

Using Asset Disclosures to Study Politicians' Rents: An Application to India

Rikhil R. Bhavnani*

January 2012

Abstract

Public asset disclosures, mandated of a third of the world's national legislators, may be used to study the gains to office and corruption among politicians. I conduct such an exercise here, using data from India. Comparing the change in winners' and losers' self-declared family assets in the country's two most recent state and national elections indicates that the average election winner increased his assets by 4-6% a year. 4-9% of election winners appear suspect, as their asset increases are greater than the premium that they could legitimately earn as legislators. Although these results are arguably modest and statistically fragile, they are driven by larger and more statistically robust estimates for members of the BJP. The suspect nature of some BJP winners' asset changes is confirmed by an analysis of their composition. Subject to data reliability, these estimates give us reason to doubt the popular characterization of all of India's politicians as massively corrupt. Members of the BJP, parliamentary majorities and cabinets, and politicians from constituencies reserved for minorities, are more likely to be suspect. These associations could reflect candidate selection or varying incentives for corruption. The method developed here could be used to study corruption among politicians elsewhere.

*Assistant Professor, Department of Political Science, University of Wisconsin-Madison, 312 North Hall, 1050 Bascom Mall, Madison, WI 53706, bhavnani@wisc.edu. I am grateful to Dustin Brown, Thad Dunning, Don Green, Macartan Humphreys, Lakshmi Iyer, David Lee, Vipin Narang, Paul Pierson, Prerna Singh, Pavithra Suryanarayan, David Szakonyi, Julia Tobias, Ashutosh Varshney and participants of the 2009 Political Methodology Summer meeting, the 2010 International Political Economy Society meeting, the 2011 Globalization and Politics of Poverty and Inequality conference, Columbia University's Seminar on the Study of Development Strategies, the Brown-Harvard-M.I.T. Joint Seminar on South Asian Politics, George Mason University's Public Choice Seminar and UW-Madison's Models and Data Group for discussions and comments. Thanks to Hi-Tech Outsourcing Services, Ishwari Bhattarai and Gokul Dahal for data entry and verification.

In 2004, Mayawati Kumari, the then ex-Chief Minister of Uttar Pradesh, India's largest state, with a population of over 190 million, declared in a mandatory pre-election filing that she had assets amounting to \$400,000. In 2008, her official declaration stated that she had assets worth \$13 million, distributed across 72 properties and 54 bank accounts. Her known sources of income between 2004 and 2008 amounted to \$50,000 a year. While Mayawati's 30-fold increase in assets does not definitively incriminate her for corruption, it—particularly in conjunction with other information—makes it highly probable that she was indeed corrupt.

Although corruption is widely thought to impede economic and political development, and corruption among politicians is thought to be the fount of all corruption, systematic data on corruption are hard to come by. This impedes our understanding of the phenomenon. The lack of data is not surprising, to the degree that the corrupt have incentives to hide their ill-gotten gains. It is, however, worth noting that the members of more than one-third of the world's national legislatures have to periodically and publicly declare their assets (Djankov, La Porta, Lopez-de-Silanes and Shleifer 2010), in filings similar to the one drawn on above. Subject to their veracity, these data can, with comparator data, be used to estimate the gains to office and corruption among politicians. I conduct such an exercise using data from India's national and state legislatures, thereby providing the first systematic analysis of the gains to office and possible corruption among the country's politicians. The methodology followed here could be used to estimate the returns to office elsewhere, and to begin to systematically study the causes and effects of, and remedies for, possible corruption.

I employ panel data on the mandatorily self-declared assets of candidates that ran for elections to India's national and state legislatures in 2003/04 and 2008/09 to estimate the gains to office and possible corruption among India's politicians. Gains to office are calculated by differencing the asset changes of election winners from that of losers. Winners are systematically different from losers, however, and since not everyone reruns for office, not everyone's change in assets is observed. To control for potential confounds, including candidate quality, I adjust the raw estimate of the gains to office using Ordinary Least Squares (OLS), matching followed by OLS, and a regression discontinuity (RD) design. While OLS controls for observables, the RD design also controls for unobservables. To control for selection due to candidates non-randomly deciding to rerun for office, I use a Heckman selection model, leveraging the fact that some candidates

exogenously fail to run for office between elections due to an apolitical redistricting and electoral quota-assigning exercise. Although none of these methods is singly a panacea for the problems of the data, their combined use helps improve inference. The analysis indicates that the assets of the average candidate increased by \$49,000-\$77,000 over five years. This is equivalent to a compounded annual asset growth rate of 4-6% a year. Although these results are inconsistently statistically significant, they are driven by the asset changes of BJP candidates, which, at \$71,000-\$196,000 or 5-12% a year, are more statistically robust. Using a similar differencing strategy and information on legislator remuneration, I calculate that approximately 4-9% of winners, including 15-37% of BJP winners, had suspect asset increases, greater than the premium that could accrue to them legitimately. The possibility that BJP winners with extreme asset changes are corrupt is supported by an analysis of the change in asset composition, which displays signs of corruption. I also examine the correlates and electoral consequences of being a suspect politician. Subject to the veracity of the data—an issue discussed in detail below—the proportion of suspect politicians is lower-than-expected by many observers of Indian politics.

This paper contributes to incipient “forensic economics” literatures on the measurement of corruption (Di Tella and Schargrotsky 2003; Golden and Picci 2005; Olken 2009), and the benefits to political office (Eggers and Hainmueller 2009; Lenz and Lim 2009; Querubin and Snyder 2009). It furthers the literature on corruption by providing a novel measure of the phenomenon, one that has the virtues of focusing on politicians, and of employing frequently and publicly available data. Having done so, it examines the correlates and consequences of corruption. It furthers the literature on the benefits of political office by explicitly controlling for selection (the previously mentioned studies employ candidate samples that are assumed, but are not known, to be representative),¹ by analyzing the gains to political office in a developing country (the previously cited works drew on data from the United Kingdom and the United States), and by using current data (two of the previously mentioned works used data from the 1800s and 1970s).

India has excellent data with which to study the gains to political office, for several reasons.

¹Extant studies might suffer from selection since the wealth data they employ are only observed for the non-random sample of politicians whose probate or census records are found. Eggers and Hainmueller (2009), for example, are able to track the wealth of 19% of candidates. Such candidates might be more prominent and wealthy than others, however. Although the dataset employed here also suffers from selection, since asset changes are only observed for candidates who rerun for office, this problem appears somewhat less severe (allowing us to track asset changes for 47% of candidates) and is explicitly controlled for using a Heckman selection model.

First, unlike in the U.K. and U.S., where only election winners have to declare their assets, all candidates who run for office in India have to do so in mandatory pre-election filings. Data on election losers' change in wealth, drawn from these filings, help us construct appropriate counterfactuals for what politicians' finances would have been had they not won office.² Second, and in addition to their own assets, candidates are required to disclose the assets of their spouse(s)³ and dependents, which are broken down into detailed categories including cash, financial instruments, jewelry, vehicles, land and buildings. This allows us to examine changes in the magnitudes and composition of candidate assets for signs of corruption. Third, even among countries that require the disclosure of financial information on the part of politicians (Djankov et al 2010 note that approximately two-thirds of countries require some sort of disclosure, and one half of these require the disclosure to be public), India is a good case to study because its politicians suffer from an incumbency disadvantage (Linden 2004; Ravishankar 2007; Uppal 2005), and since the country's electoral boundaries were apolitically redrawn in 2008/09 (Iyer and Shivakumar 2009). Both increase the chances that challengers will run for office against incumbents, and—since we only observe the gains or losses due to office when people rerun for office—ensures that we have better data coverage than is the case elsewhere.

In the case of India, such analysis is important because although India's political class is reviled for corruption, extant evidence on corruption in India is based on perceptions and is not systematic. Leading cross-national indicators of corruption, including Transparency International's Corruption Perception Index and the World Bank governance indicators, are also based on perceptions rather than actual corruption. That many of India's legislators have been accused of corruption is not systematic evidence for the existence of corruption since it is often alleged that corruption charges are false and politically motivated, and since few politicians have been convicted for corruption. Also, while India's media and state auditor routinely unearth evidence of corruption, their efforts do not comprehensively cover politicians and all their activities. In the absence of systematic and objective measures of the extent of corruption in India, people often condemn the entire political

²Since all candidates for political office in the U.K. and U.S. do not have to declare their assets before running for office, the literature uses probate (in the case of the U.K.; see Eggers and Hainmueller 2009) and old census or survey (in the case of the U.S.; see Querubin and Snyder 2009 and Lenz and Lim 2009) data to create comparable asset data for election winners and losers.

³A few politicians in the dataset analyzed here have two wives. Polygamy is legal for Indian Muslims, and is also practiced by some in the Northeast.

class. This lack of trust, as many have warned—both in India (Mehta 2003) and more generally (Almond and Verba 1963)—might have a corrosive effect on democracy. By providing systematic evidence on the wages of office for politicians, my paper “outs” and measures corruption, rather than perceptions of corruption.

I proceed by providing some background on corruption and information disclosures in India. I then introduce the dataset and estimation strategy I use, and provide estimates for the change in candidate assets due to office and associated robustness tests. I next consider the degree to which the change in candidate assets might be driven by corruption, and explore the correlates of being a suspect politician and its possible electoral consequences. In the last section, I interpret the results I have presented and discuss some implications.

Corruption and Mandatory Disclosures

I seek to evaluate two stylized facts about contemporary corruption among politicians in India.⁴ The first is that Indian politicians enjoy extraordinarily high gains to office, and the second is that practically all of them are corrupt. A recent *Times of India* poll, for example, found that 83% of respondents thought that *all* of India’s politicians were corrupt (Agence France-Presse 2009). Widespread corruption is thought to exist in academic accounts of Indian politics as well (Afzal 2007; Aidt, Golden and Tiwari 2010; Banerjee and Pande 2009; Gill 1998; Kochanek 1987; Myrdal 1968; Vaishnav 2010; Wade 1982, 1985).

Many argue that the main cause of corruption in India is the state’s extensive intervention in the economy. Krueger’s (1974) seminal work on corruption in planned economies, in fact, drew on India’s experience. More recently, Raghuram Rajan has argued that preferential access to the state resources is a critical determinant of success in India (“Many of India’s billionaires have made money by their proximity to govt” 2010). Others have located the cause of corruption in India in the decline in the salaries of bureaucrats and politicians relative to the private sector (Myrdal 1968), the banning of corporate donations to political parties from 1969 until 1985 (Kochanek 1987), the “ethnicization” of politics, which has caused the quality of politicians to drop (Banerjee

⁴Although India’s politicians have been perceived to be corrupt since the pre-Independence period (appalled with corruption in the Congress governments of the 1930s, Mohandas Gandhi famously said that he would rather give “the whole Congress a decent burial, rather than put up with the corruption that is rampant” [quoted in Gill 1998: 44]), corruption is thought to have worsened post-1947, and particularly since the 1970s.

and Pande 2009), and incumbency disadvantage, which reduces the incentives of politicians to be honest (Afzal 2007). The extent to which these accounts are true is unclear, at least partly since we lack systematic measures of corruption with which to test theories.

Indian politicians are thought to extract rents from citizens, businesses, bureaucrats and the state through various methods. First, consider some illegal means. Politicians may extract money from citizens and businesses in exchange for using their influence with the bureaucracy (Kochanek 1987; “Many of India’s billionaires have made money by their proximity to govt” 2010). Lower bureaucrats might buy their offices from senior bureaucrats, seek to recoup their investment through corruption, and pass on a cut of the spoils to their seniors who ultimately are politicians (Wade 1982, 1985). Lastly, politicians have been known to pressure public sector employees to grant them preferential access to government-administered benefits (“Aid for Farmers of Vidarbha Milked by Netas” 2008), loans, which they might fail to repay (Mahurkar 2003), and utilities, which they sometimes fail to pay for (“Due Process” 2004). Notably, in all these instances, politicians are able to extract rents due to their control over the bureaucracy, including through their powers to evaluate, promote and transfer bureaucrats (Iyer and Mani forthcoming). Since politicians’ power over the bureaucracy is contingent on their holding office, politicians are likely to accrue much of their rents while they are in office. Another possible source of illegal rents—politicians’ ability to influence legislation—is unlikely to be monetarily significant because, as in many parliamentary systems, the average legislator in India does not have much power to propose or influence legislation.⁵

Politicians might also benefit from office through a variety of semi-legal and legal means. Winning office is likely to, for example, improve politicians’ access to information, and to raise their public profiles. Both effects will likely increase politicians’ returns to office, even though some of these “halo” effects will be legal. As I describe below, while the data I employ allow for a substantial improvement over existing (practically nonexistent) measures of corruption among politicians, they do not allow us to distinguish between legal and illegal returns to office. This is less of a concern than one might think since the resulting definition of corruption employed is standard (the use of public office for private gain), and since many (but not all) of the legal ways in which politicians

⁵Possibly because of this, Indian legislators generally view themselves as “ombudsmen” (Chopra 1996; Narain and Puri 1976; Mohapatra 1976) who intervene on behalf of their constituents with the bureaucracy to “get things done,” rather than as law makers. A related, small source of rents is legislators’ ability to ask questions in the legislature. In 2005, 11 members of parliament were caught accepting money to ask particular questions during parliament’s “question hour” (Raghavan 2005).

might make money are unlikely. Most importantly, I find relatively low levels of corruption among India's politicians, a finding that is strengthened by the possible conflation of illegal and legal rents.

Recent developments have secured for citizens access to rich information on politicians. I turn to these data to assess the extent of corruption among India's politicians. Since March 2003, candidates have been required to declare detailed information on their family assets (where families are defined as the candidate, their spouse(s) and dependents), own liabilities, educational background and criminal records. These requirements were instituted by the Supreme Court, in response to a case brought against the government by a non-governmental organization. Candidates file this information as a part of the nomination papers that they submit to the Election Commission which, in turn, places hard copies of the papers on notice boards and scanned copies on their website.⁶ Non-governmental organizations have analyzed these data, releasing reports on the backgrounds of candidates that have been publicized.⁷

Compliance with the requirement that candidates file affidavits has been perfect, since candidates are barred from running for office unless all required papers are filed. Whether the information contained in these forms is accurate, however, is less certain. Penalties for the incorrect disclosure of information are severe in principle, and include the prosecution of the candidate for furnishing a false affidavit under election law, and for providing false information under the criminal code. The penalty for each of these transgressions is imprisonment for a period up to six months, or a fine, or both. Although there is no thorough count of candidates that have been prosecuted for the filing of incorrect information—and, certainly, no one has been convicted of these crimes—several prominent politicians, across state and party lines, have been taken to court for these transgressions, and for the more serious crime of possessing “assets disproportionate to known sources of income,” which is legal-speak in India for corruption. Prominent among these politicians are six former Chief Ministers (the equivalent of U.S. governors) from five states (Mayawati Kumari and Mulayam Singh Yadav of Uttar Pradesh, Jayalalitha Jayaram of Tamil Nadu, Laloo Prasad Yadav of Bihar, Om Prakash Chautala of Haryana, and Pratap Singh Karion of Punjab), a Bollywood actress-turned politician (Jaya Bachchan) and a prominent state-level minister (Atanasio Monseratte of Goa). Once affidavits are filed and made public, rival candidates and members of the

⁶<http://eci.nic.in>.

⁷See, for example, reports by the Association for Democratic Reforms, at <http://www.adrindia.org/>, and by the Liberty Institute, at <http://www.indefenceofliberty.org/>.

public can post “counter affidavits” to point out alleged errors. Moreover, affidavits are routinely scrutinized and publicized by the media and NGOs. Despite these safeguards, it is unlikely that the affidavits are fully accurate. As I describe below, various biases in the data might cause us to under- or overestimate the gains to office. Although this is the case, the remarkably low levels of corruption found here (which are low even when doubled) allow for clear inference.

Copious media coverage since 2003 has noted the surprisingly high asset values that politicians have declared (see, for example, Press Trust of India 2004 and Aiyar 2009).⁸ This—in addition to the data external validity tests presented below—should help assuage fears that the underrepresentation of assets is so severe that affidavit data are completely uninformative. Politicians are caught in a pincer: if they underdeclare their assets, they will undermine their credibility and might be prosecuted, and if they declare surprisingly high assets, they are likely to be investigated. Since the second round of elections post-2003 commenced in mid-2008 (India’s state elections are staggered), the media and NGOs have also begun to draw attention to the often large increases in assets experienced by candidates between elections (see, for example, Agencies 2008 and Association for Democratic Reforms 2008), often implying that these are due to corruption. Such accounts overestimate the gains to office since they do not consider the counterfactual: the fact that some winners would have experienced large asset increases even if they had not won office. They also use error-prone data entered by a network of volunteers, and have not fully used the rich information contained in the affidavits. The empirical strategy that I employ below uses a new, comprehensive dataset on candidate assets and a painstaking methodology—which explicitly considers the counterfactual, or what would have happened to candidates had they not won office—to recover less biased estimates of the gains to office.

Data and Empirical Strategy

To estimate the personal returns to political office and corruption among India’s politicians, I coded—with the help of an outsourcing firm and research assistants—the electoral returns and affidavits for winners and runners-up in *all* elections to the country’s lower-level national and

⁸India’s main news wire services (the United News of India, HT Syndication and the Press Trust of India), and the *Hindustan Times* had an average of two articles per day on candidate affidavits in the run-up to the April 2009 elections, for example.

state legislatures in 2003/04, which is when the information disclosures described previously were mandated. I identified candidates in the 2003/04 elections who reran for office in 2008/09,⁹ and coded the 2008/09 affidavit data for them as well. The original data were across over 70,000 scanned hand- and type-written pages in English, Hindi, Gujarati, Kannada, Malayalam, Marathi, Telugu, and Oriya. The resulting dataset has one observation for each of the approximately 3,700 winners and runners up who ran for national and state office in 2003/04. Since state elections in India are staggered, the state-level politicians tracked here were from 11 (of 28) states: Andhra Pradesh, Arunachal Pradesh, Chhattisgarh, Delhi, Karnataka, Madhya Pradesh, Maharashtra, Mizoram, Orissa, Rajasthan and Sikkim.¹⁰

The forms that all candidates for elected public office have had to file since 2003 require the disclosure of extraordinarily rich data. Candidates have to disclose the value of their own assets, and the value of assets of their spouses and dependents. This information has to be further broken down into cash, deposits, bonds, debentures and shares, other financial instruments, vehicles, jewelry, and other assets (these are grouped under the heading “moveable assets”); and agricultural land, non-agricultural land, buildings, apartments and other immovable assets (“immovable assets”). Candidates also have to declare their liabilities, age, educational background, and criminal charges and convictions.

Table 1 summarizes the main variables in the dataset, which contains, among others, those that describe electoral outcomes in 2003/04 and 2008/09, candidate affidavit data from these years, and indicators for whether representatives were members of parliamentary majorities and cabinets between elections. Figure 1 displays box plots for assets in 2003/04 and 2008/09, which are plotted separately for winners and losers in the 2003/04 election. As is typical, the asset distributions have long right tails. While winners and losers appear to have relatively similar asset distributions in 2003/04, the asset distribution for winners in 2008/09 is slightly to the right of the asset distribution of losers in this period. Much of the rest of the paper will examine this shift in the asset distribution—which might be due to office—closely.

⁹Candidates from 2003/04 that ran for office again in 2008/09 were identified using an approximate string matching procedure (Author 2009), followed by manual checks that also took into account the fact that there should be a 4-5 year difference between reported candidate age in 2003/04 and 2008/09. The resulting candidate list was checked against lists of candidates that reran for office compiled by the Association for Democratic Reforms, and was adjusted based on this.

¹⁰The population of these states make up 40% of the country’s population.

Before analyzing the asset data, I conduct two external validity tests of their veracity. I first check to see if a simple (difference) estimate of the gains to office detailed below is correlated with state-by-state corruption perception measures reported by Transparency International (2005). The data do indeed indicate that asset gains are positively correlated with corruption perceptions in municipal services ($\rho = 0.25$).¹¹ As a second external validity test, I check to see if candidates publicly accused of corruption have unusually high assets. While it is possible, indeed likely, that unusually high asset declarations form the basis for some of these charges, the latter will not exclusively be based on asset data. In order to systematically code those thought to be corrupt, I downloaded the 1,584 articles from the *Times of India*—India’s newspaper of record—from beginning-2003 and until end-2010 that included the search terms “MLA” (members of the state legislatures are called Members of the Legislative Assembly or MLAs) and “corrupt*.”¹² The 55 state-level politicians found to be accused of corruption in these articles do indeed have larger assets, both in 2003/04 (their average assets in 2003/04 were Rs. 14.6 million, versus Rs. 7.9 million for those not accused of corruption) and in 2008/09 (those accused and not accused of corruption had assets of Rs. 32.9 and Rs. 28.5 million, respectively). Together, these checks confirm that asset data are picking up corruption perceptions and charges. We may therefore proceed with some increased confidence that the asset data are reliable.

A key challenge to calculating the personal gains to office and corruption rate is controlling for the appropriate counterfactual, namely, what asset accumulation would have been had politicians not won office. There are two broad possible ways to construct this counterfactual. The first is to use asset accumulation data from income surveys of the general population, as Lenz and Lim (2009) have done. It is difficult to recover credible estimates of losers’ change in assets using this method, however, since politicians are to likely differ from non-politicians in unobservable ways (including, for example, in their desire to run for office), and because there are likely to be too few “politician-like” respondents in most income surveys. A second possibility is to use data on the accumulation of election losers’ assets, on the understanding that those who run for office are more alike one another than those who do not, and that the ability of a candidate to accrue assets is not impeded by winning office. The latter assumption is reasonable in India since elected representatives are

¹¹The correlation of corruption perceptions in municipal services and a dummy for asset increases greater than legislator remuneration is 0.40.

¹²This invariably stood for corrupt or corruption.

legally permitted to continue with their outside activities while in office.¹³ A frequent constraint with this methodology—which is not binding here—is that of data availability: asset accumulation data are not usually available for losers.

In light of this discussion, the main estimate of the gains to office I employ is the average asset changes for election winners in 2003/04-2008/09 minus the asset changes for runners up ($\Delta A_W - \Delta A_L$). The counterfactual controlled for is the gains to office that would have accrued to winners had they lost, and is proxied by losers' change in assets. Conditional on data quality, this is a reasonable estimate of the gains to office to the degree that candidates have monetized their gains,¹⁴ and candidates' spending between elections does not change due to winning office. The main estimate of the suspect rate is the difference in the proportion of winners and losers with extreme changes in assets ($P(\Delta A_W > t) - P(\Delta A_L > t)$, where t denotes the threshold beyond which asset changes are considered extreme). The counterfactual controlled for is the chances that a person would have an extreme change in assets had they lost, and is proxied by the proportion of losers with this extreme change in assets. This method controls for the fact that a proportion of losers—who, by definition, are not corrupt due to office since they do not hold office—have large asset increases in the normal course. The method uses the difference in the distribution of asset changes due to office to impute the likely degree of corruption. For much of the analysis that follows, and even though the results are robust to the use of alternative definitions, “extreme” asset increases are defined as those in excess of legislators' salaries and allowances. These vary between Rs. 0.6 million for legislators from Chhattisgarh, to Rs. 1.7 million for legislators from Rajasthan and to Rs. 2.7 million for national legislators.¹⁵

The resulting measure of corruption is expansive, in that it dubs all the gains to office—over and above the gains experienced by losers and legislator remuneration—as suspect. The implied definition of corruption—the use of public office for private gain—is standard, however. The estimate

¹³The only winners who would have to give up an income stream by winning are government employees, who—under India's Office for Profit laws—cannot hold any other government-funded office while they are legislators. Very few bureaucrats run for office, however, a norm reinforced by the fact that bureaucrats cannot be members of political parties.

¹⁴As discussed previously, this is made likely by the fact that politicians' ability to extract rents is mainly contingent on their power over bureaucrats, which they only possess while in office.

¹⁵These figures are the sum of legislators' salaries and allowances between 2003/04 and 2008/09. Salaries are adjusted for taxes, at the highest marginal tax rate of 33%. Allowances are not subject to taxes. As detailed later, estimates of the suspect rate are similar if “extreme changes” are defined as changes greater than 50%, 75%, 125% and 150% of legislator salaries and allowances.

has the advantage of being reliant on few modeling assumptions, and is driven by the constraints of the data. Although the corruption definition does not distinguish between legal and illegal gains to office, at least three of the legal means by which winners could accrue extreme increases in assets are unlikely or morally suspect. First, politicians could get themselves or family members private or public sector jobs. However, India’s “Office for Profit” laws bar legislators from holding any state-funded job other than that of legislator. Nor do politicians hold many company directorships, which are the obvious private sector alternative to state jobs. Faccio (2006) shows that only 9 out of 326 public firms in India had connections to national legislators; the proportion of state legislators with directorships is likely to be lower. Also, unlike in the U.S., where politicians have discretionary powers to appoint people to the bureaucracy, recruitment to the Indian bureaucracy is rule-based and is not discretionary. This means that politicians cannot easily appoint family members to the bureaucracy. Second, winning could boost the sales of politicians’ memoirs. Indian politicians very rarely write memoirs, however, and even if they do, these are unlikely to be remunerative, given the small audience for political biographies in India.¹⁶ Third, winning could give politicians access to privileged information with which they could make money. Insider trading in India, as elsewhere, is illegal, however. Notwithstanding these sureties, and because of the uncertainty involved in definitively classifying candidates as corrupt, I use the word “suspect,” rather than corrupt, to refer to candidates with unexpectedly large asset increases. As I describe below, the inference that suspect politicians are indeed corrupt is aided by an analysis of the change in the composition of candidate assets due to office. Lastly, one of the main findings of the paper—that the estimated corruption rate is low—is only strengthened by the possible clubbing of legal and illegal gains to office, since it would imply that the estimated corruption rate is inflated.

The simple methodology outlined above yields naive estimates of the gains to office and the probability of being suspect, insofar as it uses a relatively simple method to control for the counterfactual. Winners and losers differ from one another in a host of observable and unobservable ways, however, and it is important to control for these. Additionally, the asset changes we observe suffer from “selection” or panel attrition bias, since they are only observed for candidates who reran for office in 2008/09. I present strategies for dealing with these issues below. While none of these strategies is a panacea for the issues raised, particularly given the difficulties in modeling asset data

¹⁶A bestseller of any type in India has a run of a few thousand copies.

(Hurst, Luoh, Stafford and Gale 1998; Lenz and Lim 2009), their joint use should help inference.

Controlling for confounds. Winners and losers might differ in observable and unobservable ways. To deal with observable differences (Supplementary Information Appendix Table 1 summarize these), I employ OLS, with and without preprocessing the data using matching, to control for the following predetermined variables: incumbency status, age, sex, education, previous criminal record, initial assets, the share of immovable assets in a family’s portfolio, party affiliation, dummies for whether a constituency is reserved for “scheduled castes” or “tribes,”¹⁷ number of registered voters, and legislature and state fixed effects and their interactions. To further help improve balance, and following the literature (Eggers and Hainmueller 2009), I estimate the effect of winning office on samples with all candidates, and with candidates from just India’s two largest parties: the Indian National Congress (INC) and BJP. In the latter two instances, winners from each party are compared with losers from their own party.

Preprocessing the data using matching is a particularly powerful method to reduce covariate imbalance, since it ensures the comparison of comparable data, which is important when control and treatment groups are thought to differ substantially. I employ “space graphs” due to King, Nielsen, Coberley, Pope and Wells (2011; plotted in SI Appendix Figure 1) to help choose a matching solution.¹⁸ This graph plots hundreds of randomly generated Mahalanobis distance, propensity score, and coarsened exact matching solutions by their L_1 imbalance measures and matched sample sizes.¹⁹ The graphs make explicit the trade-off between these criteria that any choice of a matching solution necessitates. I chose the matching solution on the imbalance-sample size “observed frontier” closest to the 45° line, thereby giving equal importance to sample size and variable balance (choosing a solution on the 45° line ensures this) while maintaining efficiency (choosing a solution on the sample size-imbalance frontier ensures this). This resulted in the choice of a coarsened exact matching solution for the samples with all candidates, and for those with just INC and BJP

¹⁷The Indian constitution “reserves” or sets aside single-member seats for lower castes and tribes (known as “scheduled” castes and tribes because their names are attached to an annexure of the constitution) in the state and national legislatures in proportion to their population shares. Only scheduled caste (tribe) candidates can run from seats reserved for scheduled castes (tribes). As usual, all citizens resident within a constituency are eligible to vote.

¹⁸Winners and losers were matched based on all the variables controlled for in OLS, except for legislature and state fixed effects, but including a dummy for the national legislature. Legislature and state fixed effects are controlled for using OLS after the data are matched.

¹⁹These solutions are generated by randomly varying the procedures’ tuning parameters, calipers and variable specifications.

candidates.²⁰ Having preprocessed the data using matching, I control for any remaining imbalance using OLS.

While OLS, with and without preprocessing using matching, control for observable differences between winners and losers, I also employ RD to control for unobservables. As Lee (2008) has argued, assignment to office may be considered random near the winning threshold since elections have a random component. The comparison of the asset changes of near-winners and near-losers might therefore be akin to the comparison of treatment and control groups in a randomized experiment. Although this is the case, it is worth noting that the quasi-experimental nature of the RD design in this instance is undermined by the differential attrition of winners and losers. I elaborate on this issue in the next section.

Using RD requires a choice of a bandwidth, around which we may consider elections as being quasi-randomly determined. Since the Imbens and Kalyanaraman (2009) algorithm suggests an “optimal” bandwidth of 9.2-12.7%, depending on whether the full, INC or BJP candidate samples are considered, I employ a bandwidth of 10% for the main analysis that follows.²¹ As I discuss below, the results remain robust to use smaller and larger bandwidths as well.

To assess the validity of the RD design, I perform the checks recommended by the Lee and Lemieux (2010). I first examine whether there is a noticeable break in the density of the winning margin (this is the “assignment” variable, since its value assigns candidates to treatment or control groups) at the zero point (McCrary 2007). The presence of such a break would suggest that candidates are able to strategically “sort” around the winning threshold, which would violate the assumption that candidates are near-randomly assigned to the treatment and control groups.²² The data, however, reject the presence of such a break.²³ A second test of the validity of the RD design are tests for the “effect” of winning on various predetermined variables, such as age, gender, education and initial assets, which could not possibly be affected by winning office. SI Appendix Table 2 presents the results of these tests, for the 36 predetermined variables controlled for in the

²⁰Depending on the sample considered, and as SI Appendix Figure 1 indicates, preprocessing the data dropped 50-70% of observations as being non-comparable and reduced L_1 imbalance by 5-25%.

²¹Since many Indian elections are close, using a bandwidth of 10% covers 50% of elections.

²²Such strategic sorting is less likely in India than in the U.S. since many Indian elections have more than two candidates, which makes the precise winning threshold less certain and harder to target.

²³The log difference in the height of the kernel density function of the winning margin at zero (the winning threshold) is statistically indistinguishable from zero. This test would be mechanically satisfied if all candidates reran for office, since the winning margin of losers is defined as the negative of the winning margin of winners. This is not the case here, however, since not all winners and losers rerun for office.

OLS estimates. Winning only weakly “affects” age, but we would expect at least one such “effect” randomly, since we are making multiple comparisons.²⁴ Together, these tests suggest that the data can be indeed be analyzed as a discontinuity. Three further tests of the validity of the RD findings—tests using different bandwidths, forcing variable polynomials and placebo tests for the “effects” of winning at vote margin thresholds other than zero—are presented in the next sections, along with the results of the analysis.

To summarize, I use OLS, with and without preprocessing, and RD to control for observable and unobservable imbalances between winners and losers. I run these analyses on the sample with all candidates, and on sub-samples with candidates from the BJP and INC.

Controlling for selection. The second aspect of the data that our empirical strategy must account for is that we do not observe the change in assets for all candidates, or even for a random sample of candidates, but only observe it for those who reran for office in 2008/09. If the corrupt are systematically more or less likely to run for office, and both are plausible, this might bias our estimates of the returns to office.²⁵ Although this selection bias is probably lower than would be the case elsewhere due to the high proportion of losers who rerun for office, due to incumbency disadvantage (Linden 2004; Ravishankar 2007; Uppal 2005),²⁶ SI Appendix Table 3 indicates that the candidate sample for which we observe the change in assets is indeed biased in terms of some pre-election characteristics, both for the full and close-election samples. It appears, for example, that those who won office in 2003/04, and younger, male, richer candidates, and those charged with crimes, are all more likely to rerun for office. Controlling for these factors controls for selection, but there might be other, unobserved ways in which candidates who rerun for office differ from those who do not.

One way to correct for selection would be to leverage exogenous determinants of people rerun-

²⁴Moreover, at 3 years or a third of a standard deviation, this “effect” is arguably not substantive. These results are in contrast to the imbalances found in elections to the U.S. House of Representatives, in terms of incumbency (Caughey and Sekhon 2011) and partisan affiliation (Grimmer, Hersh, Feinstein and Carpenter 2011). Balance on incumbency might be aided by the incumbency disadvantage that prevails in India (Linden 2004; Ravishankar 2007; Uppal 2005), while balance on partisan affiliation might be due to the independence of the election machinery, and to the deference shown by the judiciary to the country’s Election Commission (Krishnamurthy 2008).

²⁵Those who rerun for office might be more corrupt than those who do not if office buys politicians protection from prosecution, or if less corrupt politicians are denied tickets as they are viewed as being unable to contribute to party finances. The reverse might be true if voters penalize corruption.

²⁶I am able to track the change in wealth for approximately 43% of the top two candidates in 2003/04. Eggers and Hainmueller (2009), which is able to track the wealth of approximately 19% of candidates.

ning for office, ones that affect the probability of running for office without affecting the change in wealth, in a Heckman selection model. India’s non-partisan redistricting and seat “reservation” processes, implemented in mid-2008, provide such exogenous factors. Briefly, India’s constitutional and non-partisan “delimitation” commission redrew state and national electoral constituencies in a formulaic manner in 2008/09.^{27,28} The delimitation commission also “reserved” seats with the highest concentration of “scheduled castes” and “scheduled tribes” exclusively for these minorities (only members of these groups can run for seats reserved for them; the electorate remains the same) and in proportion to their share of the population. These processes are widely considered to have been apolitically and faithfully implemented (Iyer and Shivakumar 2009). Both the redistricting and reservation processes will have exogenously shifted the odds that candidates will have rerun for office in 2008/09. Specifically, candidates in districts whose boundaries changed greatly will be—depending on the extent of the changes made, the entry or exit of their competitors, and their status as incumbents or challengers—more or less likely to rerun for office.²⁹ And candidates in constituencies that were either reserved or dereserved for minorities will be less likely to run for office, either because some were effectively disqualified from running for office (in the case of newly reserved constituencies) or because they faced new competition from hitherto excluded majorities (in the case of newly dereserved constituencies). Importantly, neither of these factors—the extent

²⁷By way of background, India’s states are divided into single-member parliamentary constituencies, each of which elects a representative to the lower house of the national parliament. The states are also, and in parallel, divided into single-member assembly constituencies, which each elect a representative to the lower house of the state legislature. Contiguous assembly constituencies “fit into” preexisting administrative districts, which in turn “fit into” states. Contiguous assembly constituencies—sometimes across administrative district lines—are grouped into parliamentary constituencies.

²⁸A precis of the process is as follows. The commission first allocated to each administrative district in each state, single-member state legislative assembly seats in proportion to the contribution of the district population to the state’s population. Second, starting from the North-West corner of the district, contiguous state constituencies were delimited, taking into account preexisting sub-district boundaries, such that each constituency ended up with a population within 10% of the average constituency population for that administrative district. Single-member parliamentary constituencies were then created by grouping state assembly constituencies without regard to district boundaries, also starting from the North-West corner of each state and while ensuring that their populations are within 10% of the average parliamentary constituency population for the state. The process involved minimal discretion. See eci.nic.in/delim/Procedure/Delimitation_of_Constituencies.pdf for details.

²⁹To see why the effect of redistricting on the chances of rerunning for office could be positive or negative, consider a constituency that is “too small,” which will have had territories added to it. Both incumbents and those who had run for office in the past will be able to rerun for office (a positive effect over the average), but would be less likely to the degree that they face new competition from those in newly added areas (a negative effect). Similarly, if a constituency is “too big,” it is likely to be split, preventing some from rerunning for office (a negative impact) while simultaneously reducing competition for those remaining and thereby encouraging them to rerun for office (a positive impact). In addition to this, challengers might generally be emboldened by redistricting-induced weaknesses on incumbents’ part. A literature traces these effects in the U.S. (Carson, Engstrom and Roberts 2006; Hetherington, Larson and Globetti 2003).

of delimitation, or the change in reservations—will have affected politician behavior between elections since there was not much awareness about the delimitation process (Verma 2008), and since the final delimitation “orders” were only made public and came into force soon before the 2008/09 elections.

SI Appendix Table 4 details first stage probit regressions, with a dummy for rerunning for office specified as the dependent variable. The successive regressions examine the correlates of rerunning for office in state elections with redistricting, national elections with redistricting, and state and national elections with and without redistricting. The two sets of independent variables of interest are the constituency and district imbalance measures (which indicate a need for redistricting)³⁰ and dummies for whether a constituency’s reservation status changed. While the former appear positively associated with the chances of rerunning for office, the latter are, as expected, negatively associated with rerunning for office. I use the last first-stage regression, with the pooled state and national observations, for my analysis.³¹

Given this discussion, I estimate the gains to office and corruption as follows. I first calculate the gains to office and the proportion of suspect politicians through simple differencing. I then use OLS, with and without preprocessing using matching, and RD to help control for observables and unobservables. Lastly, I use a Heckman correction model to control for selection.

Before I proceed, note that the methodology detailed above could cause us to both underestimate or overestimate the gains to office and corruption. The possible underreporting of assets could lead us to underestimate both the mean gains to office and the change in the distribution of wealth, for example.³² We could also underestimate these quantities because we lack information on candidates’

³⁰The parliamentary constituency imbalance measure is the relative size of a parliamentary constituency with respect to the average for the state. The state constituency imbalance measure is the relative size of a state assembly constituency with respect to the average for the district. The district imbalance measure is the state assembly seat-normalized district population with respect to the average value across all districts in the state. Observations where the imbalance measures are not defined (namely, the national imbalance measures for state elections, and the state imbalance measures for national elections) are set to the mean imbalance value. To ensure normality, all imbalance values are log transformed.

³¹Employing more complex specifications—including using the interaction of the redistricting and reservation variables with partisanship or winning status in 2003/04 as predictors of rerunning for office—in the first stage did not materially change the results.

³²This concern is somewhat attenuated by the fact that I am analyzing the first two rounds of data under this new disclosure policy, which means that politicians might not have had as much of a chance to hide their wealth as will have been the case otherwise. The specific concern that politicians keep funds in offshore bank accounts is less of a concern with state-level politicians, who are less sophisticated and who preside over smaller economies than do national-level politicians. The results presented below, however, are robust to restricting the dataset to state-level politicians.

expenditures (including others' expenditures for politicians on, for example, junkets) during the five years between elections, and because politicians might not have monetized all their gains. On the other hand, we might overestimate the gains to office and corruption if asset reporting improves over time, or as some might face the incentive to inflate their financial resources as a vote-getting strategy (because, for example, voters might view corruption as a marker of the ability to “work the system;” Author and Coauthor 1 2011) or as a matter of pride.³³ Lastly, our inability to distinguish between legal and illegal gains to office might also cause us to inflate the suspect rate. Since the direction of bias in our estimates of the gains to office and corruption is unclear, the estimates presented could be upper or lower bounds. The estimates of the gains to office and suspect rate presented below are so clearly lower-than-expected, however, that their interpretation remains unchanged in the face of these biases.

The Gains to Political Office

The left-hand panel of Figure 2 displays the simple difference estimate of the change in assets due to winning office. It shows that the average candidate gained Rs. 9.6 million (\approx \$213,000 or 87% of mean assets) due to winning office in 2003/04. A breakdown of the average gains to office (presented in SI Appendix Figure 2) by legislature reveals interesting patterns. First, although the gains to office for national legislators are the second-highest in the country, that the mean gains to office in the state legislatures are oftentimes also very large underlines the fact that much spending power is vested with states. Second, the legislatures with the highest and fourth-highest average gains to office are for the states of Karnataka and Orissa, respectively, both of which have high concentrations of natural resources. Third, the legislature with the third-highest average gains is—perhaps surprisingly, given the state’s remoteness from the Indian heartland—the small northeast state of Arunachal Pradesh. The state receives large transfers from New Delhi, however, which might explain the unusually high gains to office. Lastly, the average gains to office for some states, including Maharashtra and Delhi, are negative. An examination of the data reveals that this is largely due to swings in property values in the period considered.³⁴ As detailed previously, these

³³People have argued, for example, that lower-caste leader Mayawati’s “riches have become a symbol of Dalit [or lower caste] empowerment” (Bose 2008: 256; see also Aiyar 2008).

³⁴Since I have data on 11 of India’s state legislatures, I do not have sufficient power to analyze the relationship between the gains to office and variables—such as salaries and party systems—that vary across, and not within,

naive estimates of the gains to office need to be corrected for observable confounds (using OLS, with and without preprocessing using matching), unobservable confounds (using RD) and selection (using a Heckman correction).

The first row of Table 2 summarizes the results from this exercise (detailed results are in SI Appendix Tables 5, 6, 7 and 8). OLS estimates indicate that winning office is associated with an 0.17 increase in log million Rs. in assets. This is equivalent to a Rs. 2.2 million, \$49,000 or 3.7% compounded annual asset increase due to office over five years. This growth rate is arguably modest given that India experienced nominal annual GDP per capita growth rates of 13% in this period, and since we might expect legislators to do better than the average citizen.³⁵ Preprocessing the data using matching to better control for observables increases the estimated effect of winning slightly, while maintaining its statistical significance. Using the regression discontinuity design with second-order polynomials of the forcing variable—which controls for unobservables in addition to observables—makes the effect of winning statistically indistinguishable from zero. The first graph in Figure 3 graphically illustrates this. Lastly, the Heckman correction yields an estimated effect of winning office higher than the OLS estimate (the gains to office are now estimated to be Rs. 3.5 million, \$77,000 or 5.6% compounded annually) while retaining its statistical significance. Overall, the results suggest that candidates accrue arguably modest, and inconsistently statistically significant, assets while in office.

In order to explore the impact of winning office further, I consider the impact of winning office for candidates from the country’s two main parties. To do so, I include interactions of the indicator for winning office in 2003/04 with party dummies in the four specifications used previously. These estimates, presented in the second row of Table 2, suggest that the previously reported effect of winning office is being driven by BJP candidates’ asset changes, which are consistently distinguishable from zero. The table also reports p -values for the hypothesis that the effects of winning office are the same for INC and BJP candidates. In three of four instances, these suggest that BJP candidates enjoy higher mean gains to office than INC candidates. I defer a discussion of why this might be the case to the last section of the paper, after I have more fully considered the states. I do, however, have more than sufficient data to examine how the gains to office vary within states, and across candidates. I turn to this analysis next.

³⁵Asset and GDP per capita growth rates are, of course, conceptually very different, particularly given that assets are a stock, and GDP per capita is a flow.

robustness of these results.

I also reestimate the gains to office on candidate samples from just the INC and BJP, thereby comparing these candidates with their co-partisans. The results for the INC candidates are only distinguishable from zero in one instance. The results for BJP candidates are, however, statistically distinguishable from zero across three of four estimators. These indicate that the gains to office for BJP candidates vary between Rs. 3-9 million, \$71,000-\$196,000 or 54-77% of mean assets. This is the equivalent to a 5-12% compounded annual asset growth rate, which is significant but is again lower-than-expected given nominal GDP per capita growth rates of 13% in India in this period.

A further indication of the veracity of these results comes from an examination of the change in BJP candidates' wealth by incumbency and winning status in 2003/04. If winning office is profitable, incumbents should be richer than non-incumbents in 2003/04. SI Appendix Figure 3 shows this is indeed the case. The figure also indicates that incumbents are able to accrue wealth between 2003/04-2008/09 at a greater rate than non-incumbents, thereby indicating that returns to office increase over terms.³⁶

To investigate the robustness of the estimated gains to office for BJP candidates, I consider their sensitivity to the choices made while preprocessing the data and implementing the RD estimator, and then to the use of alternative estimators. Recall that I employed a "space graph" due to King et al (2011) to choose an appropriate matching method to preprocess the data. While I chose the estimator on the bias-sample size frontier nearest the 45° line for the previous analysis, the result is robust to using four other frontier procedures (two to the right, and two to the left, of the previously chosen frontier procedures) as well. To consider the robustness of the RD results, I follow Lee and Lemieux (2010) to examine how the estimated gains to office for BJP candidates vary with the bandwidth and forcing variable polynomial choices, in Table 3. Although the estimates of the gains to office for BJP candidates were statistically indistinguishable from zero in the preferred RD specification (with a bandwidth of 10%, and controlling for the second-order polynomial of the winning margin), the magnitude of the estimated gains to office is remarkably consistent across bandwidth-polynomial order combinations. Another test for whether the RD test is picking up a spurious relationship between winning and the change in wealth is presented in Table 4, which displays the change in wealth due to resetting the winning threshold to -10, -5, 5 and 10% of the

³⁶These patterns hold for the full candidate sample as well.

vote. The table indicates that only truly winning an election is associated with substantive (albeit statistically insignificant) gains to office for BJP candidates. Lastly, estimates of BJP candidates' gains to office are consistent using two additional estimators: quantile regression, which is used to estimate the change in median, rather than mean, wealth due to winning office, and the genetic matching estimator (see SI Appendix Tables 10 and 11 for the results of these tests.)

Corruption, its Correlates and Possible Consequences

The evidence I have presented so far indicates that the gains to office are generally statistically distinguishable from zero for a subset of candidates, namely, those from the BJP. BJP candidates' gains to office are also generally statistically distinguishable from the INC candidates' gains. But are these gains to office indicative of corruption, and do the INC and BJP display differential propensities for corruption, distinguishable from zero and one another? While a definitive estimate of corruption is beyond scope of this paper, an examination of the change in the distribution of wealth accrual due to office provides suggestive evidence. As discussed previously, a reasonable estimate of the maximum possible premium that non-corrupt election winners will earn over losers is the salary and allowances they draw as legislators in the five years between elections. This relatively severe definition of suspect wealth—which clubs unexpected legal and illegal gains—is necessitated by the data and relies on minimal assumptions. The implied stringent (but standard) definition of corruption—the use of public office for private gain—is arguably made more reasonable by the fact that some alternative sources of asset increases that could accrue to winners are either unlikely (such as memoir sales and directorships) or illegal (government jobs for themselves or relatives, or insider trading). Given that the average gains to office for BJP candidates calculated in the previous section are Rs. 3-9 million, and the maximum possible premium that legislators could accrue due to winning office varies between Rs. 0.6-2.7 million, we have a *prima facie* indication that some legislators might be corrupt.

The right-hand panel of Figure 2 displays the simple difference estimate of the average change in the proportion of politicians with “extreme changes” in assets. This shows that 10% of winners are suspect due to winning office. That 63% of losers experienced “extreme” changes in assets (where extreme changes are defined as those in excess of legislator salaries and allowances) tells

us that we should expect to see a similar proportion of winners to enjoy such returns, if it were not for office. That 73% of winners experienced extreme gains, however, tells us that 10% of winners enjoy inexplicably high returns. Figure 4—which displays the relative distribution of the change in assets of losers with reference to winners (Handcock and Morris 1999)—suggests that this proportion would be robust to varying the precise threshold beyond which we classify the assets as “extreme.”³⁷ An examination of the variation in this number across legislatures (plotted in the bottom panel of SI Appendix Figure 2) reveals a pattern similar to the variation observed for the gains to office. Mineral and transfer-rich states have above-average proportions of suspect legislators, and members of the national parliament are not the worst offenders.³⁸

To further examine whether there really is an 10% increase in the proportion of politicians with extreme changes in assets due to winning office, the bottom panel of Table 2 summarizes the results of multiple ways of controlling for preexisting differences between winners and losers (the full results are reported in SI Appendix Table 5, 6, 7 and 9). As before, I present the OLS results,³⁹ with and without preprocessing due to matching, RD and Heckman analyses. These estimates are calculated for all candidates, next for all candidates with separate intercepts for the effect of winning office for INC and BJP candidates, and lastly for samples of just INC and BJP candidates.

The estimates of the proportion of suspect politicians among all candidates vary between 4 and 9%, and are statistically indistinguishable from zero in three of four estimators. Strikingly, similar results hold if were to redefine politicians’ maximum possible savings to 50%, 75%, 125% and 150% of politicians’ salaries and allowances (SI Appendix Table 12). This confirms the pattern in Figure 4, which displays the relative distributions of losers’ to winners’ asset changes,⁴⁰ in that the small proportion of politicians that are suspect appears to be largely insensitive to the precise definition of “extreme” gains. The results in Table 2 also suggest that a statistically insignificant proportion of INC candidates are estimated to be suspect (both the coefficient on the interaction of

³⁷The figure shows that there were more losers than winners with low asset changes, and fewer losers than winners with high asset changes. More specifically, until the 20th percentile of winners’ wages, there were approx. 30% more losers than winners. After about the 30th percentile of winners wages, however, there were consistently 10-20% fewer losers than winners.

³⁸As mentioned before—and since I only have data for 11 of India’s state legislatures (and the entire national legislature)—I have insufficient power to systematically analyze the relationship between state-level variables and being suspect. I therefore, subsequently, leverage sub-state variation to analyze the correlates of being suspect.

³⁹I use OLS instead of logit or probit models for ease of interpretation, because the latter have trouble converging, and since practically all of the predicted probabilities in the OLS are between 0-1.

⁴⁰See footnote 37.

winning and the INC candidate dummy, and the regression on the INC candidate sample, suggest this). The suspect rate of BJP candidates—which is statistically significant in all of the four OLS estimators applied to the full candidate sample, and in two out of the four estimators applied to the BJP sample—is more consistently detected. The right-hand panel of Table 3, and the bottom panel of Table 4—which display the robustness of the RD estimates to varying choices of the bandwidth, the order of the forcing variable polynomial, and the effects of “winning” at fake thresholds—corroborate these results.⁴¹ Lastly, the hypotheses tests for the differences in the estimated proportion of suspect INC and BJP candidates consistently suggests that there are more suspect BJP than INC candidates.

A further indication that some BJP winners are indeed corrupt—over and above their extreme asset changes—comes from an analysis of the change in the composition of politicians’ assets. It is often alleged that the corrupt shift their assets into family members’ names to escape scrutiny (Simser 2008), and into hard-to-value assets such as jewelry, land and buildings (Sandesara 1985; Khusro 1988). The data—a breakdown of the drivers of the increase in assets is presented in Table 5—provide some support to these possibilities. The growth in the assets of politicians with extreme changes is driven by growth in other family members’ and “immovable” assets, which include land and buildings. Winners with extreme asset increases also divest themselves of agricultural land and increase their holdings of nonagricultural land.⁴² This pattern is consistent with the possibility that politicians use office to convert agricultural into non-agricultural land, a process controlled by politicians and bureaucrats. Note that some of these patterns hold for winners and losers, however. This could be explained by the fact that the rich generally behave differently than

⁴¹When employing the RD estimator, we might worry that the low corruption rate might mean that the suspect are concentrated among those who win or lose elections with margins greater than 10%. This might be the case if corruption is penalized by voters. We might expect the reverse as well, though, since those in close elections have a greater need for electoral funds and, therefore, incentive to be corrupt. That candidates have to declare their assets soon (around three weeks) before elections implies, however, that candidates will have already drawn down their assets to contest the next election when we observe their finances, which means that the assets data should be stripped of this differential incentive to corrupt. This possibility is somewhat belied by the fact that similar estimates of the corruption rate are recovered using the full sample (used by the OLS estimator, with and without preprocessing, and the Heckman correction), and the estimates used by the main RD sample and its robustness tests (Table 3). It is perhaps worth noting the concern that the estimates recovered by the RD estimator are “local,” is less of a concern here than, for example, in the U.S., for two reasons. First, India’s competitive politics ensures that a large share of elections (50%) were won or lost with a margin of 10% or less. And second, India’s multi-party system causes the winning vote to vary between 18-55% in the close-election sample, rather than simply hover around 50%, as it would in the U.S.

⁴²The Indian government distinguishes between these two types of land based on their primary “purpose,” and controls the conversion of agricultural land into non-agricultural land.

the poor, or that losers, too, are corrupt (but not, by definition, due to office). Differences between winners and losers with extreme asset changes, presented in the last column of the table, however, also suggest that extreme winners divest themselves of agricultural land. For reasons mentioned previously, this is particularly strong evidence of corruption.

Lastly, it is perhaps worth considering two alternative explanations, other than corruption, for the patterns observed in the data. One possibility is that the data are capturing the degree to which politicians feel pressure to declare or launder money. In this account, the proportion of politicians who are corrupt is much higher, while only 4-9% of politicians feel the pressure to declare their excess wealth. Two observable implications that follow—that constituencies with higher media exposure or more competitive races report higher gains to office—do not appear to hold (SI Appendix Figure 4).⁴³ A second possibility, also not supported by the data, is that the gains to office are not due to corruption, but due to substantial increases in the value of real estate. This confound is controlled by the use of the close-election sample, which improves balance, and by the inclusion of the proportion of immovable assets as a control in all estimators.⁴⁴ Further, as the data in Table 5 indicate, although property is a large driver of the change in assets, this is less the case for winners as compared with losers.

Having established some evidence of corruption among politicians, I explore which politicians tend to be suspect. Before I do so, note that I have so far investigated corruption by examining the difference in the proportion of winners and losers with extreme increases in assets.⁴⁵ While this analysis indicates that 4-9% of all politicians (and 15-37% of BJP politicians) are suspect, it does not identify precisely which winners are suspect. To study the correlates of being suspect, I therefore employ the candidate sample for winners and losers, specify the extreme changes in assets dummy as the dependent variable, and examine its association with various characteristics of interest and their interactions with winning. The latter variables—i.e., the interactions of candidate and constituency characteristics and winning status—yield the correlates of being suspect.⁴⁶ This

⁴³Similarly, it could be that politicians at the end of their tenure are more likely to declare their wealth, since they have less reason to fear reprisals. As SI Appendix Table 5 indicates, however, age is not positively correlated with declared assets.

⁴⁴Property constitutes over 95% of immovable assets in the period considered.

⁴⁵As reported previously, the estimate of the suspect rate is remarkably robust to changes in this threshold beyond which asset changes are classified as extreme.

⁴⁶In addition to the interactions with the winning dummy, I have added three variables to the standard specification in Table 2: the proportion of the population that is literate, and the proportions of full-time- and non-workers. These data are calculated using “taluk” level data from the 2001 Census of India, and are aggregated to the political

is a “hard” test to uncover the correlates of being suspect since individual suspect candidates have not been identified, and since there are few suspect candidates. Table 6 displays the results from this exercise, for all candidates and for BJP candidates. Despite the skepticism noted earlier, some patterns do emerge from the data. Being a member of the parliamentary majority, a minister, and from a seat reserved for scheduled tribes are all associated with increased chances of being suspect. The analysis for BJP candidates corroborates these results, and further suggests that candidates from large constituencies are more likely to be suspect. These associations—which are discussed further below—could reflect candidate selection (as different people are likely to run for or be selected into these positions), varying incentives to be corrupt, or a combination of the two.

While the evidence presented thus far on the correlates of being suspect are not causal, the RD framework allows us to recover causal estimates of the effects of some variables. Including interactions for incumbency and partisan affiliations with winning, for example, in the standard RD framework used in Table 2, yields causal estimates of the effects of these variables on the probability of being suspect. These characteristics are quasi-randomly determined in close elections since incumbents necessarily face non-incumbents, and BJP and INC candidates necessarily face others when running for office. Regression 1 of Table 7 presents the results from this specification, and confirms that BJP candidates do indeed have a greater chance of being suspect. In regression 2, we restrict our attention to close elections where female candidates faced male candidates, and where gender was therefore quasi-randomly determined. The next regressions do the same for elections where candidate education and criminal status are quasi-randomly determined, after which the exercise is repeated for BJP candidates.⁴⁷ As is always the case with a discontinuity design, this method yields local average treatment effects, in the sense that while gender, education and being charged with crimes are quasi-randomly determined in the races considered, selection into the races themselves is not random. The regressions fail to indicate that any of these variables is associated with an increased probability of being suspect. The one exception is that while criminal BJP candidates increase their wealth in office, office attenuates this advantage. The result is intriguing in light of concerns about the criminalization of Indian politics (Aidt, Golden and Tiwari

constituency level using GIS maps (the method used is detailed in Author and Coauthor 2 2011). These series were not controlled for in the main results presented in Table 2 since they are missing for some urban constituencies. The main results remain robust to the inclusion of these controls, however.

⁴⁷The regression for gender in the BJP sample is dropped due to insufficient observations.

2010; Vaishnav 2010).

Lastly, I explore whether asset increases are associated with improved candidate vote shares in 2008/09 in Table 8, first for all candidates, and then for BJP candidates. A number of the correlates of 2008/09 votes are intuitive: votes received in the previous election, initial assets and being an incumbent are all positively associated with votes received. Of particular interest, having an extreme change in family assets and the magnitude of the change in candidates' family assets are both positively associated with increased votes in 2008/09. Given that winning increases BJP members' family assets by an average of Rs. 3-9 million, their mean gains to office will be associated with 7.1-7.2 percentage point increases in candidate vote shares. The positive association between asset changes and vote increases could be associational (as third factors—such as economic growth—cause both asset and vote increases) or causal. It is worth noting that the positive association between asset increases and vote shares is no stronger for election winners than losers. That this is the case indicates that the effect, if any, of being suspect on vote shares occurs through its impact on assets.

Discussion and Conclusions

Although corruption is a central concern in political economy, it has been understudied, at least partly due to the difficulties in collecting systematic data on the phenomenon. I have, however, been able to estimate the gains to political office and suspect rate among India's politicians. While far from perfect, these estimates represent a substantial improvement in existing assessments of corruption among politicians in India, which have no systematic empirical basis. Using a rich dataset on the evolution of candidate assets in the country's national and state elections, I have found that the average candidate increased his assets by Rs. 2.2-3.5 million or \$49,000-\$77,000 over five years, which is equivalent to 4-6% compounded annual growth rate. Given that a maximum of Rs. 0.6-2.7 million of this increase could be due to savings from legislative salaries and allowances, 4-9% of winners are suspect. Although these results are inconsistently statistically distinguishable from zero, stronger evidence suggests that a subset of candidates, from the BJP, enjoy statistically significant gains to office, and that 15-37% of BJP winners appear suspect. Conditional on the veracity of the data, these figures express the order of magnitude of the mean gains to office and

corruption rate. That the change in winners' assets is accompanied by a shift in assets away from agricultural land—a process controlled by politicians and bureaucrats—supports the possibility that suspect politicians are indeed corrupt.

Many would argue that a corruption rate of 4-9% among *any* country's legislators is unacceptably high. This is perhaps particularly so in India, given the extraordinary gains to office experienced by some, the alleged sources of the gains to office (often from diverting funds meant for the poor), and the country's high poverty, which is thought to be exacerbated by corruption. However, a 4-9% corruption rate is surprisingly low given the sweeping condemnation heaped on India's politicians by the popular press (Agence France-Presse 2009), and the large-scale corruption assumed in academic accounts of Indian politics as well (Afzal 2007; Aidt, Golden and Tiwari 2010; Banerjee and Pande 2009; Gill 1998; Kochanek 1987; Myrdal 1968; Vaishnav 2010; Wade 1982, 1985). What might explain the disconnect between people's perceptions of widespread corruption and my more sober findings?⁴⁸ One possibility is that much of the gains to office are used to finance elections and therefore do not show up in the accounts I track here, either because these funds are maintained separately or because they have been used.⁴⁹ While possible, the relatively low personal gains to office found here are informative in of themselves, in that they indicate that corruption does not lead to massive personal enrichment by all. Others include the fact that people's attention is often drawn by extreme, rather than average, cases, the misattribution of bureaucratic corruption for political corruption, and by a lack of attention to the counterfactual. Interestingly, the finding that fewer-than-expected Indian politicians are corrupt echoes Querubin and Snyder's (2009) similar findings for the 19th century U.S., and the finding that individuals perceive public goods delivery in India to be riddled with far more corruption than is the case (Transparency International India and Center for Media Studies 2008). Given that prominent measures of corruption, such as Transparency International's Corruption Perceptions Index and the World Bank governance indicators, are constructed using data about corruption perceptions, the pronounced gap between perceived corruption and the estimates calculated here is of concern.⁵⁰

⁴⁸While it is possible that corruption among politicians has drastically reduced because of the 2003 Supreme Court-mandated disclosure rules, and that this is the cause of the marked difference between corruption perceptions and reality, this seems highly unlikely given that corruption is sticky, and since I have tracked the change in politicians' assets over the first two elections after the disclosure policy was promulgated.

⁴⁹This is likely since asset declarations are made approximately three weeks before elections are held.

⁵⁰See Treisman (2007) for more on the disjuncture between corruption perceptions and reality.

That the gains to office are not widely shared among politicians may be understood in light of the apparent decentralization of India’s corruption (as compared to the centralized corruption, for example, in Suharto’s Indonesia), the spoils of which are thought to be widely shared among the bureaucrats that make up the bulk of the Indian state. Also, unlike in the U.S., and in contrast to their power vis-à-vis the bureaucracy, legislators in India are weak relative to party leaders and the executive.⁵¹ This might explain the average legislator’s inability to extract rents. Consistent with this explanation, legislators who are more powerful—such as members of the parliamentary majority and cabinet—do indeed have a greater chance of being suspect in the data.⁵² In addition to this, those who are likely to be monitored less (members of historically disadvantaged minorities) and those who are likely to have more opportunities to be corrupt (those from large constituencies) are also more likely to be corrupt. These associations reflect a combination of candidate selection—if corrupt candidates are more likely to choose or win these positions—and varying incentives to be corrupt.

A second result is that BJP candidates appear to enjoy higher mean asset changes, and are more likely to have suspiciously high asset changes, as compared with INC candidates. This is ironic, since the BJP claims to be the party of “governance.” Why might the estimated gains to office for INC and BJP candidates differ? One possibility is that BJP candidates are more likely to honestly declare high assets. We have no reason to believe this to be the case, however. Asset disclosure laws apply equally to all candidates, and parties are not known to monitor asset disclosures to different degrees. Further, that BJP candidates declare lower mean (and median) assets in both 2003/04 and 2008/09 than INC candidates contradicts the possibility. A second possibility is BJP candidates’ asset increases reflect the fact that they formed the government in many states (this is, in fact, a post-treatment variable), rather than the fact that they are BJP members. This, too, appears unlikely, since the BJP formed the government in five out of the eleven states considered, while the

⁵¹The weakness of the average legislator in India is particularly acute. Indian legislatures are oftentimes convened for the minimum periods required by law, and when they are convened, much time is lost due to disruptions. Legislators are allotted scant funds, enough to hire one under-qualified staff member, do not have a parliamentary research service to draw on, and rarely speak. Few bills are passed, and even fewer are debated. Parliamentary voting is almost always along party lines, and whips are issued frequently (Agrawal 2005; Wallack 2008). Some actions of party leaders with respect to legislators could be illegal. There have been accounts, for example, of party leaders forcibly holding legislators at resorts before major votes, to ensure politicians’ attendance (“Congress, JD(S) have kidnapped Karnataka MLAs: BJP” 2010). Given all this, it is perhaps unsurprising that most legislators do not make large gains to office.

⁵²This suggests where (in members of the executive, rather than the legislature) we might expect corruption in parliamentary systems more generally.

INC ruled both the center and four remaining states. This leaves the possibility that the differences between INC and BJP candidates truly reflect differences in asset accrual. Such differences could be due to variation in party membership bases (the BJP is said to draw more of its membership from the middle classes, while the INC concentrates on economically disadvantaged minorities) or organizational structure (the INC is a dynastic party, while the BJP is relatively professional⁵³ [Chhibber 2011]). Both these possibilities could affect candidate selection, since they might cause the parties to attract differentially corrupt candidates, or politicians' incentives while they are in office.

The results presented here help improve our understanding of political life in India. In conjunction with established facts about politicians' careers—the long hours they work, the competitive elections they face, and the high frequency with which they drop out of politics, partly due to incumbency disadvantage (Linden 2004; Ravishankar 2007; Uppal 2005)—it may be possible to characterize Indian parties as tournaments with different payoff structures (Levitt and Venkatesh 2000). That much of the personal gains in office are concentrated among a few (in the data, 1% of politicians received 30% of the total gains to office, while 5% of politicians received 55% of the total gains to office) corroborates this notion.⁵⁴ This account of politicians' careers, if true, might help explain some general features about Indian politics, including the high candidate entry rate (which could be caused by the large difference between the mean and median gains to office),⁵⁵ the poor quality of the mean candidate (an attribute of tournaments without a primary-like screening mechanism, which is absent in India) and the ubiquity of middlemen (who could be viewed as proto-candidates, working for free to get party tickets). It might also help explain systematic differences between parties.

By estimating the personal gains to office in India, this paper provides a foundation with which we can examine a number of questions about the causes and consequences of corruption, questions which were hitherto difficult to answer due to a lack of systematic data. One interesting line of inquiry would be to try to mediate between selection and incentive based theories of corruption

⁵³The BJP's three year term limits for state and national party presidents, for example, might enable asset accrual by a larger set of politicians when compared with the INC, whose party officers have no such term limits.

⁵⁴This concentration in assets is large by Indian standards, as well. While the income Gini coefficient for the country was 0.37 in 2004, the Gini for the average politicians' income (i.e., their change in assets) over the five years tracked in this paper was 0.89.

⁵⁵The median gains to office are approximately one-fourth the mean gains to office.

(Fearon 1999; Pande 2008). Such analysis has been impeded in the past due to a lack of panel data—which we have here—and which are necessary to test theories about candidate entry. Other possibilities would be to bring the data on corruption presented here to bear on the difficult question of whether corruption impedes economic growth, or vice-versa.

Lastly, the method proposed in this paper could be used to study the gains to office in other contexts. As judges and bureaucrats declare their assets in India, we should be able to compute and analyze their gains to office, thereby acquiring a more comprehensive understanding of corruption in India. Similarly, the gains to office could be examined in the over one-third of countries where information on candidate assets is available to the public (Djankov et al 2010).

References

- Agence France-Presse. 2009. “India Politicians Seen as Corrupt, Inefficient: Survey.” *Agence France-Presse*, March 2.
- Afzal, Madiha. 2007. “Voter Rationality and Politician Incentives: Exploiting Luck in Indian and Pakistani Elections.” Yale University.
- Agencies. 2008. “Malhotra’s Assets Rose by Five Times in Four Years.” *The Indian Express*, November 8.
- Agrawal, Arun. 2005. “The Indian Parliament.” In *Public Institutions in India: Performance and Design*, ed. D. Kapur and P. B. Mehta. New Delhi: Oxford University Press.
- “Aid for Farmers of Vidarbha Milked by Netas.” 2008. *Times of India*, September 13.
- Aidt, Toke, Miriam Golden, and Devesh Tiwari. 2010. “Criminality and Incumbency of Candidates to the National Legislature in India.” Cambridge, UCLA and UCSD.
- Aiyar, Shankkar. 2009. “Richest Politicians.” *India Today*, 18-35.
- Almond, Gabriel A., and Sidney Verba. 1963. *The Civic Culture: Political Attitudes and Democracy in Five Nations*. Princeton, New Jersey: Princeton University Press.
- Association for Democratic Reforms. 2008. “Karnataka Election Watch.” Bangalore.

- Author. 2009. "RB-AMIN.exe: A Tool to "Fuzzy" Match Indian Names." Affiliation 1.
- Author and Coauthor 1. 2011. "Why People Vote for Corrupt Politicians: Evidence from Survey Experiments in Afghanistan." Affiliation 1 and Affiliation 2.
- Author and Coauthor 2. 2011. "Socioeconomic Profiles of India's Assembly Constituencies, 1971 and 2001." Affiliation 1 and Affiliation 3.
- Banerjee, Abhijit, and Rohini Pande. 2009. "Parochial Politics: Ethnic Preferences and Politician Corruption."
- Bose, Ajoy. 2008. *Behenji: A Political Biography of Mayawati*. New Delhi: Penguin.
- Carson, Jamie L., Erik J. Engstrom, and Jason M. Roberts. 2006. "Redistricting, Candidate Entry, and the Politics of Nineteenth-Century U.S. House Elections." *American Journal of Political Science* 50 (2):283-93.
- Caughey, Devin M., and Jasjeet S. Sekhon. 2011. "Elections and Regression-Discontinuity Design: Lessons from Close U.S. House Races, 1942-2008." *Political Analysis* 19 (4):385-408.
- Chhibber, Pradeep. 2011. "Dynastic parties: Organization, finance and impact." *Party Politics*:1-19.
- Chopra, Vir K. 1996. *Marginal Players in Marginal Assemblies*. Hyderabad: Orient Longman.
- "Congress, JD(S) have kidnapped Karnataka MLAs: BJP." 2010. *Times of India*, October 9.
- Di Tella, Rafael, and Ernesto Schargrotsky. 2003. "The Role of Wages and Auditing during a Crackdown on Corruption in the City of Buenos Aires." *Journal of Law and Economics* 46 (1):269-92.
- Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2010. "Disclosure by Politicians." *American Economic Journal: Applied Economics* 2 (April):179-209.
- "Due Process: Deduct Arrears From MPs' Salaries." 2004. *The Statesman*, March 3.
- Eggers, Andrew, and Jens Hainmueller. 2009. "MPs for Sale? Estimating Returns to Office in Postwar British Politics." *American Political Science Review* 103 (4):1-21.

- Faccio, Mara. 2006. "Politically Connected Firms." *American Economic Review* 96 (1):369-86.
- Fearon, James. 1999. "Electoral Accountability and the Control of Politicians: Selecting Good Types versus Sanctioning Poor Performance." In *Democracy, Accountability, and Representation*, ed. B. Manin, A. Przeworski and S. Stokes. Cambridge: Cambridge University Press.
- Gill, S. S. 1998. *The Pathology of Corruption*. New Delhi: Harper Collins.
- Golden, Miriam A., and Lucio Picci. 2005. "Proposal For A New Measure Of Corruption, Illustrated With Italian Data." *Economics and Politics* 17:37-75.
- Grimmer, Justin, Eitan Hersh, Brian Feinstein, and Daniel Carpenter. 2011. "Are Close Elections Random?": Stanford, Harvard, Harvard and Harvard.
- Handcock, Mark Stephen, and Martina Morris. 1999. *Relative Distribution Methods in the Social Sciences*. New York: Springer.
- Hetherington, Marc J., Bruce Larson, and Suzanne Globetti. 2003. "The Redistricting Cycle and Strategic Candidate Decisions in U.S. House Races." *Journal of Politics* 65 (4):1221-34.
- Hurst, Erik, Ming Ching Luoh, Frank P. Stafford, and William G. Gale. 1998. "The Wealth Dynamics of American Families, 1984-94." *Brookings Papers on Economic Activity* 1998 (1):267-337.
- Imbens, Guido, and Karthik Kalyanaraman. 2009. "Optimal Bandwidth Choice for the Regression Discontinuity Estimator." *NBER Working Paper* 14726.
- Iyer, Lakshmi, and Anandi Mani. Forthcoming. "Traveling Agents: Political Change and Bureaucratic Turnover in India." *The Review of Economics and Statistics*.
- Iyer, Lakshmi, and Maya Shivakumar. 2009. "Electoral Redistricting in the World's Largest Democracy: An Evaluation." Harvard Business School.
- Khusro, A. M. 1988. "Quality of Indian Growth." *Economic and Political Weekly* 23 (36):1857-62.
- King, Gary, Richard Nielsen, Carter Coberley, James E. Pope, and Aaron Wells. 2011. "Comparative Effectiveness of Matching Methods for Causal Inference."

- Kochanek, Stanley A. 1987. "Briefcase Politics in India: The Congress Party and the Business Elite." *Asian Survey* 27 (12):1278-301.
- Krishnamurthy, T. S. 2008. *The Miracle of Democracy: India's Amazing Journey*. New Delhi: Harper Collins.
- Krueger, Anne O. 1974. "The Political Economy of the Rent-Seeking Society." *American Economic Review* 64 (3):291-303.
- Lee, David S. 2008. "Randomized Experiments from Non-Random Selection in U.S. House Elections." *Journal of Econometrics* 14:675-97.
- Lee, David S., and Thomas Lemieux. 2010. "Regression Discontinuity Designs in Economics." *Journal of Economic Literature* 48 (2):281-355.
- Lenz, Gabriel, and Kevin Lim. 2009. "Getting Rich(er) in Office? Corruption and Wealth Accumulation in Congress." MIT Department of Political Science.
- Levitt, Steven D., and Sudhir Alladi Venkatesh. 2000. "An Economic Analysis of a Drug-Selling Gang's Finances." *The Quarterly Journal of Economics* 115 (3):755-89.
- Linden, Leigh. 2004. "Are Incumbents Really Advantaged? Exploring the Preference for Nonincumbents in India." MIT.
- Mahurkar, Uday. 2003. "Gujarat: Cooperating To Loot." *India Today*, July 8.
- "Many of India's billionaires have made money by their proximity to govt." 2010. *Times of India*, July 31.
- McCrary, Justin. 2007. "Manipulation of the Running Variable in the Regression Discontinuity Design: A Density Test." *NBER Technical Working Paper* (334).
- Mehta, Pratap Bhanu. 2003. *The Burden of Democracy*. New Delhi: Penguin.
- Mohapatra, Manindra Kumar. 1976. "The Ombudsmanic Role of Legislators in an Indian State." *Legislative Studies Quarterly* 1 (3):295-314.

- Myrdal, Gunnar. 1968. "Corruption—Its Causes and Effects." In *Asian Drama: An Inquiry into the Poverty of Nations*. New York, NY: Twentieth Century Fund.
- Narain, Iqbal, and Shashi Lata Puri. 1976. "Legislators in an Indian State: A Study of Role Images and the Pattern of Constituency Linkages." *Legislative Studies Quarterly* 1 (3):315-30.
- Olken, Benjamin. 2009. "Corruption perceptions vs. corruption reality." *Journal of Public Economics* 93 (7-8):950-64.
- Pande, Rohini. 2008. "Understanding Political Corruption in Low Income Countries." In *Handbook of Development Economics, Volume 4*, ed. T. P. Schultz and J. Strauss. Amsterdam and Boston: Elsevier, North-Holland.
- Press Trust of India. 2004. "Mayawati Declares Assets." *The Hindu*, April 8.
- Querubin, Pablo, and Jr. James M. Snyder. 2009. "The Returns to U.S. Congressional Seats in the mid-19th Century." In *The Political Economy of Democracy*, ed. E. Aragonés, C. Bevia, H. Llavador and N. Schofield. Barcelona: BBVA.
- Raghavan, B. S. 2005. "Cash-for-questions scam—Implications for Democracy and Society." *The Hindu Business Line*, December 22.
- Ravishankar, Nirmala. 2007. *Voting for Change: Turnout and Vote Choice in Indian Elections*, Department of Government, Harvard University, Cambridge, MA.
- Sandesara, J. C. 1985. "Report on Black Money." *Economic and Political Weekly* 20 (34):1433-7.
- Simser, Jeffrey. 2008. "Money Laundering and Asset Cloaking Techniques." *Journal of Money Laundering Control* 11 (1):15-24.
- Transparency International India. 2005. "India Corruption Study."
- Transparency International India, and Center for Media Studies. 2008. "TII-CMS India Corruption Study 2007."
- Treisman, Daniel. 2007. "What Have We Learned About the Causes of Corruption from Ten Years of Cross-National Empirical Research?" *Annual Review of Political Science* 10 (1):211-44.

Uppal, Yogesh. 2005. "The Disadvantaged Incumbents: Estimating Incumbency Effects in Indian State Legislatures."

Vaishnav, Milan. 2010. "Party Selection and Criminality in India." Columbia University.

Verma, A. K. 2008. "Fourth Delimitation of Constituencies: An Appraisal." *Economic and Political Weekly* (March 15):12-5.

Wade, Robert. 1982. "The System of Administrative and Political Corruption: Canal Irrigation in South India." *Journal of Development Studies* 18 (3):287-328.

———. 1985. "The Market for Public Office: Why the Indian State is Not Better at Development." *World Development* 13 (4):467-97.

Wallack, J. S. Jessica. 2008. "India's Parliament as a Representative Institution." *India Review* 7 (2):91.

Won in 2003/04?	3,678	0.502	0.500	0	1
Won in 2008/09?	1,731	0.447	0.497	0	1
Winning margin in 2003/04	3,678	0.000	0.162	-0.916	0.916
Winning margin in 2003/04 $\leq \pm 10\%$?	3,678	0.519	0.500	0	1
Winning margin in 2003/04 $\leq \pm 5\%$?	3,678	0.283	0.451	0	1
Family assets in 2003/04, Rs. million	3,678	9.582	26.277	0.001	762.437
Own assets in 2003/04, Rs. million	3,678	6.352	19.624	0.000	622.502
Spousal assets in 2003/04, Rs. million	3,678	2.578	10.268	0.000	362.433
Dependents' assets in 2003/04, Rs. million	3,678	0.652	3.722	0.000	100.487
Immoveable/family assets in 2003/04	3,678	0.667	0.289	0.000	1.000
Family assets in 2008/09, Rs. million	1,731	31.474	97.083	0.001	1,765.286
Own assets in 2008/09, Rs. million	1,731	20.905	79.064	0.001	1,459.573
Spousal assets in 2008/09, Rs. million	1,731	9.054	33.901	0.000	785.911
Dependents' assets in 2008/09, Rs. million	1,731	1.515	13.169	0.000	468.842
Incumbent in 2003/04?	3,678	0.338	0.473	0	1
Age, in years	3,678	49.633	10.678	25	89
Female?	3,678	0.082	0.274	0	1
Max. education: Some school?	3,678	0.305	0.460	0	1
Max. education: Some graduate?	3,678	0.491	0.500	0	1
Max. education: Some post-graduate?	3,678	0.204	0.403	0	1
Criminal charges filed before 2003/04?	3,678	0.202	0.402	0	1
Indian National Congress member?	3,678	0.367	0.482	0	1
Bharatiya Janata Party member?	3,678	0.254	0.436	0	1
Member of parliamentary majority?	1,847	0.565	0.496	0	1
Member of cabinet?	1,847	0.120	0.325	0	1
Candidate for Andhra Pradesh legislature?	3,678	0.135	0.342	0	1
Candidate for Chhattisgarh legislature?	3,678	0.033	0.179	0	1
Candidate for Karnataka legislature?	3,678	0.094	0.291	0	1
Candidate for Madhya Pradesh legislature?	3,678	0.102	0.303	0	1
Candidate for Maharashtra legislature?	3,678	0.150	0.357	0	1
Candidate for Delhi legislature?	3,678	0.028	0.165	0	1
Candidate for Orissa legislature?	3,678	0.072	0.259	0	1
Candidate for Rajasthan legislature?	3,678	0.096	0.295	0	1
Candidate for national legislature?	3,678	0.243	0.429	0	1
Seat reserved for scheduled castes?	3,678	0.125	0.331	0	1
Seat reserved for scheduled tribes?	3,678	0.131	0.337	0	1
Registered voters, thousands	3,678	427.417	486.349	3.117	3,368.399
Literates/population	3,426	0.547	0.116	0.129	0.856
Full-time employed/population	3,426	0.337	0.064	0.163	0.530
Non-workers/population	3,426	0.569	0.070	0.287	0.768

Table 1: Dataset summary. Variables ending in a ? are binary.

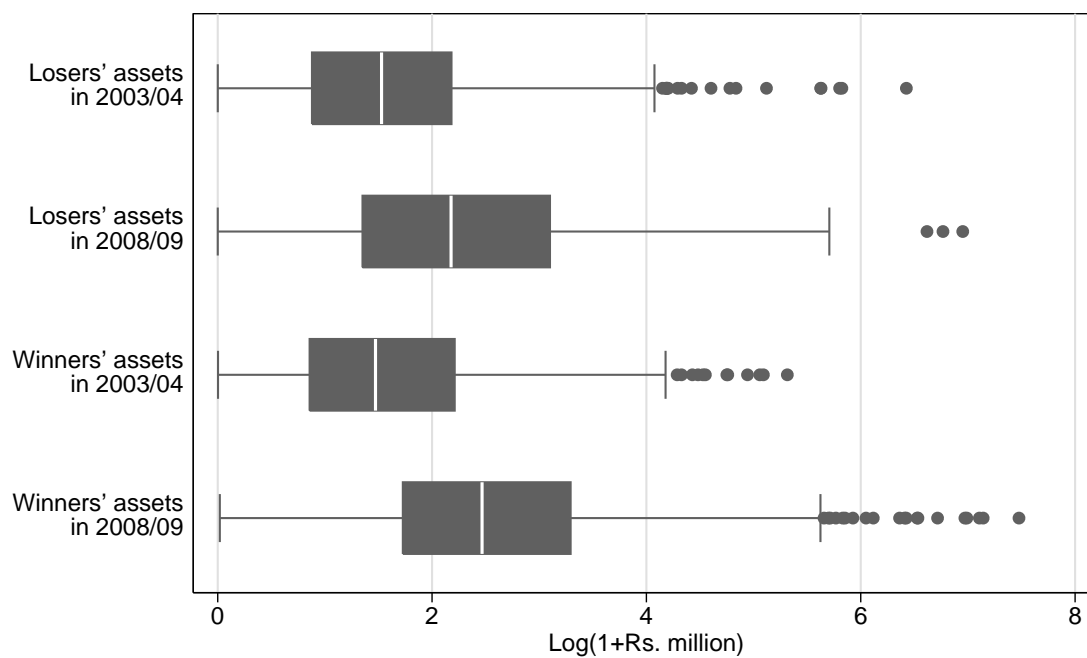


Figure 1: Box plots of assets in 2003/04 and 2008/09, by winning status in 2003/04.

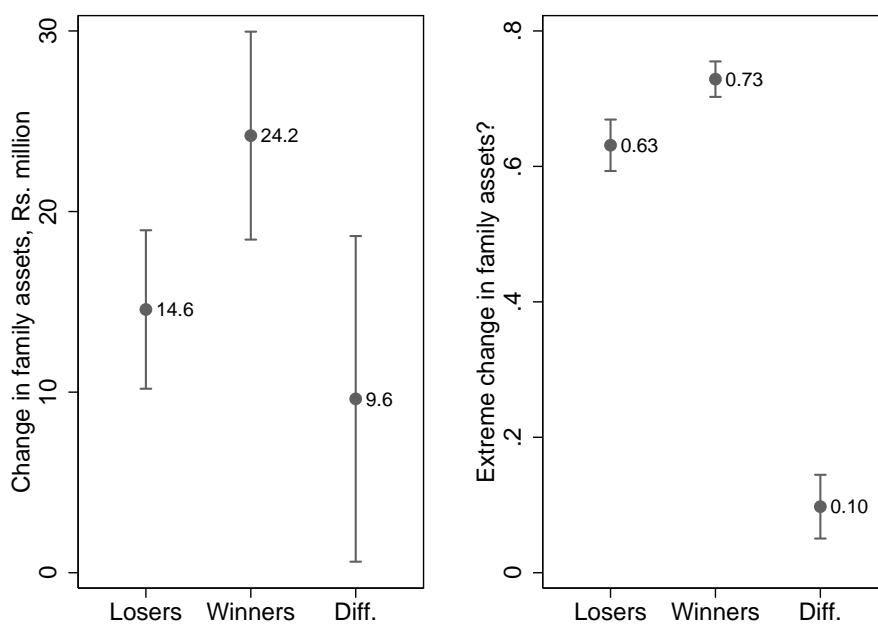


Figure 2: Changes in family assets between 2003/04 and 2008/09, by winning status in 2003/04. Vertical lines represent 95% confidence intervals.

	Candidate sample	OLS	OLS, data preprocessed using matching	RD	OLS, with Heckman correction
DV: Log family assets in 2008/09					
Effect of winning in 2003/04	Full	0.167** [0.0751]	0.186** [0.0833]	-0.0849 [0.170]	0.252** [0.110]
Effect of winning in 2003/04 (1)	Full	0.0596 [0.0754]	-0.0391 [0.0782]	-0.248 [0.193]	0.139 [0.124]
Effect of winning in 2003/04 X INC candidates (2)		0.0881 [0.109]	0.300** [0.142]	0.136 [0.146]	0.087 [0.103]
Effect of winning in 2003/04 X BJP candidates (3)		0.311*** [0.0658]	0.492** [0.191]	0.447*** [0.0993]	0.309*** [0.116]
p -value for $H: (2)=(3)$		0.06	0.30	0.04	0.06
Effect of winning in 2003/04	INC	0.162 [0.106]	0.388*** [0.134]	-0.15 [0.376]	0.138 [0.204]
Effect of winning in 2003/04	BJP	0.412*** [0.112]	0.550** [0.196]	0.235 [0.229]	0.408*** [0.149]
DV: Extreme asset change?					
Effect of winning in 2003/04	Full	0.0890** [0.0335]	0.0909 [0.0538]	0.0377 [0.103]	0.0889 [0.0565]
Effect of winning in 2003/04 (1)	Full	0.0592 [0.0417]	-0.0307 [0.0392]	-0.0254 [0.106]	0.0557 [0.0642]
Effect of winning in 2003/04 X INC candidates (2)		-0.0173 [0.0706]	0.112 [0.0736]	0.029 [0.0846]	-0.0173 [0.0537]
Effect of winning in 2003/04 X BJP candidates (3)		0.154*** [0.0494]	0.369** [0.133]	0.204*** [0.0612]	0.154*** [0.0601]
p -value for $H: (2)=(3)$		0.04	0.04	0.07	0.01
Effect of winning in 2003/04	INC	0.0552 [0.0529]	0.140 [0.0855]	-0.0782 [0.165]	0.0313 [0.0992]
Effect of winning in 2003/04	BJP	0.220*** [0.0707]	0.265 [0.155]	0.248 [0.164]	0.192** [0.0813]

Table 2: The effects of winning office in 2003/04 on family assets in 2008/09 and the probability of having an extreme asset change. The extreme asset change dummy is set to one if asset changes exceed legislator salaries and allowances. All estimators control for incumbency in 2003/04, initial assets, initial asset composition, age, gender, education, whether the candidate had been charged with crimes, party, whether their constituency was reserved for scheduled castes and tribes, electorate size and state x legislature fixed effects. Standard errors for the OLS and RD regressions are robust and clustered by state x legislature. Matching is done using a coarsened exact matching method chosen through the use of a space graph. The Heckman selection model uses measures of constituency imbalance and changes in reservation status as exogenous determinants of rerunning for office. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

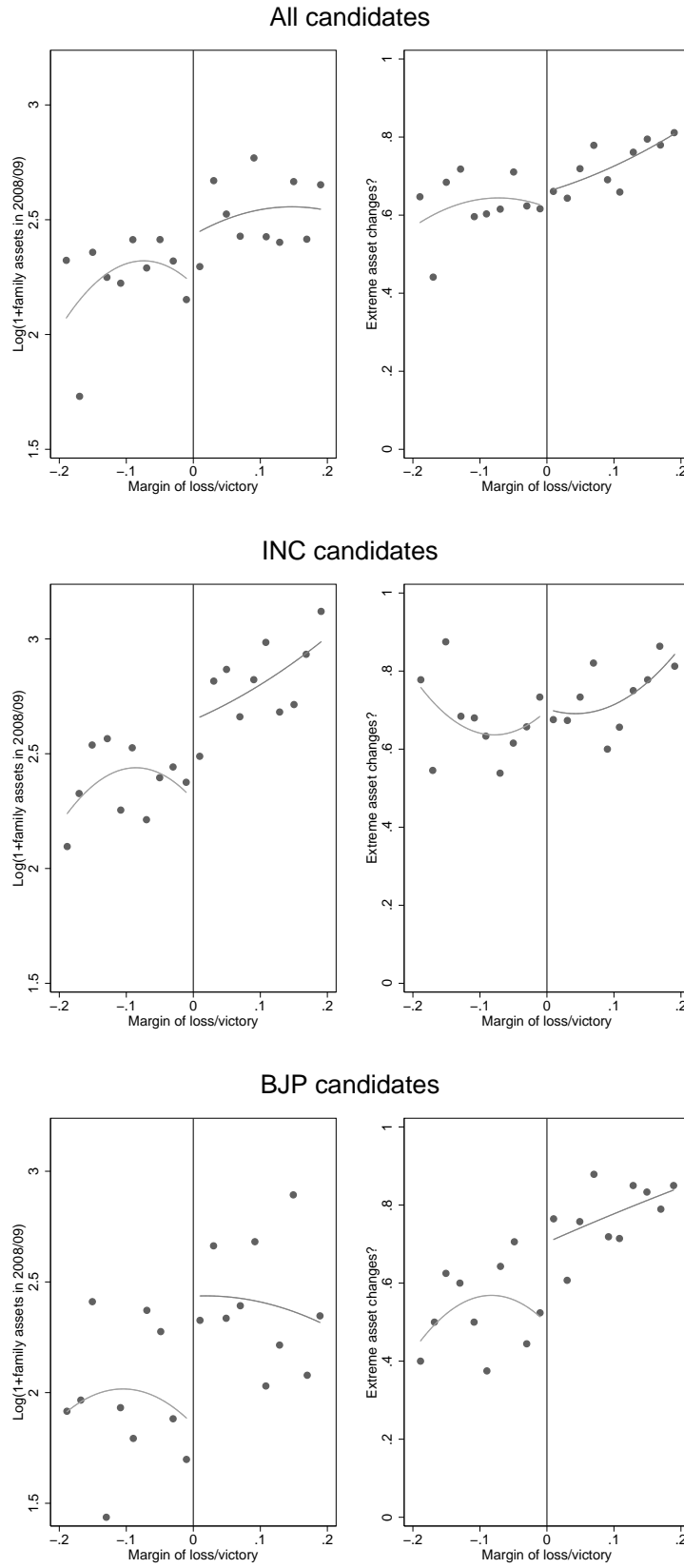


Figure 3: Regression discontinuity estimates of the effects of winning office in 2003/04 on 2008/09 assets and the probability of having an extreme asset change, for all, INC and BJP candidates. The extreme asset change dummy is set to one if asset changes exceed legislator salaries and allowances. Points are binned averages. Lines are quadratic fits of the underlying data.

Dependent variables:	Log family assets in 2008/09			Extreme asset change?		
	1	2	3	1	2	3
Forcing variable polynomial order:						
30% bandwidth	0.397*** [0.136]	0.283 [0.187]	0.2 [0.231]	0.201** [0.0949]	0.141 [0.134]	0.107 [0.168]
20% bandwidth	0.351** [0.150]	0.219 [0.213]	0.0824 [0.209]	0.152 [0.105]	0.156 [0.166]	0.0806 [0.171]
15% bandwidth	0.279 [0.175]	0.301 [0.229]	0.165 [0.229]	0.17 [0.128]	0.193 [0.152]	0.284* [0.161]
10% bandwidth	0.242 [0.156]	0.235 [0.229]	-0.0714 [0.351]	0.192 [0.145]	0.248 [0.164]	0.318 [0.210]
5% bandwidth	0.133 [0.163]	-0.029 [0.367]	0.554 [0.910]	0.149 [0.159]	0.211 [0.242]	0.721 [0.422]

Table 3: Robustness tests for the RD estimate of the effect of winning office on BJP candidate assets. The extreme asset change dummy is set to one if asset changes exceed legislator salaries and allowances. The table shows how the estimated effect of winning office varies with the inclusion of higher order polynomial terms of the forcing variable, and also how it varies with different choices of the bandwidth. Estimates in bold are presented in Table 2. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Winning threshold	-0.1	-0.05	0	0.05	0.1
DV: Log family assets in 2008/09	-0.321 [0.702]	-0.358 [0.385]	0.235 [0.229]	0.00257 [0.256]	0.00617 [0.267]
DV: Extreme asset change?	-0.0855 [0.420]	-0.0653 [0.202]	0.248 [0.164]	0.132 [0.150]	0.00532 [0.133]

Table 4: The effects of ‘winning’ on the change in BJP candidate assets at nondiscontinuity points. The estimate in bold is the estimate presented in Table 2. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

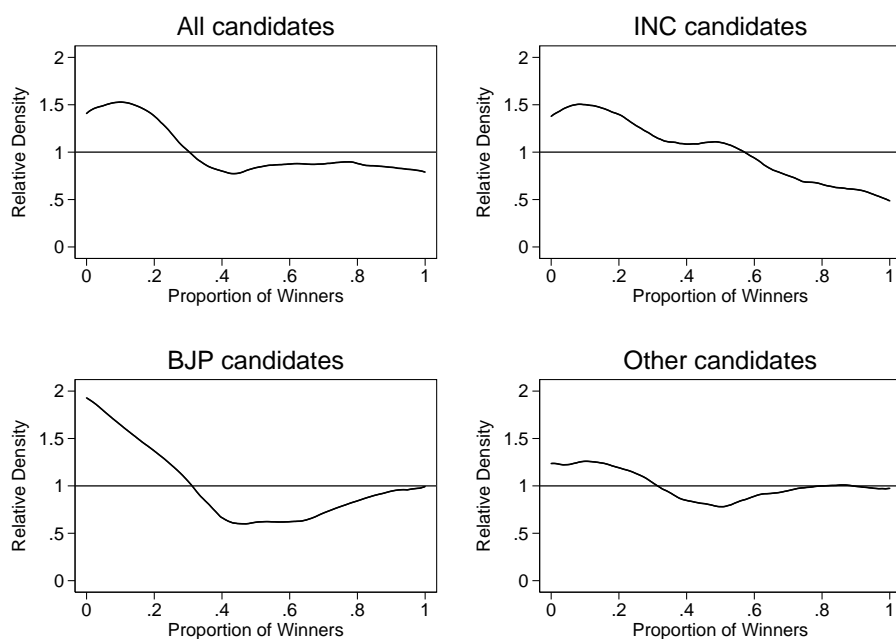


Figure 4: The relative density of asset changes between 2003/04 and 2008/09 for 2003/04 election losers with respect to 2003/04 election winners.

	Losers by asset changes			Winners by asset changes			Extreme winners - losers	
	Non-extreme	Extreme	Diff.	Non-extreme	Extreme	Diff.		
By ownership:								
Own assets	-4.7	-4.0		-3.3	-3.5		0.5	
Spouse assets	5.6	1.0		7.1	2.5		1.6	
Dependent assets	-0.9	3.1	*	-3.8	1.0	**	-2.0	
By asset class:								
Moveable assets	14.4	-16.2	***	6.9	-6.8	***	9.4	**
Cash	6.5	-7.5	***	-0.6	-4.6	**	2.9	
Deposits	1.6	-5.2	*	-0.3	0.4		5.6	***
Bonds, debentures, shares	-1.2	0.3		1.3	-0.2	*	-0.5	
Vehicles	1.7	0.1		4.3	0.9	**	0.8	
Jewelry	7.1	-2.9	***	2.0	-2.4	***	0.5	
Other moveable assets	-1.3	-1.0		0.3	-1.0		0.0	
Immovable assets	-14.4	16.2	***	-6.9	6.8	***	-9.4	**
Agricultural land	-3.5	4.6	*	-3.5	-1.9		-6.5	**
Nonagricultural land	-2.5	2.3		-0.2	4.0	*	1.7	
Buildings	-5.1	4.2	*	1.2	1.5		-2.7	
House/apartments	-3.0	3.6		-3.2	3.6	**	0.1	
Other immovable assets	-0.2	1.5		-1.2	-0.4		-1.9	

Table 5: Changes in BJP candidates' asset composition, 2003/04-2008/09, in % of change in family assets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ for two-sided difference in means tests.

	All candidates		BJP candidates	
	Coefficient	Standard error	Coefficient	Standard error
Won in 2003/04?	-1.379	[0.878]	-3.084	[2.317]
Log(1+initial family assets)	0.0354	[0.0262]	0.0922	[0.0838]
Won in 2003/04? X Log(1+initial family assets)	-0.0132	[0.0285]	-0.0874	[0.0844]
Immoveable/family assets	-0.103	[0.0921]	-0.0601	[0.233]
Won in 2003/04? X Immoveable/family assets	-0.039	[0.0991]	0.0211	[0.333]
Incumbent in 2003/04?	0.0541	[0.0444]	0.134	[0.101]
Won in 2003/04? X Incumbent in 2003/04?	0.0183	[0.0392]	-0.0612	[0.0693]
Age, years	0.00115	[0.00329]	0.00105	[0.00587]
Won in 2003/04? X Age, years	-0.00281	[0.00316]	-0.00274	[0.00699]
Female candidate?	-0.147	[0.132]	-0.214	[0.318]
Won in 2003/04? X Female candidate?	0.213	[0.145]	0.332	[0.270]
Max. education: Some college?	-0.0125	[0.0505]	0.0265	[0.0982]
Won in 2003/04? X Max. education: Some college?	-0.00666	[0.0667]	-0.0474	[0.141]
Max. education: Some post-graduate?	-0.0116	[0.0323]	0.213	[0.160]
Won in 2003/04? X Max. education: Some post-graduate?	-0.00152	[0.0477]	-0.237	[0.189]
Charged with crime?	0.000615	[0.0337]	0.144	[0.125]
Won in 2003/04? X Charged with crime?	0.0239	[0.0382]	-0.147	[0.127]
Indian National Congress candidate?	0.0754	[0.0694]		
Won in 2003/04? X Indian National Congress candidate?	-0.0538	[0.0746]		
Bharatiya Janata Party candidate?	-0.0232	[0.0470]		
Won in 2003/04? X Bharatiya Janata Party candidate?	0.0795	[0.0473]		
Seat reserved for scheduled castes?	-0.134**	[0.0511]	-0.372***	[0.123]
Won in 2003/04? X Seat reserved for scheduled castes?	0.102	[0.0743]	0.331**	[0.131]
Seat reserved for scheduled tribes?	-0.209***	[0.0587]	-0.492**	[0.237]
Won in 2003/04? X Seat reserved for scheduled tribes?	0.201***	[0.0643]	0.558**	[0.255]
Log(electorate/1,000)	-0.0183	[0.0337]	-0.0739	[0.0688]
Won in 2003/04? X Log(electorate/1,000)	0.0302	[0.0313]	0.149*	[0.0833]
Literates/population	0.0497	[0.255]	0.134	[0.513]
Won in 2003/04? X Literates/population	0.075	[0.294]	-0.0996	[0.596]
Full-time employed/population	-0.46	[0.983]	-2.072	[2.513]
Won in 2003/04? X Full-time employed/population	1.568	[1.029]	2.877	[2.976]
Non-workers/population	-0.587	[0.736]	-2.393	[1.466]
Won in 2003/04? X Non-workers/population	1.383*	[0.814]	2.718	[1.826]
Member of parliamentary majority?	0.0602**	[0.0296]	0.631*	[0.311]
Member of cabinet?	0.127***	[0.0393]	0.202**	[0.0843]
State x legislature fixed effects?		Y		Y
Observations		1,608		413
R-squared		0.134		0.29

Table 6: Correlates of extreme asset change dummy. Extreme asset changes are defined as changes in excess of legislator salaries and allowances. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

	All candidates					BJP candidates			
	1	2	3	4	5	6	7	8	9
Incumbent in 2003/04?	0.043					0.0985			
	[0.0456]					[0.0862]			
Won in 2003/04? X Incumbent in 2003/04?	0.0352					-0.0331			
	[0.0600]					[0.109]			
Indian National Congress candidate?	-0.00969								
	[0.0722]								
Won in 2003/04? X Indian National Congress candidate?	0.0232								
	[0.0908]								
Bharatiya Janata Party candidate?	-0.110*								
	[0.0646]								
Won in 2003/04? X Bharatiya Janata Party candidate?	0.203***								
	[0.0612]								
Female candidate?		-0.337							
		[0.204]							
Won in 2003/04? X Female candidate?		0.235							
		[0.318]							
Max. education: Some college?			0.115				0.109		
			[0.0882]				[0.209]		
Won in 2003/04? X Max. education: Some college?			-0.163*				0.0432		
			[0.0869]				[0.210]		
Max. education: Some post-graduate?				-0.0628				-0.0511	
				[0.0805]				[0.215]	
Won in 2003/04? X Max. education: Some post-graduate?				0.092				0.0941	
				[0.0922]				[0.325]	
Charged with crime?					0.0832				0.650***
					[0.0792]				[0.214]
Won in 2003/04? X Charged with crime?					0.108				-0.365*
					[0.147]				[0.171]
Observations	941	112	372	224	261	238	90	59	65
R-squared	0.11	0.355	0.2	0.248	0.191	0.228	0.448	0.618	0.491

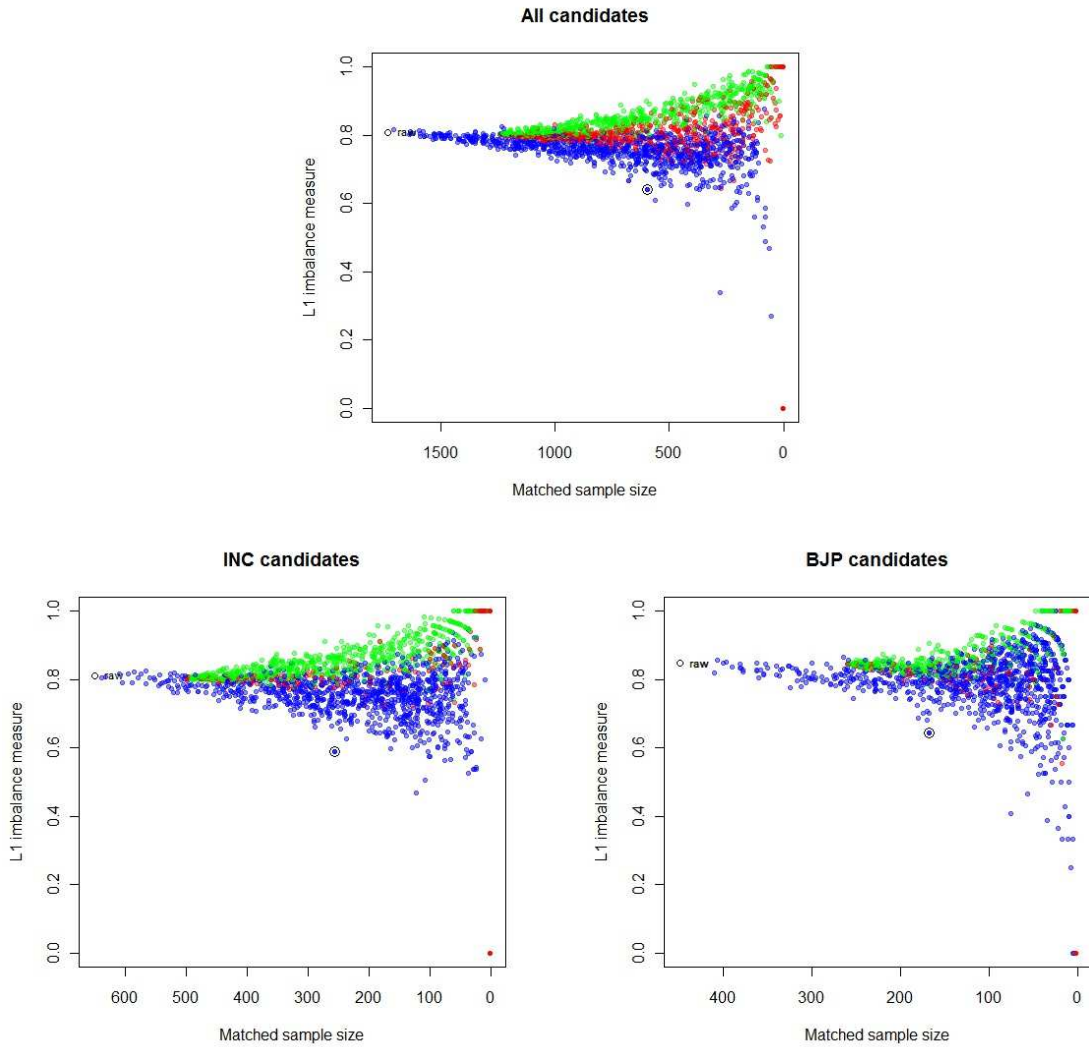
Table 7: Discontinuity estimates of the effects of candidate characteristics on the probability of extreme asset changes. Extreme asset changes are defined as changes in excess of legislator salaries and allowances. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

DV: % votes received in 2008/09	All candidates			BJP candidates		
	1	2	3	4	5	6
Extreme change in family assets?	4.150*** [1.276]		3.395* [1.734]	5.284*** [1.776]		6.061** [2.671]
Winner X Extreme change in family assets?	-0.606 [0.749]		0.38 [1.450]	-0.472 [1.947]		-2.469 [2.312]
Log(64+change in family assets)		2.409*** [0.804]	0.794 [0.905]		3.882** [1.597]	1.712 [1.825]
Winner X Log(64+change in family assets)		-0.165 [0.151]	-0.255 [0.288]		0.262 [0.586]	0.485 [0.745]
% votes received in 2003/04	0.593*** [0.0449]	0.615*** [0.0391]	0.604*** [0.0371]	0.593*** [0.0563]	0.594*** [0.0551]	0.574*** [0.0553]
Log(1+initial family assets)	1.175*** [0.314]	1.048*** [0.315]	1.106*** [0.330]	1.924*** [0.480]	1.684*** [0.572]	1.700*** [0.537]
Immoveable/family assets	-0.707 [1.292]	-0.559 [1.316]	-0.578 [1.296]	-5.656** [2.464]	-5.478* [2.714]	-5.421** [2.521]
Incumbent in 2003/04?	2.321*** [0.836]	2.602*** [0.880]	2.316*** [0.834]	2.946 [1.779]	3.554* [1.915]	2.963 [1.823]
Age, in years	-0.146*** [0.0286]	-0.142*** [0.0292]	-0.143*** [0.0274]	-0.0906 [0.0754]	-0.0814 [0.0744]	-0.0867 [0.0728]
Female candidate?	0.935 [1.149]	0.99 [1.081]	0.892 [1.148]	1.502 [2.181]	1.721 [2.088]	1.573 [2.264]
Max. education: Some college?	0.47 [0.783]	0.484 [0.760]	0.455 [0.787]	1.494 [1.600]	1.538 [1.535]	1.549 [1.577]
Max. education: Some post-graduate?	1.452** [0.679]	1.473** [0.687]	1.436** [0.690]	0.875 [1.802]	1.026 [1.803]	0.799 [1.804]
Charged with crime?	0.542 [0.743]	0.713 [0.770]	0.575 [0.742]	1.53 [0.987]	1.897* [0.934]	1.52 [0.928]
Indian National Congress candidate?	1.134 [1.614]	1.172 [1.611]	1.117 [1.606]			
Bharatiya Janata Party candidate?	-0.912 [2.160]	-0.801 [2.182]	-0.923 [2.165]			
Seat reserved for scheduled castes?	-1.7 [1.273]	-1.854 [1.275]	-1.704 [1.272]	-3.486 [2.459]	-3.951 [2.637]	-3.448 [2.484]
Seat reserved for scheduled tribes?	-1.224 [1.279]	-1.503 [1.308]	-1.249 [1.281]	1.57 [1.863]	1.614 [1.920]	1.688 [1.835]
Log(electorate/1,000)	-0.883 [0.589]	-0.949 [0.585]	-0.91 [0.590]	-1.523 [1.341]	-1.44 [1.374]	-1.523 [1.307]
State x legislature fixed effects?	Y	Y	Y	Y	Y	Y
Observations	1,730	1,730	1,730	448	448	448
R-squared	0.301	0.292	0.302	0.374	0.362	0.377

Table 8: The effects of asset changes on % votes received in 2008/09. The extreme asset change dummy is set to one if asset changes exceed legislator salaries and allowances. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

	All candidates				Those who reran for office			
	Losers	Winners	Diff.		Losers	Winners	Diff.	
Incumbent in 2003/04?	0.33	0.34	0.01		0.42	0.38	-0.04	
Age, in years	49.74	49.52	-0.22		48.16	48.52	0.35	
Female?	0.10	0.07	-0.03	***	0.07	0.06	-0.01	
Max. education: Some school?	0.31	0.30	-0.01		0.28	0.30	0.02	
Max. education: Some college?	0.47	0.51	0.03	**	0.52	0.51	-0.01	
Max. education: Some post-graduate?	0.22	0.19	-0.03	**	0.20	0.20	0.00	
Criminal charges filed before 2003/04?	0.17	0.23	0.06	***	0.19	0.25	0.06	***
Family assets in 2003/04, Rs. million	9.04	10.11	1.07		9.56	11.37	1.81	
Own assets in 2003/04, Rs. million	6.12	6.58	0.47		6.39	7.33	0.94	
Spouse assets in 2003/04, Rs. million	2.30	2.86	0.56	*	2.41	3.19	0.78	
Dependent assets in 2003/04, Rs. million	0.63	0.68	0.05		0.76	0.85	0.09	
Immoveable/family assets in 2003/04	0.68	0.66	-0.02	*	0.67	0.65	-0.02	
Indian National Congress member?	0.41	0.33	-0.08	***	0.40	0.36	-0.04	*
Bharatiya Janata Party member?	0.20	0.31	0.11	***	0.21	0.29	0.07	***
Seat reserved for scheduled castes?	0.12	0.13	0.01		0.12	0.11	-0.01	
Seat reserved for scheduled tribes?	0.12	0.14	0.01		0.15	0.15	0.00	
Log(electorate/1,000)	5.48	5.48	0.00		5.33	5.41	0.08	
Candidate for Andhra Pradesh legislature?	0.13	0.14	0.00		0.16	0.13	-0.03	
Candidate for Chhattisgarh legislature?	0.03	0.03	0.00		0.04	0.03	-0.01	
Candidate for Karnataka legislature?	0.10	0.09	0.00		0.13	0.10	-0.03	*
Candidate for Madhya Pradesh legislature?	0.10	0.10	0.00		0.09	0.10	0.01	
Candidate for Maharashtra legislature?	0.15	0.15	0.00		0.13	0.16	0.03	
Candidate for Delhi legislature?	0.03	0.03	0.00		0.03	0.04	0.00	
Candidate for Orissa legislature?	0.07	0.07	0.00		0.11	0.08	-0.02	
Candidate for Rajasthan legislature?	0.10	0.10	0.00		0.08	0.08	0.00	
Candidate for national legislature?	0.24	0.25	0.01		0.17	0.22	0.05	**

SI Appendix Table 1: Are winners and losers from 2003/04 different? * significant at 10%; ** significant at 5%; *** significant at 1% using difference of means tests.



SI Appendix Figure 1: Space graphs to choose a matching estimator for the full, INC and BJP candidate samples. Space graphs plot L_1 imbalance measures against matched sample sizes for hundreds of coarsened exact matching solutions in blue, propensity score solutions in green, and Mahalanobis distance matching solutions in red. The observed frontier is the set of points such that no other point from that method appears closer to the origin. The chosen solutions, which employ coarsened exact matching solutions, are circled. See text for details.

Dependent variables	Coefficient	Standard error
Family assets in 2003/04, Rs. million	0.288	[0.188]
Immoveable/family assets in 2003/04	0.0302	[0.0544]
Incumbent in 2003/04?	-0.0359	[0.131]
Age, in years	3.212*	[1.740]
Female?	0.0238	[0.0417]
Max. education: Some college?	-0.00871	[0.132]
Max. education: Some post-graduate?	-0.0594	[0.0612]
Criminal charges filed before 2003/04?	-0.00995	[0.0795]
Indian National Congress member?	-0.0696	[0.0952]
Bharatiya Janata Party member?	0.066	[0.103]
Seat reserved for scheduled castes?	-0.0125	[0.0603]
Seat reserved for scheduled tribes?	0.0121	[0.0541]
Log(electorate/1,000)	0.0311	[0.185]
Candidate for Andhra Pradesh legislature?	0.0354	[0.0304]
Candidate for Chhattisgarh legislature?	-0.0346	[0.0344]
Candidate for Karnataka legislature?	0.00784	[0.0241]
Candidate for Madhya Pradesh legislature?	0.0078	[0.0109]
Candidate for Maharashtra legislature?	-0.0484	[0.0440]
Candidate for Delhi legislature?	0.0121	[0.0125]
Candidate for Orissa legislature?	-0.0946	[0.0763]
Candidate for Rajasthan legislature?	-0.0438	[0.0413]
Candidate for national legislature from Andhra Pradesh?	0.00415	[0.00484]
Candidate for national legislature from Assam?	0.00789	[0.00840]
Candidate for national legislature from Bihar?	-0.00735	[0.00932]
Candidate for national legislature from Gujarat?	-0.0309	[0.0324]
Candidate for national legislature from Jharkhand?	0.00491	[0.00520]
Candidate for national legislature from Karnataka?	-0.00772	[0.00838]
Candidate for national legislature from Kerala?	0.0293	[0.0303]
Candidate for national legislature from Madhya Pradesh?	-0.00289	[0.00305]
Candidate for national legislature from Maharashtra?	0.0277	[0.0279]
Candidate for national legislature from Orissa?	0.0169	[0.0176]
Candidate for national legislature from Punjab?	-0.011	[0.0117]
Candidate for national legislature from Rajasthan?	0.00973	[0.0102]
Candidate for national legislature from Tamil Nadu?	0.00143	[0.00152]
Candidate for national legislature from Uttar Pradesh?	0.0496	[0.0467]
Candidate for national legislature from West Bengal?	0.0111	[0.0117]

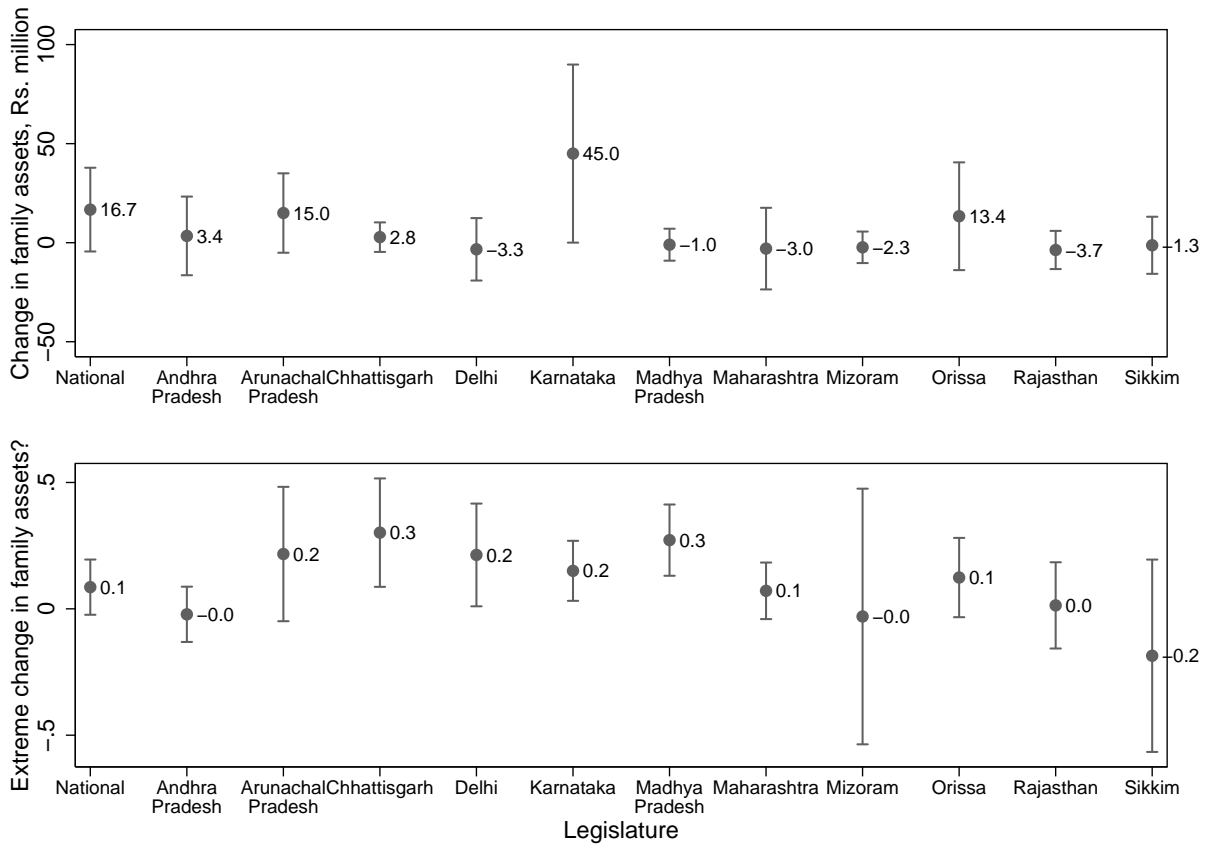
SI Appendix Table 2: Placebo tests for the “effects” of winning on predetermined outcomes. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

	Full sample				Close-election sample			
	No	Yes	Diff.		No	Yes	Diff.	
Reran for office?								
Won in 2003/04?	0.38	0.64	0.26	***	0.39	0.62	0.23	***
Incumbent in 2003/04?	0.29	0.39	0.10	***	0.29	0.38	0.09	***
Age, in years	50.74	48.39	-2.35	***	50.90	48.32	-2.58	***
Female?	0.10	0.06	-0.04	***	0.10	0.06	-0.04	***
Max. education: Some school?	0.32	0.29	-0.03	*	0.32	0.29	-0.03	
Max. education: Some college?	0.47	0.51	0.04	**	0.47	0.52	0.05	***
Max. education: Some post-graduate?	0.21	0.20	-0.01		0.22	0.19	-0.03	*
Criminal charges filed before 2003/04?	0.18	0.23	0.05	***	0.18	0.23	0.05	***
Family assets in 2003/04, Rs. million	8.57	10.72	2.16	**	8.65	10.80	2.15	**
Own assets in 2003/04, Rs. million	5.78	6.99	1.21	*	5.86	7.09	1.23	
Spouse assets in 2003/04, Rs. million	2.28	2.91	0.63	*	2.32	2.87	0.55	
Dependent assets in 2003/04, Rs. million	0.50	0.82	0.32	***	0.47	0.85	0.37	***
Immoveable/family assets in 2003/04	0.68	0.65	-0.03	***	0.68	0.66	-0.03	**
Indian National Congress member?	0.36	0.37	0.02		0.36	0.38	0.02	
Bharatiya Janata Party member?	0.25	0.26	0.01		0.26	0.26	-0.01	
Seat reserved for scheduled castes?	0.14	0.11	-0.02	**	0.14	0.11	-0.02	**
Seat reserved for scheduled tribes?	0.11	0.15	0.04	***	0.12	0.16	0.04	***
Log(electorate/1,000)	5.57	5.38	-0.18	***	5.61	5.42	-0.20	***
Member of parliamentary majority?	0.21	0.36	0.15	***	0.21	0.33	0.12	***
Member of cabinet?	0.04	0.09	0.05	***	0.03	0.07	0.04	***
Candidate for Andhra Pradesh legislature?	0.13	0.14	0.01		0.13	0.14	0.01	
Candidate for Chhattisgarh legislature?	0.03	0.04	0.01		0.03	0.04	0.00	
Candidate for Karnataka legislature?	0.08	0.11	0.03	***	0.08	0.12	0.03	***
Candidate for Madhya Pradesh legislature?	0.11	0.10	-0.01		0.10	0.09	-0.01	
Candidate for Maharashtra legislature?	0.15	0.15	0.00		0.15	0.14	0.00	
Candidate for Delhi legislature?	0.02	0.03	0.01	*	0.02	0.02	0.01	
Candidate for Orissa legislature?	0.06	0.09	0.04	***	0.06	0.10	0.04	***
Candidate for Rajasthan legislature?	0.11	0.08	-0.03	***	0.12	0.08	-0.04	***
Candidate for national legislature?	0.28	0.21	-0.07	***	0.28	0.21	-0.07	***

SI Appendix Table 3: Are candidates that reran for office in 2008/09 different? Close-election sample includes candidates with a winning margin of $\pm 10\%$. * significant at 10%; ** significant at 5%; *** significant at 1% using difference of means tests.

DV: Candidate reran for office?	State elections with redistricting	National elections with redistricting	All elections, with and without redistricting
District imbalance	-0.767 [0.570]		0.716** [0.313]
State constituency imbalance	-0.977*** [0.352]		0.651** [0.266]
National constituency imbalance		-0.0309 [0.537]	-0.12 [0.396]
Legislature redistricted?			-0.345* [0.177]
Constituency newly reserved?	-0.372*** [0.0693]	-0.318** [0.135]	-0.349*** [0.0662]
Constituency desreserved?	-0.484*** [0.133]	-0.191 [0.166]	-0.326*** [0.104]
Won in 2003/04?	0.644*** [0.104]	0.860*** [0.101]	0.683*** [0.0587]
Log(1+initial family assets)	0.117*** [0.0448]	0.157*** [0.0356]	0.128*** [0.0257]
Immoveable/family assets	-0.185*** [0.0494]	-0.370* [0.221]	-0.165** [0.0763]
Incumbent in 2003/04?	0.368*** [0.0961]	0.17 [0.168]	0.307*** [0.0653]
Age, in years	-0.0173*** [0.00576]	-0.00988** [0.00469]	-0.0143*** [0.00320]
Female candidate?	-0.418** [0.169]	-0.232 [0.171]	-0.321*** [0.0984]
Max. education: Some college?	0.0809 [0.0648]	0.181* [0.104]	0.0443 [0.0512]
Max. education: Some post-graduate?	0.0875** [0.0443]	0.286** [0.123]	0.0870* [0.0455]
Charged with crime?	0.106** [0.0524]	0.319*** [0.110]	0.0995** [0.0504]
Indian National Congress candidate?	0.00749 [0.0682]	0.470*** [0.141]	0.0701 [0.0709]
Bharatiya Janata Party candidate?	0.109* [0.0653]	0.274** [0.118]	0.0234 [0.0590]
Seat reserved for scheduled castes?	0.164* [0.0893]	0.11 [0.196]	0.0774 [0.0614]
Seat reserved for scheduled tribes?	0.193 [0.229]	0.343* [0.185]	0.14 [0.104]
Log(electorate/1,000)	0.813*** [0.217]	-0.0995 [0.151]	-0.0294 [0.0278]
State x legislature fixed effects?	Y	Y	Y
Observations	1,798	894	3,678

SI Appendix Table 4: Probit estimates of the determinants of rerunning for office. The third regression is used as the first stage for the Heckman correction model. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.



SI Appendix Figure 2: Changes in family assets by 2003/04 winning status and legislature. Vertical lines represent 95% confidence intervals.

Dependent variables	Log family assets in 2008/09				Extreme asset change?			
	Full 1	Full 2	INC 3	BJP 4	Full 5	Full 6	INC 7	BJP 8
Candidate sample Regression								
Winner in 2003/04?	0.167** [0.0751]	0.0596 [0.0754]	0.162 [0.106]	0.412*** [0.112]	0.0890** [0.0335]	0.0592 [0.0417]	0.0552 [0.0529]	0.220*** [0.0707]
Winner in 2003/04 X INC candidate?		0.0881 [0.109]				-0.0173 [0.0706]		
Winner in 2003/04 X BJP candidate?		0.311*** [0.0658]				0.154*** [0.0494]		
Log(1+initial family assets)	0.840*** [0.0291]	0.839*** [0.0286]	0.845*** [0.0372]	0.783*** [0.0545]	0.0412** [0.0154]	0.0411** [0.0156]	0.0371* [0.0216]	0.0385 [0.0379]
Immoveable/family assets	-0.546*** [0.130]	-0.554*** [0.130]	-0.560*** [0.168]	-0.425** [0.185]	-0.110** [0.0513]	-0.116** [0.0504]	-0.132** [0.0637]	-0.0673 [0.0806]
Incumbent in 2003/04?	0.00995 [0.0385]	0.0124 [0.0392]	-0.0948 [0.0699]	0.194 [0.135]	0.0698*** [0.0241]	0.0703*** [0.0242]	0.0569 [0.0466]	0.131* [0.0693]
Age, in years	-0.00249 [0.00306]	-0.00246 [0.00298]	-0.00905 [0.00567]	-0.00520* [0.00278]	-0.00019 [0.00125]	-0.00012 [0.00120]	-0.0017 [0.00253]	-0.00033 [0.00145]
Female candidate?	0.0115 [0.0836]	0.00755 [0.0820]	0.0885 [0.0982]	0.181 [0.129]	0.024 [0.0456]	0.0185 [0.0457]	0.0717 [0.0714]	0.0902 [0.134]
Max. education: Some college?	-0.0549 [0.0488]	-0.0591 [0.0510]	-0.0658 [0.0843]	-0.088 [0.0764]	0.000185 [0.0214]	-0.00105 [0.0223]	0.00585 [0.0337]	-0.0168 [0.0407]
Max. education: Some post-graduate?	-0.0488 [0.0447]	-0.0499 [0.0471]	-0.109 [0.129]	0.136 [0.129]	0.00521 [0.0236]	0.00576 [0.0245]	0.00171 [0.0505]	0.0483 [0.0674]
Charged with crime?	-0.00419 [0.0670]	-0.0161 [0.0658]	-0.0578 [0.0941]	-0.0195 [0.108]	0.0275 [0.0233]	0.0209 [0.0232]	0.0165 [0.0449]	0.0513 [0.0567]
Indian National Congress candidate?	0.0726* [0.0403]	0.0215 [0.0854]			0.022 [0.0265]	0.0351 [0.0591]		
Bharatiya Janata Party candidate?	0.0552 [0.0639]	-0.145 [0.0872]			0.0397 [0.0309]	-0.0579 [0.0428]		
Seat reserved for scheduled castes?	-0.0891 [0.0816]	-0.0913 [0.0824]	-0.0548 [0.107]	-0.330** [0.139]	-0.0503 [0.0380]	-0.0524 [0.0385]	-0.0399 [0.0456]	-0.135 [0.0837]
Seat reserved for scheduled tribes?	-0.161 [0.102]	-0.168 [0.102]	-0.205* [0.103]	-0.197 [0.119]	-0.0783 [0.0541]	-0.0818 [0.0508]	-0.0686 [0.0520]	-0.0174 [0.0864]
Log(electorate/1,000)	0.0818** [0.0401]	0.0832** [0.0407]	0.0792 [0.0480]	0.0838 [0.0560]	0.00243 [0.0241]	0.00341 [0.0235]	0.0257 [0.0261]	0.0354 [0.0298]
State x legislature fixed effects?	Y	Y	Y	Y	Y	Y	Y	Y
Observations	1,731	1,731	649	448	1,731	1,731	649	448
R-squared	0.559	0.56	0.569	0.554	0.093	0.098	0.099	0.167

SI Appendix Table 5: OLS results for the effects of winning office on family assets in 2008/09 and the probability of having an extreme asset change. The extreme asset change dummy is set to one if asset changes exceed legislator salaries and allowances. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Dependent variables	Log family assets in 2008/09				Extreme asset change?			
	Full 1	Full 2	INC 3	BJP 4	Full 5	Full 6	INC 7	BJP 8
Candidate sample								
Regression								
Winner in 2003/04?	0.186** [0.0833]	-0.0391 [0.0782]	0.388*** [0.134]	0.550** [0.196]	0.0909 [0.0538]	-0.0307 [0.0392]	0.14 [0.0855]	0.265 [0.155]
Winner in 2003/04 X INC candidate?		0.300** [0.142]				0.112 [0.0736]		
Winner in 2003/04 X BJP candidate?		0.492** [0.191]				0.369** [0.133]		
Log(1+initial family assets)	0.901*** [0.0599]	0.907*** [0.0581]	0.856*** [0.0682]	0.747*** [0.105]	0.0780*** [0.0127]	0.0797*** [0.0125]	0.0392 [0.0279]	-0.00055 [0.0371]
Immoveable/family assets	-0.938*** [0.151]	-0.951*** [0.147]	-0.878** [0.334]	-0.622** [0.267]	-0.306*** [0.0726]	-0.309*** [0.0709]	-0.285** [0.125]	-0.236** [0.101]
Incumbent in 2003/04?	-0.0302 [0.0827]	-0.0303 [0.0818]	-0.16 [0.102]	0.211 [0.209]	0.0927 [0.0603]	0.0922 [0.0589]	0.0328 [0.0772]	0.12 [0.0802]
Age, in years	-0.00082 [0.00698]	-0.00121 [0.00669]	-0.00097 [0.00872]	0.00278 [0.00546]	-3.54E-05 [0.00356]	-0.00024 [0.00333]	-0.00285 [0.00610]	0.00427 [0.00294]
Female candidate?	0.281 [0.284]	0.29 [0.300]		0.132 [0.306]	0.300*** [0.0412]	0.305*** [0.0393]		0.179* [0.0906]
Max. education: Some college?	-0.0386 [0.0701]	-0.0524 [0.0662]	0.00754 [0.100]	0.0712 [0.146]	0.00459 [0.0417]	-0.00296 [0.0377]	0.0302 [0.0484]	0.107 [0.0642]
Max. education: Some post-graduate?	0.222* [0.124]	0.210* [0.118]	0.267 [0.239]	1.478** [0.698]	0.128* [0.0624]	0.120** [0.0546]	0.132 [0.101]	0.284*** [0.0943]
Charged with crime?	-0.146 [0.112]	-0.151 [0.111]	-0.0903 [0.373]	0.231 [0.306]	0.0454 [0.0494]	0.0419 [0.0473]	-0.128 [0.192]	0.0766 [0.101]
Indian National Congress candidate?	-0.0132 [0.0611]	-0.184 [0.136]			-0.0453 [0.0272]	-0.106** [0.0473]		
Bharatiya Janata Party candidate?	0.118 [0.0962]	-0.164 [0.176]			0.0392 [0.0428]	-0.165* [0.0861]		
Seat reserved for scheduled castes?	-0.0473 [0.115]	-0.0439 [0.113]	-0.215* [0.107]	-0.239 [0.529]	-0.0387 [0.0472]	-0.0379 [0.0464]	-0.228 [0.144]	0.0586 [0.266]
Seat reserved for scheduled tribes?	-0.307** [0.147]	-0.305** [0.145]	-0.0257 [0.303]	-0.364*** [0.0553]	-0.187 [0.138]	-0.185 [0.121]	0.0174 [0.179]	-0.123 [0.0819]
Log(electorate/1,000)	0.00824 [0.0977]	0.0158 [0.0956]	0.0725 [0.159]	0.00475 [0.221]	-0.0357 [0.0676]	-0.0299 [0.0623]	0.0612 [0.0848]	-0.0195 [0.0786]
State x legislature fixed effects?	Y	Y	Y	Y	Y	Y	Y	Y
Observations	597	597	256	166	597	597	256	166
R-squared	0.477	0.483	0.498	0.56	0.13	0.151	0.172	0.33

SI Appendix Table 6: OLS (data preprocessed using matching) results for the effects of winning office on log family assets in 2008/09 and the probability of having an extreme asset change. The extreme asset change dummy is set to one if asset changes exceed legislator salaries and allowances. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Dependent variables	Log family assets in 2008/09				Extreme asset change?			
	Full 1	Full 2	INC 3	BJP 4	Full 5	Full 6	INC 7	BJP 8
Candidate sample Regression								
Winner in 2003/04?	-0.0849 [0.170]	-0.248 [0.193]	-0.15 [0.376]	0.235 [0.229]	0.0377 [0.103]	-0.0254 [0.106]	-0.0782 [0.165]	0.248 [0.164]
Winner in 2003/04 X INC candidate?		0.136 [0.146]				0.029 [0.0846]		
Winner in 2003/04 X BJP candidate?		0.447*** [0.0993]				0.204*** [0.0612]		
Vote margin	-3.722 [4.405]	-3.912 [4.217]	4.238 [14.92]	-15.49 [10.83]	-4.028 [3.686]	-4.131 [3.396]	1.619 [5.893]	-8.954 [8.789]
Vote margin X winner in 2003/04?	15.98*** [4.301]	16.44*** [4.677]	6.637 [14.02]	34.61** [15.78]	7.765** [3.089]	8.034** [2.991]	3.006 [7.767]	14.37 [9.086]
Vote margin squared	-24.49 [35.60]	-28.6 [34.57]	52.74 [128.2]	-160.2 [135.3]	-38.52 [34.13]	-40.8 [32.01]	5.731 [59.09]	-84.69 [102.7]
Vote margin squared X winner in 2003/04?	-71.35 [69.76]	-71.04 [66.95]	-158.2 [180.2]	19.17 [109.3]	8.875 [52.28]	8.966 [49.42]	-58.56 [72.62]	46.19 [106.0]
Log(1+initial family assets)	0.814*** [0.0480]	0.811*** [0.0470]	0.848*** [0.0796]	0.767*** [0.0915]	0.0357* [0.0192]	0.0346* [0.0189]	0.0675* [0.0336]	0.0329 [0.0548]
Immoveable/family assets	-0.537*** [0.127]	-0.559*** [0.127]	-0.466** [0.178]	-0.545* [0.290]	-0.151** [0.0620]	-0.163** [0.0616]	-0.117 [0.0867]	-0.219** [0.0990]
Incumbent in 2003/04?	0.017 [0.0579]	0.024 [0.0592]	-0.183 [0.112]	0.172 [0.169]	0.0604 [0.0382]	0.0635 [0.0382]	0.048 [0.0644]	0.0767 [0.0742]
Age, in years	-0.00231 [0.00247]	-0.00221 [0.00228]	-0.00525 [0.00616]	-0.00163 [0.00383]	-0.00117 [0.00150]	-0.00107 [0.00142]	-0.00347 [0.00377]	5.80E-05 [0.00267]
Female candidate?	-0.157 [0.143]	-0.164 [0.143]	0.0121 [0.174]	0.00127 [0.0962]	-0.109 [0.0659]	-0.114* [0.0667]	-0.0699 [0.102]	-0.0465 [0.150]
Max. education: Some college?	-0.110* [0.0633]	-0.123* [0.0648]	-0.0934 [0.149]	-0.154* [0.0793]	0.00605 [0.0353]	-0.00039 [0.0374]	0.0203 [0.0685]	0.0208 [0.0616]
Max. education: Some post-graduate?	-0.0514 [0.0690]	-0.0616 [0.0700]	0.0169 [0.153]	0.0875 [0.198]	0.00438 [0.0420]	-0.00017 [0.0438]	0.0431 [0.0800]	0.057 [0.103]
Charged with crime?	0.00193 [0.0701]	-0.0151 [0.0664]	-0.0126 [0.131]	-0.0615 [0.0996]	0.0580** [0.0264]	0.0501* [0.0268]	0.101 [0.0787]	0.0831* [0.0449]
Indian National Congress candidate?	0.0378 [0.0393]	-0.0381 [0.103]			0.00197 [0.0422]	-0.0129 [0.0691]		
Bharatiya Janata Party candidate?	0.0596 [0.0627]	-0.217** [0.102]			0.0162 [0.0375]	-0.110* [0.0640]		
Seat reserved for scheduled castes?	-0.218** [0.0935]	-0.217** [0.0907]	-0.092 [0.139]	-0.433*** [0.142]	-0.0995* [0.0502]	-0.0999** [0.0485]	-0.085 [0.0583]	-0.115 [0.106]
Seat reserved for scheduled tribes?	-0.187 [0.127]	-0.201 [0.129]	-0.146 [0.155]	-0.326 [0.238]	-0.0662 [0.0607]	-0.0738 [0.0588]	0.0386 [0.0718]	-0.0754 [0.128]
Log(electorate/1,000)	0.115** [0.0520]	0.120** [0.0559]	0.0399 [0.0625]	0.322* [0.185]	0.0482* [0.0264]	0.0497* [0.0272]	0.0405 [0.0371]	0.165* [0.0928]
State x legislature fixed effects?	Y	Y	Y	Y	Y	Y	Y	Y
Observations	941	941	347	238	941	941	347	238
R-squared	0.554	0.558	0.563	0.614	0.104	0.11	0.149	0.228

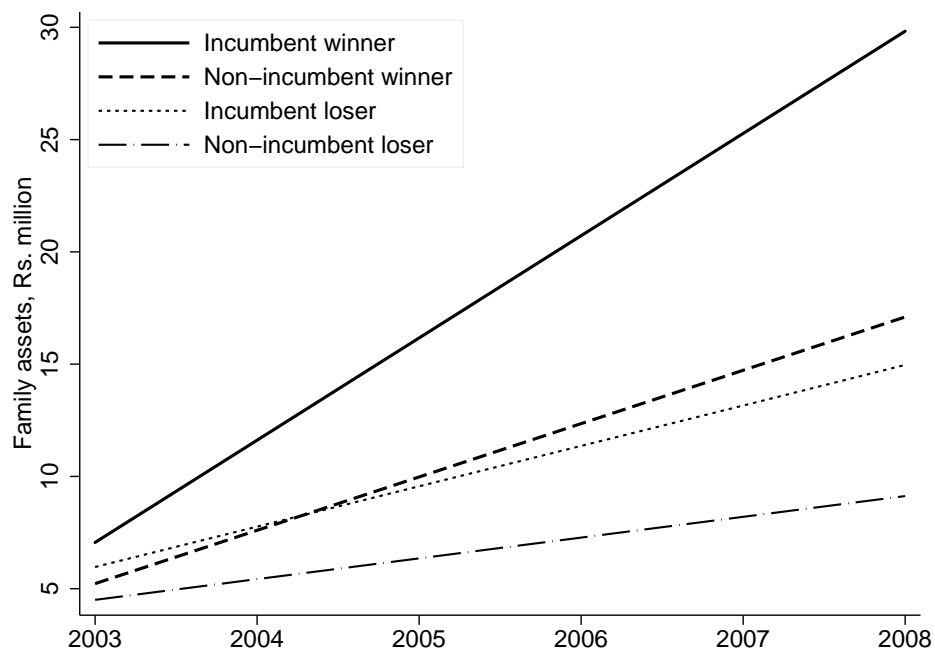
SI Appendix Table 7: RD results for the effects of winning office on log family assets in 2008/09 and the probability of having an extreme asset change. The extreme asset change dummy is set to one if asset changes exceed legislator salaries and allowances. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Regression Candidate sample	1 Full		2 Full		3 INC		4 BJP	
Stage	Second	Selection	Second	Selection	Second	Selection	Second	Selection
Winner in 2003/04?	0.252** [0.110]	0.684*** [0.0442]	0.139 [0.124]	0.684*** [0.0442]	0.138 [0.204]	0.848*** [0.0867]	0.408*** [0.149]	0.636*** [0.101]
Winner in 2003/04 X INC candidate?			0.087 [0.103]					
Winner in 2003/04 X BJP candidate?			0.309*** [0.116]					
Log(1+initial family assets)	0.856*** [0.0295]	0.129*** [0.0249]	0.854*** [0.0294]	0.129*** [0.0249]	0.841*** [0.0486]	0.164*** [0.0406]	0.783*** [0.0529]	0.146** [0.0583]
Immoveable/family assets	-0.567*** [0.0772]	-0.165** [0.0787]	-0.572*** [0.0771]	-0.165** [0.0787]	-0.558*** [0.128]	-0.107 [0.139]	-0.424*** [0.144]	-0.267 [0.163]
Incumbent in 2003/04?	0.0485 [0.0637]	0.328*** [0.0481]	0.0476 [0.0635]	0.328*** [0.0481]	-0.108 [0.129]	0.519*** [0.0856]	0.192* [0.104]	0.303*** [0.107]
Age, in years	-0.00452 [0.00327]	-0.0170*** [0.00222]	-0.00432 [0.00326]	-0.0170*** [0.00222]	-0.00813 [0.00822]	-0.0346*** [0.00397]	-0.00509 [0.00521]	-0.0182*** [0.00450]
Female candidate?	-0.0304 [0.101]	-0.321*** [0.0823]	-0.0309 [0.101]	-0.321*** [0.0823]	0.0959 [0.150]	-0.271** [0.133]	0.187 [0.256]	-0.692*** [0.182]
Max. education: Some college?	-0.0473 [0.0496]	0.0635 [0.0512]	-0.0522 [0.0495]	0.0635 [0.0512]	-0.0635 [0.0854]	-0.0511 [0.0876]	-0.0886 [0.0918]	0.068 [0.106]
Max. education: Some post-graduate?	-0.0414 [0.0623]	0.0712 [0.0639]	-0.0431 [0.0621]	0.0712 [0.0639]	-0.109 [0.105]	0.0574 [0.110]	0.135 [0.114]	0.0816 [0.129]
Charged with crime?	0.0109 [0.0554]	0.120** [0.0570]	-0.00214 [0.0555]	0.120** [0.0570]	-0.0594 [0.110]	0.0609 [0.118]	-0.0207 [0.0931]	0.159 [0.104]
Indian National Congress candidate?	0.0806 [0.0531]	0.0725 [0.0558]	0.0296 [0.0836]	0.0725 [0.0558]				
Bharatiya Janata Party candidate?	0.0599 [0.0602]	0.033 [0.0641]	-0.139 [0.0959]	0.033 [0.0641]				
Seat reserved for scheduled castes?	-0.0908 [0.0687]	0.0614 [0.0827]	-0.0929 [0.0685]	0.0614 [0.0827]	-0.0528 [0.120]	-0.0257 [0.136]	-0.330*** [0.121]	-0.071 [0.151]
Seat reserved for scheduled tribes?	-0.137* [0.0755]	0.133* [0.0796]	-0.146* [0.0753]	0.133* [0.0796]	-0.208* [0.118]	0.147 [0.135]	-0.196 [0.120]	-0.142 [0.141]
Log(electorate/1,000)	0.0788** [0.0354]	-0.014 [0.0477]	0.0804** [0.0353]	-0.014 [0.0477]	0.0786 [0.0516]	-0.047 [0.0706]	0.0848 [0.0780]	-0.136 [0.229]
District imbalance		0.625* [0.332]		0.625* [0.332]		0.1 [0.603]		1.442* [0.862]
State constituency imbalance		0.688** [0.314]		0.688** [0.314]		0.533 [0.534]		1.922** [0.918]
National constituency imbalance		-0.135 [0.481]		-0.135 [0.481]		-0.622 [0.947]		-0.401 [0.972]
Constituency newly reserved?		-0.374*** [0.0818]		-0.374*** [0.0818]		-0.491*** [0.151]		-0.530*** [0.197]
Constituency desreserved?		-0.347*** [0.120]		-0.347*** [0.120]		-0.316 [0.201]		-0.173 [0.265]
Legislature redistricted?		-0.371* [0.223]		-0.371* [0.223]		0.509 [0.341]		-0.586 [1.080]
Lambda		0.203 [0.239]		0.186 [0.238]		-0.0494 [0.384]		-0.0111 [0.330]
State x legislature fixed effects?	Y	Y	Y	Y	Y	Y	Y	Y
Observations	3,678	3,678	3,678	3,678	1,349	1,349	936	936

SI Appendix Table 8: Heckman results for the effects of winning office on log family assets in 2008/09. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Regression Candidate sample	1		2		3		4	
	Full		Full		INC		BJP	
Stage	Second	Selection	Second	Selection	Second	Selection	Second	Selection
Winner in 2003/04?	0.0889	0.684***	0.0557	0.684***	0.0313	0.848***	0.192**	0.636***
Winner in 2003/04 X INC candidate?	[0.0565]	[0.0442]	[0.0642]	[0.0442]	[0.0992]	[0.0867]	[0.0813]	[0.101]
Winner in 2003/04 X BJP candidate?			-0.0173					
			[0.0537]					
			0.154**					
			[0.0601]					
Log(1+initial family assets)	0.0412***	0.129***	0.0405***	0.129***	0.033	0.164***	0.0326	0.146**
	[0.0151]	[0.0249]	[0.0151]	[0.0249]	[0.0236]	[0.0406]	[0.0289]	[0.0583]
Immoveable/family assets	-0.110***	-0.165**	-0.116***	-0.165**	-0.131**	-0.107	-0.0552	-0.267
	[0.0397]	[0.0787]	[0.0397]	[0.0787]	[0.0621]	[0.139]	[0.0788]	[0.163]
Incumbent in 2003/04?	0.0698**	0.328***	0.0688**	0.328***	0.0438	0.519***	0.118**	0.303***
	[0.0328]	[0.0481]	[0.0327]	[0.0481]	[0.0629]	[0.0856]	[0.0567]	[0.107]
Age, in years	-0.00019	-0.0170***	-3.99E-05	-0.0170***	-0.00079	-0.0346***	0.000461	-0.0182***
	[0.00168]	[0.00222]	[0.00168]	[0.00222]	[0.00400]	[0.00397]	[0.00284]	[0.00450]
Female candidate?	0.0241	-0.321***	0.0202	-0.321***	0.0791	-0.271**	0.129	-0.692***
	[0.0521]	[0.0823]	[0.0521]	[0.0823]	[0.0732]	[0.133]	[0.140]	[0.182]
Max. education: Some college?	0.000175	0.0635	-0.00136	0.0635	0.00809	-0.0511	-0.021	0.068
	[0.0255]	[0.0512]	[0.0255]	[0.0512]	[0.0416]	[0.0876]	[0.0500]	[0.106]
Max. education: Some post-graduate?	0.0052	0.0712	0.00546	0.0712	0.00114	0.0574	0.0436	0.0816
	[0.0321]	[0.0639]	[0.0320]	[0.0639]	[0.0513]	[0.110]	[0.0621]	[0.129]
Charged with crime?	0.0274	0.120**	0.0203	0.120**	0.0149	0.0609	0.0426	0.159
	[0.0285]	[0.0570]	[0.0285]	[0.0570]	[0.0536]	[0.118]	[0.0508]	[0.104]
Indian National Congress candidate?	0.022	0.0725	0.0348	0.0725				
	[0.0273]	[0.0558]	[0.0432]	[0.0558]				
Bharatiya Janata Party candidate?	0.0397	0.033	-0.0581	0.033				
	[0.0309]	[0.0641]	[0.0496]	[0.0641]				
Seat reserved for scheduled castes?	-0.0503	0.0614	-0.0523	0.0614	-0.0379	-0.0257	-0.132**	-0.071
	[0.0353]	[0.0827]	[0.0353]	[0.0827]	[0.0584]	[0.136]	[0.0658]	[0.151]
Seat reserved for scheduled tribes?	-0.0783**	0.133*	-0.0828**	0.133*	-0.0708	0.147	-0.0129	-0.142
	[0.0388]	[0.0796]	[0.0388]	[0.0796]	[0.0575]	[0.135]	[0.0652]	[0.141]
Log(electorate/1,000)	0.00243	-0.014	0.00353	-0.014	0.0251	-0.047	0.0423	-0.136
	[0.0182]	[0.0477]	[0.0182]	[0.0477]	[0.0251]	[0.0706]	[0.0426]	[0.229]
District imbalance		0.625*		0.625*		0.1		1.442*
		[0.332]		[0.332]		[0.603]		[0.862]
State constituency imbalance		0.688**		0.688**		0.533		1.922**
		[0.314]		[0.314]		[0.534]		[0.918]
National constituency imbalance		-0.135		-0.135		-0.622		-0.401
		[0.481]		[0.481]		[0.947]		[0.972]
Constituency newly reserved?		-0.374***		-0.374***		-0.491***		-0.530***
		[0.0818]		[0.0818]		[0.151]		[0.197]
Constituency desreserved?		-0.347***		-0.347***		-0.316		-0.173
		[0.120]		[0.120]		[0.201]		[0.265]
Legislature redistricted?		-0.371*		-0.371*		0.509		-0.586
		[0.223]		[0.223]		[0.341]		[1.080]
Lambda		-0.00026		-0.00832		-0.0489		-0.0776
		[0.123]		[0.123]		[0.187]		[0.180]
State x legislature fixed effects?	Y	Y	Y	Y	Y	Y	Y	Y
Observations	3,678	3,678	3,678	3,678	1,349	1,349	936	936

SI Appendix Table 9: Heckman results for the effects of winning office on the probability of having an extreme asset change. The extreme asset change dummy is set to one if asset changes exceed legislator salaries and allowances. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.



SI Appendix Figure 3: Changes in BJP candidates' family assets by 2003/04 incumbency and winning status.

Candidate sample	Full	INC	BJP
Won in 2003/04?	0.125*** [0.0412]	0.138 [0.0886]	0.315*** [0.0716]
Log(1+initial family assets)	0.900*** [0.0213]	0.870*** [0.0392]	0.861*** [0.0372]
Immoveable/family assets	-0.420*** [0.0697]	-0.466*** [0.138]	-0.531*** [0.109]
Incumbent in 2003/04?	-0.00358 [0.0423]	-0.0384 [0.0853]	0.0674 [0.0704]
Age, in years	-0.00197 [0.00210]	-0.00712 [0.00441]	0.000936 [0.00318]
Female candidate?	-0.0664 [0.0825]	-0.00862 [0.148]	-0.119 [0.155]
Max. education: Some college?	-0.028 [0.0461]	-0.073 [0.0914]	-0.0222 [0.0732]
Max. education: Some post-graduate?	-0.0315 [0.0585]	-0.0693 [0.114]	0.150* [0.0906]
Charged with crime?	0.0343 [0.0497]	-0.0614 [0.119]	0.127* [0.0690]
Indian National Congress candidate?	0.0532 [0.0496]		
Bharatiya Janata Party candidate?	0.0284 [0.0567]		
Seat reserved for scheduled castes?	0.00039 [0.0650]	-0.0237 [0.130]	-0.192** [0.0971]
Seat reserved for scheduled tribes?	-0.106 [0.0662]	-0.104 [0.128]	-0.0364 [0.0957]
Log(electorate/1,000)	0.0571* [0.0333]	0.0749 [0.0551]	0.0601 [0.0575]
State x legislature fixed effects?	Y	Y	Y
Observations	1,731	649	448

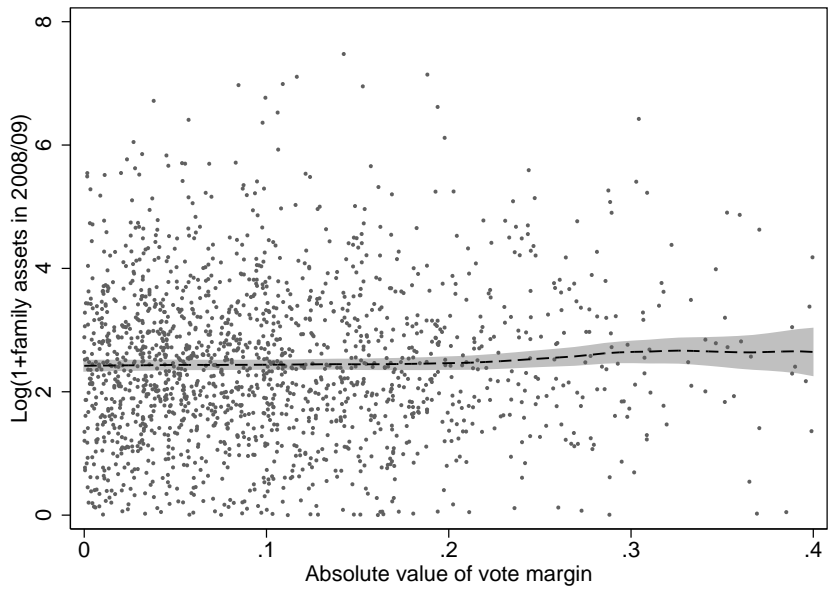
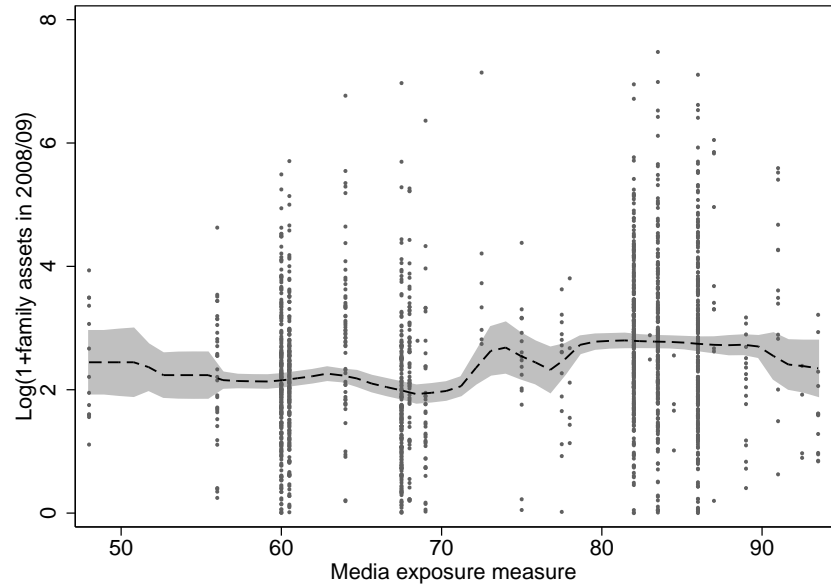
SI Appendix Table 10: Quantile regression results for the effects of winning office on log family assets in 2008/09. Standard errors are robust and clustered by state x legislature. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

	Candidate sample	Dependent variable	
		Log family assets in 2008/09	Extreme change in assets?
Effect of winning in 2003/04	Full	0.124** [0.0496]	0.0809*** [0.0257]
Effect of winning in 2003/04 (1)	Full	-0.00444 [0.0804]	0.0452 [0.0416]
Effect of winning in 2003/04 X INC candidates (2)		0.163 [0.118]	-0.00106 [0.0610]
Effect of winning in 2003/04 X BJP candidates (3)		0.283** [0.131]	0.147** [0.0677]
p -value for $H: (2)=(3)$		0.37	0.03
Effect of winning in 2003/04	INC	0.177* [0.0943]	0.101** [0.0455]
Effect of winning in 2003/04	BJP	0.445*** [0.100]	0.257*** [0.0549]

SI Appendix Table 11: OLS (data preprocessed using genetic matching) results for the effects of winning office on log family assets in 2008/09 and the probability of having an extreme asset change. The extreme asset change dummy is set to one if asset changes exceed legislator salaries and allowances. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Candidate sample	OLS	OLS, data preprocessed using matching	RD	OLS, with Heckman correction
“Extreme” asset changes > 50% of legislator remuneration				
Full	0.0967*** [0.0322]	0.104** [0.0485]	0.0102 [0.0874]	0.129** [0.0531]
INC	0.0585 [0.0500]	0.179** [0.0833]	-0.0141 [0.175]	0.0394 [0.0924]
BJP	0.226*** [0.0550]	0.255* [0.136]	0.107 [0.123]	0.211*** [0.0750]
“Extreme” asset changes > 75% of legislator remuneration				
Full	0.0915** [0.0349]	0.0938* [0.0476]	0.0121 [0.0926]	0.102* [0.0548]
INC	0.0488 [0.0455]	0.142* [0.0807]	-0.0846 [0.164]	0.0396 [0.0958]
BJP	0.215*** [0.0671]	0.258* [0.140]	0.174 [0.158]	0.199** [0.0778]
“Extreme” asset changes > 125% of legislator remuneration				
Full	0.0845** [0.0362]	0.100* [0.0555]	0.0148 [0.0938]	0.0252 [0.0582]
INC	0.0459 [0.0613]	0.141 [0.0943]	-0.0283 [0.202]	-0.0146 [0.102]
BJP	0.227*** [0.0676]	0.292** [0.130]	0.212 [0.126]	0.147* [0.0857]
“Extreme” asset changes > 150% of legislator remuneration				
Full	0.0819** [0.0390]	0.123** [0.0462]	0.0488 [0.0732]	0.0241 [0.0594]
INC	0.0579 [0.0631]	0.145 [0.0887]	-0.0354 [0.197]	-0.028 [0.105]
BJP	0.218*** [0.0612]	0.295** [0.126]	0.166 [0.159]	0.127 [0.0877]

SI Appendix Table 12: The effects of winning on the probability of “extreme” asset changes in 2003/04-2008/09, where extreme asset changes are defined as those exceeding 50, 75, 125 and 150% of legislator salaries and allowances. Standard errors for the OLS and RD regressions are robust and clustered by state x legislature. Heckman selection models use measures of constituency imbalance and changes in reservation status as exogenous determinants of rerunning for office. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.



SI Appendix Figure 4: 2008/09 asset disclosures by media exposure and winning margins. Local polynomial smooths. Media exposure data are by state, and are from the National Family Health Survey-3.