distress
 - Executives in firms with strong political connections lack the financial expertise in optimize firm's capital structure.
 - The capital structure decision may not be of the first order importance from controlling state owner.

Hypotheses

- *Aptitude* hypothesis:

- *H1a: Firms operating in environment with stronger political strength have higher speed of adjustment.*
- *H2a: Firm's political connection is positively related with firm's SOA.*

- *Audacity* hypothesis:

- *H1b: Firms operating in environment with stronger political strength have lower speed of adjustment.*
- *H2b: Firm's political connection is negatively related with firm's SOA.*

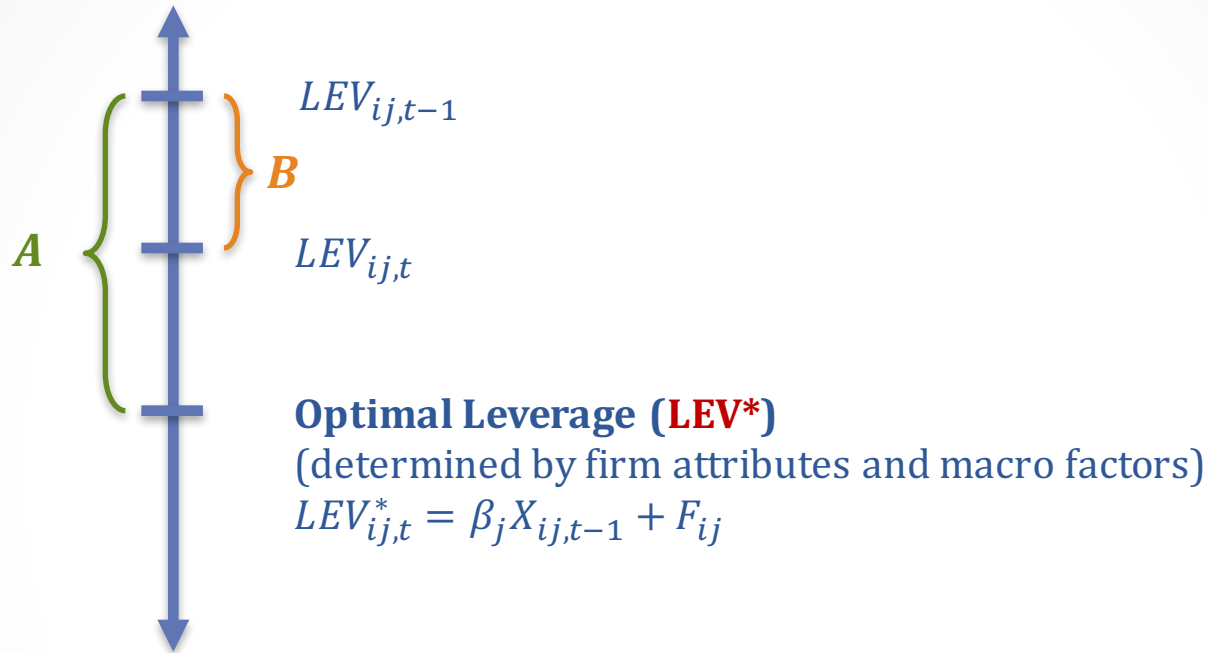
Empirical Setting

- China is largely considered to be politically oriented. Politics pervades in every aspect of the modern society.
- A sizeable amount of public firms is state controlled, making it easier to track and quantify the state interest in the underlying firms.
- Firms' capital structure is relatively simple with limited external financing options.
- China's single party political structure facilitates the quantification of the politics.

Main Findings

- Our results support the *Aptitude* hypothesis at both macro and micro level.
 - Political connection has positive effect on firm's speed of adjustment
 - Political connection
 - Political exposure
 - State ownership
 - Political environment affects firm's speed of adjustment positively

Speed of Adjustment (SOA)



$$(LEV_{ij,t} - LEV_{ij,t-1}) = \lambda_j (LEV_{ij,t}^* - LEV_{ij,t-1}) + \delta_{ij,t}$$

B

A

Speed of Adjustment (SOA)

Static Measure of SOA

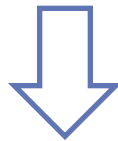
- $LEV_{ij,t} - LEV_{ij,t-1} = \lambda_{ij,t}(LEV_{ij,t}^* - LEV_{ij,t-1}) + \delta_{ij,t}$
- $LEV_{ij,t}^* = \beta_j X_{ij,t-1} + F_{ij}$



- $LEV_{ij,t} = (1 - \lambda_{ij,t}) LEV_{ij,t-1} + (\lambda_{ij,t} \beta_j) X_{ij,t-1} + \lambda_{ij,t} F_{ij} + \delta_{ij,t}$

Time-variant Measure of SOA

- $LEV_{ij,t} = (1-\lambda_{ij,t}) LEV_{ij,t-1} + (\lambda_{ij,t}\beta_j) X_{ij,t-1} + \lambda_{ij,t}F_{ij} + \delta_{ij,t}$
- $O\widehat{LEV}_{ij,t} = \widehat{\beta}_j X_{ij,t-1}$
- $D\widehat{LEV}_{ij,t} = O\widehat{LEV}_{ij,t} - LEV_{ij,t-1}$
- $\lambda_{ij,t} = \gamma_{i.j.t-1} Politics_{i.j.t-1}$



- $LEV_{ij,t} - LEV_{ij,t-1} = \gamma_{i.j.t-1} Politics_{i.j.t-1} (D\widehat{LEV}_{ij,t}) + \delta_{ij,t}$

Methodology (SOA)

- Dynamic GMM (Generalized Method of Moments)
 - Arellano & Bond (1991)
 - Follow the empirical implementation of Qian, Tian & Wirjanto (2009)
 - Use lagged variables in levels starting from the second lag as instruments
 - Also implement the first differenced form to avoid the correlation between unobserved firm-specific characteristics and the explanatory variables.

Control variables

- Firm level
 - Size
 - Profitability
 - Tangibility
 - Non-debt tax shields
 - Tobin's Q
 - Market-to-book ratio
 - State ownership
- Macro level
 - GDP growth
 - Inflation
 - Unemployment
 - Risk-free rate
 - CPI
- Year fixed effect

Measures (Political Connection)

- Firm level

- CEO's connection to the party
- State ownership
- Political exposure

- $R_{it} = \alpha + E_{Pi} \cdot R_{Pt} + \gamma_{Mi} \cdot R_{Mt} + \varepsilon_{it}$

- in which, R_{it} is firm's monthly stock return (over the risk free rate), R_{Pt} is the *monthly percentage change* in the political uncertainty index of China. R_{Mt} is the monthly value weighted market return (over the risk free rate).
- The coefficient E_{Pi} captures the **sensitivity** of firm's stock returns to the changes in political uncertainty.
- Measured over 36-month window
- We use the **absolute value** of E_{Pi} to measure a firm's political exposure.

Measures (Political Environment)

- Affiliation:
 - whether the incumbent state president and/or premier of China were born or have worked in certain province
- Origin:
 - Of the provincial leaders (Central government / Local province / Other provinces)
- Politburo:
 - Politburo status of the provincial leaders
- Political Pluralism:
 - Herfindahl-Hirschman Index (HHI) of five types of members in the provincial congress: farmers and workers, military officers, cadres, intellectuals, and others.

Data

- CSMAR (China Stock Market & Accounting Research)
 - Financial statement
 - Stock return
- Political Uncertainty Index (China)
 - Baker, Bloom & Davis (2012)
- National Bureau of Statistics of China
 - Macro economics measure
- Sample
 - 1990-2014
 - 2,787 firms
 - Around 30,000 firm-year observations

Summary Statistics

variable	N	mean	sd	p5	p25	p50	p75	p95
Leverage	28735	0.202	0.161	0	0.0654	0.185	0.305	0.488
Firm Size	28788	21.37	1.270	19.59	20.53	21.20	22.03	23.75
Tangibility	28784	0.262	0.179	0.0164	0.123	0.230	0.375	0.608
NDTS	28785	0.0207	0.0167	0	0.00839	0.0174	0.0294	0.0531
Profitability	28670	0.0262	0.0775	-0.104	0.00270	0.0307	0.0645	0.133
Market-to-Book Ratio	27986	3.392	3.139	0.173	1.586	2.603	4.276	9.006
Tobin's Q	27627	2.337	1.606	0.797	1.304	1.865	2.832	5.427
State Ownership	31412	0.205	0.253	0	0	0.0201	0.425	0.675
Political Exposure	27352	0.0225	0.0244	0.001	0.007	0.0149	0.0283	0.0726
GDP	31390	35695	25177	5425	13539	30730	52840	85373
Employment	31412	0.256	0.150	0	0.100	0.300	0.400	0.400
CPI	31380	102.7	3.284	98.50	101.1	102.4	103.8	106.3
Riskfree Rate	31390	4.228	1.664	3.200	3.800	3.900	3.900	9.400

Political Leaders of P.R. China

Name	Title	Tenure	Affiliated Provinces
	General Secretary of the Central Committee of the Communist Party of China	24 Jun 1989 - 15 Nov 2002	
Jiang Zemin	President of the People's Republic of China	27 Mar 1993 - 15 Mar 2003	Jiangsu, Shanghai, Jilin, Beijing
	Chairman of the Central Military Commission	19 Mar 1990 - 8 Mar 2005	
	General Secretary of the Central Committee of the Communist Party of China	15 Nov 2002 - 15 Nov 2012	
Hu Jintao	President of the People's Republic of China	15 Mar 2003 - 14 Mar 2013	Jiangsu, Gansu, Guizhou, Tibet, Beijing
	Chairman of the Central Military Commission	13 Mar 2005 - 14 Mar 2013	
Li Peng	Premier of the People's Republic of China	25 Mar 1988 - 17 Mar 1998	Heilongjiang, Jilin, Liaoning, Beijing
Zhu Rongji	Premier of the People's Republic of China	17 Mar 1998 - 16 Mar 2003	Hunan, Beijing, Shanghai
Wen Jiabao	Premier of the People's Republic of China	16 Mar 2003 - 15 Mar 2013	Tianjin, Gansu, Beijing

Preliminary Results (General Level)

VARIABLES	(1) Leverage
Leverage(t-1)	0.824*** (0.020)
Firm Size	0.005*** (0.001)
Tangibility	0.058*** (0.008)
NDTS	-0.565*** (0.074)
Profitability	-0.280*** (0.018)
Market-to-Book Ratio	0.001 (0.001)
Tobin's Q	-0.003** (0.001)
State Ownership	0.010*** (0.003)
Constant	-0.073*** (0.015)
Macro Control	Yes
Year Fixed Effect	Yes
Observations	24,972
No. Firms	2,657

- $\lambda = 1 - 0.824 = 17.6\%$
 - 1990-2014
- 28.30%
 - pre-2003 (Jiang Zemin)
- 18.10%
 - post-2003 (Hu Jintao)

Macro

- Affiliation of the State Leader

	Related Provinces	Unrelated Provinces
Jiang Zemin (1993-2003)	33.2%	25.5%
Hu Jintao (2003-2013)	20.2%	17.1%

- Politburo Status of the Province Leader

	Yes	No
If provincial party secretary and/or governor became politburo member	28.0%	18.9%

- Origination of the Province Leader

	Central Government	Other Provinces	Local Province
Governor	26.5%	19.0%	20.1%
Party Secretary	19.2%	22.1%	20.5%

- Political Pluralism

	Low	High
Political Pluralism	19.5%	21.4%

Micro

- State Ownership

	No	Yes
State Owned (Ownership>50%)	19.8%	21.4%

- CEO's Party Membership

	Yes	No
CEO is Party member	17.9%	16.6%

- Political Exposure

	High	Median	Low
Political Exposure (Two groups)	16.9%		21.7%
Political Exposure (Three groups)	17.3%	19.0%	25.8%

Time-variant SOA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	DLEV	DLEV	DLEV	DLEV	DLEV	DLEV	DLEV	DLEV	DLEV
Political Uncertainty Index	-0.049***					-0.028***	-0.050***	-0.032***	-0.027***
	(0.001)					(0.004)	(0.001)	(0.004)	(0.004)
Political Pluralism		-0.050***				-0.023***		-0.025***	-0.032***
		(0.001)				(0.004)		(0.004)	(0.005)
Origination of the Leader (ORIGIN)			-0.034***					0.006***	0.005***
			(0.001)					(0.002)	(0.002)
Political Exposure				-0.014***			-0.002**	-0.002*	-0.002*
				(0.001)			(0.001)	(0.001)	(0.001)
State Ownership					-0.010***				0.006***
					(0.001)				(0.001)
Constant	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	24,708	24,708	24,304	23,731	24,708	24,708	23,731	23,731	23,731
R-squared	0.181	0.180	0.115	0.066	0.049	0.184	0.191	0.194	0.196
Adj. R-squared	0.083	0.081	0.006	-0.051	-0.065	0.086	0.089	0.092	0.094

Interaction

		Overall	Exposure (H)	Exposure (L)
Political Pluralism	Low	19.5%	20.0%	22.2%
	High	21.4%	16.8%	26.9%

		Overall	Exposure (H)	Exposure (L)
Politburo	No	18.9%	18.8%	21.9%
	Yes	28.0%	20.1%	42.6%

Exogenous shock with emigrant policy

	(1)	(2)
VARIABLES	DLEV	DLEV
Political Pluralism	-0.020*** (0.001)	
Political Exposure		-0.046*** (0.002)
Constant	0.004*** (0.001)	0.004*** (0.001)
Observations	24,708	23,731
Adj. R-squared	0.051	-0.145
Underidentification test (Anderson LM statistic)	8841	1984
	P-value (0.000)	(0.000)
Weak identification test (Cragg-Donald Wald F statistic)	543382	1369
Stock-Yogo weak ID test critical values	19.93	19.93
Sargan statistic (overidentification test)	180.0	27.26
	P-value (0.000)	(0.000)

Conclusions

- Our results support the *Aptitude* hypothesis
- Political connection has positive effect on firm's speed of adjustment
 - Political connection
 - Political exposure
 - State ownership
- Political environment affects firm's speed of adjustment positively

Contributions

- First to investigate the collective political impact on financial flexibility, with evidence from both micro and macro level
 - Builds a solid ground for future studies to explain the political influences on other firm level decision-makings
 - Fits into the increasingly debate of whether political connection and affiliation is an important factor in the firm operation
 - Provides additional direct evidence on the political impact in a transitioning economy

Q & A

THANK YOU!

