

**UNSTABLE POLITICS:  
FISCAL SPACE AND ELECTORAL VOLATILITY IN THE INDIAN STATES<sup>1</sup>**

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**Abstract:** What explains variation in electoral volatility? We argue that fiscal space - availability of financial resources to enact policy initiatives and provide public programs - possessed by governments can explain the level of electoral volatility experienced by the state. Where governments have fiscal space, citizens reward incumbent parties with their continued support. But, when fiscal space is constrained, the incumbent government's ability to provide state resources is drastically reduced. Citizens therefore have little reason to reward it at the polls, and are 'available' to opposition politicians and to alternative appeals. Vote-switching ensues and the incumbent government is voted out of the office. We test this argument, and others in the existing literature, on electoral returns from state assembly elections across 15 major Indian states from 1967-2004. Our results support the argument that fiscal space influences electoral volatility.

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Elected governments are expected to provide services to voters, in exchange for which voters reward the party in government with their support.<sup>2</sup> For this trade, so to speak, of government programs for citizen's votes, governments must possess the revenues to enact policy initiatives and to finance public programs that voters desire. What happens if elected governments do not have the resources to meet voter demands?

In this paper we argue that the availability of these revenues, which we, following Heller (2005), term *fiscal space*, is crucial to explaining levels of electoral volatility. Where a government's budget has fiscal space, *i.e.*, "room ... to provide resources for a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy" (Heller 2005: 32), governments are able to enact policy for the voters and citizens may reward the incumbent parties with their votes at the next elections. However, when fiscal space is constrained, either for exogenous reasons such as economic crises or endogenous reasons such as excessive expenditures or low tax revenues, the ability of the incumbent government to provide such resources is drastically reduced. Citizens therefore have little reason to reward the incumbent government at the polls, and are 'available' to opposition politicians and to alternative appeals. Vote-switching ensues and the incumbent government is voted out of the office.

This explanation for electoral volatility is significantly different from existing explanations developed to explain cross-national and inter-temporal variation in electoral

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<sup>2</sup> This trade, so to speak, has been linked to the growth in the size of the public sector. This growth has been linked to the extension of the franchise, electoral incentives, and party competition, all of which pressure the state to cater to the demands of the masses and of organized interests (Aidt, Dutta, and Loukoianova 2006; Bawn and Rosenbluth 2006; Boix 2001; Meltzer and Richard 1981; Tanzi and Schuknecht 2000).

volatility. Scholars studying electoral volatility in Western and Eastern Europe, Latin America, and Africa, have argued in favor of explanations emphasizing changes in patterns of mobilization (Huntington 1968; Przeworski 1975), variation in electoral laws and party systems (Pedersen 1983; Bartolini and Mair 1990; Roberts and Wibbels 1999), nature of social cleavages (Ferree 2004; Heath 2005; Tavits 2005), economic voting (Remmer 1991; Roberts and Wibbels 1999), and the passage of time (Przeworski 1975; Tavits 2005). To assess the validity of our argument we utilize an original data set of state assembly election returns from 15 major Indian states from 1967-2004. The Indian states are particularly useful for this purpose as they exhibit both spatial and temporal variation in electoral volatility, while sharing institutional arrangements. Our empirical analysis demonstrates strong effects of fiscal space on electoral volatility, even when controlling for alternative explanations. These results, we argue, have important implications for our understanding patterns of electoral politics in fiscally constrained societies – most of which happen to be in the developing world.

We begin the paper by developing our theoretical framework for understanding electoral volatility. Next, we describe the variation in electoral volatility in Indian state elections, which we argue is ideal for testing our argument. We then briefly review the principal explanations and findings from previous studies of electoral volatility, before turning to statistical analyses of our data. We conclude with a discussion of the possible extensions of our argument and its implications for other puzzles of Indian politics specifically, and comparative politics generally.

## **FISCAL SPACE: A POLITICAL ECONOMY EXPLANATION**

All governments must provide the citizens they represent access to the resources of the state. This access is delivered via public policy enactments. The relationship between governments and voters, therefore, can be conceptualized as an exchange of government-

financed programs for electoral support. An important feature of this relationship is that it is continuous; that is, leaders, once elected, cannot rest on their laurels but rather must persist in bringing state resources to their home districts (Ferejohn 1974; Fenno 1978; Evans 2004). Accordingly even politicians with proven records for being able to ‘deliver the bacon’ must work with their colleagues in the legislature to ensure a steady flow of state resources to the district from which they are elected. Doing so successfully is thought to make politicians invulnerable to challenge because voters recognize their ability to provide access to state resources. The key feature of this dynamic relationship, therefore, is that elected governments need to provide this support in every election cycle. As Fenno saw it, voters have a ‘what have you done for us lately’ attitude, and leaders feel the pressure of their constant expectations (Fenno 1978).

As a result of this dynamic, every US budget carries new elements of pork (Weingast, Shepsle, and Johnsen 1981; see Evans 2004 for a recent review of this literature). Even in a democratic system that is not fully competitive such as Jordan, an expansion of the legislature can lead to an expansion of state resources allocated for discretionary expenditures by politicians (Lust-Okar 2005). In other words, any government reliant on popular support must continually be able to generate sufficient revenues to allocate as discretionary expenditures that would help its electoral prospects in the next election, which is consistent with the empirical observation that democratically-elected governments tend to have ever-increasing public sectors (Meltzer and Richard 1981; Tanzi and Schuknecht 2000; Tanzi 2005).<sup>3</sup>

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<sup>3</sup> This basis of this assumption is no different than the standard claim in other democratic contexts that elected politicians seek to provide ‘pork’ to their constituencies (Weingast, Shepsle, and Johnsen 1981). Constituency service therefore becomes essential to politicians’ re-election fortunes (see also Fenno 1978). Since any individual politician cannot generate and direct pork to

This continuous trade, of government programs for citizen's votes, is only possible if governments possess the necessary resources to enact policy initiatives and to finance programs that legislators seek. Not all state governments have equal resources. Poorer states, and states whose economies are not performing well, are likely to face greater resource constraints than richer and better performing states. Likewise, even if states have relatively equal levels of revenues, states differ in terms of the discretionary funds that they have available, *i.e.*, the amount of money they have after accounting for their principal and recurring commitments. Once such costs have been paid, governments use any remaining resources to create new programs for citizens. We combine these two aspects of government revenues into a single concept of fiscal space, which we define as "room in a government's budget that allows it to provide resources for a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy" (Heller 2005: 32).

When governments possess fiscal space they are able to provide state resources to their

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her constituency without the collaboration of others in the legislature, a politician's ability to do so is a function of her ability to forge a winning coalition within the legislature. In this formulation, one purpose of political parties is to solve the collective action problem within legislatures (Aldrich 1995; Chhibber and Kollman 2004). By being a member of a party that has a majority of seats in the legislature, or that can enter a coalition with other parties, individual legislatures can enter log-rolls and provide their constituencies the service needed to secure their votes. This is especially true in majoritarian systems, such as those in place in Indian states, where the majority party can implement its policy agenda without much opposition. Therefore, backing a candidate from the majority party is important if the voter is hoping to benefit from government policies.

citizens or the party's supporters and their campaign promises to continue to do if re-elected are deemed more credible by voters.<sup>4</sup> If adequate fiscal space exists, voters return the incumbent party to power, since they recognize that the degree to which a particular constituency - partisan or geographic (Franzese, Jusko, and Nooruddin 2006) - is targeted with these services is a function of the support it provided the incumbent party or coalition of parties. However, when fiscal space is constrained, either for exogenous reasons such as economic crises or endogenous reasons such as excessive expenditures or low tax revenues, the ability of the incumbent government to provide such resources is drastically reduced and citizens deem election-year promises to do so incredible (Howes, Murgai and Wes 2004). Citizens therefore have little reason to reward the incumbent government at the polls, and are 'available' to opposition politicians and to alternative appeals. Vote-switching ensues and the incumbent government is voted out of the office.<sup>5</sup>

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<sup>4</sup> Governments can choose to create public policy programs aimed at delivering collective goods or to focus on the delivery of patronage to their 'clients'. In either case, their promise to erstwhile supporters to do so is only credible if the state possesses the necessary resources. As such, beyond the basic democratic requirement that a party must secure the support of a plurality of voters to win office, our argument does not require us to assume that governments prefer public good provision to patronage or vice versa. Both strategies - or any mixture of them - still requires fiscal space.

<sup>5</sup> One option available to a cash-strapped government is to improve its fiscal situation by reducing expenditures or increasing tax revenues. The former strategy is politically difficult and most governments are loathe to cut spending on law and order services or to lay off government services (Nooruddin and Simmons 2006). Similarly, governments must continue to meet their

The irony of this situation is that, the incumbent ruling party dethroned, the erstwhile opposition which is now in power might be just as constrained as its predecessor by the lack of fiscal space unless it is able to redraw the contours of its financial position. If not, it too will prove unable to provide consistent constituency service, and voters will punish it at the polls at the next opportunity. In this manner, a chronic lack of fiscal space can induce not just anti-incumbency behavior but longer-term party system, or aggregate electoral, volatility as well.

Of course, not all states face equally dire financial straits, with some facing far more intractable problems than others. Our argument, therefore, is that variation in government's fiscal space can explain variation in the degree to which voters form party loyalties and, therefore, aggregate electoral volatility. Specifically, our discussion thus far yields the following testable hypothesis:

*H<sub>1</sub>: States with less fiscal space should experience greater aggregate electoral volatility.*

## **ELECTORAL VOLATILITY ACROSS INDIAN STATES**

The Indian party system, after decades of relatively stable one-party party system dominance by the Congress party, has fragmented considerably in recent years. Most analysis of Indian electoral politics has focused on what has transpired at the national level in India where over 30 parties are currently represented in Parliament and recent governing coalitions (such as

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debt servicing obligations or run the risk of losing future access to credit (Mahdavi 2004).

Further, research by the IMF has shown that few governments are able to reduce their budget deficits by increasing tax collection (IMF 2003; Cho 2004). A natural extension of the research presented here would be to endogenize the fiscal space available to governments. For now, we focus on establishing the analytical utility of the concept for explaining variations in electoral volatility.

the BJP-led National Democratic Alliance or the Congress-led United Progressive Alliance) have been composed of at least 10 parties. The national-level fragmentation, electoral volatility and the anti-incumbency sentiments of the electorate have been well documented and commented upon (Yadav 2000, 2004; Chhibber and Nooruddin 2000; Chhibber and Kollman 2004; Sridharan 2004; Linden 2004).

What about at the state level? Have electoral politics in the Indian states also become more volatile over time and what explains volatility in the Indian states? What we find is that at the state level electoral volatility has not increased since the 1990s. In fact, electoral volatility in the states is lesser today than it was in the 1970s though the change is not that substantial. In other words, while at the national level electoral volatility has indeed increased since the 1990s, this is not the case at the state level where electoral volatility has been a relatively consistent characteristic of the states.<sup>6</sup>

Electoral volatility is defined as the “net electoral change between two consecutive elections” (Bartolini and Mair 1990: 19). Aggregate levels of electoral volatility, measured as the net change in vote shares for parties competing in the elections, are used as a convenient proxy for the cumulation of individual vote shifts.<sup>7</sup> To measure electoral volatility, we use the measure

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<sup>6</sup> Linden (2004), in a study of incumbency rates for elections to state assemblies, finds that the incumbency rates for individual politicians have been relatively low and that they have not changed much since the 1970s. This too belies observations made from national-level data that the Indian party system is far more volatile today than it has been in the past.

<sup>7</sup> It is in fact possible for there to be electoral volatility at the aggregate volatility without any individuals changing their votes—due to the entry of new voters—and for there to be complete individual volatility without any aggregate volatility—if all the individual vote shifts perfectly

first presented by Przeworski (1975) and made prominent by Pedersen (1979, 1983).

Accordingly, for a given election, aggregate electoral volatility (EV) is calculated as the sum of each party's absolute change in vote share. Thus, in a party system with ' $n$ ' parties,

$$[1] \quad EV = (\sum_{i=1}^n |vote_{i,t} - vote_{i,t-1}|) / 2$$

Where,  $vote$  is the share of the total vote gained by party  $i$  in election  $t$ . The sum of the absolute changes is divided by 2 to avoid double-counting, since each party's gains are some other party's losses, and to provide a convenient metric for the resulting index. EV thus has a theoretical range of 0 or perfect stability to 100 or perfect instability.

/INSERT FIGURE 1 ABOUT HERE/

Just how volatile are state elections in India? Figure 1 plots the simple frequency distributions of electoral volatility and vote shifts for the largest party in the prior election across 123 state assembly elections held in the 15 major Indian states over the period 1967-2004.<sup>8</sup> The top histogram indicates that Indian state assembly elections have been quite volatile over the past four decades. The average EV score is 25.52% and the standard deviation is 15.18, and Figure 1

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balance each other. However, Bartolini and Mair (1990) conclude that aggregate electoral volatility is an appropriate indicator of individual vote shifts.

<sup>8</sup> We have data for 138 elections but the first observation for each state is dropped since we cannot calculate the change from the previous election. The states included in this analysis are Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal. These states together are home to over 90% of the Indian population. A complete listing of elections for which we collected data is available in the Appendix. All electoral data are drawn from the Electoral Commission of India (<http://www.eci.gov.in>).

makes clear that this is not the result of a few outlying elections. Rather the modal outcome is around 20% volatility. By comparison, across the 303 West European elections surveyed by Bartolini and Mair (1990), only five had electoral volatility scores higher than 25 and none were higher than 32.1. The lower histogram in Figure 1 plots the frequency distributions of changes in vote share received by the incumbent party.<sup>9</sup> Clearly there is no incumbency advantage here, with an average swing of 8% *away* from the party that had the largest vote share in the previous election. While most elections have relatively small anti-incumbent or small pro-incumbent swings, at least 28 elections, just slightly less than a quarter of the entire sample, had anti-incumbent swings of over 20 percentage points.<sup>10</sup> Two conclusions are suggested by these data: state-level elections in India have been characterized by high levels of volatility and being the incumbent ruling party carries little electoral advantage.<sup>11</sup>

/INSERT FIGURE 2 ABOUT HERE/

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<sup>9</sup> Throughout the paper, we use ‘ruling party’, ‘incumbent party’ and ‘incumbent’ synonymously to refer to the party that has formed the government at the state level. Since the largest party does not always form the government, we identified the ruling party by checking the party affiliation of the Chief Minister of the state.

<sup>10</sup> Nor is this an artifact simply of anti-Congress swings after Indira Gandhi’s imposition of Emergency in the mid-1970s. The elections that took place during the Janata reign of 1977-1980 certainly had large anti-Congress swings, but even when elections held in this period are excluded from the analysis, the mean incumbency swing is 5.6 percentage points *against* and the median swing is 1.2 points against.

<sup>11</sup> Linden (2004) finds that, after 1991, incumbent members of the legislative assemblies (MLAs) were 14% less likely to win in legislative assembly elections in India.

Are all states equally volatile? Are incumbents at a disadvantage everywhere? Figure 2 answers these questions. The fifteen states for which we have data are arrayed in order of increasing volatility and it is obvious that there is significant variation in levels of volatility.<sup>12</sup> At one extreme, there is a cluster of states with very high levels of volatility: Tamil Nadu, Haryana, Bihar, Orissa, and Assam. These states have an average volatility score of over 30 percentage points. Comparatively, these states have volatility scores twice that of the states at the other end of the continuum: Kerala, Andhra Pradesh, and West Bengal are the most stable states. Figure 2 also provides the mean ruling party vote change by state. As might be expected, the more volatile states also experience larger anti-incumbent swings, but the correlation is not perfect, which indicates that electoral volatility cannot be reduced to simply anti-incumbency. For instance, Bihar and Orissa have experienced greater or the same level of volatility as Assam, yet Assam's anti-incumbency swing is 5% greater than in either of those two states. There are only two states in which the largest parties have had an advantage, albeit a very small one: West Bengal and Kerala. In these two states, on average, the most successful parties in previous elections have increased their vote shares by almost 1% when they returned to the polls.

Average levels of volatility might mask more than they reveal if there is a lot of variation around those means. For instance, states might have high mean volatility but little variation around that mean, implying that the volatility is 'predictable' in a certain sense. Likewise, a state might have several extremely destabilizing elections and yet average out to a moderate mean because its other elections are fairly stable. When one considers this possible variability of volatility in addition to its mean level, states that have high means *and* high variation are clearly the most unstable (Bartolini and Mair 1990: 73). Figure 3 plots the variability of aggregate

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<sup>12</sup> The state codes used as data labels in the figures are listed in Appendix 1.

volatility and confirms the picture drawn by Figures 1 and 2 with the same states appearing distinctive. In the upper-right-hand-most corner of Figure 3 lies Tamil Nadu with the highest mean and highest variability. Orissa and Assam are also in that area of the figure. Further, considering this second moment of volatility brings to the fore states like Madhya Pradesh and Andhra Pradesh, both of which have relatively low mean levels of volatility but higher than average variation around those means, implying that each has had a few destabilizing elections.

/INSERT FIGURE 3 ABOUT HERE/

The data described in this section paint a vivid picture of high levels of aggregate volatility across India, but with substantial variation across individual elections and states. There is not, however, the expected difference in volatility over the years with average volatility at 18.1 from 1967 to 1970; 31.3 in the 1970s; 26.1 in the 1980s; 23.6 in the 1990s and 19.2 in the first four years of the twenty-first century (see Figure 4).

/INSERT FIGURE 4 ABOUT HERE/

This evidence suggests that, if anything, volatility is decreasing rather than increasing in the Indian states over time and that claims that the 1990s were a period of greater party instability are not correct (see Linden (2004) for a similar finding with regards to incumbency rates for individual politicians). However, it is patently true Indian state elections have been, on average, remarkably more volatile than elections in other parts of the world, and, further, that some states experience higher levels of electoral volatility than others.

In the next section, we describe our measure of fiscal space, and then turn to considering alternative explanations for the observed variation in electoral volatility across the Indian states.

## EXPLAINING ELECTORAL VOLATILITY

Our principal focus is explaining the level of aggregate electoral volatility across states. An additional focus is the size and direction of the incumbent vote change. We have argued that fiscal space affects the value of party labels for voters. If this argument is true, we should expect to see that more fiscal space reduces the level of overall electoral volatility in a state. As discussed in the previous section, to measure electoral volatility we use the conventional *‘Pedersen’ index of electoral volatility*.

### *Measuring Fiscal Space*

Our main explanatory variable is *fiscal space*, which we define as “room in a government’s budgetary resources that allows it to provide funds for a desired purpose without jeopardizing the sustainability of its financial position or the stability of the economy” (Heller 2005: 32). More constrained governments are unable to satisfy the demands of their constituents and suffer reverses more frequently at the polls. Our measure of fiscal space was devised subsequent to interviews with state bureaucrats who were responsible for the financial affairs in two Indian states.<sup>13</sup> These senior government officials independently agreed with our measure giving us a sense of inter-coder reliability. The measure of fiscal space we develop for this paper is specific to India. What constitutes discretionary expenditures may be different for other nation states. In other words, while the concept of fiscal space travels across nation-states its empirical manifestation could be different in different states.

For Indian states we measured fiscal space as the difference between its total receipts on the revenue account and the sum of its expenditures on civil administration, the police, and debt

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<sup>13</sup> We interviewed finance commissioners of the states of Assam and Bihar.

servicing from the revenue account.<sup>14</sup> To the resulting difference, we add the size of the deficit the central government allows the state government to run. Khemani (2003) has argued that the fiscal situation of Indian states is determined by the extent to which a state government is aligned with the central government. States that have some ‘leverage’ at the center have higher deficits since they can obtain more resources from the central government. Since state government deficits do have a direct political cause and these are therefore exogenous to the revenue generating capabilities of a state government it important to control either for the loans received by a state or its deficits. Therefore, a state’s fiscal space is the sum of the difference between its total revenues (TR) and primary commitments (civil administration, police, and debt) and the deficit the central government allows it to run. We normalize this sum by the total size of government revenues<sup>15</sup>, so that our measure of fiscal space is:

$$[2] \quad \text{Fiscal Space} = [\text{TR} - (\text{CivAdm} + \text{Police} + \text{DebtService}) + \text{Deficit}] / \text{TR}$$

To check the robustness of our results, we also use a non-normalized version of the fiscal space measure, taking a logarithmic transformation of the raw fiscal space a state enjoys. Note also that, in the empirical analysis reported below, we use the average fiscal space between elections

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<sup>14</sup> This definition is derived from our knowledge of the fiscal situations of the Indian states and our interviews with the finance commissioners of Assam and Bihar. Scholars wishing to apply the notion of fiscal space in other settings would need to tailor the set of categories deemed ‘fixed and recurring’ according to the specifics of that situation.

<sup>15</sup> Conceptualizing fiscal space as a share of total revenues also accounts partially for differential economic performances across states, since, *ceteris paribus*, better performing states enjoy higher tax revenues. Using the non-normalized level of fiscal space does not alter our results. See Model 2 in Table 1 below.

$t-1$  and  $t$  to predict electoral volatility in election  $t$  on the assumption that voters are more likely to reward a party at the polls if it had been able to deliver resources consistently during its term in office.<sup>16</sup>

We believe that this measure captures quite accurately the ‘discretionary’ resources that are available to an elected government to direct to voters in response to their particular demands. We do not include government spending on infrastructure as part of this calculation since most of those expenditures take place on the capital and not revenue accounts of the state government and are often made in conjunction with directives and/or cost-sharing schemes with the central government. In other words, expenses on the capital account are not discretionary as far as the elected state government is concerned. We also treat expenses on civil administration as non-discretionary. The officials whom we interviewed suggested that a state government’s expenses on salaries and benefits are committed and have to be paid. Workers can neither be laid off nor their salary expenses not paid. This does not mean that an elected state government may not use ‘jobs’ for its supporters to ensure electoral success. A government certainly may do so but once a worker is hired in the state sector for all intents and purposes that employment is permanent and the election of a ‘new’ government does not mean any layoffs will take place. What this suggests is that for any given government in power it has to treat its expenses on civil

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<sup>16</sup> The data for the independent variables are annual in their original format. Here, we construct averages for each inter-election period to include in the regression model. To take the most relevant example: to predict electoral volatility in election year  $t$ , we use the average fiscal space enjoyed by the state across the years since the last election. This is true for all the independent variables. Doing so provides some check against reverse causation since the variables are temporally ordered, and also that we aren’t capturing the effects of a single bad year.

administration as a commitment. A government may increase its expenses on civil administration either by hiring more people or paying higher salaries and benefits but whether they are able to do so is a function of the fiscal space left over from paying government employees already on the books. The proportion of a state's budget devoted to civil administration has, for the period under study, remained by and large constant for all the Indian states (Appendix 3). Since state governments in India have not increased the share of expenses devoted to civil administration we can assume that expenses on civil administration have little relationship to electoral volatility which is not constant over time (again, see Appendix 3).

While we believe that the fiscal space explanation is plausible given the patterns we describe in the previous section, other possible explanations are suggested by the existing literature. Specifically, there are five main sets of alternative hypotheses for which we control in the regression models, which can be usefully divided as follows: (1) mobilization, (2) institutional rules and party systems, (3) social cleavages, (4) economic voting, and (5) the passage of time. We summarize the main arguments and findings from each below.

#### *Changes in mobilization*

The first serious comparative analysis of electoral volatility was conducted by Przeworski (1975), who sought to respond to Huntington's (1968) provocative claim that developing societies might be destabilized by the rapid increase in social mobilization resulting from concurrent economic and political reform (see Weiner 1962 for an application of this argument to India). Przeworski utilized data for electoral volatility in European societies to see if increases in mobilization resulting from widening enfranchisement as well as the creation of mass parties

that sought to mobilize new voters increased volatility in the electoral arena, which he likened to ‘decay’ or ‘deinstitutionalization’ of the party system.<sup>17</sup>

Bartolini and Mair summarize this argument succinctly:

Increases in turnout should therefore create a new active electorate which is relatively more susceptible to the impact of short-term factors. Subject to different forces and to different influences, the balance among the new voters is unlikely to be identical to that of existing voters. This, combined with the impact of those new voters who have been mobilized by special issues, suggests that the newly enlarged electorate is likely to reflect a partisan balance which differs from that at the previous election, and this, in turn, should be reflected in a relatively high level of volatility. (1990: 174)

To summarize, the effect of mobilization on electoral volatility is posited to occur via the introduction of new voters with different preferences than the older voters.<sup>18</sup> In India, Vanderbok

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<sup>17</sup> A similar argument was later advanced by Sjoblum (1983), who theorized that increasing social and spatial mobility of voters resulting from economic development in industrial societies should lead to higher levels of electoral volatility. As voters became more mobile, their political preferences regarding government policy were likely to become more fluid. Moreover, the growth of the public sector and the increasing complexity of the economy made government economic policy less certain, which Sjoblum argued would lead voters to be available to alternative appeals.

<sup>18</sup> Tests of the mobilization hypothesis have been limited by lack of accurate data over-time cross-nationally. Przeworski used historical data from nine European states and Canada and finds that “institutionalization was lowest [*i.e.*, electoral volatility was highest] during the period between the wars” (1975: 51) and that “newly mobilized voters [were] not any less socialized

(1990) argues that the apparent “waves” in support for the Congress party are actually the result of differential levels of mobilization by the opposition party. Losses in vote share by the Congress, he argues, are the result of additional voters for the opposition rather than the movement of previous Congress voters away from the party. Likewise, Yadav (1996) argues that a second democratic upsurge occurred in the 1990s with the mobilization of hitherto unmobilized voters, especially among the poor and the disadvantaged.<sup>19</sup>

The mobilization hypothesis thus suggests that changes in the size of the electorate might affect electoral volatility, especially if the newly mobilized have different preferences. Since all Indian elections have operated under universal franchise, the only changes to the electorate’s size occur through *changes in the level of turnout*.

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than [were] previous participants” (1975: 58). Further analysis revealed that the argument had more empirical support in some countries than others, and that the effects of mobilization and demobilization were distinct. Bartolini and Mair (1990: 175-176) find evidence of a threshold effect for turnout, such that changes in turnout above 4%, were correlated with higher volatility. Further, they echo Przeworski’s claim that mobilization and demobilization are distinct, and argue that there’s a “skewed parabolic effect” of turnout on volatility.

<sup>19</sup> The voting age in India was lowered from 21 to 18 in 1989. While this change did add to the electoral rolls, there is no evidence that it changed the rates of turnout or the composition of the electorate in any systematic manner. Indeed, to the extent that existing theories argue that younger voters are more fluid, a plausible expectation would be that the change in voting age should have led to increased volatility post-1989. However, as Figure 5 above demonstrates, the opposite is true.

### *Institutions, Parties, and Party Systems*

A second more institutional strand of this literature has received increasing attention in recent years. One advantage of studying the Indian states is that we can control for several alternative institutional explanations for “free.” For instance, previous work has argued that institutional factors such as presidentialism and district magnitude should affect volatility by making politics more personalistic and making the party system more restrictive (eg., Mainwaring 1988). Indian state assemblies, however, share the same structure and all elections are conducted under first-past-the-post rules. As such, formal electoral-institutional arguments provide no leverage in this context. Therefore, we focus instead on arguments about the impact of party system format.

Pedersen (1983) first linked the party system format to electoral volatility, arguing that there exists a positive relationship between the number of parties competing in the system and the level of electoral volatility. Relying on a spatial logic of electoral competition, Pedersen argued that multi-party systems are characterized by less distance between parties, which allows voters to switch between parties more easily. This hypothesis is arguably the most commonly tested in subsequent studies, and finds empirical support in studies of Western Europe (Pedersen 1983; Bartolini and Mair 1990), Latin America (Remmer 1991; Roberts and Wibbels 1999; Mainwaring 1998), and the post-communist states (Bakke and Sitter 2005; Tavits 2005).<sup>20</sup>

Others have built on Pedersen’s insight to emphasize the ideological polarization of the party system. Arguments for this dimension are principally that more ideologically polarized

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<sup>20</sup> At the individual level of analysis, Heath finds that people living in Indian states with multiparty systems are more likely to report having switched their votes from one election to the next (2005: 183).

systems are evidence of greater institutionalization of existing social cleavages and should therefore be more stable (Bartolini and Mair 1990; Tavits 2005).<sup>21</sup>

To capture the effect of party system format, we control for the level of party fragmentation in the electoral arena, which we measure using the commonly used index of *effective number of parties* (Laakso and Taagepera 1979).<sup>22</sup> We also control for *changes in the level of party fragmentation*. If the party system in a given states changes, such that a two-party system splinters into a multiparty system, or vice versa, then we would expect electoral volatility to be affected. Increases in party system fragmentation should increase electoral volatility.<sup>23</sup>

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<sup>21</sup> Remmer (1991: 791) points to the vulnerability of minor extreme parties as one reason such more polarized systems may be more volatile over time. An interesting empirical question therefore is whether the volatility-dampening effect of increased polarization is counteracted by the volatility-inducing effect of increased party fragmentation. We leave this question for future research.

<sup>22</sup> The effective number of parties in a given election is calculated as  $N=1/\sum v_i^2$ , where  $N$  is the effective number of parties, and  $v_i$  is the vote share of party  $i$ . Our results are robust to using instead the effective number of parties represented in the legislature, which substitutes seat shares for vote shares in the above formula.

<sup>23</sup> Bartolini and Mair (1990) argue that European party systems have been fairly stable if one examines ‘block volatility’ rather than ‘total volatility.’ Similar claims about the influence of coalitional politics in influencing electoral results in India are made by Sridharan (2004) and Heath (2005). In this analysis, we focus on party-level electoral volatility since coalitional politics has been a relatively recent phenomenon in Indian politics, and, moreover, has been mainly observed at the national rather than state level.

For the polarization of the party system, we use Heath's *index of cleavage polarization*.<sup>24</sup> Heath (2005) provides convincing survey evidence that electoral volatility in India can be explained by the extent to which social cleavages are politicized and polarized by the party system. His cleavage polarization index attempts to measure the extent to which a different political party represents each social cleavage. States in which parties can generate cross-cleavage support are therefore less polarized. To construct this index, Heath examines "the relationship between caste-community and the cluster voted for, and use[s] an index of dissimilarity to measure the degree to which political competition is polarized along caste-community lines" (2005: 189). One limitation of Heath's data is that they are constructed for a single-time point since they are based on a national survey. We use the reported value for each state as a constant over time, thereby making the strong assumption that the level of cleavage polarization has remained unchanged.<sup>25</sup>

### *Social Cleavages*

Tied intimately to the mobilization and polarization arguments is an emphasis on the role social cleavages play in the political arena, and therefore in determining electoral volatility. This set of arguments draws its inspiration from a well-established literature that finds the roots of modern party systems in historical social cleavages (see Lipset and Rokkan 1967 for the seminal statement of this claim). The Lipset-Rokkan thesis was that modern European party systems were stable because they reflected 'frozen' historical social cleavages. The existence of strong cleavages gave rise to strong electoral preferences, the growth of parties that mobilized these cleavages, and the institutionalization of these cleavage-based parties through repeated party

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<sup>24</sup> See Heath (2005: 186-188 and *fn12*) for more detail on the construction of this measure.

<sup>25</sup> Our results are robust to the exclusion of this variable. Results available upon request.

competition. Bartolini and Mair (1990) call this ‘cleavage closure’ and argue that strong party-cleavage linkages stabilize party politics by making cross-party alliances less likely and providing fewer viable alternatives to voters.

Extensions of this cleavage argument to non-Western societies therefore explain higher levels of electoral volatility by the low identification of parties with salient social divisions (Mainwaring 1998) or the multiplicity of possible social divisions that might be politicized for electoral support (Tavits 2005). Ferree (2004) examines the role of ethnic heterogeneity in African societies, paying particular attention to the possibility and likelihood of inter-ethnic alliances, and finds that higher levels of ethnic diversity are linked to greater electoral volatility across African states. Interestingly, in her analysis of the post-communist European states, Tavits finds no evidence of any effect of ethnic cleavages, but does find that social cleavages increase electoral volatility during economic downturns (2005: 295-296).

To explore the role of social cleavages, we utilize two demographic variables. First, we include census data collected by Wilkinson (2004) on the proportion of the total population each major religious group comprises.<sup>26</sup> We transform these data into a measure of the *effective number of social groups*. Second, we include separately the size of the *scheduled castes and tribes as a share of total population*, since the mobilization of this group has been documented by Yadav (1996).<sup>27</sup>

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<sup>26</sup> We thank Steven Wilkinson for sharing these data with us.

<sup>27</sup> As an alternative indicator of the social cleavage structure in each state, we used Heath’s measure of the number of *effective clusters* in each state, which captures “the number of politically mobilized cleavage groups” (Heath 2005: 186-188, *fn12*) in each state. Our results are

## *Economic Voting*

How does economic performance prior to elections affect electoral volatility? The study of economic voting has a rich pedigree, and there is robust evidence for the claim that economic factors shape voters' decisions significantly. From the perspective of electoral volatility, the important question is how economic performance might affect whether voters *change* their vote. Note that economic voting can be taking place in the sense that economic conditions shape vote choices, and yet economic conditions might have no effect on electoral volatility if voters do not switch their votes from one election to the next. That is, if the voter supported the current incumbent in the previous election (*i.e.*, backed the eventual winner), does poor economic performance cause that voter to switch her support? Alternatively, if the voter had supported the current incumbent's opponent in the previous election, does good economic performance cause that voter to alter their choice and 'reward' the incumbent?

Research into these questions has focused primarily on the impact of economic crisis on political stability. Zimmerman and Saalfeld (1988) find that the economic crisis of the 1930s had powerful political effects in Europe, but the extent to which it undermined the political stability of the state was conditioned by the success of national consensus formation at the elite level. Bohrer and Tan (2000) argue that 'austerity' plans enacted by European states to bring their economies into compliance with the European Monetary Union (EMU) requirements caused voters to support parties of the Left in greater numbers than before. In the Latin American context, Remmer found that "elections held under conditions of economic crisis...consistently produced losses for governing parties" and, "in the overwhelming majority of cases, [these] not affected, and are available upon request. We prefer the Wilkinson and Yadav data since they vary over time.

elections resulted in the defeat of the governing party or coalition” (1991: 781). She finds that growth of GDP per capita and inflation consistently predict electoral volatility. Roberts and Wibbels (1999) confirm the finding of economic growth’s stabilizing effects, but find mixed statistical support for the claim about inflation.<sup>28</sup> Most recently, Tavits (2005) also finds that economic downturns increase electoral volatility in post-communist European states and, as noted earlier, sharpen social cleavages. None of these studies finds any evidence of volatility induced by voters switching to the incumbent because of good economic performance.

Note that the economic voting thesis is partially accounted for by virtue of our decision to normalize fiscal space as a share of total state revenues. Better performing states have higher tax bases and therefore should enjoy higher levels of revenues. In addition, we add two explicit measures of economic performance. The state’s *per capita income*, measured in 1994 Rupees, provides an indicator of the overall level of development in the state. The average annual *growth rate of per capita income* since the previous election serves as an indicator of the incumbent government’s performance. Both are expected to reduce electoral volatility and to increase the ruling party’s vote share.<sup>29</sup>

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<sup>28</sup> The inflation variable, in either its level or change form, is statistically significant in only 1 of 6 specifications predicting electoral volatility (3 in the context of legislative elections and 3 in the context of presidential elections) reported by Roberts and Wibbels (1999: Tables 2 and 3). It is significant in only 1 of the 3 specifications predicting incumbent vote change (Ibid.: Table 4).

<sup>29</sup> A possible concern arises in controlling for these economic variables since they are likely correlated with a state’s fiscal space. In our sample, a state’s growth rate is correlated with fiscal space as a percentage of total revenue at a level of 0.25. When we do not normalize the measure of fiscal space, the correlation increases to 0.38. Likewise, the correlation of per capita income

## *Time*

The final factor considered in the study of electoral volatility is the passage of time. Most scholars argue that time, whether operationalized as the age of the regime or of the main parties, is a good proxy for the institutionalization of the political system.<sup>30</sup> The longer voters have been going to the polls, the more likely socialization of these voters will be deeply-rooted and the less likely voters will suddenly switch their votes. Similarly, the older the parties in the system, the more likely they will have formed robust linkages with societal groups. Some of this effect is probably correlated with the restrictiveness of the electoral laws. If it is difficult for new parties to form and gain a foot-hold electorally, then there will be fewer choices for voters and those parties that do exist will enjoy first-mover advantages.

Tavits's findings on the question of time are worth noting. She finds support for a curvilinear relationship between time and volatility in the transition democracies. Therefore, the early period of transition is quite volatile but the party system stabilizes after about 11 years

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with the two versions of fiscal space is 0.44 and 0.57 respectively. There is therefore little risk of multicollinearity being a problem, and this is borne out by our examination of the variance inflation factors.

<sup>30</sup> Remmer (1991: 785) considers the age of the regime in her analysis and finds little evidence for the claim that new democracies were particularly vulnerable to crisis. Rather, she argues that the "relative immunity of the older democracies" reflects the stabilizing influence of their two-party systems. Roberts and Wibbels (1999) measure the average age of parties receiving more than 10% of the vote in the previous election, while Tavits (2005) controls for the average age of parties in parliament. Tavits also includes a trend variable that counts the number of years since the first democratic election.

(2005: 293). More interestingly, she finds that the effect of inflation decreases over time<sup>31</sup>, which suggests that as party systems become older, patterns of party competition become more institutionalized and voting behavior stabilizes, becoming eventually immune to short-term economic fluctuations and presumably more a function of longer-term political socialization and policy attitudes.

Applied to India, three factors suggest that the post-1990 period should differ systematically than the earlier period. First, Yadav (1996) argues that mobilization of lower-caste voters has increased substantially in the 1990s, which should lead to higher electoral volatility according to the mobilization hypothesis. Second, as noted earlier, the voting age was lowered from 21 to 18 in 1989. If this change had an effect on volatility independent of the effect it had via changes in turnout, then we might expect it to show up in this time trend. Third, India's economy was liberalized in far-reaching reforms in 1991, and the economy has been growing more rapidly since. To account for these potential differences, we include a dummy variable for the *post-1991 period*.

#### *A Statistical Analysis of Electoral Volatility in India*

We test the fiscal space hypothesis against these alternative explanations on data for the 138 state assembly elections held between 1967 and 2004 in the 15 major Indian states.<sup>32</sup>

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<sup>31</sup> Tavits reports that about 13 years after the transition the estimated effect of inflation on volatility is no longer statistically significant (2005: 294).

<sup>32</sup> The regressions reported in Table 1 are estimated on a sample of 108 elections. Electoral volatility captures aggregate changes between two elections; therefore, we cannot calculate the volatility score for the first election in each state which requires us to drop the 15 observations (1 election per state). Including a lagged dependent variable results in the loss of another 15

Appendix 1 lists the specific elections for which we have collected data and provides summary statistics for all variables used in the regression analyses.

The analysis of time-series-cross-sectional data involves a host of statistical issues, the most important of which are serial correlation, heteroskedasticity, and omitted variable bias. To address these concerns, we estimate our models with a lagged dependent variable and correct the standard errors for clustering by state. We do not include state fixed effects since our purpose is to exploit cross-state variations in fiscal space to explain variation in electoral volatility, and additionally because the cleavage polarization measure is constant over time, and the other social cleavage variables change very slightly over time. But to capture any unobserved heterogeneity across states, we do include a random intercept term.<sup>33</sup> Therefore, the regression models are random effects models of the following form:

$$\begin{aligned}
 [3] \ EV_{i,t} &= \alpha(EV_{i,t-1}) + \beta_1(\Delta Turnout_{i,t}) + \beta_2(ENoP_{i,t-1}) + \beta_3(\Delta ENoP_{i,t}) \\
 &+ \beta_4(ENoGroups_{i,t}) + \beta_5(SC\&ST_{i,t}) + \beta_6(Polarization_{i,t}) \\
 &+ \beta_7(RealIncome_{i,t-1}) + \beta_8(Growth_{i,t}) + \beta_9(FiscalSpace_{i,t}) + \beta_{10}(Post1991_{i,t}) + v_i + \varepsilon_{i,t}
 \end{aligned}$$

where,  $EV$  is electoral volatility in state  $i$  in election  $t$ ,  $\alpha$  and  $\beta_k$  are  $k+1$  coefficients to be estimated,  $v_i$  are random effects, and  $\varepsilon_{i,t}$  is a white-noise error term.

Table 1 reports the results from the estimation of this equation using two different versions of the fiscal space measure.

/INSERT TABLE 1 ABOUT HERE/

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observations by a similar logic. Our results do not change if we drop the lagged dependent variable from the model, but we report the versions that include it since these are more conservative.

<sup>33</sup> The results do not change if we estimate the models without random effects.

Overall the results are very supportive of our argument. The fiscal space variable is robust to specification, and is correctly signed and statistically significant in both models reported in Table 1. And the size of the effect is sizable. In model 1, for instance, the estimated coefficient on fiscal space is -0.37. Put another way, for each additional percentage point of fiscal space, electoral volatility declines by 0.37 per cent. Given the range of this variable in the estimation sample, the effect of going from the minimum to the maximum level of fiscal space is to reduce electoral volatility by approximately 13 percentage points, or about 20% of the total range of the dependent variable which ranges from 3.15% to 67% in the estimation sample.

Of the other variables included in the analysis, three are worthy of some discussion. First, the change in party system fragmentation is an important factor in understanding electoral volatility. As fragmentation increases, so does the electoral volatility, which suggests that one source of volatility is the creation of new parties. Second, the effective number of social groups is negatively related to electoral volatility, which runs counter to conventional wisdom. It does indicate, however, that more diverse states have more stable voting patterns, presumably because parties locate themselves closer to the different groups making it more costly for members of those groups to switch their votes. Finally, the post-1991 indicator variable is negatively signed and statistically significant. This is consistent with the data presented in Figure 5, and contradicts popular statements that the recent period of Indian elections has been particularly unstable.<sup>34</sup>

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<sup>34</sup> Our data do not allow us to investigate whether this volatility-dampening effect of the 1990s is due to changes in the electorate, party system, or economic performance, and we leave this question for future research.

Relative to the other explanatory factors linked to electoral volatility, how large an effect does fiscal space have? Table 2 uses our regression estimates to generate the predicted effect of each variable found to be statistically significant in the regressions described above.

/INSERT TABLE 2 ABOUT HERE/

The cell entries in Table 2 in the column labeled ‘Min to Max’ are the predicted effect on the dependent variable when the independent variable in question is moved from its average minimum value to its average maximum value in the sample. The cell entries for the column labeled ‘ $\pm$  Std Dev’ are the predicted effects of a move from one standard deviation below the mean of the independent variable to one standard deviation above the mean.

Table 2 makes clear that fiscal space has a substantively large effect on both electoral volatility, and that the size of its effect is comparable to those had by those variables conventionally held to affect volatility. The largest predicted effects are those associated with changes in the party system, though those of fiscal space are very similarly sized. And both of these factors have a far greater impact on both dependent variables than does the social cleavage measure. Further, of these three factors, it is important to remember that ‘fiscal space’ is the only one that is mutable in the short-run since the level of party system fragmentation and especially social cleavage structure tend to be relatively stable features of the Indian states.

To summarize, our statistical analysis of the determinants of electoral volatility across state assembly elections during the period 1967-2004 in the 15 major Indian states yields robust support for our hypothesis that the ‘fiscal space’ enjoyed by some state governments in India has made control of the reins of policy more important in those states. Accordingly, parties and, therefore, party labels are more powerful in those states, as voters realize that access to state largesse runs through political parties. In states with less room for political maneuver, large

public policy initiatives are simply not feasible. In such states, reelection has less to do with being able to direct public goods towards one's constituency since these are scarcely being produced. Instead the currency for politicians is providing smaller more private goods to members of their constituencies, and developing personal reputations. Here, the party label loses its value both for politicians and for voters, resulting in higher levels of electoral volatility.

## **CONCLUSION**

In recent years, students of Indian politics have focused much attention on the fragmentation of the party system, and its consequences for various aspects of political and economic performance. Popular wisdom suggests that this fragmentation is symptomatic of a larger instability in Indian politics. The research presented suggests otherwise. While it is indisputably true that Indian elections experience greater levels of electoral volatility than in other parts of the world, an analysis of state assembly election returns from 1967 to 2004 reveals that average electoral volatility has *decreased* steadily over time. However, considerable variation exists across the Indian states in their levels of electoral volatility.

To explain these differences, this paper presents a new explanation rooted in the political economy of the relationships between governments and voters. Our argument is that voters support parties in expectation of continually benefiting from state expenditures on public services. When states lack the fiscal space necessary to provide public services, voters have little reason to reward parties with their continued support and become available to alternative appeals. Our empirical analysis provides robust support of these claims, demonstrating that higher levels of fiscal space reduce aggregate electoral volatility. Of the existing explanations for electoral volatility, derived from studies in other contexts, only party system format is supported

by our data, while mobilization, social cleavage, and economic voting explanations receive little to no empirical support.

These results have important implications for our understanding of democratic politics in India and more generally in the developing world. In particular, the explanation developed here makes clear that economic conditions can shape the ability of governments to retain power in democratic elections, even after controlling for the rate of economic growth. Governments that are unable to provide services to the public because of financial constraints suffer at the polls, and are more likely to lose power. In India, this has resulted in low incumbency success rates, but the implication of this finding is that introducing democracy in countries where the government has few discretionary resources runs the risk of unsuccessful consolidation as governments struggle to satisfy the demands of society.

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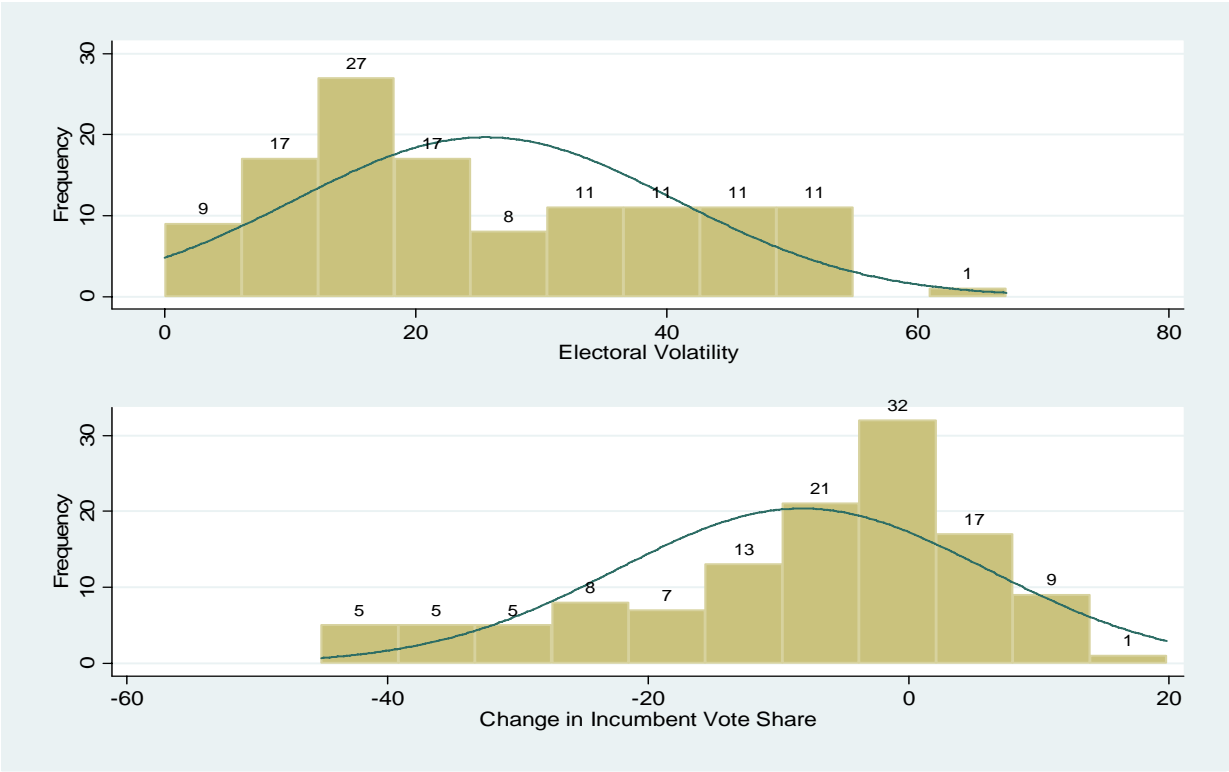
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**Figure 1. Electoral Volatility and Anti-Incumbency: Frequency Distribution**



**Figure 2. Mean Total Electoral Volatility and Largest Party Vote Change by State, 1967-2004.**

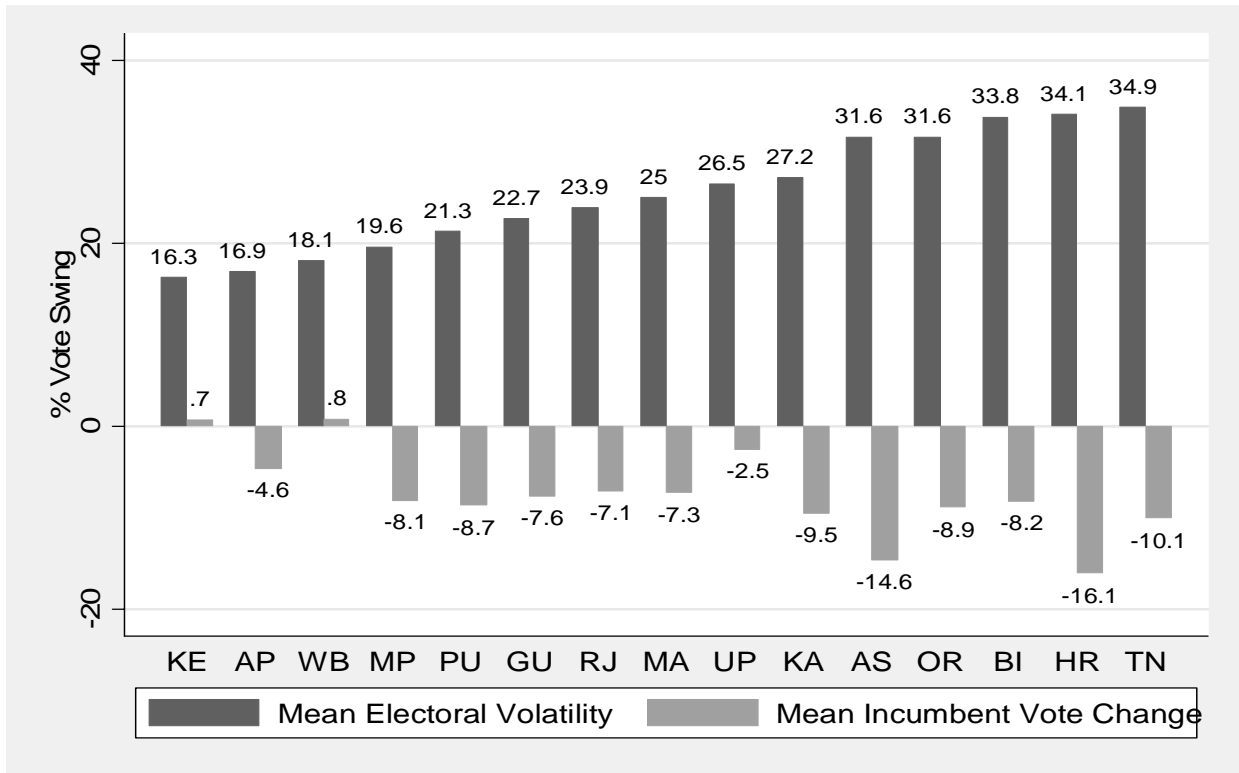
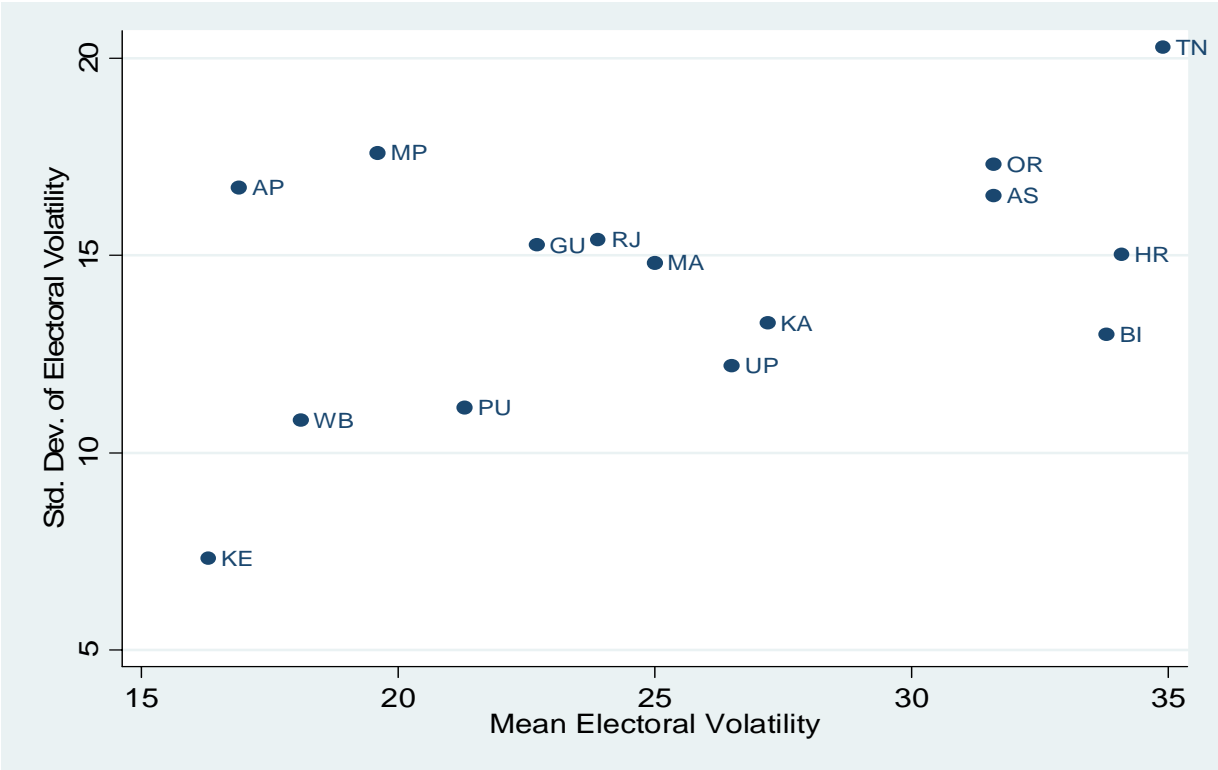
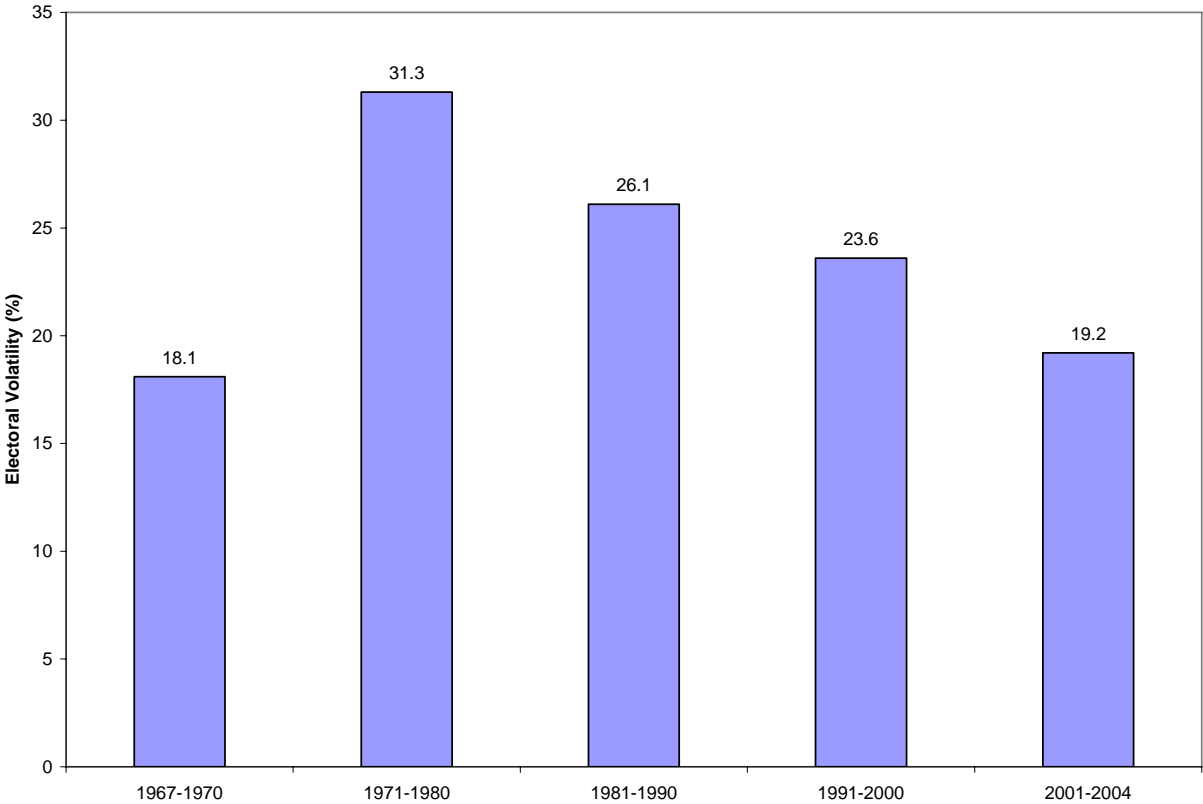


Figure 3. The Variability of Electoral Volatility 1967-2004.



**Figure 4. Average Electoral Volatility Has Decreased Over Time.**



**Table 1. The Impact of Fiscal Space on Electoral Volatility.**

<i>Independent Variables</i>	<b>Electoral Volatility<sub>t</sub></b>	
	<b>Model 1</b>	<b>Model 2</b>
Electoral Volatility <sub>t-1</sub>	0.085 (.072)	0.063 (.062)
ΔTurnout	0.002 (.129)	0.020 (.148)
Party System Fragmentation	1.117 (2.117)	1.052 (1.956)
Δ in Party System Fragmentation	3.475** (1.587)	3.929*** (1.515)
Effective No. of Social Groups	-12.145** (5.731)	-17.292*** (4.323)
SCs & STs (%)	-20.704 (22.717)	-40.392** (19.375)
Cleavage Polarization	0.037 (.123)	0.088 (.091)
Per capita income (1994 Rs., Log)	-2.771 (5.733)	-3.291 (4.394)
Growth rate (%)	0.158 (.429)	0.438 (.388)
Fiscal Space (%)	-0.368** (.188)	
Fiscal Space (Log)		-5.758*** (1.272)
Post-1991 Dummy	-6.946* (3.603)	2.481 (4.041)
Constant	94.787** (44.449)	145.323*** (44.012)
No. of Observations	108	108
Adjusted-R <sup>2</sup>	0.222	0.285
Random Effects	Yes	Yes
1 <sup>st</sup> -order Serial Correlation	2.442	3.137

*Notes:* 1) Independent variables are measured as averages for inter-election period; 2) ΔX = 1-period change in X; 3) p-values: \*\*\* p<0.01; \*\* p<0.05; \* p<0.1; 4) Robust standard errors reported in parentheses have been corrected for clustering by state; 5) For 1<sup>st</sup>-order serial correlation, value of T\*R<sup>2</sup> from Breusch-Godfrey Lagrange-Multiplier test is reported. This test-statistic is distributed  $\chi^2$  with T degrees of freedom and the 0.05 critical level with T=7 is 20.28. Therefore, it is safe to say that neither model's test-statistic approaches conventional levels of statistical significance; 6) Models were estimated in STATA 9.2 using the `xtreg` command and random effects option (`re`).

**Table 2. Effect Size of Alternative Explanations**

<i>Independent Variable</i>	<b>Electoral Volatility</b>	
	<i>Min to Max</i>	<i>± Std Dev</i>
<b>Post 1991 era</b>	-6.95	
<b>Party System Format</b>		
Effective No. of Parties (Chg)	8.84	6.20
<b>Social Cleavages</b>		
Effective No. of Groups	-0.63	-0.52
<b>Fiscal Space</b>	-6.29	-4.50

*Notes:* Cell entries are changes in predicted levels of the dependent variables when the independent variable in question is moved from (a) its average minimum to average maximum or (b) one standard deviation below its mean to one standard deviation above its mean. In each case, all other variables are held constant. These are in-sample predictions based on the estimation sample from Model 1 in Table 1 (N=108).

## APPENDIX

### 1. List of Elections

State	Code	Election Years
Andhra Pradesh	AP	1967, 1972, 1978, 1983, 1985, 1989, 1994, 1999, 2004
Assam	AS	1967, 1972, 1978, 1983, 1985, 1991, 1996, 2001
Bihar	BI	1967, 1969, 1972, 1977, 1980, 1985, 1990, 1995, 2000
Gujarat	GJ	1967, 1972, 1975, 1980, 1985, 1990, 1995, 1998, 2002
Haryana	HA	1967, 1968, 1972, 1977, 1982, 1987, 1991, 1996, 2000
Karnataka	KA	1967, 1972, 1978, 1983, 1985, 1989, 1994, 1999, 2004
Kerala	KE	1967, 1970, 1977, 1980, 1982, 1987, 1991, 1996, 2001
Madhya Pradesh	MP	1967, 1972, 1977, 1980, 1985, 1990, 1993, 1998, 2003
Maharashtra	MA	1967, 1972, 1978, 1980, 1985, 1990, 1999, 2004
Orissa	OR	1967, 1971, 1974, 1977, 1980, 1985, 1990, 1995, 2000, 2004
Punjab	PU	1967, 1969, 1972, 1977, 1980, 1985, 1992, 1997, 2002
Rajasthan	RA	1967, 1972, 1977, 1980, 1985, 1990, 1993, 1998, 2003
Tamil Nadu	TN	1967, 1971, 1977, 1980, 1984, 1989, 1991, 1996, 2001
Uttar Pradesh	UP	1967, 1969, 1974, 1977, 1980, 1985, 1989, 1991, 1993, 1996, 2002
West Bengal	WB	1967, 1969, 1971, 1972, 1977, 1982, 1987, 1991, 1996, 2001

## APPENDIX

### 2. Summary Statistics

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Electoral Volatility	123	25.52	15.19	3.15	67
Change in Turnout	123	0.37	9.62	-44.6	46.5
Effective Parties (Votes)	138	4.04	1.18	2.46	8.40
Effective Groups	138	1.44	0.33	1.05	2.38
SCs and STs	138	0.23	0.08	0.10	0.40
Cleavage Polarization	153	30.01	10.13	17.39	56.07
Per capita Income (1994 Rs., Log)	134	8.53	0.44	7.83	9.61
Growth rate (%)	133	2.42	3.96	-11.97	12.02
Fiscal Space (%)	128	76.75	7.89	55.68	100.36
Fiscal Space (Log)	128	11.63	1.49	8.68	14.38

## APPENDIX

### 3. Civil Administration Spending as a Share of Revenues is Steady Over Time.

