Firm Boundaries and Political Uncertainty: Evidence Using State Elections in India

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Abstract

Using subsidiary-level data for Indian firms and staggered elections across Indian states, I find that political uncertainty's impact on firm performance varies by organizational form. I find that the gap in leverage ratio between subsidiaries of conglomerate and stand-alone firms widen by 15% in states with elections vis-á-vis other states. Political uncertainty is also associated with relatively lower investment and higher borrowing cost for the stand-alone firms. The results are consistent with the possibility of being driven largely by the (reduced) supply of capital than the (subdued) demand for it. This paper introduces political uncertainty as a new dimension in the long standing literature that compares diversified and single segment firms.

Key Words: Conglomerate, stand-alone, political uncertainty, leverage

I Introduction

The importance of organizational structure in firm's decision making has been at the helm of economic research since the introduction of the idea of "new institutional economics" in Coase (1937). A large amount of intellectual effort has been concentrated upon understanding the cost and benefits for the formation of conglomerates. The primary benefits, as has been discussed in the literature, stems from efficient resource allocation in the conglomerates through centralized capital control and their potential to co-insure debt (Lewellen (1971), Williamson (1975), Williamson (1985) and Stein (1997)). However, increased agency problems coupled with corporate socialism in conglomerates leads to destruction in value and inefficient resource allocation (Lang and Stulz (1994), Berger and Ofek (1995), Rajan, Servaes, and Zingales (2000) and Schoar (2002) among others).

In this paper I study how firms varying by the structure of their organization is impacted differently during periods of elevated political uncertainty. Political uncertainty associated with possible changes in government policy or national leadership can have major impact on the behaviour of firms. However, there can be significant cross-sectional heterogeneity in firms' sensitivity to uncertainty. Subsidiaries of conglomerate, by the virtue of being a part of an organization covering diverse industry and geographic location is likely to be more immune to such uncertainty relative to similar stand-alone firms. Meanwhile, the inherent agency problems in the conglomerates can lead the subsidiaries to be more vulnerable to adverse economic situation. The lenders might consider these contradicting behaviour of firms while making their lending decision during times of uncertainty, consequently impacting leverage and borrowing cost of the firms differently. The potentially contradicting predictions provides motivation for the empirical investigation in this paper.

Borrowing from predictions of models on the option value of investment delay during

policy uncertainty coupled with empirical predictions of bank lending during elections, I focus on investment and borrowing as my primary dependent variables. It has been noted that policy uncertainty adversely impacts investment by firms as the option value of waiting increases (Julio and Yook (2012), Gulen and Ion (2015), Akey and Lewellen (2015)). Gulen and Ion (2015) shows difference in investment between firms varying in their asset redeployability [1] while Akey and Lewellen (2015) shows difference in firms' sensitivity by their political contribution. Meanwhile, bank lending have been shown to be politically motivated during elections and thereby impacting funds available to firms not facilitating government's objectives (Cole, 2009).[2] I add to this literature by looking at cross sectional variation in sensitivity to political uncertainty emanating from difference in firm structure. This difference is distinct from the above papers as it is independent of any particular industry specific characteristics or inherent political lineages.

In the context of firm boundaries as well, leverage is an important variable to study. In a seminal paper Lewellen (1971) noted that the borrowing capacity of conglomerates is higher following imperfect correlation in cash flows and the ability to coinsure debt among the subsidiaries which reduces default risk. However, as pointed out by Harris and Raviv (1991), optimal capital structure depends on industry characteristics which makes it difficult to test the theory of Lewellen (1971) without any perturbation to the steady state. Shocks to policy uncertainty identified as periods of election in this paper provides such an event to test if the leverage of conglomerate and stand alone firms respond differently.

The empirical findings of this paper suggest that in periods of elevated political uncertainty, stand alone firms are more adversely impacted compared to subsidiaries of conglomerates. This work augments the recent literature that has looked at a broader

[1] The paper uses the measure of asset redoplayability from Kim and Kung (2014)

[2] Researchers have also shown the impact of policy uncertainty on other variables like initial public offering, option prices among others (Dinc and Gupta (2011), Kelly, Pastor, and Veronesi (2014) among others).

implication of firms' decision to extend their boundaries. Kuppuswamy and Villalonga (2015) showed that value of corporate diversification increased in the face of economic shock in 2007-09 owing to efficiency in the internal capital markets. Giroud and Mueller (2015) also lend their support to internal capital market arguing that reallocation of resources within financial firms is beneficial particularly for financially constrained firms, while Bai (2015) shows that conglomerate firms are more immune to competitive shocks owing to active and more effective restructuring. Meanwhile,Ozbas and Scharfstein (2009) show that conglomerate firms tend to invest less in high Q-industries than stand alone and he attributes this partly to agency problems. Seru (2014) have shown that conglomerates invest less in research and development and thereby produce both smaller and less novel innovations.

I use information at the subsidiary level of Indian conglomerate organizations which are known as Indian business groups (or business houses) (IBG hereon).[3] The information at the subsidiary levels helps in identifying an affiliate of conglomerate that is largely similar to the stand alone firms. I use election in Indian states as a measure of political uncertainty. India being federal in nature, a large number of policies that are likely to impact business decisions are taken at the state level. The policies and their implementation varies significantly with the political party that gets elected into power. Thus the period in the run up to an elections provide a natural experiment set up to study the impact of political uncertainty.

I employ a difference-in-difference specification which exploits the staggered nature of election across Indian states and identifies a set of control states for every group of states having imminent elections. The empirical specification allows me to compare stand alone and IBGs in a state with elections vis-á-vis a state without election. To fix ideas through an example, consider two automobile firms: Mahindra automobile (subsidiary of IBG) and Hindustan Motors Limited (stand alone) located in state A that has an election.

[3]For the purpose of this paper I use conglomerate and IBG interchangeably

Similarly consider two other automobile companies Tata Motors (subsidiary of IBG) and Maruti Udyog (stand alone) located in state B having no elections. I am interested in understanding the way that the main variables differ across the firms located in state A when compared with the difference between the firms located in state B. I find that relative to the subsidiary of IBGs the stand alone firms suffer a significant decline in their debt-to-asset ratio in states having an election vis-*á*-vis a state that does not have an election. I find that the impact is mostly through the decline short term lending while the impact on long term lending is statistically insignificant. Short term loans have maturity less than a year, so firms have to roll over its debt during the period of uncertainty. Hence if there exist any heterogeneity between borrowing of conglomerates and stand alone firms, it should be reflected in short term loans. I also observe that relative to the subsidiaries of conglomerate firms, the stand alone shows decline in investment and it is associated with an increase in borrowing cost.

I refine my results by grouping elections between more uncertain and less uncertain elections. I identify more uncertain elections as the ones in which the difference in the number of seats won by the winner and runner up is less than 5% of the total number of seats. Since elections in India takes place at the constituency, whose winner goes on to form the government, true competition in terms of vote share occurs at the constituencies.[4] However, the state level competition intensifies if the number of constituencies secured by the political parties are very close such that any slight change could cause a different party to form the government. I find that the magnitude of my results increases during a more uncertain election.

My results indicate that difference in credit supply plays a major role in driving the results and the entire impact is not driven by the demand channel (as indicated by the models on option value of waiting). If the results were purely based on subdued demand

[4]Constituencies are sub-unit of states, the lowest unit of a state-level election. The winner of a constituency in a state election is a member of Legislative Assemby (MLA). It requires to have 50% MLA from one party (or a coalition) to form a government

by the firms, then we would have observed a decline in quantity to be accompanied with a fall in price. However, the aforementioned result which show that there has been a decline in the equilibrium level of quantity borrowed (or lend) and it has been associated with an increase in interest rate indicates that the outcome is not driven entirely from the demand channel. On the contrary, decline in quantity coupled with increase in price indicates that supply side shock should be the dominant driving force for the equilibrium outcomes.[5] I corroborate this hypothesis by computing capital distortion and output distortion as in Hsieh and Klenow (2007). Output distortions are the ones that affect both capital and labour while capital distortion changes the marginal product of capital more than labour. Hsieh and Klenow (2007) highlights capital distortion to be a measure of access to credit ("*[capital distortion] would be high for firms that do not have access to credit, but low for firms with access to cheap credit.*") I find that this measure of capital distortion is relatively higher for stand alone firms compared to IBGs during periods of more uncertain elections.

There has been studies to understand the sensitivity of organizational form to different economic shocks like demand shock (Maksimovic and Phillips, 2002), shocks to market turmoil and distress (Almeida and Kim (2012), Matvos and Seru (2014), Kuppuswamy and Villalonga (2015) among others). However, the impact of political uncertainty in particular has not been examined. To the best of my knowledge this is the first paper to study the link between firms' organizational form and political uncertainty, and the finding lends empirical support to conglomerate firms being more immune to such risks.

The paper proceeds as follows. In the next section, we discuss the releted literature. In section III, we provide the institutional background for our study where we describe the Indian business groups and state elections.Sections IV details our empirical strategy and describes our results. Section V concludes.

[5]We understand the limitations in the argument, and under some circumstances this can be argued to be through demand itself. Given the available data at hand we cannot rule out such possibilities. We highlight such concerns in detail in section **??**

II Related Literature and Hypothesis Development

In this paper we try to link two strands of literature. Firstly, we build on the empirical evidence that examine costs and benefits of conglomeration and highlight the way that the existing literature studies the role of firm boundaries during periods of exogenous shocks. This provides a premise for us to introduce political uncertainty as a new dimension in this literature. Secondly, we add to the growing literature that examines the effects of aggregate political uncertainty on firm outcome. We particularly focus on the factors that cause differential sensitivities of firms to such uncertainties. The heterogeneity in this paper comes from different organizational form, i.e. whether a firm is subsidiary of a conglomerate or a stand alone firm

II.A Firm Boundaries

The entire literature on the importance of firm boundaries, as mentioned earlier, originated from the seminal work of Coase (1937), and since then has been one of the most intensely studied topics in economics. Theoretical model of Williamson (1985) (which follows the earlier work Williamson (1975)) suggested ease in transaction and reduction in the complexity of contractual agreement as the primary reason for forming conglomerates. Meanwhile Grossman and Hart (1986) through their modern property rights approach and Milgrom and Roberts (1992) through the cost of bureaucracy laid the theoretical foundations for the formation of conglomerates. Debt co-insurance argument of Lewellen (1971) is one of the likely theoretical rationale of the empirical result in this paper. In the following review we emphasize on the contradictory view on the usefulness of internal capital market particularly in the context of India. Following which we highlight the relatively more recent addition to this debate in terms of new dimensions of comparison between the two organization form and how this paper augments them.

Conglomerates have an internal capital market and can use this either positively for new investment opportunity in group firms or supporting them in financial difficulty or negatively by tunneling funds for private gains. Bertrand, Mehta, and Mullainathan (2002) developed a general empirical technique to quantify tunneling of resources by controlling shareholder from group firms where they have less cash flow rights to the one that they have more. Using data from Indian business groups, they find that such activities are prevalent in India. Meanwhile, Gopalan, Nanda, and Seru (2007) using data from the same source finds that solvent business groups support their member firms using internal capital markets and thereby significantly lowers the probability of default, which in turn also prevents any negative spillover to other group firms. They also observe that an implicit guarantee by group firms also provide confidence to external borrowers and thereby improves the credit scenario. The paper found limited evidence of group loans being used to tunnel cash. Hund, Monk, and Tice (2012) and Hoberg and Phillips (2014) among others have highlighted that usefulness of internal capital market also depends on the way comparable single segment firms are chosen and also on availability of data and industry classifications.[6]

More recent literature have focused their discussion on the way that conglomerate firms differ in their response to an exogenous shock vis-á-vis a stand alone firm. Giroud and Mueller (2015), documents that a positive shock (introduction of new airline routes that reduce the travel time) to a plant in a firm spills over to other firms in the same group. The introduction of airline was an instrument for a sudden shock to opportunity in investment. The paper finds that there is resource re-allocation in a manner that investment in the treated plant increases and the other decreases, nevertheless increasing the productivity of the entire firm. The intuition being that headquarters minimize loss by withdrawing resource from the least productive plant. Bai (2015), using event of import tariff reduction finds that conglomerate firms more actively restructure to improve their

[6] For detail discussion on this issue refer to the survey paper Maksimovic and Phillips (2013)

overall efficiency and focus more on their areas of competitive advantage. Our paper adds to this strand of literature by highlighting the importance of firm boundaries in their ability to navigate through a shock in uncertainty, identified as periods of state elections in India.

The closest to the spirit of our paper is Kuppuswamy and Villalonga (2015), which shows that the value of diversification increased during the financial crisis. The increase in value was led by better access to external credit market coupled with efficient internal capital market. Though our findings complement the paper, the uncertainty that we are examining in this paper is significantly different in nature. The financial crisis is a one-off unforeseen event that effects the entire economy through multiple channels like financial sector, investor sentiment and perceptions and even leads to policy uncertainty. Consequently, using financial crisis as an event does not provide a clear understanding about which of the above mechanism is the primary driver of the result. Meanwhile in this paper we primarily focus on the uncertainty about the policy and functioning of government using the recurring events of elections which are foreseen and yet exogenous in terms of timing. Further, given that the crisis of 2007-09 originated from the financial sector, using it as an exogenous shock to study financial decisions could be a matter of concern.

II.B Political Uncertainty

The relationship between politics and financial outcomes has been a topic of public discourse as periods political uncertainty automatically translates into policy uncertainty impacting all agents in the economy (Barro (1989), Alesina and Perotti (1996), Mauro (1995) among others). Uncertainties associated with possible changes in government policy or national leadership resulting in different policy outcome can have major impact on the behaviour of firms. One main concern in this area is to identify periods of elevated

policy uncertainty. Elections provide a recurring natural experiment set up to study the impact of political uncertainty (Julio and Yook, 2012). While there has been significant work that looks at the the time series impact, relatively lower focus has been given on the cross-sectional impact on firms.

Gulen and Ion (2015) is one among the few papers that looks at the cross sectional heterogeneity between firms' sensitivity to policy uncertainty. Using the policy uncertainty index developed in Baker, Bloom, and Davis (2015), they find that capital investments of firms with higher degree of irreversible investment are more prone to be negatively impacted by the uncertainty. The intuition behind their result is that option value of waiting is proportional to investment irreversibility. They also find cross sectional differences in firms by their dependence on government spending, with more dependence leading to lower investment during periods of uncertainty. Akey and Lewellen (2015) shows that policy sensitive firms accumulate higher political capital and they are more likely to be impacted by election uncertainties than less sensitive firms.[7] Jens (2015) uses term limit as an instrumental variable for close elections, and provide evidence that investment in firms decreases in states having elections compared to other states. These studies are in line with Julio and Yook (2012) which is one of the first papers to documented corporate investment cycles using the timing of elections across different countries, as a period to identify political uncertainty and found that investment decreased significantly prior to the election. It is important to note that apart from the first few papers, the others do not explore the cross sectional variation. This paper adds to this literature of identifying cross sectional variation in response to political uncertainty through heterogeneity in organizational form.

In this paper we connect the literature on firm boundaries to that of political (policy) uncertainty and understand the interaction between them. To the best of my knowledge

[7] The political capital is accumulated through contribution to political parties. There is a large area of literature related to political connectedness and accumulation of political capital, however, we do not venture into that area for the purpose of this paper

this is the first paper to bridge the gap.

II.C Hypothesis

As we have highlighted above, this paper is an attempt to introduce political uncertainty as a new dimension in the long standing literature on firm boundaries. Given that subsidiaries of conglomerates are present in multiple states and are diversified in their business unlike the stand alone firms we expect stand alone to be more susceptible to policy uncertainty and hence it is more difficult for the later firms to raise debt or get loans during periods of election. Consequently our first hypothesis is:
H1: Compared to subsidiaries of IBGs, stand alone firms have a lower leverage in states with elections vis-á-vis a state without elections .

Since the short term loans that are issued in the period to the run up for elections are likely to be matured around the elections before the uncertainty has completely resolved, we expect the impact to be reflected primarily in short term loans (ST). Meanwhile, long term loans (LT) have longer maturity, it should be largely unaffected by the election uncertainty.[8] To get the concept fixed let us consider the following:
Stand-alone with LT debt: no effect – the stand-alone firm is riskier, but unless the LT debt is due at the time of the election, the election should have no impact on the firm's existing borrowing.
Conglomerate with LT debt: no effect – the conglomerate is safer but unless the LT debt is due at the time of the election, the election should have no impact on the firm's existing borrowing.
Stand-alone with ST debt: large effect – the stand-alone firm now has to roll over its ST debt during the period of high uncertainty, and it is riskier than the conglomerate, so it is more likely that the bank will charge a higher rate or refuse to refinance the loan.

[8]Unless the long term loan refinancing is scheduled during some elections.

Conglomerate with ST debt: small effect – the conglomerate now has to roll over its ST debt during the period of high uncertainty. However, since the conglomerate is safer, the above effect (as in stand alone firms) should be fairly small.

Given this premise, our follow up to the hypothesis H1 are as follows:

H1A: Compared to subsidiaries of IBGs, ST debt-to-asset ratio of stand alone firms is expected to be lower in a given year in states with elections vis-a-vis a state without elections.

H1B: There is no significant difference in the long term debt-to-asset ratio of firms belonging to IBGs and stand alone.[9]

Since the leverage and borrowing outcomes are hypothesised to be impacted heterogeneously, we expect the findings to be reflected in the investment outcomes as well.

H2: Compared to states without elections, there is a heterogeneous impact on investment of firms belonging to IBGs and stand alone in states which have an impending election

We now focus on whether the impacts are driven by the lack of demand by the stand alone firms or from subdued supply of funds to them. The difference in demand between IBGs and stand alone could be due to difference in option value of waiting for investment Julio and Yook (2012). However, it is unlikely that subsidiaries of IBGs and stand alone firms, being in the same industry have a systemic difference in investment irreversibility or government procurements which are the likely channels that cause difference in demand for borrowing during policy uncertainty (Gulen and Ion, 2015).[10] Given this premise, we expect the effect is largely driven by reduced supply of funds to stand alone firms. One way to identify this is to check if the equilibrium prices and quantity move in opposite

[9]We do not have data on the aggregate short term and long term debt the company issues. However, we have data on the short term and long term bank borrowing. Going ahead in the empirical section we will test hypothesis H1A & H1B using short term and long term bank borrowing. In this regard it is also important to note that in India corporate debt market being underdeveloped bank lending is one of the major source of corporate borrowing.

[10]We acknowledge the fact that the risk appetite could be higher due to the presence of internal capital markets. However, we do not think that the risk appetite should be particularly higher during elections

direction due to the uncertainty.[11] Consequently, given H1 and H2, our third hypothesis is:

H3: Interest rate is higher for stand alone vis-á-vis subsidiaries of IBGs in a state having elections compared to state without elections.

Following the arguments to justify the hypothesis H2A and H2B, the same should be true for interest rates as well.

H3A: The heterogeneity in interest rate is driven by short term interest rate while long term interest rate is not impacted.

III Background and Data

In this section we discuss the structure of Indian conglomerates and elections in India. The data used for this project is primarily of two types: subsidiary level data for Indian business groups and stand alone firms and data on State elections in India.

III.A Organizational Structure of Indian Firms

Conglomerate firms are known as business groups or business houses in India and are a group of legally independent entities held together by a core owner. The entities largely engage in diverse set of activities in different industries which are mostly unrelated to each other. The IBGs can use not only equity and debt to transfer funds across groups, but also subordinate unsecured debt. As we have highlighted before, the motives behind the transactions are either profitable investment opportunity, support the group firms or tunneling funds (Bertrand, Mehta, and Mullainathan (2002) and Gopalan, Nanda, and Seru (2007))

[11] It should be noted that we do not claim that this phenomenon in any way help us to say that the entire impact is driven only by supply. However, it indicates that supply should have a larger impact than demand.

Our primary source of data is the Prowess database maintained by the Center for Monitoring of Indian Economy (CMIE). Prowess maintains annual financial data of public and private Indian firms starting from 1989. For the purpose of this paper we use data from 1992-2014, we exclude the data from 1989-1991 which account for the period before liberalization of Indian economy, following which there was significant structural changes in the economy. We collect data primarily for 3 broad groups: financial information for each subsidiaries, group affiliation and industry affiliation. To classify firms as being affiliated to a group, i.e. whether it is a part of a conglomerate we use Prowess' group classification as has been used in the literature (Bertrand, Mehta, and Mullainathan (2002), Gopalan, Nanda, and Seru (2007) among others). According to Gopalan, Nanda, and Seru (2007), Prowess' classification is based on monitoring company announcements and qualitative understanding of group wise behaviour of individual firms and hence is likely to provide a better measure than equity-centred classification. Prowess contains a panel of around 34,000 listed and unlisted firms firms with assets plus sales greater than INR 40 million.[12] In this paper we use non banking and financial sector firms which are more than 10,000 in the database. The firms in Prowess are also classified into Indian private sector, government sector and foreign and joint ventures based on the identity of the controlling share holder. The private sectors are sub-divided between business groups and stand alone, and this primarily forms the basis of our identification. We do not use the government sector firms primarily because its optimizing function are very different from the private sector firms and often used by the incumbent government for its own interest, which is likely to be elevated during periods of election. We also remove firms with the debt to asset ratio outside the [0,1] bound since firms with ratio greater than 1 typically undergo debt restructuring and are referred to Bureau of Industrial and Fiancial research (BIFR) (Gopalan, Mukherjee, and Singh, 2014). The data is arrange by financial calendar of India which is from April-March. Hence FY2015 corresponds to

[12]It should be noted that the coverage of public firm is more comprehensive owing to reporting requirements compared to the private firms.

April 2014 to March 2015 of the calendar year.

III.B State Assembly Elections

India has a federal structure and has elections both at state and national levels. The elections are held regularly for all the states and union territories with the average electoral cycle being five years. Although elections can be called early if the assembly is dissolved, we observe such instances rarely in the sample. We drop such elections as the decision to call early elections can be related to economic conditions (Kumar, 2014). The elections are staggered across states, i.e. all the states does not have elections in the same year, and even if two states have elections in the same year, they might not be held at the same time. However, every year there is at least one state which is scheduled to have elections. This nature of elections provide a good setting for identification.

It is important to note that the constitution bestows significant power to the state government. The legislature provides complete power to the states in the items mentioned in state list like incorporation of corporate, trade and commerce, public law, labour markets, property rights among others. Further, the state government has their own civil service and maintaining law and order are under the control of politicians in a state. All of these have significant influence on firm performances and hence state elections are significantly important for corporate managers.

Indian elections in general and state elections in particular follow first past the post system. That is candidates from multiple parties compete for a single seat in a legislative constituency, and the candidate with the highest vote share wins.[13] Thus in India the competitiveness of an election is at the constituency level and not at the state level. However, if the number of constituencies secured by competing parties are close, then an

[13]In India it is not required to get 50% vote share to win the election. For example, in a const with 4 candidates, a contestant can win with 26% vote share if none of the others get more than that

election can be classified as a closely contested election. We use this method of identifying close/ more uncertain election to strengthen our empirical specification in section (IV). The primary data on elections is collected from the statistical reports compiled by the election commission of India.

III.C Summary Statistics

In table 1, we provide the descriptive statistics for our sample. In the upper panel we report the characteristics of an Indian Business group. It can be seen that the median (mean) number of subsidiaries of each group is 11 (21) which span around 6(11) industries and covers 3(3.8) states. It thus gives an idea that the conglomerates are fairly diverse and also belong to a large number of states. A concern might be raised about diversification since the number of subsidiaries are higher than the number of industry. However, it should be noted that for the purpose of this paper we use 3 digit classification, but the diversification can occur at a more granular level of industry classifications.

In columns 1 and 2 we report the mean and median of the subsidiaries of the Indian business group while in columns 3 and 4 lists the same for stand alone firms. We find that on an average, size is higher for the subsidiaries than the stand alone firms.[14]. The other variables are economically similar in magnitude for both conglomerates and stand alone firms. It is interesting to note that though the total debt to asset is higher for conglomerate firms, the borrowing from banks and the total secured borrowing is higher for stand alone firms.

[14]This can be a concern when we identify firms based on whether they are conglomerate or stand alone. To alleviate this in the robustness section we also run all our specification by grouping firms on size. It is explained in section (IV.E.1)

IV Empirical Strategy and Results

IV.A Empirical strategy

In this section I lay down the estimating equation and discuss the approach to identify the impact of political uncertainty on the organizational structure. As noted before, the staggered elections in Indian states plays a crucial role in identification that would not be possible with national elections. The staggered elections helps us to distinguish between any time trend that is likely to exist in a developing country with evolving capital and organizational structure and periods of uncertainty. The state election also helps us to identify a control state (no elections) for every treatment state (state with elections). The state election coupled with subsidiary level data also allows to deal with the existing criticism in the literature that conglomerate and stand alone are very different in multiple dimensions and comparing them could be a matter of concern. The state election provides a setup where a conglomerate in a treated state is compared to a conglomerate in control state while a stand alone in treated state is compared to a stand alone in a control state. The difference between the latter and the former provides an estimate of the additional impact of political uncertainty on stand alone firms compared to firms belonging to a conglomerate. Meanwhile the subsidiary level data helps to compare two similar firms: one belonging to a larger conglomerate and the other stand alone.

Political uncertainty is assumed to be highest during the run up to elections and is identified as the financial year proceeding elections in a state. For example if there is election in the state of Maharshtra in May 2015, the financial variables of firms corresponding to FY2015 (April2014-March 2015) located in the state of Maharashtra would be associated with the period of political uncertainty.[15]

[15]This raises the concern as to which period should the elections held between January and February 2015 be classified. Our assumption is that the uncertainty due to the elections from this period is already reflected in the variables corresponding to FY 2015.

Using the subsidiary level data we group firms into being a part of business group or stand alone. The same identification has been used in Bertrand, Mehta, and Mullainathan (2002), Gopalan, Nanda, and Seru (2007) among others.[16] It is also important to note that all the firms belonging to conglomerate continues to be in the same conglomerate through out the sample. We do not have any firm which is stand alone till a certain point in time and then is acquired by a business group as this would lead to endogeneity concerns.[17]

We are interested in understanding the way political uncertainty heterogonously impacts IBGs and stand alone firms. As illustrate through an example in section (I), we exploit the variation in timing across election in the Indian states to investigate if the gap between a subsidiary of IBG and stand alone located in a state with election is significantly different from the gap between a subsidiary of IBG and stand alone located in a state without an election. In order to do so we estimate the following difference-in-difference specification:

$$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit} \tag{1}$$

where for a state s, the dependent variable Y_{sit} measures the variable of interest like leverage, investment and interest rates among others for firm i located in the state at time t.[18] The dummy $Election_{st}$ takes a value 1 when there is an election in state s at year t and 0 otherwise. As we have seen above election in the calendar year 2015 is mapped to financial variables of fiscal year year 2015, the election dummy and the dependent variable have the same subscript 't'. Going ahead it should be noted that when I refer

[16] As we have discussed earlier, Prowess classifies every firm into a business group that it belongs.

[17] The firms that switch from being stand alone to conglomerate can be very useful in identifying the impact of political uncertainty since we can compare the same firm before and after the Mergers. However, the choice of such mergers could be endogenous to timing of election and hence we do not include them in the sample to somewhat mitigate the concern. Though some concerns can still persist and we have highlighted them in section (**??**)

[18] In this setting firms belong to one state, identified as the state in which the head office of the firm is registered

to a time period as a "period of election", I refer to the fiscal year corresponding to the period of political uncertainty. The primary variable of interest is the interaction term between $Election_{st} \times StandAlone_i$ where stand alone is the firm that does not belong to a conglomerate. The coefficient β_1 captures the differential effect of being a stand alone or conglomerate firms given the same kind of political uncertainty measured by state election in this scenario. This interpretation of β_1 also helps us to understand the importance of state elections over national elections. State elections by the virtue of being staggered across time provides a natural experiment setting to compare states with elections to states without within the same year. Such comparison would not have been possible with national elections.

The state×time, industry×time and firm (subsidiary) fixed effects allows us to control for unobserved state and industry characteristics that varies by time and average subsidiary trends respectively. The location of firms are identified by the state in which the headquarters of the firms are registered (Gopalan, Mukherjee, and Singh, 2014) . In all the regressions, we estimate standard errors that are clustered by the state level, the level at which the uncertainty shock occurs.

I refine the analysis by grouping elections between more and less uncertain elections. More uncertain are the ones in which the results of elections are difficult to predict (close elections). I identify close elections as the ones in which the difference between the number of constituencies won by a winner and a runner up is less than 5% of the total number of constituencies. Akey (2015), Boutchkova, Doshi, Durnev, and Molchanov (2012) among others have identified close election in the context of US as the ones in which vote difference between winner and runner up is less than 5%. However, as mentioned above, India unlike US follows a multi-party first past the post system and hence the competition to form a government in a state comes from the ability to secure 50% of constituencies. Hence when there is close competition between two parties the difference in the number of constituencies they manage to secure under their banner should be

very small. To investigate if the results are largely driven by the close and thereby more uncertain elections, I use the following regression specification.[19]

$$\begin{aligned} Y_{sit} &= \beta_0 + \beta_i + \beta_{st} + \beta_1 HighUncertainElection_{st} \times StandAlone_i \\ &\quad + \beta_2 LowUncertainElection_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit} \end{aligned} \tag{2}$$

The coefficients of interest are β_1 and β_2 and I intend to see if the former is higher in magnitude than the latter.

IV.B Results

IV.B.1 Impact on Leverage

During the periods of elections with elevated political uncertainty, borrowing capacity of firms is likely to decrease owing to the perceived riskiness in investments. We have highlighted in section (II.A) that the literature has contradicting view of the effect of uncertainty on stand alone and conglomerate firms. While stand alone firms are likely to be more vulnerable to such risks than the subsidiaries of the conglomerates firms due to lack of internal capital market the latter might be more exposed to policy uncertainty owing to perverse managerial incentives. We empirically test this using equation (1), with the dependent variable being $\left(\frac{Debt}{Asset}\right)_{sit}$

The primary coefficient of interest is β_1 which is the average difference between an individual and conglomerate firm in a state that goes in election vis-a-vis the state that does not go in an election. Column (1) of table2 shows that the difference goes down by 55 basis points. Given that the average difference is 3% per year, it indicates the expansion of the gap by more than 18%. In column (2) I control for the industry×year

[19]The methodology is similar to Mukherjee, Singh, and Zaldokas (2015), where they divide tax changes as tax increase or tax decrease and study their impact on innovation

fixed effects for time varying industry characteristics effect and find that the coefficient is largely unchanged.

In columns 3 and 4 elections are grouped into two subsets close (uncertain) elections and non close (less uncertain) elections. The former being the one in which the difference between the seat share of winner and runner up is less than 5%. Using regression specification (2), I find that the results are stronger and statistically significant during the periods of more uncertain election. Column 3(4) reports that during the uncertain elections the difference between stand alone and conglomerates goes down by 1.3 percentage points which shows that the gap between the two groups increases by over 40%. Meanwhile, I find the coefficient for $LowUncertainElection_{st} \times StandAlone_i$ (β_2) much lower in magnitude and statistically insignificant. In table 2B we perform the same specification as in equations (1 and 2) with the primary dependent variable being natural logarithm of the debt level of each firms. We find our results hold in this specification as well. Compared to stand subsdiaries of conglomerates stand alone firms decline by around 4.4% (14%) during elections (more uncertain elections).

The result verifies the hypothesis H1 and lend some empirical support to the debt co-insurance argument as has been explained in section (I). Since one of the likely reasons for the conglomerate subsidiaries to be immune could be their availability of fund in the internal capital market that co-insures the debt of group firms and thereby reduces likelihood of default (Lewellen (1971), Kim and McConnell (1977) among others). The results also support the finding from Kuppuswamy and Villalonga (2015) which showed that when credit becomes rationed banks and bond holders find it safer to lend to subsidiaries of conglomerate and hence the stand alone firms are likely to suffer more. The constraints can arise because of the increased use of banks by the incumbent during the election to diverse funds to the sectors and/or areas that are in line with their political motive (Cole (2009), Kumar (2014)). In the following sections we look at the sub groups of debt by investigating the impact on short term and long term debt.

IV.B.2 Impact on Short and Long Term Debt

As hypothesized in section (II.C) that the impact of political uncertainty is likely to manifest itself primarily through the short term borrowing of firms as short term loans are for than 1 year and is more likely to cover periods of uncertainty. Meanwhile, long term borrowing (or lending) is likely to be less impacted as the repayment period is after the uncertainty resolves. I test these specification using equations (1 and 2). In columns 1 and 2 of table 3 my dependent variable is $\left(\frac{Short-Term\ Debt}{Asset}\right)_{sit}$. I find that compared to subsidiaries of conglomerates, stand alone firms decrease by around 25 basis points (coefficient β_1 from equation 1) from . Give that on an average stand alone firms have a higher short-term debt to asset ratio than the subsidiaries, the results indicate that the gap shrinks during times of election. Given that the average difference is around 2.5 percentage point, the gap decreases by 10 percent during elections. In columns 3 and 4 when I group elections by more and less uncertain elections, I find that the difference between a stand alone and conglomerate in a state in the year of election is stronger in magnitude. The coefficient β_1 from equation 2 is negative and significant indicating that in more uncertain elections short term leverage of stand alone firms is 50 basis points lower than conglomerates in state with elections vis-á-vis other states. Meanwhile, the coefficient β_2 is insignificant. I perform the same tests using $\left(\frac{Long-Term\ Debt}{Asset}\right)_{sit}$ and find no impact on any of my baseline specifications. This lends support to the hypotheses H1A and H1B according to which the impact of uncertainty is likely to have most impact on loans with shorter tenure.

We repeat the same analysis using natural logarithm of short term and log term debt. The results corroborate our initial finding that the decline in total debt is primarily led by short term debt. Columns 1(2) and 3(4) of table 3B shows that short term debt declines by 4 (13) percentage points. Meanwhile, we do not find any change in long term debt.

IV.C Impact on Investment

Following the analysis on leverage, in this section we investigate corporate investment in a multivariate setting to control for firm characteristics and economic conditions. Investment has widely been used in literature to study the impact of political uncertainty on firm performance (Julio and Yook (2012), Gulen and Ion (2015) among others). Investment can decrease both as a result of decrease in demand from firms or decrease in supply of resources from the bank or both. The decrease in demand is through the increase in option value of waiting while the decrease in supply could be through risk aversion of banks or tighter financial constraints in times of elections.

If demand is the dominant factor: *Ceteris paribus* Fall in equilibrium investment is associated with a decline in interest rate.[20]

If supply is the dominant factor: *Ceteris paribus* Fall in equilibrium investment is associated with an increase in interest rate.

While in this section we investigate if investment has relatively declined for a particular group of firm during elections, in the next section we will focus on the impact on interest rate.

Given, our setting we test if the investment prior to the elections was different for subsidiaries of IBGs compared to stand alone firms. We use our baseline specification equations 1 and 2 with $\left(\frac{Invest_{sit}}{Asset_{sit-1}}\right)$ as the dependent variable. The results from the above equation is summarized in Table 4. Column 1(2) show that controlling for fixed effects and other controls, in a state having election, the difference in investment to asset ratio of stand alone and subsidiaries is 1.3(1.4) percentage points compared to a state where there is no elections. Given that the mean difference between the ratio between the two groups is around 1.5 percentage points, the results indicate that the gap almost doubles

[20]It is important to note that I consider the investment opportunity to be constant in the statement. I acknowledge that a reduction in the investment opportunity set can increase the riskiness of a firm and consequently interest rate can rise. However, In this case there is no prior to believe that during elections a subsidiary and a similar stand-alone firms belonging to same industries will have different investment opportunities.

during the election. We find similar results in columns 3 and 4 when the elections are grouped between more and less uncertain elections. The cross sectional heterogeneity in the impact of political uncertainty on leverage obtained in the previous tables is echoed in this result on investment. The results thus validate the hypothesis H2.

IV.D Impact on Interest rate

While the previous sections have looked at the impact of political uncertainty on the quantity of borrowing and investment, this section focuses on the price of borrowing measured by the interest rate. Since we do not have data on the interest rate that the firms are paying, we use interest expense as a share of total debt as the dependant variable in our baseline specifications

The results from the above regression is summarized in table 5. Column 1(2) shows that the compared to conglomerates, the stand alone firms pay 17(18) basis points higher interest rate in the states that has elections vis-a-vis other states. The results highlights and reiterates the significant cross sectional heterogeneity in the impact of political uncertainty. The result combined with the prior findings also the indicates that the decline in quantity is not entirely determined by the subdued demand. When performing the specification using more and less uncertain elections, we find that during uncertain election difference in interest rate increases to 53 basis points.

We also perform the same specification by decomposing interest rate into short term and long term interest rate and find that the entire increase in interest rate is through the short term interest expenditure. Table 6 shows that stand alone firms experience a rise in short term interest by 19(18) basis points compared to subsidiaries of conglomerates. The same increases for more uncertain elections and thus the coefficient of interest (β_1) in equation (2) increases to 53 and 54 basis points in columns 3 and 4. Meanwhile, we

do not find any significant impact on the long term interest rate. The intuition for the result follows the arguments highlighted in section (IV.B.2) that justified the impact in short term loans and identified reason for no impact on the long term borrowing.

The results obtained above highlights significant cross heterogeneity in the performance of a conglomerate vis-a-vis a stand alone firm in the face of political uncertainty. The findings support the hypothesis that stand alone firms have a higher propensity to be adversely affected by political uncertainty compared to the firms belonging to Indian business groups. Further, decline in quantity coupled with increase in interest rate emphasises that shortage of supply played a dominant role, though our empirical setting does not allow us to rule out the role of demand.

IV.E Impact on Capital and Output Distortion

The above results on decline in borrowing and increase in borrowing cost indicates that increased supply side constraint could be a likely reason for the difference in outcome of a stand alone and conglomerate firms. I intend to extend this argument further by estimating capital and output distortion following the methodology used Hsieh and Klenow (2007). Through a standard setting of monopolistic competitions and heterogenous firms with two inputs- Labour(L) and Capital (K), they identify distortions that affect both capital and labour. Distortion that affects marginal product of capital and labour by the same amount is output distortion (τ_Y) and the distortion that affects marginal product of capital more than labour is capital distortion (τ_K).

The production function in Hsieh and Klenow (2009) is given by,

$$Y_{si} = A_{si} K_{si}^{\alpha_s} L_{si}^{1-\alpha_s} \tag{3}$$

Where, Y_{si} is the output of a firm i in industry s, A_{si} is the total factor of a firm i in

industry s, α_s is the share of output to labour in industry s. Given the distortions, the profit for a firms is given by,

$$\pi_{si} = (1 - \tau_{Y_{si}})P_{si}Y_{si} - wL_{si} - (1 + \tau_{K_{si}})RK_{si} \tag{4}$$

Given this structure, Hsieh and Klenow (2009) computes the distortions as

$$1 + \tau_{K_{si}} = \frac{\alpha_s}{1 - \alpha_s}\frac{wL_{si}}{RK_{si}} \tag{5}$$

$$1 - \tau_{Y_{si}} = \frac{\sigma}{1 - \sigma}\frac{wL_{si}}{(1 - \alpha_s)P_{si}Y_{si}} \tag{6}$$

Hsieh and Klenow (2009) interprets τ_Y would be high for firms that face high government restriction while τ_K is likely to be high for firms that has lower access to credit. Given the prior tests have indicated that supply of capital plays a dominant role in driving the results, I intend to see if τ_K is different between stand alone and conglomerates during elections. I compute 1-α_s as the average share of labour of an industry.[21]

$$1 - \alpha_s = \sum_{i \epsilon s} \frac{wL_{si}}{P_{si}Y_{si}} \tag{7}$$

The interest rate (R)=10% and σ, intertemporal elasticity of substitution is considered to be 3 following Hsieh and Klenow (2009).

Using regression specifications (1) and (2), we find that capital distortion for stand alone firms is higher than conglomerates during periods of more uncertain elections as can be seen from column 2 of table 7. However, we do not find any changes to output distortion. This provides some supporting evidence to our initial conjecture that access to capital could be the primary driving factor of the results.

[21] Hsieh and Klenow (2009) uses α_s of the corresponding industry from the US. However, the data is available only for the manufacturing sector which is the sector of interest in the paper. However, in this paper I use all non-financial sectors and hence use industry averages of labour share of Indian firms as an alternative measure of α_s.

IV.E.1 Validity Test

In this section we investigate if the above analysis can be replicated by classifying firms under other categories like tangibility ratio, size among others.

Unlike the previous sections here we group firms by their tangibility ratio.[22] We group firms in terciles of tangibility ratio and classify firms in the third tercile as the high tangibility group, while the firms is belonging in the first tercile is the low tangibility group. Gulen and Ion (2015) has used this ratio as one of the measure of asset redeployability and find high tangibility groups are more affected by policy uncertainties owing to their high adjustment cost and time lag in changing investments. Their explanation is thus more from the demand side as these firms are likely to have higher option value of waiting. We perform the following regression specification.

$$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times LowTangibility_i + \delta' Controls_{sit} + \epsilon_{sit} \quad (8)$$

In table 8 we present the estimates of the above equation and find that the coefficient β_1 is insignificant for all our primary variables of interest. This alleviates the concern that our previous results are not picking up an effect of tangibility. It also allows us to rule out one of the possible demand channels.

We also group firms in high and low size based on the total sales of the firms.[23] We group firms into terciles based on size and group the highest tercile firms as being big and smallest tercile as small firms. The purpose of this test is to check if the identification based on firm structure is mimicking size. We perform the following regression

[22] tangibility ratio is defined as the ratio of fixed asset to total asset, i.e. $\frac{FixedAsset_{is}}{TotalAsset_{is}}$. Tangibility is often used as a measure of borrowing capacity, meanwhile it can also be measured as a proxy for asset redeployability

[23] We do not use total asset as a measure of size since all the dependant variables are scaled by total asset. Nevertheless the results remain qualitatively same if we group variables by total assets

specification.

$$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times LowTangibility_i + \delta' Controls_{sit} + \epsilon_{sit} \quad (9)$$

The results are reported in table 9. We find that the coefficient β_2 for all the variables of interest are statistically insignificant.[24] This results intends to alleviate the concern that the difference in size could be a factor driving the results in the previous sections and not the difference between organization structures.

V Conclusion

In this paper we investigate whether the impact of political uncertainty varies by firms' organizational form. By exploiting staggered elections in Indian states as natural experiment setting we find that stand alone firms are more adversely impacted compared to the subsidiaries of Indian business group. The staggered nature of the state elections supports the identification primarily in two ways. Firstly it provides a set up in which the outcomes of firms in a state with elections can be compared with firms in states without election in the same year. Secondly it helps us to differentiate between time trend and the impact of elections which would be difficult to separate by using national elections.

Given this premise we find that leverage of stand alone firms are lower compared to the firms belonging to the IBGs. Looking underneath the surface reveals that the primary impact is through the short term debt, which is in line with expectation as short term loans that are likely to be refinanced during the periods of elections. We also find that equilibrium investments of stand alone firms are lower compared to IBGs. The decrease in borrowing and investment is associated with an increase in borrowing cost measured

[24]The sign and magnitude of the result in column(3) of table 9 is still a matter of concern. Nevertheless, it is statistically insignificant and empirically interpreted as failure to reject the null hypothesis of $\beta_1 = 0$.

by the interest rate on debt.

The above finding of opposite movement in prices and quantity at equilibrium, point out that the shortage of supply of funds to stand alone firms compared to the IBGs in the state with elections plays larger role than (subdued) demand from firms in driving the results. Our results thus suggest that one advantage of being in business group is the increase in likelihood of being immune from shocks in uncertainty measured as political uncertainty in this paper.

Figure 1: Stand Alone vs Conglomerate Debt-to-Asset Ratio

In this graph we present the coefficient from regressing debt-to-asset ratio on the event cycle (with 3 years before the election being the base). We perform the regressions separately for the Indian business groups and stand alone firms. The following figure plots the coefficients.

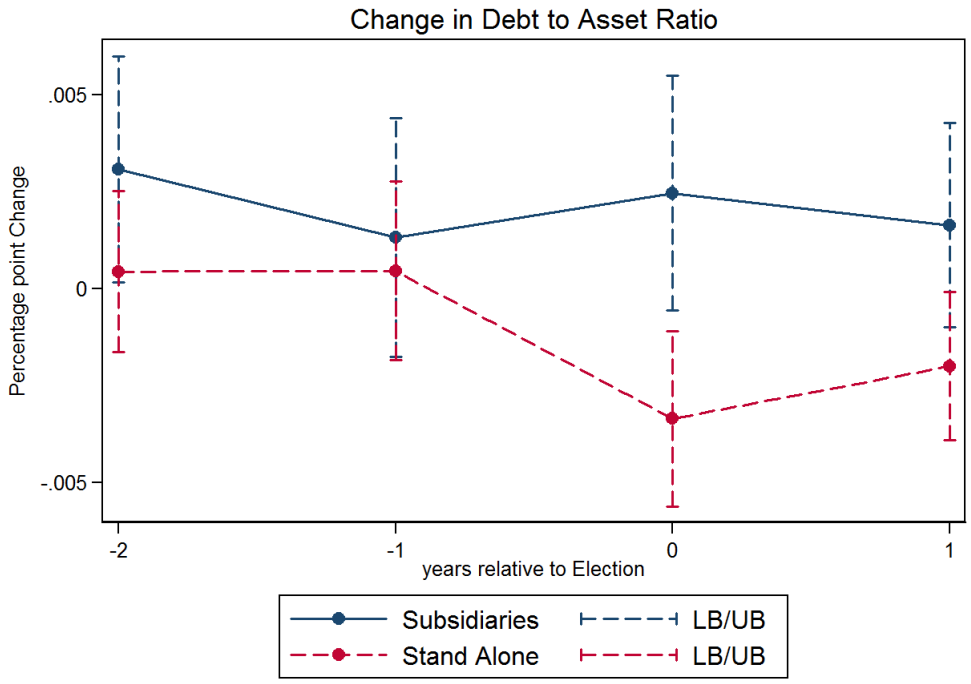

Figure 2: Stand Alone vs Conglomerate Interest Rate

In this graph we present the coefficient from regressing debt-to-asset ratio on the event cycle (with 3 years before the election being the base). e perform the regressions separately for the Indian business groups and stand alone firms. The following figure plots the coefficients.

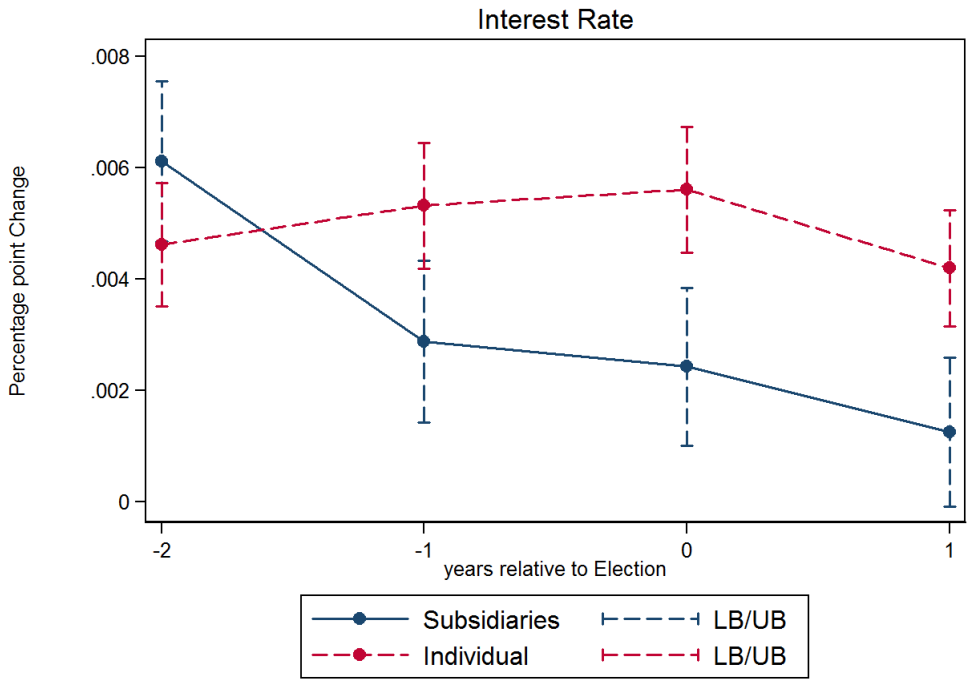

Table 1: Summary Statistics

The following table reports the summary statistics of the primary variables of interest separately for Indian business groups and its subsidiaries and stand alone firms. We find that the subsidiaries of IBG is close to stand-alone firms in the economic magnitude of the parameters except the size.

	Indian Business Group	
	Mean	Median
No. of Subsidiaries	21.84	11
No. of Industries	10.17	6
No. of States	3.8	3

	Subsidiaries		Stand Alone	
	Mean	Median	Mean	Median
Total Assets (INR million)	2747.26	842.30	787.92	207.50
Tangibility	0.52	0.53	0.51	0.48
PAT to Asset Ratio	0.03	0.02	0.02	0.02
Debt to asset Ratio	0.37	0.38	0.33	0.35
Secured Debt to Asset Ratio	0.22	0.23	0.22	0.24
Short Term Debt to asset Ratio	0.13	0.11	0.16	0.14
Investment to Asset Ratio	0.05	0.03	0.05	0.02
Interest Rate	0.11	0.13	0.13	0.12

Table 2: Heterogeneous impact on Debt-to-Asset ratio

In this table we present the difference in difference regression estimates of debt to asset ratio. The event of interest is the periods of election in the Indian states. The coefficient of interaction term indicates the difference in the dependent variable between Conglomerate and stand alone firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. The results in column (1) and (2) is obtained from the regressions of the following form form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
Where for a state s, the dependent variable Y_{sit} measures the debt-to-asset ratio of firm i located in that state at time t. The dummy $Election_{st}$ takes a value 1 when there is an election in state s at year t and 0 otherwise. The primary variable of interest is the interaction term between $Election_{st} \times StandAlone_i$ where stand alone is the firm that does not belong to a conglomerate. The results in column (3) and (4) are obtained by grouping the election dummy into more and less uncertain elections and is of the form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Uncertain\, Election_{st} \times StandAlone_i + +\beta_2 Less\, Uncertain\, Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
The primary coefficients of interest is β_1 and β_2. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

	(1) Debt to Asset Ratio	(2) Debt to Asset Ratio	(3) Debt to Asset Ratio	(4) Debt to Asset Ratio
Stand Alone× Election	-0.00557**	-0.00520**		
	(0.00251)	(0.00225)		
Stand Alone× More Uncertain Election			-0.0130***	-0.0121***
			(0.00398)	(0.00344)
Stand Alone× Less Uncertain Election			-0.00249	-0.00236
			(0.00178)	(0.00177)
Observations	110,711	110,583	110,711	110,583
R-squared	0.750	0.757	0.750	0.757
Controls	Yes	Yes	Yes	Yes
State× Time FE	Yes	Yes	Yes	Yes
Industry×Time FE	No	Yes	No	Yes

Table 2B: Heterogeneous impact on Log Debt

In this table we present the difference in difference regression estimates of log Debt. The event of interest is the periods of election in Indian states. The coefficient of interaction term indicates the difference in the dependent variable between Conglomerate and stand alone firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. The results in column (1) and (2) is obtained from the regressions of the following form form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
Where for a state s, the dependent variable Y_{sit} measures log(1+$Debt_{sit}$) ratio of firm i located in that state at time t. The dummy $Election_{st}$ takes a value 1 when there is an election in state s at year t and 0 otherwise. The primary variable of interest is the interaction term between $Election_{st} \times StandAlone_i$ where stand alone is the firm that does not belong to a conglomerate. The results in column (3) and (4) are obtained by grouping the election dummy into more and less uncertain elections and is of the form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Uncertain\, Election_{st} \times StandAlone_i + +\beta_2 Less\, Uncertain\, Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
The primary coefficients of interest is β_1 and β_2. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

	(1) Log(1+Debt)	(2) Log(1+Debt)	(3) Log(1+Debt)	(4) Log(1+Debt)
Stand Alone×Election	-0.0434*	-0.0417**		
	(0.0214)	(0.0199)		
Stand Alone×More Uncertain Election			-0.141***	-0.142***
			(0.0402)	(0.0330)
Stand Alone×Less Uncertain Election			-0.00290	-0.000847
			(0.0153)	(0.0149)
Observations	110,711	110,583	110,711	110,583
R-squared	0.874	0.878	0.874	0.878
Controls	Yes	Yes	Yes	Yes
State×Time FE	Yes	Yes	Yes	Yes
Industry×Time FE	No	Yes	No	Yes

Table 3: Heterogeneous impact on Short and Long Term Debt-to-Asset Ratio

In this table we present the difference in difference regression estimates of Short(Long) Term debt-to-asset ratio. The event of interest is the periods of election in Indian states. The coefficient of interaction term indicates the difference in the dependent variable between Conglomerate and stand alone firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. The results in column (1), (2), (5) and (6) is obtained from the regressions of the following form form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$

Where for a state s, the dependent variable Y_{sit} measures short and long term debt ratio of firm i located in that state at time t. The dummy $Election_{st}$ takes a value 1 when there is an election in state s at year t and 0 otherwise. The primary variable of interest is the interaction term between $Election_{st} \times StandAlone_i$ where stand alone is the firm that does not belong to a conglomerate. The results in column (3), (4), (7) and (8) are obtained by grouping the election dummy into more and less uncertain elections and is of the form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Uncertain\,Election_{st} \times StandAlone_i + +\beta_2 Less\,Uncertain\,Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$

The primary coefficients of interest is β_1 and β_2. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

	(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	-0.00255***	-0.00259***			-0.000955	-0.000936		
	(0.000867)	(0.000884)			(0.00134)	(0.00133)		
Stand Alone×More Uncertain Election			-0.00497***	-0.00509***			0.000882	0.000979
			(0.00162)	(0.00139)			(0.00165)	(0.00186)
Stand Alone×Less Uncertain Election			-0.00151	-0.00152			-0.00124	-0.00158
			(0.00128)	(0.00128)			(0.00152)	(0.00144)
Observations	89,840	89,703	89,840	89,703	89,840	89,703	89,840	89,703
R-squared	0.663	0.672	0.663	0.672	0.678	0.695	0.678	0.695
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State×Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry×Time FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 3B: Heterogeneous impact on Short and Long Term Debt

In this table we present the difference in difference regression estimates of Log Short(Long) Term debt. The event of interest is the periods of election in Indian states. The coefficient of interaction term indicates the difference in the dependent variable between Conglomerate and stand alone firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. The results in column (1), (2), (5) and (6) is obtained from the regressions of the following form form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
Where for a state s, the dependent variable Y_{sit} measures log (1+short term debt) and log(1+long term debt) of firm i located in that state at time t. The dummy $Election_{st}$ takes a value 1 when there is an election in state s at year t and 0 otherwise. The primary variable of interest is the interaction term between $Election_{st} \times StandAlone_i$ where stand alone is the firm that does not belong to a conglomerate. The results in column (3), (4), (7) and (8) are obtained by grouping the election dummy into more and less uncertain elections and is of the form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Uncertain\,Election_{st} \times StandAlone_i + +\beta_2 Less\,Uncertain\,Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
The primary coefficients of interest is β_1 and β_2. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

	(1) Log Short Term	(2) Log Short Term	(3) Log Short Term	(4) Log Short Term	(5) Log Long Term	(6) Log Long Term	(7) Log Long Term	(8) Log Long Term
Stand Alone×Election	-0.0343*	-0.0358*			-0.00913	-0.00651		
	(0.0172)	(0.0173)			(0.0218)	(0.0194)		
Stand Alone×More Uncertain Election			-0.122***	-0.124***			-0.00696	-0.0111
			(0.0279)	(0.0312)			(0.0740)	(0.0655)
Stand Alone×Less Uncertain Election			0.00346	0.00184			-0.00987	-0.00499
			(0.0153)	(0.0148)			(0.0191)	(0.0214)
Observations	89,839	89,702	89,839	89,702	89,839	89,702	89,839	89,702
R-squared	0.818	0.823	0.818	0.823	0.809	0.818	0.809	0.818
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State×Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry×Time FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 4: Heterogeneous impact on Capital Expenditure

In this table we present the difference in difference regression estimates of Capital Expenditure. The event of interest is the periods of election in the Indian states. The coefficient of interaction term indicates the difference in the dependent variable between Conglomerate and stand alone firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. The results in column (1) and (2) is obtained from the regressions of the following form form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
Where for a state s, the dependent variable Y_{sit} is $\frac{CAPEX}{Asset}$ firm i located in that state at time t. The dummy $Election_{st}$ takes a value 1 when there is an election in state s at year t and 0 otherwise. The primary variable of interest is the interaction term between $Election_{st} \times StandAlone_i$ where stand alone is the firm that does not belong to a conglomerate. The results in column (3) and (4) are obtained by grouping the election dummy into more and less uncertain elections and is of the form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Uncertain\, Election_{st} \times StandAlone_i + +\beta_2 Less\, Uncertain\, Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
The primary coefficients of interest is β_1 and β_2. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

	(1) $\frac{CAPEX}{Asset}$	(2) $\frac{CAPEX}{Asset}$	(3) $\frac{CAPEX}{Asset}$	(4) $\frac{CAPEX}{Asset}$
Stand Alone×Election	-0.0138*	-0.0139*		
	(0.00667)	(0.00676)		
Stand Alone×More Uncertain Election			-0.0149***	-0.0152***
			(0.00334)	(0.00453)
Stand Alone×Less Uncertain Election			-0.0133	-0.0133
			(0.00867)	(0.00855)
Observations	99,108	98,975	99,108	98,975
R-squared	0.139	0.155	0.139	0.155
Controls	Yes	Yes	Yes	Yes
State×Time FE	Yes	Yes	Yes	Yes
Industry×Time FE	No	Yes	No	Yes

Table 5: Heterogeneous impact on Interest Rate

In this table we present the difference in difference regression estimates of Interest Rate. The event of interest is the periods of election in the Indian states. The coefficient of interaction term indicates the difference in the dependent variable between Conglomerate and stand alone firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. The results in column (1) and (2) is obtained from the regressions of the following form form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
Where for a state s, the dependent variable Y_{sit} measures the interest rate of firm i located in that state at time t. Since interest rate data is not available we use $\frac{InterestExpense}{Debt}$ as a measure of interest rate. The dummy $Election_{st}$ takes a value 1 when there is an election in state s at year t and 0 otherwise. The primary variable of interest is the interaction term between $Election_{st} \times StandAlone_i$ where stand alone is the firm that does not belong to a conglomerate. The results in column (3) and (4) are obtained by grouping the election dummy into more and less uncertain elections and is of the form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Uncertain\, Election_{st} \times StandAlone_i + + \beta_2 Less\, Uncertain\, Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
The primary coefficients of interest is β_1 and β_2. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

DEPENDANT VARIABLE	(1) Interest Rate	(2) Interest Rate	(3) Interest Rate	(4) Interest Rate
Stand Alone×Election	0.00175*	0.00184**		
	(0.000911)	(0.000848)		
Stand Alone×More Uncertain Election			0.00514**	0.00519***
			(0.00227)	(0.00169)
Stand Alone×Less Uncertain Election			0.000408	0.000526
			(0.00174)	(0.00176)
Observations	110,711	110,583	110,711	110,583
R-squared	0.750	0.757	0.750	0.757
Controls	Yes	Yes	Yes	Yes
State×Time FE	Yes	Yes	Yes	Yes
Industry×Time FE	No	Yes	No	Yes

Table 6: Heterogeneous impact on Short and Long Term Interest Rate

In this table we present the difference in difference regression estimates of Short(Long) Term interest rate. The event of interest is the periods of election in Indian states. The coefficient of interaction term indicates the difference in the dependent variable between Conglomerate and stand alone firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. The results in column (1), (2), (5) and (6) is obtained from the regressions of the following form form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$

Where for a state s, the dependent variable Y_{sit} measures short and long term interest rate of firm i located in that state at time t. The dummy $Election_{st}$ takes a value 1 when there is an election in state s at year t and 0 otherwise. The primary variable of interest is the interaction term between $Election_{st} \times StandAlone_i$ where stand alone is the firm that does not belong to a conglomerate. The results in column (3), (4), (7) and (8) are obtained by grouping the election dummy into more and less uncertain elections and is of the form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Uncertain\,Election_{st} \times StandAlone_i + +\beta_2 Less\,Uncertain\,Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$

The primary coefficients of interest is β_1 and β_2. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

	(1) Short Term Interest Rate	(2) Short Term Interest Rate	(3) Short Term Interest Rate	(4) Short Term Interest Rate	(5) Long Term Interest Rate	(6) Long Term Interest Rate	(7) Long Term Interest Rate	(8) Long Term Interest Rate
Stand Alone×Election	0.00192***	0.00179**			-1.24e-05	0.000465		
	(0.000571)	(0.000662)			(0.000481)	(0.000567)		
Stand Alone×More Uncertain Election			0.00528***	0.00547***			0.000638	0.000903
			(0.000384)	(0.000693)			(0.000759)	(0.000641)
Stand Alone×Less Uncertain Election			0.000577	0.000331			-0.000272	0.000104
			(0.00102)	(0.000876)			(0.000753)	(0.000793)
Observations	65,539	65,365	65,539	65,365	65,539	65,365	65,539	65,365
R-squared	0.549	0.563	0.549	0.563	0.518	0.532	0.518	0.535
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State*Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry*Time FE	No	Yes	No	Yes	No	Yes	No	Yes

Table 7: Heterogeneous impact on Capital and Output Distortion

In this table we present the difference in difference regression estimates of capital and Output Distortion. Capital Distortion (τ_k) is measured as:
$1 + \tau_{K_{si}} = \frac{\alpha_s}{1-\alpha_s} \frac{wL_{si}}{RK_{si}}$
Where α_s is the average share of capital of the industry where firm 'i' belongs. wL_{si} is the labour compensation. RK_{si} is obtained by assuming interest rate as 10% and capital as the gross fixed asset of firm i (As has been used in Hsieh and Klenow (2009)).
Output Distortion (τ_y) is measured as:
$1 - \tau_{Y_{si}} = \frac{\sigma}{1-\sigma} \frac{wL_{si}}{(1-\alpha_s)P_{si}Y_{si}}$
Where σ is the elasticity of intertemporal substitution and is set to 3 (Hsieh and Klenow (2009))
The event of interest is the periods of election in the Indian states. The coefficient of interaction term indicates the difference in the dependent variable between Conglomerate and stand alone firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. The results in column (1) and (3) is obtained from the regressions of the following form form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
Where for a state s, the dependent variable Y_{sit} is capital (output) distortion of firm i located in that state at time t. The dummy $Election_{st}$ takes a value 1 when there is an election in state s at year t and 0 otherwise. The primary variable of interest is the interaction term between $Election_{st} \times StandAlone_i$ where stand alone is the firm that does not belong to a conglomerate. The results in column (2) and (4) are obtained by grouping the election dummy into more and less uncertain elections and is of the form:

$Y_{sit} = \beta_0 + \beta_i + \beta_{st} + \beta_1 Uncertain\, Election_{st} \times StandAlone_i + +\beta_2 Less\, Uncertain\, Election_{st} \times StandAlone_i + \delta' Controls_{sit} + \epsilon_{sit}$
The primary coefficients of interest is β_1 and β_2. ***, **, * represents statistical significance at the 1%, 5% and 10% levels.

	(1) Capital Distortion	(2) Capital Distortion	(3) Output Distortion	(4) Output Distortion
Stand Alone×Election	-0.187		-0.00416	
	(0.215)		(0.0242)	
Stand Alone×More Uncertain Election		0.328*		0.0182
		(0.174)		(0.0212)
Stand Alone×Less Uncertain Election		-0.400		-0.0173
		(0.350)		(0.0272)
Observations	108,213	108,213	109,785	108,759
R-squared	0.468	0.468	0.456	0.457
Controls	Yes	Yes	Yes	Yes
State×Time FE	Yes	Yes	Yes	Yes
Industry×Time FE	No	No	No	No

Table 8: Classification based on Tangibility Ratio

In this table we present the difference in difference regression estimates. The event of interest is the periods of election in the Indian states. The coefficient of interaction term indicates the difference in the dependent variable between high tangible and low tangible firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. ***, **, * represents statistical significance at the 1%, 5% and 10% levels. Robust t-statistics in brackets

	(1)	(2)	(1)	(2)
	Debt to Asset	Short term Bank borrowing to Asset	Investment to Asset	Short term Interest Rate
Low Tangibility×Election	0.00194	0.00128	-0.00505	-0.000710
	(0.00137)	(0.00127)	(0.00976)	(0.000719)
Observations	72,003	56,829	64,103	41,017
R-squared	0.761	0.687	0.110	0.580
Controls	Yes	Yes	Yes	Yes
State*Time FE	Yes	Yes	Yes	Yes
Industry*Time FE	Yes	Yes	Yes	Yes

Table 9: Classification based on Size

In this table we present the difference in difference regression estimates. The event of interest is the periods of election in the Indian states. The coefficient of interaction term indicates the difference in the dependent variable between large and small firms in a state during election year vis-a-vis a state with no elections. Additional controls include profitability, cash flow, firm size and vintage of the firms. The standard errors are clustered at the state level. ***, **, * represents statistical significance at the 1%, 5% and 10% levels. Robust t-statistics in brackets

	(1)	(2)	(1)	(2)
	Debt to Asset	Short term Bank borrowing to Asset	Investment to Asset	Short term Interest Rate
Low Asset×Election	-0.00319	-0.000395	-0.00554	-1.37e-05
	(0.00224)	(0.00113)	(0.00489)	(0.000583)
Observations	77,036	59,465	68,124	42,998
R-squared	0.754	0.673	0.137	0.556
Controls	Yes	Yes	Yes	Yes
State*Time FE	Yes	Yes	Yes	Yes
Industry*Time FE	Yes	Yes	Yes	Yes

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