Hi-Stat

Discussion Paper Series

No.158

**Limits to Policy Reversal:
Privatization in India**

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March 2006

Limits to Policy Reversal: Privatization in India[*]

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August 11, 2005

Abstract

We examine the effect of regime change on privatization using the 2004 election surprise in India. In that election, the pro-reform BJP was unexpectedly defeated by a less reformist coalition. Government controlled companies that were being studied for complete privatization by the BJP dropped by 7.5 percent relative to private firms. By contrast, government controlled firms that were not being considered for privatization, or firms that had already been fully privatized firms, did not experience significant drop relative to private firms. Firms that the BJP had slated for definite future privatization experienced intermediate declines of approximately 3.5 percent. We interpret this as evidence consistent with investor belief of policy irreversibility in privatization, where reforms may reach a 'point of no return' beyond which future regimes have difficulty reversing those policies. Taking advantage of an 'intermediate' event where policies were expected to be more heavily influenced by the communist party, we still find evidence consistent with policy irreversibility. (JEL:Fill in)

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Over the past couple of decades, economists have shifted towards supporting private over public ownership, motivated by a large body of the theoretical and empirical work documenting the inefficiencies stemming from state ownership (see Shleifer, 1998, for a summary). Concomitant with this change in thinking, governments around the world have privatized state assets to raise revenues, and also presumably to generate improved economic performance (Megginson and Netter, 2001). However, many assets slated for privatization remain in government hands. Further, governments have retained control rights through continued majority stakes, thereby obviating many of the advantages that are meant to be derived from privatization (Gupta, 2005).

One significant barrier to privatization stems from the often volatile politics in countries attempting to implement large-scale privatizations: While the party in power may favor the sale of state assets, privatization is a long run process which may, as in the case of India we study here, continue across different governing regimes with differing views on privatization. Since each new government may argue that they are not bound by the promises of earlier regimes, investors may be concerned that the privatization process may be derailed with each electoral cycle, which may be undermining to the attempts at sell-offs in the first place. This is a multi-party variant on the classic hold-up problem faced by privatizing governments due to the temptation to expropriate the new owners after the transfer of funds has taken place (Perotti, 1995). On the other hand, policies, once committed to, may be difficult to reverse for a number of reasons. Perhaps most straightforwardly, there is inertia in policy - legislative checks and balances in a parliamentary democracy make policy reversals difficult, and vested interests may be mobilized to resist changes. Scholars of political economy also provide a number of arguments based on government credibility: Governments may not wish to completely undermine the policies that had been put in place by a previous regime, since the new government understands that it will not be in power forever, and hence may wish to sustain a cooperative equilibrium with other parties (see, for example, Alesina, 1988 for a classic reference).[1] Closely related is the argument that political parties may put some value on the maintenance of the reputation of the legislature (as distinct from the political party itself). Overall, there may thus be a point of no return in policies, beyond which less reformist politicians or new governments may not wish (or be able) to overturn a privatization-in-progress.

To what degree are commitments to privatize actually held to be credible by investors, and at what point do public statements commit future governments to adhere to privatization programs? Given the arguments on each side given in the preceding paragraph, it is largely an empirical question. India provides a particularly promising site for examining this question. It is a country with a large population of firms at varying stages of the privatization process, active electoral competition, and where privatization is actively debated as a policy

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[1]This set of issues have been in the public eye recently because of the recent debate in the U.S. Senate over the use of the 'nuclear option' to over-ride the fillibuster of judicial appointments. Many observers suggested that this would undermine the generally cooperative relations between Democrats and Republicans.

question. Further, the recent national election in India provides a useful event to evaluate the effects of political shifts on the privatization process. More specifically, we study the role of electoral turnover as a potential shock to privatization programs, by studying the change in value of partially privatized firms in response to the surprise victory of the Indian National Congress (INC) party in India's 2004 election. In contrast to the less-reformist INC, the incumbent Bharatiya Janata Party (BJP) had outlined and committed to an ambitious program of economic liberalization. This included the complete privatization of a number of publicly traded firms where the government still held a controlling stake. Because partially privatized firms were at many stages of the process of complete privatization when the election took place, ranging from 'under study' to already fully privatized, this event serves as a useful laboratory for analyzing government commitments to privatize (and government commitment in a democracy more generally).

Our results may be summarized as follows: First, we find that partially privatized (government controlled) firms decline by three to four percent relative to private firms over a four day window following the election. Further, there is considerable heterogeneity in the returns of different types of partially privatized firms. Most strikingly, the largest relative declines are among the firms that were under study for potential complete privatization; these firms decline by seven to eight percent relative to private firms (significant at the 0.1 percent level) over the four-day window. By contrast, firms already slated for future (complete) privatization, which might have been expected to decline by more than other partially privatized firms if a larger privatization premium had already been factored into prices, declined by only about 3.5 percent relative to private firms; this decline is significantly less than that experienced by the decline of firms only under consideration for complete privatization. Finally, already-privatized companies do not experience significant relative declines, nor do firms that the prior government had not considered for privatization. We find this non-linear pattern between likelihood of future privatization and returrns to be highly robust to a range of specifications.

We provide a theoretical framework for interpreting these results. Intuitively, given that neither fully privatized firms nor never-to-be completely privatized firms did not suffer abnormal returns, investors did not expect an increase in government interference in companies with government influence under the INC (relative to private firms). Hence, we may interpret the difference in the abnormal returns of firms merely under study for complete privatization and those the BJP had committed to privatize as stemming largely from different changes in the probability of privatization. We interpret the greater negative returns of 'under study' firms as evidence in favor of some limits to policy reversals.

Additionally, we may take advantage of the following 'intermediate' event - in the two trading days after the INC election was realized, it was thought that the INC's policies would be heavily influenced by communist members of a coalition government. In response to this intermediate event *all* firms with any government ownership as well as recently privatized firms declined

significantly relative to private firms, suggesting that the market anticipated disproportionate government interference in the activities of all of these firms. Interestingly, the declines experienced by both fully privatized and never-to-be fully privatized firms were virtually identical, suggesting comparable shifts in expected government interference in both types of companies. Firms that were under study for complete privatization dropped by more than firms that had been committed for complete divestment for this intermediate event as well. Interpreting these results through the lens of our theoretical framework, this once again suggests that even in the presence of a more radical policy agenda, the change in the probability of privatization was lower for firms that had already been committed to be privatized.

We consider a number of alternative explanations based on relative incentives to privatize particular companies for the INC relative to the BJP. Most importantly, we consider whether our findings may result from a realignment of political interests and the resultant need for the government to maintain control of companies for political purposes (Dinc and Gupta, 2005). Interestingly, we do find that political changes in a company's state of incorporation is predictive of market reaction to the election outcome. However, this is independent of our main results, as we observe virtually identical returns from state electoral shifts regardless of government ownership. Rather, we interpret these state political effects as likely reflecting the value of political connections to the central government. We also consider alternatives based on the labor intensity, profitability, and leverage of different types firms, and similarly find that our results are unaffected.

Overall, we interpret our findings as providing strongly suggestive evidence that reformist governments may have the ability to put in place changes that constrain future governments from going back on pre-committed reforms.

The rest of the paper is structured as follows: In section 1, we provide a background description of the Indian election of May 2004. Section 2 describes the data. In Section 3, we provide a brief model to aid with the interpretation of our results, and present our empirical findings. Section 4 concludes.

1   Political Background

India officially announced that it was embarking on an economic liberalization program in 1991, while under a government led by the Indian National Congress (INC) party. Although a number of economic reforms were phased in over the subsequent years, the government made very little headway in privatizing state companies. By 1999, only approximately 2.5 billion dollars were generated in revenues.

In 1999, a coalition government led by the Bharatiya Janata Party (BJP) came to power with more ambitious plans for reform. Further, in their five years in office, the BJP was much more successful in actual implementation of policies. Of particular importance for our study, the BJP accelerated the disinvestment and privatization program, and invited bids for well-established

public sector companies. In all, over 7.75 billion dollars were raised through the sale of controlling stakes and partial divestments through share issue privatizations (SIPs) in the following five years. In each SIP, a fraction of the company was sold to private investors through an equity issue on the Bombay Stock Exchange (BSE), with the government retained a controlling stake in each company. There was the expectation, however, that a number of these firms would ultimately be fully privatized. For instance, the BJP's political manifesto states, "...the government should progressively withdraw from involvement in non-priority sectors... In general, it should reduce its role in manufacturing and services business, where the private sector can serve the people better except where it is required for strategic reasons, to prevent private sector monopolies, run important utilities, or in exceptional circumstances." Further, while performance improvements from these 'partial privatizations' have been documented (Gupta, 2005), investors expected further improvements if and when the government sold off its remaining holdings.[2]

In addition to the companies that had already been fully privatized by the election of 2004, the BJP published a list of companies that were already slated for full disinvestment in their following term, as well as a list of companies that were 'under study' for possible complete disinvestment. Hence, among government-affiliated firms, we will consider four classifications: fully privatized; slated for complete disinvestment; under study for complete disinvestment; and partially privatized but not under consideration for full disinvestment.

1.1 Election Surprise of 2004

In its political manifesto, the BJP emphasized that the government should focus on core areas such as national security, macro-economic management, infrastructure development (both physical and social) and maintenance of law and order. Importantly, the party emphasized that the government should withdraw from manufacturing and services business, except in certain strategic cases (BJP's political manifesto, 2004). This, along with frequent mention of the budget deficit, signaled to the market that a future BJP government would continue to implement its large-scale privatization program. In fact, the BJP sold off stakes in six companies in the two months prior to the election to beat its fiscal deficit target.

By contrast, the INC platform stressed social change and employment opportunities for the poor. It mentioned strengthening the private sector through new management, and selective disinvestments. Further, it was extremely unlikely that the INC would be able to form a government without the support of the communist parties. Since privatization would inevitably lead to some labor retrenchment, the market interpreted the INC platform as largely anti-privatization and anti-reform (The Economic Times, on April 28, 2004 noted,

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[2] For example, the Economic Times on March 10, 2004 quoted a major rating agency chief economist saying, "...privatisation is extremely desirable from the point of view of increasing efficiency of resource use..."

"It seems very unlikely that ... a Congress government dependent on support from the Left, can introduce legislation to push through with privatisation...").

Immediately preceding the 2004 elections, the BJP was overwhelming favored to return to power, as reflected in pre-election opinion polls, indicating that the INC was likely to suffer its worst-ever defeat in election history . The elections were held in various states on different days beginning April 20 to May 10. Even exit polls taken after the elections just two days before the results were declared said that BJP was expected to win. For example, Hindu BusinessLine wrote, on May 11, 2004, "Exit polls conducted by TV channels predict that the BJP-led NDA is expected to garner 245-265 seats, while Congress and its allies would bag 190-210 seats."

The election results were declared on May 13. Vote counts came in after equity markets closed, and it became clear overnight that the INC had registered a convincing victory, and would likely head a new coalition government. The BSE index reacted to the news by falling six percent the following day. This reflected both concerns about the economic policies of the INC, as well as fears that in order to form a government, the INC would need the support of the Indian communist party CPI-M and allies, which had won 59 seats, their highest-ever. On the evening of May 14, the communist allies (the Left Front) decided that scrapping of the disinvestment minstry was to be a precondition for the CPI-M to support a INC-led government. The CPI-M General Secretary, Mr Harkishen Singh Surjeet, said, "We cannot afford it (the disinvestment programme followed by the NDA). We oppose disinvestment of profit-making PSUs" and generally implied that economic reforms would be put on hold. The BSE went into a tailspin, falling an additional eleven percent on May 17 (markets were closed for the weekend on May 15 and 16) despite senior members of INC responding with reassuring statements on future reforms.

The market's concern over the CPI-M's influence in the new coalition were put to rest in the following days: After senior members of INC reassured the markets on future reforms and the relatively reformist Manmohan Singh was announced as Prime Minister on May 18, the market recovered by nine per cent over the next two days. The timeline for the post-election sequence of events is listed in Table 1.

[Table 1 here]

We thus have two shocks to the political regime – May 14 represents a relatively extreme shift to policies that they market felt, with some probability, would be dominated by CPI-M ideology. Taking the longer period, May 14 – May 19, the market's reaction reflects investor response to a less extreme political shift, i.e., a shift from BJP reforms to INC reforms.[3]

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[3]This market's feelings toward Singh's leadership is summarized by Uday Kotak, managing director of Kotak Mahindra Bank (the Indian partner of Goldman Sachs), who commented that "[Singh] is a very acceptable face to the markets as well as to most political parties."

1.2 Effect on (partially) privatized firms

As emphasized above, the three parties (BJP, INC, CPI) all had substantively differing views on economic reforms, and privatization was one of the central points of contention. Potential differences in the treatment of partially and completely privatized firms includes both a shift in the probability of privatization as well as potential changes in the extent of government interference that may also impact firm value. While there was no mention by any of the three parties of actual reversals of already-privatized companies, governments obviously have many instruments through which corporate profits may be affected, and their interest and willingness to do so is likely to be greater among firms with prior government ownership.[4] In the empirical section, we will estimate reduced forms of the effects of the two political regime shifts described above. However, to aid in our interpretation of these results, it will be useful to put some structure on market valuations. Specifically, we will try to distinguish between changes in valuation caused by differences in the probability of privatization of different parties and changes in valuation caused by differences in the extent of interference by different parties.

As suggested by our description of the privatization process above, we will consider the effect on market valuation of four different types of firms: already privatized (a); slated for disinvestment (d); under study for disinvestment (u); and not considered for disinvestment (n). Note that, when we use the term privatization below, we will always be referring to the change from partial to complete privatization. Let the market valuation of a company of type $x \in \{a, d, u, n\}$ under regime $i \in \{BJP; INC; CPI\}$ be given by:

$$V_i^x = q_i^x V_i^p + (1 - q_i^x)V_i^g \tag{1}$$

where q_i^x is the probability of privatization for a type of firm x under regime i, V_i^p is the value if the firm is (fully) privatized, and V_i^g is the value if the government chooses to retain a controlling share. That is, firm value is the average of privatized and non-privatized valuations, weighted by the probability of privatization. We omit firm subscripts for ease of exposition. Then the change in valuation triggered by a regime shift from BJP to INC (exactly analogous expressions may be derived for a shift to CPI) is given by:

$$\begin{aligned} \Delta V_{INC,BJP}^x &= (V_{INC}^g - V_{BJP}^g) + q_{INC}^x(V_{INC}^p - V_{INC}^g) \\ &\quad - q_{BJP}^x(V_{BJP}^p - V_{BJP}^g) \end{aligned} \tag{2}$$

As this expression makes clear, there are many simultaneous changes in valuation that occur with the regime change, and it is not immediately obvious how one may identify the various components. However, we are aided by the fact

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[4]For example, there were fears among recently divested oil companies immediately after the election that the oil pricing mechanism that the government had recently made flexible would be reversed.

that companies in different stages of the privatization process will have extreme values of q that will simplify this expression. In particular, we assume that there was no risk of renationalization under any regime. This assumption is very much in line with the Indian government's relations with the private sector over the past few decades: Since the nationalization of Air India in 1953, the only other major nationalizations have been the banking and insurance industry nationalizations in the late 1960s and early 1970s. These sectors have since been reopened to the private sector, and no media mentions have been made in recent years of any renationalizations. If this is the case, then for firms that had already been completely privatized we may set $q^a_{BJP} = q^a_{INC} = 1$, so that the expression reduces to:

$$\Delta V^a_{INC,BJP} = V^p_{INC} - V^p_{BJP} \tag{3}$$

Similarly, we will assume that if a company is not under consideration for full privatization by the BJP, the most reformist regime, then it is unlikely to be privatized by any party, i.e., $q^n_{BJP} = q^n_{INC} \approx 0$. This yields:

$$\Delta V^n_{INC,BJP} = V^g_{INC} - V^g_{BJP} \tag{4}$$

Rearranging (2), we may obtain a general expression for market reaction:

$$\Delta V^x_{INC,BJP} = \Delta V^n_{INC,BJP} + (q^x_{INC} - q^x_{BJP})(V^p_{BJP} - V^g_{BJP})$$
$$+ q^x_{INC}(\Delta V^a_{INC,BJP} - \Delta V^n_{INC,BJP}) \tag{5}$$

We will be primarily interested in comparing the two intermediate firm types d and u, and in particular what we may infer about differential changes in probabilities of privatization from market reaction to political regime changes. We will find it useful to write:

$$\Delta q^x_{INC,BJP} = (q^x_{INC} - q^x_{BJP}) \tag{6}$$

Utilitizing (5),we have:

$$\Delta q^x_{INC,BJP} = \frac{\Delta V^x_{INC,BJP} - \Delta V^n_{INC,BJP}}{V^p_{BJP} - V^n_{BJP}} - q^x_{INC}A \tag{7}$$

where A is given by:

$$A = \frac{\Delta V^a_{INC,BJP} - \Delta V^n_{INC,BJP}}{V^p_{BJP} - V^n_{BJP}} \tag{8}$$

This will be useful if we may put some structure on A. In particular, our estimation below will generate estimates of $\Delta V^a_{INC,BJP}$ and $\Delta V^n_{INC,BJP}$, by looking at the change in market valuation of a and n type firms.

2 Data

The data required for our empirical tests include (a) stock prices (b) privatization information for the government controlled companies (c) company-level controls.

Our sample is the set of BSE500 stocks, traded on the Bombay Stock Exchange in Mumbai. We obtain daily closing price data for each company from Datastream. The main dependent variable in what follows is the returns (i.e. daily closing price changes) for each company. We define election results day, May 13, as $t = 0$ and calculate returns over the subsequent trading days. In particular, we define 2-day returns (May 14 - May 17) for firm f as:

$$R_2^f = \frac{P_2^f - P_0^f}{P_0^f} \tag{9}$$

where P_t^f is the closing price of firm f on date t. These returns include the market response to the election results combined with the subsequent comments by the communist leadership. We similarly define R_4^f as the returns over the period May 14 - May 19.[5] These returns further incorporate the stock market's reaction to the pacifying responses by INC leaders and the announcement of Manmohan Singh as prime minister.

We use ownership data from the Center for Monitoring Indian Economy (CMIE) database to classify companies as having government ownership (CMIE has five ownership classifications, including: Domestic Group; Domestic non-Group; Foreign Group; Foreign non-Group; and Government). For firms classified as government-owned, we obtained data on the Indian privatization process and the stage of privatization from the Department of Disinvestment, Ministry of Finance (India) website (www.divest.nic.in). Fully privatized companies, or companies being considered for full privatization, were classified on the website as one of "under study", "under disinvestment", or "disinvested." We generate a set of indicator variables that reflect these classifications: $UNDERSTUDY$; $DIVEST$; and $PRIVATIZED$ respectively; firms that were not present on the list were classified as $NEVER$. These indicator variables map to the firm types (a, d, u, n) discussed the previous section. Unfortunately, within a few months of the election, this information was removed from the website.

Data on firm characteristics were also obtained from the CMIE database. These include size characteristics (sales), labor expenses, industry (matched to 2-digit SIC codes), and the state of a company's headquarters. These variables are used as controls and to check robustness.

Finally, for data on Indian elections and political parties running various state governments, we rely primarily on the Election Commission of India website (www.eci.gov.in). Further information on political alliances was derived from www.indian-elections.com. We will provide further information on our use of this geographic data when we describe our tests on regional political influence.

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[5] The results are unchanged if we use risk adjusted returns

The distribution of firms according to stage of privatization is listed in Table 2A; in Table 2B we report data on for each of our variables, both for the full sample and disaggregated according to stage of privatization.

[Table 2 here]

3   Results

3.1   Reaction to the INC Regime (4 day window)

Before proceeding to regression analyses, we show the basic patterns in the data without conditioning on such characteristics as industry and size. Figure 1 shows the median cumulative returns of our four types of firms relative to the BSE200 index during May 14 - May 19. Looking at cumulative returns over the entire post-election event, we see that all government-affiliated companies declined relative to the BSE200. However, there is considerable heterogeneity in the extent of decline. Most strikingly, median cumulative returns for firms that were under study by the BJP for privatization declined by 6 percent relative to the market, while already privatized and never-to-be privatized firms' returns were indistinguishable from the broader market index. An intermediate decline was seen by firms already slated for privatization. Turning to cumulative returns through to May 17, the midpoint of the post-election period, we find that the median returns of all government-affiliated firms are below that of the BSE200. That is, the market perceived that a CPI-influenced economic agenda would adversely impact even firms that had already been completely privatized (relative to the rest of the market). Additionally, the negative impact of the CPI leader's comments on firms that were not even being considered for privatization is large, relative to other government-affiliated firms. Based on our assumption that these firms did not have any probability of complete privatization factored into pre-election valuations, this suggests that the market was concerned about greater interference in the running of government controlled firms if the CPI were to influence government policy.

[Figure 1]

Turning now to regression analysis of returns, we present first a set of results on cumulative returns for the entire post-election period, May 14-19. Our baseline specification is given by:

$$R_f^{INC} = \alpha + \beta_1 PRIVATIZED_f + \beta_2 DIVEST_f$$

$$+ \beta_3 UNDERSTUDY_f + \beta_4 NEVER_f + \varepsilon_f$$

(10)

f indexes the firm and ε_f is an *i.i.d.* error term. As explained in the data section, R_f^{INC} is the May 14-19 cumulative returns, and the remaining variables are indicator variables denoting the type of firm. The omitted category is for firms that never had government ownership, so that the coefficients on the four indicator variables reflect performance relative to private firms. The results of this regression are in the first column of Table 3.

[Table 3]

While returns relative to private firms are negative and significant for all but $PRIVATIZED$ firms, the decline is most pronounced for $UNDERSTUDY$ firms, with a decline of 8.3 percent relative to private firms. By comparison, $DIVEST$ and $NEVER$ firms declined by 4.3 and 2.2 percent respectively. When we control for industry effects in column (2), we find that the coefficient on $NEVER$ is no longer significant at conventional levels. In column (3), we add $\log(SALES)$ as a control and find the results unchanged. Finally, we control for geographic heterogeneity by including state fixed effects in column (4), and find that our results are unchanged. We may summarize our first main result as follows:

Result 1 *In the post-election period May 14-19, $NEVER$, and $PRIVATIZED$ firms experience declines that were statistically indistinguishable from the returns experienced by private firms. $UNDERSTUDY$ firms experienced declines of approximately eight percent relative to private firms, significant at the 0.1 percent level. $DIVEST$ firms experienced intermediate declines of approximately 3.5 percent. The decline in $UNDERSTUDY$ firms was also significantly different (at least at the ten percent level in all specifications) from the declines experienced by $DIVEST$ firms.*

The interpretation of these results is aided by reference to Section 2 above. First, we interpret the coefficient on $PRIVATIZED$ to reflect the expected change in government interference in already fully privatized firms, $\Delta V_{INC,BJP}^a = V_{INC}^p - V_{BJP}^p$. This is precisely estimated as zero (standard error of approximately 0.02), relative to private firms, in all specifications. Similarly, assuming that the probability of full privatization was close to zero for all $NEVER = 1$ firms, the coefficient on $NEVER$ reflects the decline in government controlled firms ($\Delta V_{INC,BJP}^n = V_{INC}^g - V_{BJP}^g$) relative to private firms, and hence the likely change in government interference in government controlled firms under the INC. In specifications with controls, this coefficient is insignificantly different from zero, suggesting that the market anticipated a minimal shift in government interference in the companies it controlled under the INC, relative to the BJP (beyond industry-wide shifts in government policy which are absorbed by the industry effects). Comparing market reaction for $DIVEST$ and $UNDERSTUDY$ firms, we find that the coefficient on $UNDERSTUDY$ is significantly more negative than the coefficient on $DIVEST$. Differencing (7) for the two types of firms, and utilizing the fact that $\Delta V_{INC,BJP}^a - \Delta V_{INC,BJP}^n$

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(and hence A) is very close to zero, we may estimate the differential effect on the probability of full privatization by:

$$\Delta q_{INC,BJP}^d - \Delta q_{INC,BJP}^u \approx \frac{\Delta V_{INC,BJP}^d - \Delta V_{INC,BJP}^u}{V_{BJP}^p - V_{BJP}^g} \qquad (11)$$

Since the difference $\Delta V_{INC,BJP}^d - \Delta V_{INC,BJP}^u$ is negative (significant at least at the ten percent level in all specifications), and the denominator is clearly positive, this suggests that the market expected a greater change in the probability of privatization of $UNDERSTUDY$ firms, relative to $DIVEST$ firms.

There are two primary interpretations of this result. First, the political economy explanation that we outline in the introduction posits that the privatizations that the BJP government pre-committed to (i.e., $DIVEST$ firms) would be difficult for a subsequent regime to reverse relative to those that it had not already committed to privatize (i.e., $UNDERSTUDY$ firms). We refer to this as the 'Irreversibility' explanation. Alternatively, it may be that the firms to be fully divested earlier are those that would create the greatest benefit to the government, regardless of the party in power. If this were the case, then the 'marginal' privatization cases that were only at the stage of being studied for possible privatization would be most adversely affected by a shift to a less privatization-friendly government. We refer to this below as the 'Ordered Privatization' explanation.

While we cannot definitively ruled out either explanation, we may provide a circumstantial test for the latter. Prior work suggests that governments may be averse to privatizing some types of politically strategic firms. In particular, Boycko et al, (1996) focus on excess employment in government firms, as these companies are used to achieve the political objective of increased employment. In our context, the Indian government will be better able to control the wage bill for firms where it maintains a controlling stake. Hence, it may be politically more costly for the government (BJP or INC) to lose control over a firm with more potential to cut costs by shedding labor. DeWenter and Malatesta (2001) observe that, in addition to concerns over employment, governments avoid privatizing firms that are unprofitable or heavily laiden with debt. Hence, we investigate whether there are systematic differences between $DIVEST$ and $UNDERSTUDY$ firms in these characteristics. We define the variable $WAGE\_RATE$ to be the ratio of a firm's wage bill to total sales; as measures of profitability and leverage we use $PBIT/Assets$ and $Debt/Equity$. The summary statistics in Table 2 show that for profitability there is virtually no difference between $DIVEST$ and $UNDERSTUDY$ firms, though there are many firms for which profit data are unavailable. For leverage, we find that $DIVEST$ firms actually have higher debt ratios than $UNDERSTUDY$ firms. The only characteristic that is consistent with the Ordered Privatization hypothesis is $WAGE\_RATE$: This variable does indeed appear to be correlated with the decision to privatize: the mean of $WAGE\_RATE$ is 0.067 and 0.139 for $DIVEST$ and $UNDERSTUDY$ firms respectively. This difference is significant at the five percent level. Further, $NEVER$ firms have a wage ratio of

0.14 that is much closer to that of $UNDERSTUDY$ firms. We therefore include $WAGE\_RATE$ as a control variable in specification (10). This appears in column (5) of Table 3: the coefficient on $WAGE\_RATE$ is not significant, and more importantly, the coefficients on our privatization variables are unaffected. Thus, while there is some evidence that labor intensive firms were being held back from privatization, this does not seem to be the primary explanation for the differential market reaction that we study here. Overall, our results here provides tentative evidence that runs counter to the Ordered Privatization explanation. We recognize that this by no means conclusive, as it may be that the $DIVEST$ versus $UNDERSTUDY$ classification is a more precise proxy for the preferred ordering of privatization for any government, but our test does provide compelling circumstancial evidence to the contrary.

A second concern is that the ordering of privatizations may be a function of political interests. Indeed, in the case of India specifically, Dinc and Gupta (2005) provide evidence that government owned firms based in states where the government holds a majority are less likely to be privatized. It may be, therefore, that the BJP held back firms in states where they had a dominant presence, so that firms in BJP-dominated states are more likely to be classified as $UNDERSTUDY$ than as $DIVEST$. If, additionally, firm value suffers from being located in a politically disadvantaged state in general, so that firms in BJP-dominated states were expected to suffer after the change in government, then underperformance of $UNDERSTUDY$ firms relative to $DIVEST$ firms after the election may be the result of an omitted variable bias. The fact that our results are unaffected by state-level fixed effects implies that this is not a concern. As an additional test, we construct the variable $BJP04_s$, which is the fraction of seats in the federal government obtained by the BJP in state s in the 2004 election, where s is the state that a firm is headquartered; we similarly define $BJP99_s$. Consistent with the work of Dinc and Gupta (2005), the mean value of $BJP99$ is indeed much higher for $NEVER$ and $UNDERSTUDY$ firms (0.46 and 0.64), while the average of $BJP99$ is 0.36 for $DIVEST$ firms. Collectively, this does support the hypothesis that BJP politicians may have been avoiding the complete privatization of firms in their home states. We report results including these political variables in columns (6) and (7) of Table 3. The coefficient on $BJP04$ is negative and significant at the one percent level, but the coefficients on our privatization variables are unaffected. Thus, while there is indeed a significant effect of the political affiliation of a company's home state on post-election returns, this is independent of our privatization results. Additionally, we note that the interaction of $BJP04$ with our privatization variables is never significant, implying that the effect of firm value of being in a politically disadvantaged state is substantial also for private firms.[6] The results of these additional analyses lead to our second result:

Result 2 *Since the declines in $NEVER$ and $PRIVATIZED$ firms are almost*

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[6] We view this as a very interesting ancillary set of results, and serves as a contribution on the value of political connections in the spirit of, for example, Fisman (2001), Ramalho (2003), and Faccio (2005).

identical (and close to zero), we infer that there was a greater change in the probability of privatization for $UNDERSTUDY$ relative to $DIVEST$ firms. We tentatively interpret this as resulting from a limit on the scope for reversals of policies put in place by the BJP while in power.

3.2 Reaction to the Communist-Influenced Regime (2 day window)

We take advantage of the 'intermediate' event, as described in Table 1 above, which suggests that during the two trading days after the election the market expected a political regime that would be very antagonistic towards economic reforms due to CPI influence. In Table 4 we therefore report results parallel to those in Table 3 above, but for the abbreviated event window of May 14-17. Interestingly, we find large and statistically significant negative coefficients on both $PRIVATIZED$ and $NEVER$ in the two day window. The coefficient on $PRIVATIZED$ takes on a value of -0.064 in the specification with full controls, and is significant at the one percent level. Assuming once again that there was no perceived risk of privatization reversal,[7] the large and negative coefficient on $PRIVATIZED$ suggests that the market anticipated government interventions in the economy that would differentially affect firms with prior government ownership. This could be the result of the government retaining some means of controlling these firms, for example, through residual representation on the board. Alternatively, these companies might be clustered in industries and/or regions that are particularly amenable to government control.[8] Given that the coefficient on $PRIVATIZED$ is completely unaffected by the inclusion of industry and state controls, we lean toward the first explanation.

[Table 4 here]

We similarly find a large and statistically significant coefficient on $NEVER$. In our preferred specification in column (4) of Table 4 that properly controls for industry heterogeneity, the point estimate is $-.068$ and significant at the one percent level. Interestingly, the coefficient is almost identical to the coefficient on $PRIVATIZED$, suggesting a similar market anticipation of increased interference in the two types of firms, assuming once again that the probability of full privatization is zero for $NEVER$ firms under all economic regimes.[9]

Finally, we note that in the abbreviated window, we once again find that the decline in $UNDERSTUDY$ firms is significantly greater than that of any other type of firm, including $DIVEST$ firms. Further, referring once again to 7, we may once again set $A \approx 0$, given the similarity in market response of

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[7]As noted previously, there have been no recent nationalizations (nor any discussion of potential nationalizations) in India in recent decades.

[8]For example, the government directed oil companies to freeze retail prices of gasoline in early 2004.

[9]Note that this obviously does not imply the same level of interference in the two groups of firms: interference in $NEVER$ firms is presumably higher than interference $PRIVATIZED$ firms under any economic regime.

$PRIVATIZED$ and $NEVER$ firms. The implied difference in the change of probability of privatization once again suggests that privatizations that had been put in motion by the BJP, but not yet implemented, would not be undermined even by this more extreme regime.

Result 3 *In the post-election period May 14-17, $DIVEST$, $NEVER$, and $PRIVATIZED$ firms experience declines that are significantly greater than the declines experienced by private firms; the relative declines of six to seven percent experienced by these three types of firms are statistically indistinguishable from one another. $UNDERSTUDY$ firms experienced even steeper declines of approximately 12 percent relative to private firms. This decline is significantly greater than those experienced by all other types of firms. We interpret these results as implying the following: (1) a greater fear of interference by a communist-influenced government in both already privatized and government controlled firms; (2) a greater change in the probability of privatization of $UNDERSTUDY$ relative to $DIVEST$, even under a relatively extreme communist-dominated policy regime.*

3.3 Postscript: post-election decisions of the INC

From an asset pricing perspective, the post-election actions of the INC are not useful in generating a precise measure of market sentiments toward government policy, due to the difficulty in isolating precise (and surprising) policy announcements. We can merely make some cursory assessment of whether the market was correct in its beliefs about privatization reversals. As of this writing, it is still too early to make a concrete assessment, as virtually none of the $UNDERSTUDY$ and $DIVEST$ companies has been privatized or slated to remain under government control. Broadly speaking, the market was indeed correct about being concerned about shifts in privatization. Soon after the new government took charge, it scrapped the disinvestment ministry, and announced the Common Minimum Program which involved much less privatization than the BJP had planned, though this involved relatively few firms that had been partially privatized. This will be a potentially useful area for investigation in a few years' time.

4   Conclusion

Government policies are subject to reversal following any regime change. In the volatile politics of many young democracies in the developing world, there is particular concern that this sort of reversal may reduce credibility with investors and hamper investment flows. In this paper, we study the effects of political change on privatizations by analyzing market reaction to the INC party's unexpected victory over the reformist BJP part in the 2004 Indian election. Our findings provide evidence regarding the presence of limits to which privatization policy can be reversed. We therefore speak to two important literatures: the political economy of multi-party democracies, and the process of privatization.

However, we view this as only a very first step in generating a broader understanding of these issues. First, it will be useful to gather further evidence that may more precisely nail down the irreversibility hypothesis. Further, it would be useful to know the contexts in which irreversibility is strongest. We mention at various points in the text the importance of a legislative democracy with checks and balances, but there is huge variation in governing institutions within this realm. Research in political economy has examined differences stemming from, for example: the extent of electoral competition; presidential versus parliamentary government; and many others, and it would be useful to know how these characteristics of government affect policy inertia.

Additionally, we have uncovered strong effects of the ruling party on the valuation of government controlled firms. However, we have not examined the channels through which this takes place. We suggest that our methodology, built on examining valuation responses to unexpected electoral outcomes, may be a useful technique for examining this question in India and elsewhere.

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Figure 1
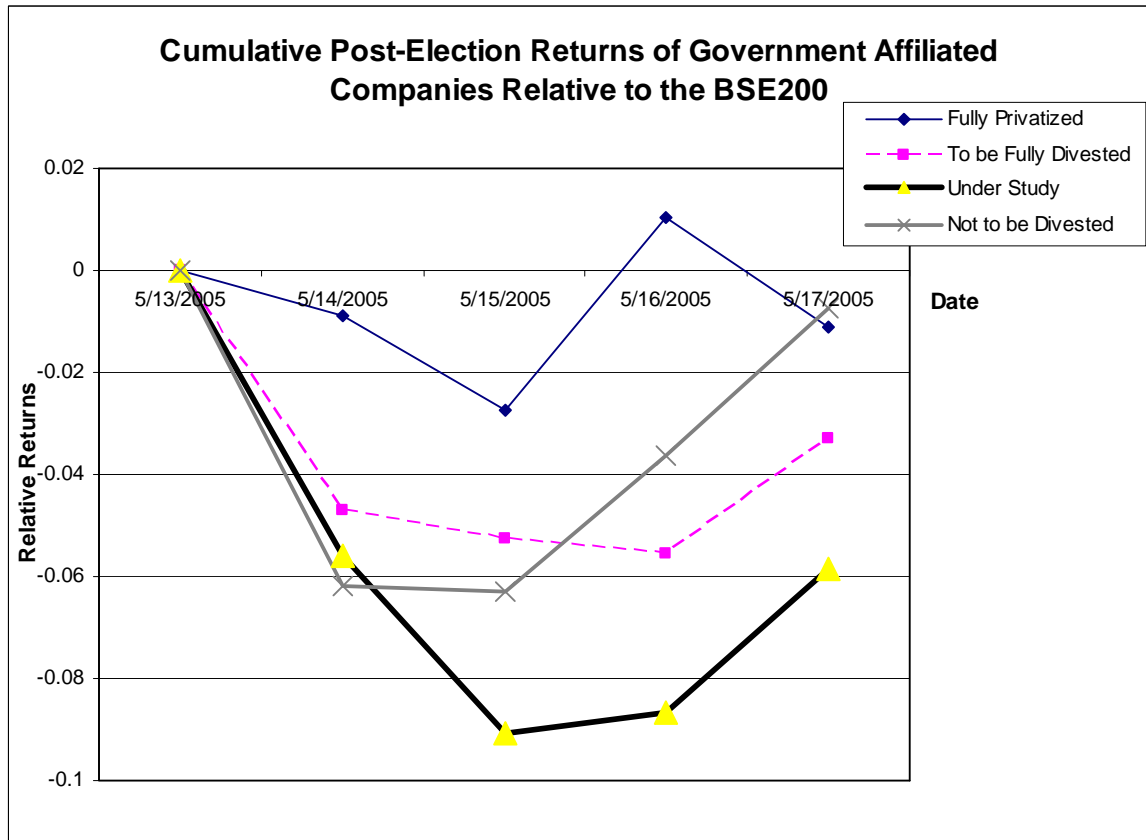

Cumulative Post-Election Returns of Government Affiliated Companies Relative to the BSE200

Table 2A. Freq. Distn of Ownership Type	
PRIVATIZED	6
UNDERSTUDY	14
DIVEST	11
NEVER	30
PRIVATE	432

Table 2B - Summary Statistics by Firm Type										
Firm Type		Mean	Std. Dev.	Obs				Mean	Std. Dev.	Obs
All	4 day returns	-0.078	0.053	493	DIVEST	4 day returns		-0.116	0.055	11
	2 day returns	-0.170	0.077	493		2 day returns		-0.226	0.098	11
	log(SALES)	6.298	1.433	479		log(SALES)		8.222	1.751	11
	WAGE_RATE	0.151	0.786	462		WAGE_RATE		0.068	0.080	11
	Debt/Equity	0.720	35.978	364		Debt/Equity		0.700	16.948	8
	PBIT/NA	10.473	82.560	429		PBIT/NA		14.285	6.054	10
	BJP99	0.361	0.296	481		BJP99		0.361	0.336	11
	BJP04	0.256	0.212	481		BJP04		0.213	0.189	11
PRIVATIZED	4 day returns	-0.086	0.037	6	NEVER	4 day returns		-0.096	0.048	30
	2 day returns	-0.236	0.053	6		2 day returns		-0.247	0.080	30
	log(SALES)	8.311	1.115	6		log(SALES)		7.593	1.407	28
	WAGE_RATE	0.074	0.079	6		WAGE_RATE		0.112	0.062	27
	Debt/Equity	0.135	0.106	2		Debt/Equity		1.235	2.027	6
	PBIT/NA	17.025	15.182	2		PBIT/NA		1.780	7.719	21
	BJP99	0.482	0.376	6		BJP99		0.457	0.350	28
	BJP04	0.299	0.333	6		BJP04		0.333	0.252	28
UNDERSTUDY	4 day returns	-0.157	0.052	14						
	2 day returns	-0.280	0.060	14						
	log(SALES)	8.092	1.264	14						
	WAGE_RATE	0.132	0.094	14						
	Debt/Equity	0.145	1.925	10						
	PBIT/NA	19.705	32.936	12						
	BJP99	0.643	0.433	14						
	BJP04	0.230	0.230	14						

Note: For Debt/Equity and PBIT/NA we list medians rather than means because of the presence of extreme outliers

Table 3 - Effect of Ownership Type on Four day Post-Election Returns May 14-19							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PRIVATIZED	-0.013	-0.015	-0.014	-0.012	-0.013	-0.010	-0.012
	(0.014)	(0.018)	(0.019)	(0.018)	(0.019)	(0.018)	(0.017)
DIVEST	-0.043***	-0.038**	-0.037*	-0.035*	-0.035*	-0.036**	-0.038**
	(0.016)	(0.018)	(0.019)	(0.019)	(0.019)	(0.018)	(0.018)
UNDERSTUDY	-0.084***	-0.073***	-0.072***	-0.075***	-0.075***	-0.070***	-0.074***
	(0.014)	(0.013)	(0.014)	(0.016)	(0.016)	(0.013)	(0.013)
NEVER	-0.023**	-0.014	-0.016	-0.017	-0.014	-0.013	-0.015
	(0.009)	(0.011)	(0.012)	(0.013)	(0.013)	(0.012)	(0.012)
log(Sales)			-0.000	-0.001	-0.002	-0.001	-0.001
			(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
WAGE_RATE					-0.014		
					(0.009)		
BJP04						-0.035***	-0.044***
						(0.012)	(0.012)
BJP99							0.020**
							(0.008)
Industry FE	No	Yes	Yes	Yes	Yes	Yes	Yes
State FE	No	No	Yes	Yes	Yes	No	No
Observations	493	492	478	470	454	469	469
R-squared	0.09	0.20	0.21	0.27	0.28	0.23	0.24

Notes: Four day returns is the dependent variable in all regressions. PRIVATIZED is an indicator variable denoting a fully privatized firm. NEVER is an indicator variable denoting a firm that was not being considered for full privatization at the time of the election. DIVEST is an indicator variable denoting that the firm had been slated for disinvestment by the BJP at the time of the election. UNDERSTUDY is an indicator variable denoting that the BJP was studying the possibility of fully privatizing the firm. WAGE_RATE is the ratio of the wage bill to sales in 2003. BJP04 and BJP99 are the fractions of seats won by the BJP in the firm's home state in 2004 and 1999 respectively. Robust standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4 - Effect of Ownership Type on two day Post-Election Returns May 14-17

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
PRIVATIZED	-0.076***	-0.075***	-0.064***	-0.061***	-0.060***	-0.059***	-0.060***
	(0.020)	(0.021)	(0.021)	(0.017)	(0.017)	(0.021)	(0.020)
DIVEST	-0.067**	-0.061**	-0.057**	-0.055*	-0.055*	-0.055*	-0.055*
	(0.028)	(0.026)	(0.028)	(0.032)	(0.032)	(0.029)	(0.028)
UNDERSTUDY	-0.120***	-0.118***	-0.108***	-0.122***	-0.120***	-0.105***	-0.106***
	(0.016)	(0.015)	(0.017)	(0.020)	(0.020)	(0.017)	(0.017)
NEVER	-0.088***	-0.073***	-0.068***	-0.074***	-0.069***	-0.068***	-0.069***
	(0.015)	(0.018)	(0.018)	(0.019)	(0.020)	(0.019)	(0.019)
log(Sales)			-0.006*	-0.006*	-0.007**	-0.006**	-0.007**
			(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
WAGE_RATE					-0.018		
					(0.016)		
BJP04						-0.027	-0.031*
						(0.017)	(0.018)
BJP99							0.008
							(0.013)
Industry FE	No	Yes	Yes	Yes	Yes	Yes	Yes
State FE	No	No	Yes	Yes	Yes	No	No
Observations	493	492	478	470	454	469	469
R-squared	0.16	0.26	0.27	0.32	0.33	0.28	0.28

Notes: Four day returns is the dependent variable in all regressions. PRIVATIZED is an indicator variable denoting a fully privatized firm. NEVER is an indicator variable denoting a firm that was not being considered for full privatization at the time of the election. DIVEST is an indicator variable denoting that the firm had been slated for disinvestment by the BJP at the time of the election. UNDERSTUDY is an indicator variable denoting that the BJP was studying the possibility of fully privatizing the firm. WAGE_RATE is the ratio of the wage bill to sales in 2003. BJP04 and BJP99 are the fractions of seats won by the BJP in the firm's home state in 2004 and 1999 respectively. Robust standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%