Firm Boundaries and Political Uncertainty:

Evidence Using State Elections in India

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  - *Are stand alone firms more sensitive to political uncertainty than firms belonging to a conglomerate?*

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CONGLOMERATE VS. STAND-ALONE FIRMS

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  - *In this paper I study the difference in borrowing and investment of conglomerate and stand alone firms during shocks to political uncertainty*

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- *In this paper I study which of these channels dominate during periods of elevated political uncertainty*

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- Investment also decreases for stand alone firms compared to conglomerates.

1. Institutional background and political set up

2. Data

3. Identification Challenge and Empirical Strategy

4. Results

5. Cross-sectional Tests

6. Robustness Checks

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- Political party (or coalition) that wins 50% of constituencies forms the Government.

■	2015
■	2014
■	2013
■	2012
■	2011
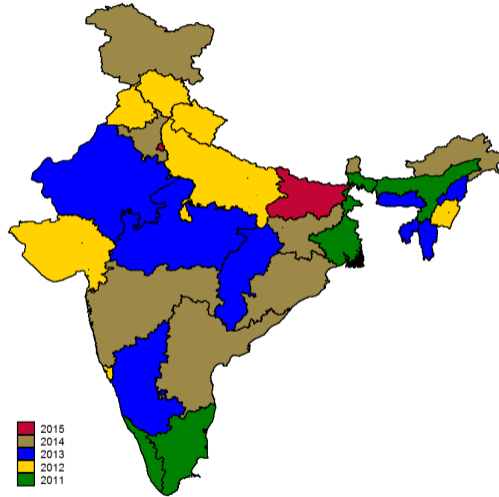
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- To borrow a term that Anand Mahindra, the chairperson of India's Mahindra Group, likes to use, a business group is a "federation" of companies.

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- Data on Lending and interest rate from a large bank in India

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  - *Gujarat recently passed a series of labor law reforms making it more difficult for utility workers to go on strike*

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\begin{aligned}
Y_{sit} =\ & \beta_0 + \beta_i + \beta_{st} + \beta_1 MoreUncertainElection_{st+1} \times StandAlone_i \\
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$$\frac{Constituencies\ won\ by\ Winner - Constituencies\ Won\ by\ Runnerup}{Total\ No.\ of\ Constituencies} < 5\%$$
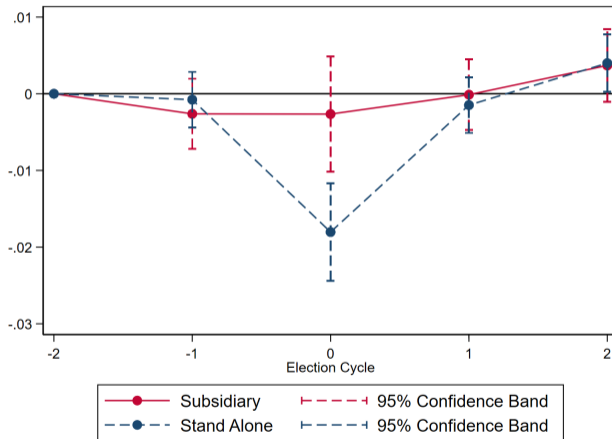
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	(1) Debt Asset Ratio	(2) Debt Asset Ratio	(3) Debt Asset Ratio	(4) Debt Asset Ratio
Stand Alone× Election	-0.008***	-0.008***		
	(0.002)	(0.002)		
Stand Alone× More Uncertain Election			-0.027***	-0.022***
			(0.004)	(0.004)
Stand Alone× Less Uncertain Election			-0.003	-0.004
			(0.003)	(0.003)
Controls	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes
Adj.-R^2	0.643	0.725	0.643	0.725
Obs.	86484	86484	86484	86484

	(1) Bank Loan Asset Ratio	(2) Bank Loan Asset Ratio	(3) Bank Loan Asset Ratio	(4) Bank Loan Asset Ratio
Stand Alone× Election	-0.006***	-0.007***		
	(0.002)	(0.002)		
Stand Alone× More Uncertain Election			-0.021***	-0.019***
			(0.004)	(0.004)
Stand Alone× Less Uncertain Election			-0.001	-0.003
			(0.002)	(0.002)
Controls	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes
Adj.-R^2	0.613	0.663	0.613	0.663
Obs.	72817	72817	72817	72817

	(1) Short Term Debt-to-Asset	(2) Short Term Debt-to-Asset	(3) Short Term Debt-to-Asset	(4) Short Term Debt-to-Asset	(5) Long Term Debt-to-Asset	(6) Long Term Debt-to-Asset	(7) Long Term Debt-to-Asset	(8) Long Term Debt-to-Asset
Stand Alone× Election	-0.005*** (0.002)	-0.006*** (0.001)			-0.001 (0.002)	-0.001 (0.001)		
Stand Alone× More Uncertain Election			-0.016*** (0.004)	-0.015*** (0.003)			-0.005** (0.002)	-0.003 (0.002)
Stand Alone× Less Uncertain Election			-0.001 (0.002)	-0.003* (0.002)			-0.000 (0.002)	-0.001 (0.002)
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj.-R^2	0.606	0.649	0.606	0.649	0.602	0.614	0.602	0.614
Obs.	72817	72817	72817	72817	72817	72817	72817	72817

	(1) Interest Rate	(2) Interest Rate	(3) Interest Rate	(4) Interest Rate
Stand Alone× Election	0.642***	0.645***		
	(0.168)	(0.155)		
Stand Alone× More Uncertain Election			1.117***	1.155***
			(0.249)	(0.261)
Stand Alone× Less Uncertain Election			0.512***	0.505***
			(0.145)	(0.135)
Controls	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes
Adj.-R^2	0.489	0.505	0.489	0.505
Obs.	72888	72888	72888	72888

- The opposite movement in borrowing and interest is consistent with the possibility of being driven largely by the (reduced) supply of capital than the (subdued) demand for it.

	(1) Bank Borrow Asset Ratio	(2) Bank Borrow Asset Ratio	(3) Short Term Asset Ratio	(4) Short Term Asset Ratio	(5) Long Term Asset Ratio	(6) Long Term Asset Ratio
Log(No. of Relationship) × Stand Alone× More Uncertain Election	0.010*	0.012**	0.012***	0.011**	-0.004*	-0.001
	(0.005)	(0.005)	(0.004)	(0.004)	(0.002)	(0.002)
Stand Alone× More Uncertain Election	-0.021**	-0.022***	-0.026***	-0.026***	0.007**	0.006
	(0.008)	(0.007)	(0.007)	(0.005)	(0.003)	(0.004)
Log(No. of Relationship) × Stand Alone× Less Uncertain Election	0.001	-0.003	-0.001	-0.003	0.001	-0.000
	(0.008)	(0.005)	(0.006)	(0.004)	(0.004)	(0.004)
Stand Alone× Less Uncertain Election	0.007	0.008	-0.000	0.000	0.008	0.009
	(0.010)	(0.007)	(0.006)	(0.005)	(0.006)	(0.005)
Controls	No	Yes	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Stand Alone × Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj.-R^2	0.582	0.637	0.575	0.624	0.544	0.565
Obs.	30548	30548	30548	30548	30548	30548

Borrowing Constraint - Tangibility

	Debt to Asset Ratio				Bank Loan to Asset Ratio			
	Low Tang	High Tang	Low Tang	High Tang	Low Tang	High Tang	Low Tang	High Tang
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Stand Alone× Election	-0.014***	0.002			-0.012***	-0.004		
	(0.003)	(0.003)			(0.004)	(0.003)		
Stand Alone× More Uncertain Election			-0.018**	0.004			-0.020***	-0.010*
			(0.007)	(0.005)			(0.006)	(0.005)
Stand Alone× Less Uncertain Election			-0.013***	0.001			-0.008**	-0.003
			(0.004)	(0.003)			(0.003)	(0.003)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj.-R^2	0.710	0.784	0.710	0.784	0.660	0.687	0.660	0.687
Obs.	38340	38336	38340	38336	30446	33385	30446	33385

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$$1 - \tau_{Y_{si}} = \frac{\sigma}{1-\sigma}\frac{wL_{si}}{(1-\alpha_s)P_{si}Y_{si}}$$

- Use Hsieh and Klenow (2009) to compute capital and output distortion.

$$\pi_{si} = (1 - \tau_{Y_{si}})P_{si}Y_{si} - wL_{si} - (1 + \tau_{K_{si}})RK_{si}$$

- Output Distortion (τ_Y) is measured as:

$$1 - \tau_{Y_{si}} = \frac{\sigma}{1-\sigma}\frac{wL_{si}}{(1-\alpha_s)P_{si}Y_{si}}$$

- According to Hsieh and Klenow "τ_Y *would be high for firms that face government restrictions on size or high transport cost*"

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- According to Hsieh and Klenow " τ_K would be high for firms that do not have access to credit"

CAPITAL AND OUTPUT DISTORTION

	(1) Capital Distortion	(2) Capital Distortion	(3) Output Distortion	(4) Output Distortion
Stand Alone× More Uncertain Election	0.069***	0.052*	0.020	0.027
	(0.024)	(0.027)	(0.034)	(0.029)
Stand Alone× Less Uncertain Election	0.014	0.012	0.012	0.021*
	(0.022)	(0.024)	(0.014)	(0.011)
Controls	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes
Adj.-R^2	0.697	0.724	0.681	0.748
Obs.	93649	93649	93649	93649

	(1) $\frac{CAPEX}{Asset}$	(2) $\frac{CAPEX}{Asset}$	(3) $\frac{CAPEX}{Asset}$	(4) $\frac{CAPEX}{Asset}$
Stand Alone× Election	-0.001	0.003		
	(0.014)	(0.014)		
Stand Alone× More Uncertain Election			-0.064*	-0.058*
			(0.034)	(0.032)
Stand Alone× Less Uncertain Election			0.023	0.026
			(0.018)	(0.017)
Controls	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes
Adj.-R^2	0.163	0.183	0.163	0.183
Obs.	69673	69673	69673	69673

1. Institutional background and political set up

2. Data

3. Identification Challenge and Empirical Strategy

4. Results

5. **Cross-sectional Tests**

6. Robustness Checks

| | Debt to Asset Ratio | | | |
	No Election Largest Subsidiary	Election Largest Subsidiary	No Election Largest Subsidiary	Election Largest Subsidiary
Stand Alone× Election	-0.021**	-0.005		
	(0.008)	(0.006)		
Stand Alone× More Uncertain Election			-0.038***	-0.015
			(0.012)	(0.011)
Stand Alone× Less Uncertain Election			-0.017**	-0.002
			(0.007)	(0.008)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes
Adj.-R^2	0.729	0.721	0.729	0.721
Obs.	73302	69855	73302	69855

Conglomerates Varying in the Number of Industries

| | Debt to Asset Ratio | | | |
	More Industries	Less Industries	More Industries	Less Industries
Stand Alone× Election	-0.009**	-0.019**		
	(0.004)	(0.009)		
Stand Alone× More Uncertain Election			-0.029***	-0.021***
			(0.007)	(0.006)
Stand Alone× Less Uncertain Election			-0.003	-0.018
			(0.004)	(0.011)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes
Adj.-R^2	0.729	0.721	0.729	0.721
Obs.	74737	69898	74737	69898

Conglomerates Varying in the Number of States

| | Debt to Asset Ratio | | | |
	More States	Less States	More States	Less States
Stand Alone× Election	-0.004	-0.018		
	(0.004)	(0.011)		
Stand Alone× More Uncertain Election			-0.024***	-0.025**
			(0.007)	(0.011)
Stand Alone× Less Uncertain Election			0.001	-0.016
			(0.004)	(0.014)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
State × Industry × Time FE	Yes	Yes	Yes	Yes
Stand Alone × Industry × Time FE	Yes	Yes	Yes	Yes
Adj.-R^2	0.737	0.710	0.738	0.710
Obs.	75888	68712	75888	68712

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6 **Robustness Checks**

- Results Using data from a large bank in India.

- Use of national Elections as a measure of political uncertainty.

- Alternate measure of political uncertainty - ENOP.

- Controls for size related difference.

- Placebo test by distributing controls and treatments randomly within the same industry, the same state.

- There is cross sectional heterogeneity based on organizational form in firms' response to political uncertainty.

- The results suggest that stand alone firms are relatively more impacted by political uncertainty than conglomerate firms.

- Opposite movement of price and quantity at equilibrium suggest shortage in supply of funds plays larger role than low demand.

- While a large section of existing literature points to some form of conglomerate discount, this paper highlights a bright side, particularly during periods of elevated uncertainty.