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Traveling Agents: Political Change and Bureaucratic Turnover in India*

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WORK IN PROGRESS

Abstract

Political principals face high-powered electoral pressures while bureaucrat-agents face longer term, low-powered incentives. Given constitutional constraints, what "carrots and sticks" do politicians employ to control bureaucrats and how do bureaucrats respond to such incentives? We use a simple career concerns framework and a unique dataset from the Indian Administrative Service to address these issues. State level politicians (Chief Ministers) exert control over bureaucrats when they assume office, through a novel mechanism of reassignment (transfers) to new jobs. Transfers are less likely if district politicians belong to the same party as the Chief Minister, i.e. he appears to treat local politicians and bureaucrats as substitutes. We use a framework where bureaucrats differ in their willingness to invest in job expertise or political loyalty. Consistent with this framework, we find in our data that more able bureaucrats and those with greater job-specific experience are less likely to be reassigned when a new politician assumes office. In accordance with politicians' district reassignment patterns, we do not find

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robust evidence of any negative impact of such politically-induced transfers on development and policy outcomes at the district level.

1 Introduction

Bureaucrats are ubiquitous in all economies, but they loom especially large in developing ones. While politicians legislate and set overall priorities for public good provision, the actual implementation and delivery of public goods to citizens is largely the domain of bureaucrats. In this context, much has been written about the two groups of agents that the bureaucracy links, but less so about this vital mediating institution.¹ Recent principal-agent literature has devoted some theoretical attention to the interaction between politicians and bureaucrats, given their differing incentives. However, economists have shed little empirical light on how bureaucracies work and interact with political institutions, especially in developing countries. In this paper, we use data on the career histories of bureaucrats in India to examine the factors that influence the de facto division of power between politicians and bureaucrats. We discuss the implications of the observed relationship between these two agents for the motivation of bureaucrats and present some evidence of its impact on socio-economic outcomes.

Bureaucrats in public service typically have low-powered incentives, while their political principals face high-powered electoral pressures in representative democracies. Such a contrast in their incentives is often by constitutional design, as is the insulation afforded to bureaucrats from political influence. Recent papers by Maskin and Tirole (2004) and Alesina and Tabellini (2007) highlight the role of short-term pressures on politicians to justify having insulation of bureaucrats from politicians. In developed countries, there is evidence that such differences in the incentives

¹Two strands of literature are related to our study of the bureaucracy. The literature on public good provision has focused mainly on the two sets of players that bureaucrats link: political parties/representatives and heterogeneous citizen-voter groups. Persson and Tabellini (2000) provide a comprehensive review of the theoretical literature on the political economy aspects of public good provision. The empirical literature examines the impact of politician and voter characteristics on public goods provision, including voter heterogeneity (Alesina and La Ferrara (2000); Alesina, Baqir and Easterly (1999)), political representation of specific voter groups (Pande(2003); Chattopadhyay and Duflo(2004); Banerjee and Somanathan (2007)) and politician incentives (Besley and Burgess (2002)). The institutions literature typically analyzes one specific institution, such as property rights (Banerjee and Iyer (2005)), democracy (Acemoglu and Robinson (2006)) or legal origin (La Porta et al (1998)). In contrast to these papers, we focus on the interaction between two key institutions: political representatives and the bureaucracy.

of public officials lead to systematically different outcomes (Besley and Coate (2003); Besley and Payne (2003); Weingast and Moran (1983)). The arguments in favor of bureaucratic insulation from political pressures are likely to be stronger in a developing country, with a politically less sophisticated electorate. Bardhan (1999) goes further to argue that bureaucratic insulation may have broader implications for the process of development itself.

Given constitutional constraints, what “carrots and sticks” do political principals facing short term electoral pressures employ to motivate bureaucrat agents with longer term career concerns? Recent work has addressed these questions at a theoretical level, both on the delegation of power by politicians to bureaucrats (Alesina and Tabellini (2007); Calvert and Weingast (1989); Epstein and O’Halloran (1999)), as well as on the motivation of bureaucrats with low-powered incentives (Besley and Ghatak (2005); Prendergast (2007)). On the empirical side, Rauch and Evans (2000) conduct a cross-country study of how the structure of the bureaucracy affects its performance, while Wade (1982) and de Zwart (1994) offer descriptive accounts of Indian bureaucrats in action. Park and Somanathan (2004) explicitly considers the relationship between politicians and bureaucrats using data on Korean public prosecutors.

We analyze the relationship between politicians and bureaucrats using data on the complete career histories of over 4000 officers in the Indian Administrative Service (IAS) between 1980 and 2004. Despite strong constitutional provisions for the insulation of bureaucrats from politicians in India, we find that politicians use a novel mechanism to motivate and/or exert their authority over bureaucrats: frequent transfers (re-assignment) of officers across posts. Changes in the identity of a state’s Chief Minister result in a significant increase in the frequency of bureaucrat reassignments in that state.² Elections, at the state or national level, matter little unless they result in a change in the Chief Minister.³ Our analysis further suggests both positive and negative effects of transfers on bureaucrats’ motivation for performance.

Our state-level analysis suggests that the impact of a new Chief Minister on bureaucrat reas-

²The Chief Minister is the de facto executive head of the state government. In India’s parliamentary democracy, he is usually the leader of the party which wins the largest number of seats in the state election.

³See Iyer and Mani (2007) for a detailed analysis of the impact of elections on bureaucratic turnover.

signments does not depend on whether the party in power changes, or on measures of the party's political clout, such as its seat share in the state legislature or its participation in the central government. This is somewhat of a puzzle, given India's parliamentary system with strong political parties. This puzzle is partially resolved by our district level analysis: we find that a new Chief Minister is not likely to appoint a new district-level bureaucrat if the local representatives from that district belong to his party. A larger seat share for the Chief Minister's party in the state legislature implies more local politicians from his party. Simply put, the greater political clout of the Chief Minister's party is matched against a lower perceived need for transfers, especially in the case of District Officers. This finding also suggests that, in terms of policy control at the district level, Chief Ministers regard local politicians and bureaucrats as "substitutes." In terms of bureaucrat motivations, this is not likely to provide strong performance incentives.

We find that politicians do weigh the costs and benefits of such bureaucrat assignments, though we cannot pinpoint the motivations behind specific transfers. Officers at higher levels of seniority are more likely to be transferred; these are the officers likely to have maximum impact on policy, as well as to have the greatest personal interactions with the Chief Minister. Key positions such as the Chief Secretary (the top bureaucrat in the state hierarchy) and the Finance Secretary are particularly likely to see transfers by a new Chief Minister. Together with the district level results, this suggests that the primary benefit of reassigning bureaucrats is that it enables the politician to have greater control over policy implementation. At the same time, we find that officers with longer tenures in their posts are significantly less likely to be transferred, as are officers of higher ability. This suggests that politicians do value ability and job-specific expertise, which is likely to provide positive performance incentives to bureaucrats.

Finally, we examine the impact of bureaucrat transfers on a set of district level outcomes: implementation of infrastructure and immunization projects, as well as overall poverty reduction. They appear to have little impact on outcomes – either positive or negative. We note that this is consistent with our finding that Chief Ministers regard district level politicians and bureaucrats as substitutes, in terms of policy implementation: if bureaucrat transfers occur only to compensate for the absence of a local politician from the CM's party, we would not expect to find any difference

in outcomes.

The rest of the paper is structured as follows: Section 2 describes the characteristics of the Indian Administrative Service and the political setting in India. Section 3 describes our data, sections 4 to 7 present our empirical results, and section 8 concludes.

2 Bureaucrats and Politicians in India

2.1 The Indian Administrative Service

The Indian Administrative Service (IAS) is the top layer of the government bureaucracy in India. This service consists of a relatively small number of career civil servants: in 2005, there were less than 5000 officers administering a population of over 1 billion.⁴ The IAS is the successor to the erstwhile Indian Civil Service (ICS) set up by the British East India Company during the late 18th and early 19th centuries. IAS officers are career civil servants and staff the most important positions in district administration, various departments of the state and central government secretariats, and state-owned enterprises. Each district is under the supervision of a District Officer, who is responsible for ensuring law and order, providing certain judicial functions, organizing relief and rehabilitation in cases of natural disasters, implementing development policies and overseeing all aspects of district administration. These officers are variously known as District Collectors, District Magistrates and Deputy Commissioners in different parts of India.⁵ Lower levels of administration are staffed by members of State Civil Services.

IAS officers are recruited in two main ways: through nationwide competitive examinations conducted by an independent Commission (“direct recruits”), and by promotion of the best-performing officers from the State Civil Services (“SCS promotees”), the latter category being restricted to not more than one-third of officers in a state.⁶ After recruitment and initial training,

⁴To have an idea of the overall size of the state in India, we should note that the central government of India employed more than 3.8 million people in 2000 (41% of whom were employed in the Indian Railways), and central government expenditure accounted for 19% of India’s GDP in 2005.

⁵These different designations reflect the designations for ICS officers in different provinces of British India

⁶Nearly 50% of all posts are reserved for members of historically disadvantaged sections of society: 15% for

direct recruits are assigned to specific state cadres, where they typically spend most of their careers. This assignment of officers to states is done by a rigid (rather complicated) bureaucratic rule, resulting in a quasi-random assignment of officers to states. In particular, it is very difficult for elected politicians or the bureaucrats themselves to affect this assignment. Further, the IAS rules state that not more than one-third of the direct recruits in a state can be natives of that state.⁷

IAS officers start by holding positions at the sub-district level, and move on to higher positions within the district, the state secretariat or state-owned enterprises. Officers are usually appointed as District Officers after attaining five to ten years of experience (this varies by state). Promotions are based on years of service for the first few years, and have a merit-based component for the higher level positions. IAS officers are evaluated by their superior officers in Annual Confidential Reports. Recently, the Ministry of Personnel has initiated Performance Appraisal Reports under which officers will be assigned numerical grades for their work output and completion of work plans, personal attributes and functional competencies. Such work plans could include quantitative targets, but this is not necessary. As such, it is not quite clear what outcome variables we would use to assess the efficiency of the Indian bureaucracy.

2.2 Transfers of IAS Bureaucrats

The Constitution of India designates the IAS as an “all-India” service, which means that bureaucrats hold office at the pleasure of the President of India, and cannot be “dismissed or removed by an authority subordinate to that by which he was appointed.”⁸ In particular, this means that IAS

Scheduled Castes, 7.5% for Scheduled Tribes and, since 1992, 27% for Other Backward Castes.

⁷Broadly, the assignment rule is as follows: each state is first assigned a “home-state” officer, then two officers from other states. This order is adhered to over time e.g. if a state got one home-state officer and one “outsider” last year, then the first officer to be assigned to that state this year will be an outsider as well. This assignment rule has specific criteria regarding reservation for various disadvantaged sections of society and the promotion of SCS officers, as well as provisions to prevent too many of the top-ranked recruits going to a single state. An officer who is not assigned to his home state is assigned to the next available state in alphabetical order.

⁸Constitution of India, Article 311.

officers cannot be dismissed or demoted by state-level elected representatives. However, officers can be reassigned or transferred from one post to another. These transfers are almost always within the state, or sometimes between the state and central governments; transfers across states are extremely rare. Such transfer orders are signed by the Chief Secretary (the top bureaucrat) of the state, and decisions are usually made in consultation with elected representatives. While bureaucrats can request specific assignments, they have very little power to affect the outcome of such requests.

IAS bureaucrats are transferred extremely frequently: in our dataset, we find that the average tenure of IAS officers in a given post is about 16 months and only 56% of District Officers spend more than one year in their jobs. This is in violation of the recommendations, put forward by the Ministry of Personnel and the Fifth Pay Commission, for a three-to-five year tenure in each post. Interestingly, frequent transfers of bureaucrats was a feature of life in the old ICS as well; for instance, Potter (1996) finds that two-thirds of all District Officers in 1936 had held their posts for less than one year.⁹ Gilmour (2005, p 220) provides a vivid example from an even earlier period: “...between 1879 and 1885 Colonel Tweedie did three stints in Gwalior, two in Baghdad, two in Ajmer, one in Jodhpur, one on the road between Peshawar and Kabul as Political Officer during the invasion of Afghanistan, and another as Political Officer in charge of Jalalabad.”

In recent years, there are concerns that frequent transfers have become a tool of “political interference” i.e. driven by politicians wanting to exert control over bureaucrats. Such alleged politicization of the bureaucracy is a major public policy issue in India. For instance, the present Prime Minister Dr. Manmohan Singh expressed grave concern about this, warning that the failure of the government to tackle the menace of the “transfer and posting industry” will have a “debilitating impact not only on their performance and morale but also on the whole process of governance.”¹⁰ Several other scholars and public figures have voiced similar concerns, including the former Election

⁹The reasons cited for frequent transfers during the colonial period included leaves of officers going home every five years, creation of new provinces, riots and plots against collectors, unhappiness with posts, incompetence, illness and accidents (Potter 1996).

¹⁰Letter to all chief ministers, July 2004.

Commissioner of India, Mr. Lyngdoh.¹¹ A Public Services Bill (2006) currently exists in draft form, which explicitly limits any officer transfer before s/he completes three years of service.¹²

2.3 India's Political System

India is a parliamentary democracy in which elections are held every five years, both for the central government in New Delhi and the 28 states that constitute the Indian Union. However, mid-term polls can also be held if the government falls with no alternative government being formed. The election calendar resets to a five-year one after any midterm poll. Differing incidence of midterm polls across states has now resulted in states' calendars being different from each other and from the national election calendar.¹³ Typically, the leader of the party which wins a majority of seats in the state legislature is appointed as the Chief Minister, and is the de facto head of the executive branch of government in the state.¹⁴ It often happens that the current Chief Minister loses the support of his party (due to internal party politics) or the parties in a coalition government fall apart.¹⁵ In such cases, efforts are made to form another government, either by choosing a new leader from the same party, or by putting together another coalition. If these efforts fail, the central government often steps in to declare "President's Rule" in the state. In such a situation, the administration of the state is brought under the central government until new elections are held and a new government can take over.

¹¹ "Free Bureaucrats from Politicians" – July 2003 at www.rediff.com

¹² <http://persmin.nic.in/DraftPublicServiceBill/>

¹³ For instance, the last national elections were in 2004, but five states had state elections in 2006.

¹⁴ The de jure executive head is an appointed Governor, who is constrained to act on the advice of the Chief Minister and the Council of Ministers.

¹⁵ For instance, in August 2004, Babulal Gaur replaced Uma Bharati in Madhya Pradesh because of the latter's loss of support within the state level party. A well-known case of a coalition falling apart happened in the state of Uttar Pradesh in the late 1990s. Kalyan Singh of the BJP was the Chief Minister (CM), when the leader of the Bahujan Samaj Party, Kanshi Ram, withdrew the support of his party to the state government. Kalyan Singh was replaced by Mayawati as CM of Uttar Pradesh.

3 Data on Bureaucrat Transfers and Political Events

3.1 Bureaucrat Transfers

We collected four types of data related to bureaucrat transfers in India: a data set of officer career histories, a district-level data set of District Officers over time, proxy measures of bureaucrat quality and measures of the importance of different positions. The first data set contains detailed information on the career histories of all officers serving in the IAS as of October 2005.¹⁶ We focus our analysis on 4047 officers serving in 19 major states, which comprised 96% of India’s population in 2001.¹⁷ The data set provides information on officer characteristics such as gender, the year of joining the IAS, whether the officer is a “direct recruit” (i.e. recruited through examinations) or a “promotee” from the State Civil Service, and whether the officer has been assigned to his home state. 13% of the officers in our dataset are female, 75% are direct recruits. Of the direct recruits, 32% hold appointments in their home state, consistent with the official rule of not more than one-third home state appointments (Table 1, Panel A).

We have information on details of every post held by the officer: the start and end dates of each post, the exact designation, the level of seniority, the department (e.g. Finance, Environment, Health etc.) and whether the post was in the central, state or district-level administration. Based on the start and end dates of each post, we construct a dummy variable for whether the officer is transferred in a given year as follows: if he is recorded as starting a new post in that year, the transfer dummy for that officer and year is assigned to be 1. If he does not start a new post in that year, the transfer dummy is zero. If the officer has not yet joined the service, the dummy is

¹⁶We obtained this data from the website of the Ministry of Personnel, Public Grievances and Pensions.

¹⁷These states are Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttaranchal and West Bengal. Chattisgarh, Jharkhand and Uttaranchal were carved out of Madhya Pradesh, Bihar and Uttar Pradesh respectively, in November 2000. We exclude the following political subdivisions: the state of Delhi, 7 smaller northeastern states with population less than 4 million each, 8 Union Territories which are governed by the central government, and the state of Jammu & Kashmir, which is governed under special constitutional provisions.

not assigned any value. Multiple transfers within 1 year are coded as a dummy of 1 as well, so our measure of the transfer rate is a lower bound on its true value.¹⁸ The probability of a transfer in a given year is 49%, consistent with the earlier observation that officers hold a given post for an average of 16 months (Table 1, Panel C).

Figure 1 presents the average transfer rates in each of the nineteen states, for the period 1980-2004. There is noticeable cross-sectional variation in this figure, ranging from a low of 41% for West Bengal to a high of 52% for the state of Uttar Pradesh. Appendix Table 1 presents correlations of state-level average transfer rates with other state-level characteristics. We find that transfers are somewhat lower in states with higher literacy rates and higher per capita state domestic product. None of these correlations are statistically significant, though that may be due to the small number of observations. Further, it is not clear whether any causal interpretation can be attached to these numbers; we present them mainly as a descriptive feature of our data.

Since the data set consists of all currently serving officers, it excludes officers who retired in earlier years and is thus less comprehensive for earlier years. We remedy this in three ways: first, we check the robustness of our results to the exclusion of the most senior cohorts (where the attrition due to retirement is likely to be the most severe). Second, we include officer fixed effects in many of our specifications. This would control for factors such as the characteristics or size of specific cohorts. Third, we constructed a second data set on District Officers over time as follows: first, we used the data on career histories from the first data set to identify District Officer positions. We then filled in the gaps in this data by collecting information from the printed copies of the annually published IAS Civil List, which lists the position held by each officer at the beginning of the year.¹⁹ Transfer probabilities in our District Officer data set are similar to the overall data set, about 52% in a given year. We also constructed similar position-level data sets over time for two other key positions: the Chief Secretary of the state (the head of the entire state bureaucracy) and the Principal Finance Secretary.

¹⁸One-fifth of the transfers in our data are caused by officers taking up more than one new job in a given year. Some of these are multiple transfers during the year, and some are multiple posts being held by the officer concurrently.

¹⁹We were able to obtain the Civil List from 1985 onwards, with the exception of the years 1987, 1989 and 1991.

Our third piece of data related to bureaucrats involved constructing proxy measures of their ability. For this, we use two measures: their ranking within their cohort after initial recruitment and training and whether they were selected later in their careers for more prestigious positions in the central government. For the latter, the bureaucracy conducts a detailed review of officers' careers after about 20 years, and selected officers are "empanelled" i.e. deemed suitable for senior central government positions. Such "empanelment" of an officer is widely regarded as a sign that the officer is of superior ability.²⁰

Based on detailed interviews with certain IAS officers, we constructed a measure of whether certain departments were considered more important or more prestigious than others. The Constitution precludes formal demotion of IAS officers by state politicians, but a move from the Department of Finance to, say, the Department of Youth Affairs would be regarded as a de facto demotion by most officers. We have obtained such information only for a few states as of now (Uttar Pradesh, Kerala, Andhra Pradesh), and are working to refine this measure.

3.2 Political Events

We collected data on two main types of political events: elections and changes in the political executive of the state. Dates of state and national elections are available from the website of the Election Commission of India. This source also gives us information on the seats obtained by different parties in the state legislature in every election, as well as the party identity of the elected representative in each electoral constituency. We also put together information on the identity of the Chief Minister over time.²¹ We then created dummies for whether the state had an election in a given year, and whether a new person took office as Chief Minister in that year. For changes in the Chief Minister, we use a dummy which equals one for years in which a new person assumes this post in the state.²²

Over the years 1980-2004, states had an election about once every five years, but a new Chief

²⁰We obtained the data on empanelment very recently, and hence this version of the paper does not include results with this measure.

²¹This information is available from the official websites of the relevant State Governments in most cases.

²²We define a change in the Prime Minister of the country in a similar way.

Minister once in three years (Table 1, Panel B). It is useful to emphasize that a change in the Chief Minister of a state can happen in several ways: first, the incumbent party might lose a state election, as a result of which a new party comes to power and hence a new Chief Minister. Second, it might happen that the incumbent party is re-elected, but chooses a different leader to become the Chief Minister. In our data, about 54% of new CMs come to power as a result of a new party coming to power (Appendix Table 2, Panel A). Third, there can be a change in the Chief Minister even without elections, if his government loses a vote of confidence in the state legislature (see Section 2.3). Finally, in rare cases, there can be a change in the Chief Minister due to the death or resignation of the incumbent for reasons apart from losing legislative support. Appendix Table 2, Panel B shows that only 52% of new CMs come to power as a result of elections i.e. nearly half of the changes in the chief executive of the state are *not* related to elections.

4 Are Bureaucrats Insulated from Politics?

4.1 Theoretical Framework (Work in Progress)

Outline only:

- Politicians seek to control bureaucrats whom they cannot hire, fire, demote, determine wages or change the rules for.
- Two types of bureaucrats (initially exogenous) : ‘Able’ – who derive utility from doing their job efficiently, from a social welfare perspective and ‘Loyal’ – who derive utility from implementing a *particular* politician’s preferences
- This implies a positive rate of transfers in equilibrium, when a new politician assumes office, but bounded away from 100 percent:
- Politician transfers all ‘loyal’ bureaucrats (who were loyal to previous party/politician in power) and some of the ‘able’ officers (whose view conflict with those of the politician). Thus,

able bureaucrats are less likely to be transferred than loyal bureaucrats by new politician too, upon assuming office. (Our tests so far corroborate these predictions).

- Extensions of the basic framework: Officers' type is endogenously determined, depending upon whether they invest in ability/expertise or loyalty.
- Some posts are "good" while others are "bad" – but marginal cost of investment in ability is lower for able officers.
- Implications for Officers' Career Concerns decisions: Low ability types will invest in loyalty, while high ability types invest in expertise

4.2 Initial Data Analysis

As mentioned earlier, we consider a specific measure of bureaucratic insulation, namely whether the bureaucrat is transferred. This has the advantage of being cleanly observable, unlike other forms of political influence such as a politician asking a bureaucrat to do him some favors or a politician overriding a bureaucrat's decision on some issue. Our way of assessing whether bureaucrats are insulated from politicians is simply to examine whether bureaucrat transfers coincide with state-level political events, and if so, how large are the changes due to political events. We begin by graphing state-level average transfer rates over time for each state in Figure 2. The vertical lines indicate years in which there was a change in the Chief Minister of the state. We note that the presence of a new Chief Minister is often associated with a spike in the transfer probability of IAS officers in the state; this pattern is especially strong for states like Tamil Nadu and, to a lesser extent, Orissa and Punjab.

We quantify the relationship between political and bureaucratic turnover captured in these pictures in Table 3, using the following regression specification:

$$Transfer_{jt} = a_j + b_t + cPolChange_{jt} + e_{jt} \tag{1}$$

where $Transfer_{jt}$ is the average transfer probability in state j and year t , a_j is a fixed effect for state j , b_t is a dummy for year t , $PolChange_{jt}$ is a measure of political change in state j in year t – either elections or change in the Chief Minister – and e_{jt} is an error term. Since transfers within the same state might be correlated over time, we cluster our standard errors at the state level.

We find that, despite the strong constitutional provisions for insulating the bureaucracy from politics, bureaucrat transfers are significantly influenced by one very specific political event: a change in the identity of the Chief Minister (CM) of the state. Table 2 documents the results from running regression (1) for our sample of 19 major states over the period 1980-2004. Columns (1) and (2) of Table 2 indicate that bureaucrat transfers are significantly higher during years when elections were held in the state, and in years when a new Chief Minister (CM) took office. Column (3) seeks to separate out these effects, and we find that the key political event which matters is the presence of a new Chief Minister: after controlling for this, the coefficient on the state election dummy is much smaller than in column (1) and statistically insignificant. In related work (Iyer and Mani (2007)), we use monthly transfer data to document that this spike in transfers occurs mainly in the month after a state election, lending further corroboration that this is being carried out by the incoming government rather than by other events during the year.

Appendix Table 3 presents the results of several robustness checks on this finding. Column (1) shows that the statistically significant coefficient on the general (national) election dummy in Table 2 is driven by two outliers: the states of Punjab and Assam did not have national elections in the same years as the rest of the country in 1985 and 1991 due to internal disturbances. Once we set their election dates to the national election dates, there is no significant effect of national elections on bureaucrat transfer frequency. Columns (2), (3) and (4) of Appendix Table 3 show, respectively, that this effect of a new CM is robust to controlling for the presence of a new Prime Minister, to dropping the years of President’s Rule (when the state administration was conducted by the central government) and to adding controls for the real state domestic product, the number of crimes and the number of riots per capita in the state.²³ The results are also not driven by any

²³However, there could also be reverse causality in the sense that frequent transfers of bureaucrats might result in a deterioration of law and order or poor implementation of economic policies; hence, we present this specification

one state: we re-ran the specification of Table 2, Column (3) dropping one state at a time: the coefficients ranged from 0.034 to 0.046, and were always significant (results not shown).

We go on to document that this impact of the Chief Minister on bureaucrat transfers is a “politician” effect rather than a “political” effect, in the sense that the circumstances of the change in politician identity do not matter for bureaucratic turnover. Column (4) of Table 2 shows that the impact of a new CM on bureaucrats is the same, regardless of whether the party in power changed or not. Similarly, Column (5) shows that Chief Ministers who come to power as a result of elections have statistically similar impact on bureaucrat transfers as those who come to power without an election. This specification also reinforces the fact that in election years where the incumbent CM is re-elected (“Election, no new CM”), there is no increase in bureaucrat turnover.

The strongest corroboration for the personal rather than the party-driven element is provided by the fact that the impact of the Chief Minister on bureaucrats is independent of his party’s seat share in the state legislature, and of whether he is part of a coalition government or not (Columns 6 and 7). Appendix Table 3 documents that the impact of the CM is similarly independent of whether he is a first-time CM or not, whether his party is part of the governing coalition in the central government, and whether he belongs to the same party as the Prime Minister (columns 5, 6 and 7). Interestingly, we note that the impact of the Chief Minister on transfers is much higher in the 1990s than in the 1980s (columns 8 and 9), though we should keep in mind that our data is much more complete for the 1990s than for the 1980s. The period after 1989 saw a marked increase in political competition in India, the loss of Congress party dominance, the rise of several new regional political parties representing previously under-privileged social groups and a strong anti-incumbency bias in election outcomes (Chhibber and Kolman 2004, Chandra 2004 and Linden 2003 document these trends). The differential effect of the 1980s compared to the 1990s can be partially explained by the rise of regional parties: column (10) shows that Chief Ministers from such parties are much more likely to transfer bureaucrats when they come to power.

only as a robustness check. Kingston (2004) examines the relationship between riots and transfer frequency in the 1980s, and finds ambiguous results: transfers are negatively correlated with riots in the cross-section, but positively related in the panel specification.

5 Which Places See Greater Politician-Related Bureaucrat Changes?

We use our district level data set to document whether districts with certain characteristics are more likely to see changes in the District Officer when a new Chief Minister takes office. The District Officer may be likened to the “CEO” of the district, with overarching responsibility over most administrative matters in the district. These are positions of considerable importance: the median population of a district in 2001 was 1.5 million people, and District Officers frequently administer budgets of the order of \$2 billion.²⁴ As such, these officers are crucial in linking the Chief Minister to the voters in local areas.

We run regressions of the form:

$$Transfer_{djt} = a_d + b_t + cNewCM_{jt} + fNewCM_{jt} * DistrictChar_{djt} + X'_{ijt}d + u_{djt} \quad (2)$$

where $Transfer_{djt}$ is a dummy variable for whether the District Officer of district d of state j was transferred in year t , a_d is a fixed effect for the district, b_t is a fixed effect for the year, $NewCM_{jt}$ is a dummy indicating whether a new Chief Minister came to power in state j in year t , $DistrictChar_{djt}$ represent different district characteristics (demographic and political) and X_{ijt} is a vector of controls for other time-varying state characteristics (state and national election years).

For this key position, we find that a new CM coming to power raises the probability of a transfer by ten percentage points or about 20% (Table 3, Column 1). This is in keeping with the view that more “important” positions are likely to see more politically related transfers. Column (2) shows that District Officers in the most populous districts are the ones most affected: for these areas, the probability of the CM appointing a new District Officer is nearly 15 percentage points. We should note that this effect is not because these areas are more likely to be urbanized and have higher literacy rates: new CMs are not significantly more likely to transfer District Officers in more urbanized or more literate places (regressions available upon request). This suggests that the new CM is likely to appoint his preferred bureaucrat in places where a larger *number* of voters can be affected.

²⁴Several officers have mentioned that moving from District Officer to a higher level post in the state secretariat often resulted in a decreased breadth of responsibility.

Column (3) examines the pattern of transfers according to the political characteristics of the districts.²⁵ A District Officer is 12 percent points less likely to be transferred if all the local politicians (Members of Legislative Assembly, or MLAs, from that district) belong to the same party as the CM – effectively bringing the likelihood of transfer by a new CM to zero.²⁶ This strongly suggests that bureaucrats and local politicians are “substitutes” in the chief executive’s view, since the CM has little motivation to replace the district bureaucrat when he already has “his own man” at the district level. This ties in with our earlier state level analysis, in which a larger seat share for the CM’s party had little impact on the transfer rate. Simply put, the greater political clout of the CM’s party is matched against a lower perceived need for transfers, especially in the case of an important subset of officers, the district collectors. Column (4) documents that this is not simply a function of political instability or a “swing district” phenomenon, by including the interaction of the new CM variable with a measure of political turnover (fraction of constituencies where the incumbent lost in the last election). This gives us more confidence that what we observe is the effect of local politicians from the CM’s party being present on the ground. An alternative interpretation of this can be that local politicians also have preferences over which bureaucrat is appointed to their district, and the CM gives weight to these preferences when the local politicians are from his own party. In places where the local politicians are not from his party, the CM imposes his choice of bureaucrat.

²⁵For this purpose, we aggregate electoral outcomes to the administrative district level. State electoral districts are usually subsets of administrative districts, with one administrative district containing on average 10 electoral districts. All variables are further aggregated to the 1988 administrative district boundaries, to account for splits in districts over time.

²⁶The sum of the coefficients on “New CM” and “New CM * % local politicians from CM party” is not significantly different from zero. This means that if all the local politicians belong to the CM’s party, then a new CM is not likely to appoint a new District Officer.

6 Which Officers are Transferred by the new Chief Minister?

In this section, we examine whether certain types of officers are more likely to be transferred when there is a new Chief Minister in office. Since we have data on the complete career histories of officers over a span of several years, we can control for officer-level fixed effects and interact the officer characteristics with the presence of a new Chief Minister in order to examine more closely the impact of political changes. We run regressions as follows:

$$Transfer_{ijt} = a_i + b_t + cNewCM_{jt} + fNewCM_{jt} * OfficerChar_{ijt} + X'_{ijt}d + u_{ijt} \quad (3)$$

where $Transfer_{ijt}$ is a dummy variable for whether officer i of state j was transferred in year t , a_i is a fixed effect for the officer, b_t is a fixed effect for the year, $NewCM_{jt}$ is a dummy indicating whether a new Chief Minister came to power in state j in year t , $OfficerChar_{ijt}$ represent different officer characteristics (gender, experience, ability, length of tenure in the previous post and whether the officer serves in their home state) and X_{ijt} is a vector of controls for other time-varying officer and state characteristics (years of experience, state and general elections).

Column (1) of Table 4 replicates the earlier state-level regressions with individual data and officer-level fixed effects. We find a very similar effect of a new Chief Minister increasing bureaucrat transfer probability by about 4.6 percentage points. This is reassuring because it means that our results are not driven by some omitted state-level differences in officer characteristics. In particular, it means that our results are not driven by the attrition bias in our data set caused by the fact that we do not have data on officers who have retired or left the IAS. Having officer fixed effects means that an officer is much more likely to be transferred in a year when a new Chief Minister takes office, compared to the same officer in a different year. As in the state-level regressions, elections do not have any significant impact unless they lead to a change in the Chief Minister (coefficients not shown).

Individual level regressions also allow us to examine whether politician changes have an impact on promotions of officers. Columns (2) and (3) suggest that most transfers initiated by a change in the CM are “lateral” i.e. occur between posts at the same level of seniority, and not promotions.

In other words, the reassignments we observe are not a reward for past performance or routine promotions that merely coincide with a new CM coming into office. Having complete career histories also enables us to identify the level at which these reassignments take place. Column (4) shows that the new Chief Minister does not affect transfers to central government posts in New Delhi; all the reassignments documented in Column (1) are to state secretariat or district positions (Columns 5 and 6). This is consistent with the fact that the CM's authority typically does not extend to the central government; this also provides a robustness check that our results are not driven by some changes in the central government which happen to be concurrent with state-level Chief Minister changes.

Looking at the interactions with officer characteristics, we find evidence consistent with the idea that politicians take into account the costs and benefits of reassigning officers when making bureaucrat transfers. Column (7) looks at whether officers who have been on their jobs longer have a greater probability of being transferred. A priori, this could go either way: longer tenures might help officers build up job-specific expertise and hence it would be costly to replace them with more inexperienced people. On the other hand, if the motivation for transfer was purely to capture rents or to dispense patronage to certain groups, the length of tenure would not matter. If the motivation was "punishment" for being allied to the previous regime, we might even expect to see that officers who have held their jobs longer to be much more likely to be transferred. Column (7) shows that the interaction of new CM and the length of tenure in the post is negative and significant at the 10% level i.e. CM-induced transfers are concentrated disproportionately among people who have held their jobs for shorter periods. This strongly suggests that the CM wants to preserve job-specific capital when deciding which bureaucrats to appoint.

Column (7) also yields some other interesting findings: women officers are less likely to be reassigned and more senior officers are more likely to be moved into new jobs when a new politician takes office. This is consistent with the fact that the degree of interaction, as well as issues of the division of authority between politicians and bureaucrats are likely to increase with the latter's seniority.

The results on length of tenure in a given post, seniority and gender are extremely similar when

we restrict our sample to direct recruits only i.e. those who were recruited through competitive examinations (Column 8). Since these officers are assigned to different states in a quasi-random manner, we can see whether that plays a role in the CM's decision. We find that officers serving in their home state are significantly more likely to be transferred when a new CM takes office. This is consistent with the overall local focus of the Chief Ministers embodied in the earlier result that regional parties are more likely to transfer officers.

We then look at the impact of officer quality, measured by the rankings of these officers after they complete their initial training. We find that Chief Ministers are less likely to transfer higher quality officers (Column 9): an officer in the top 10 members of his cohort is 2.9 percentage points less likely to be reassigned when a new politician principal takes office. In Column (10), we show that this effect appears to be acting mainly through an increase in the amount of job-specific experience. Overall, these results suggest that politicians consider the costs of reassigning bureaucrats when making transfer decisions.

7 Are development outcomes affected by bureaucrat transfers?

Given that the observed results appear to be driven by the chief executive's need to exert his authority at the local level, we examine some district-level outcomes to see whether bureaucrat transfers, and politically-induced transfers in particular, have any impact on development outcomes. There are potential costs to frequent transfers: officers need some time to adjust to new places and positions, and initiatives begun by one officer may not be continued by another. This can be exacerbated if politicians' actions increase the transfer frequency. On the other hand, politically induced transfers might mean that the bureaucrat is now aligned with the Chief Minister, and hence is more likely to implement the politician's preferred policy. We look at two measures of policy implementation: the extent of full immunization in the district, and the completion status of road projects. The major caveat with using these outcomes is that these are only a subset of the district administrator's purview. Hence we do not capture a full picture of policy implementation in the district. As an overall measure of well-being, we also consider poverty reduction over

five-year periods, based on district-level poverty estimates provided in Topalova (2005).

Table 5 shows that there is no significant differences in outcomes in areas which had more politically-induced transfers.²⁷ There are no significant differences for other types of transfers as well. The point estimates also vary in sign across the outcomes and specifications, with no specific trend. This is consistent with the results in Section 5 that Chief Ministers appear to regard politicians and bureaucrats as substitutes; hence, changes in the bureaucrat occur only when the politicians are not already aligned with the CM. If bureaucrat transfers result in all local decision makers (bureaucrats or politicians) being aligned with the CM, then it is quite likely that they will also have similar outcomes. This is not the only explanation behind the observed patterns, which could also be driven by our outcome measures being too noisy to capture the impact of these high-frequency bureaucrat changes, or by the top-level bureaucracy not really mattering for local development outcomes.

8 Conclusion

We use a unique data set on the entire career histories of bureaucrats in the Indian Administrative Service (IAS), the highest level of the bureaucracy in India, to study the relationship between politicians and bureaucrats. Despite the protections provided by the Indian Constitution provides for insulation of the bureaucracy from political pressures, we find a significant political influence on the bureaucracy through the process of transferring bureaucrats to different posts. Changes in politician identity, specifically that of the state’s Chief Minister increased bureaucrat reassignment frequency by 8 percent. These politically-induced transfers have a regional character in the sense that they mostly affect officers who are from that state, and they are initiated to a much greater extent by Chief Ministers from regional parties. They are also of a personal, rather than a political, nature: the extent of these transfers does not depend on the circumstances of coming to power, or on the legislative strength of the Chief Minister’s party.

²⁷Here we define “politically-induced” transfer as one which happens to coincide with a change in the identity of the Chief Minister.

Local politicians and bureaucrats appear to be substitutes, suggesting that the chief executive's main benefit from reassigning bureaucrats is to have his "own man" on the ground. The politician also appears to consider the cost of such bureaucrat transfers: officers who have accumulated greater job-specific expertise are much less likely to be reassigned by a new incoming politician. Looking at some district-level measures of policy implementation and poverty reduction, we do not find statistically significant differences across areas which had a differing extent of transfers; nor do politically-induced transfers appear to have any differential impact on these measures. The latter is consistent both with the earlier observation of substitutability of bureaucrats and politicians. One policy implication of this is that administrative policies directed towards limiting the Chief Minister's impact on transfers are unlikely to result in large improvements in district-level outcomes.

In future work, we plan to document the pattern of transfers across jobs of greater or lesser degrees of importance or prestige, as a way to shed greater light on the motivations of politicians and the incentives facing bureaucrats. Another potential direction of research is to document explicitly the links between politicians and bureaucrats and examine whether these links have a significant impact on bureaucrats' career paths. Understanding these links between politicians and bureaucrats would be a valuable contribution to the literature on endogenous evolution of institutions.

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Table 1: Summary statistics

	# Obs	Mean	s.d.	Minimum	Maximum
Panel A: Officer characteristics					
Year of joining service	4047	1987	8.84	1968	2004
Year of birth	4045	1957	8.78	1945	1981
Proportion female	4047	0.13	0.33	0	1
Proportion of direct recruits	4047	0.75	0.43	0	1
Proportion of home state officers (out of direct recruits)	3024	0.32	0.47	0	1
Panel B: Political change variables (1980-2004)					
State election year dummy	415	0.23	0.42	0	1
General election year dummy	415	0.32	0.47	0	1
New Chief Minister (CM) dummy	415	0.33	0.47	0	1
New party in power dummy	415	0.18	0.39	0	1
Seat share of CM's party	405	0.56	0.16	0.13	0.85
CM's party has a majority of seats	405	0.70	0.46	0	1
CM belongs to a national party	405	0.78	0.41	0	1
CM's party same as PM's party	405	0.44	0.50	0	1
CM's party is part of Center coalition	405	0.50	0.50	0	1
First-time CM (since 1980) dummy	405	0.53	0.50	0	1
Panel C: Officer-year variables					
Transfer dummy	69097	0.49	0.50	0	1
Years of experience	69097	11.41	7.94	0	36
Collector dummy	69097	0.07	0.25	0	1
Proportion in district administration	69097	0.15	0.35	0	1

Table 2: Which Political Events Cause Bureaucrat Transfers?

Dependent variable: state-level bureaucrat transfers

				How did CM come to power		Does legislative strength matter?	
	State elections (1)	New Chief Minister (2)	New CM + election (3)	With elections (4)	With party change (5)	CM party seat share (6)	Is CM in a coalition (7)
New Chief Minister dummy		0.044*** (0.012)	0.041*** (0.012)			0.056* (0.029)	0.038** (0.015)
State election dummy	0.030* (0.015)		0.011 (0.014)	0.012 (0.015)		0.012 (0.015)	0.012 (0.015)
New CM, new party in power				0.038** (0.015)			
New CM, no new party in power				0.040*** (0.013)			
New CM after election					0.052*** (0.017)		
New CM, no election					0.035*** (0.012)		
Election, no new CM					0.001 (0.015)		
Seat share of CM's party						0.014 (0.033)	
New CM * Seat share of CM's party						-0.029 (0.052)	
CM's party has majority in state legislature							-0.012 (0.012)
New CM * CM's party has majority in state legislature							0.003 (0.019)
General election dummy			-0.028** (0.010)	-0.027** (0.011)	-0.029** (0.010)	-0.082** (0.036)	-0.085** (0.037)
State and year fixed effects	YES	YES	YES	YES	YES	YES	YES
Mean of dependent variable	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Observations	415	415	415	415	415	405	405
R-squared	0.33	0.36	0.37	0.36	0.36	0.37	0.37

Robust standard errors in parentheses, corrected for state-level clustering

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3: Which Places are More Susceptible to Politically Induced Bureaucrat Transfers

Dependent variable =1 if the district gets a new District Officer in that year

	Interaction of New CM with			
		District population	local politicians	Political turnover
	(1)	(2)	(3)	(4)
New CM dummy	0.100** (0.036)	0.085** (0.036)	0.156*** (0.034)	0.129** (0.056)
New CM * 5 most populous districts		0.062** (0.028)		
New CM * %local politicians from CM party			-0.117*** (0.040)	
% local politicians from CM party			0.014 (0.032)	
New CM * political turnover				-0.032 (0.073)
Political turnover				0.065 (0.039)
Year fixed effects	yes	yes	yes	yes
District fixed effects	yes	yes	yes	yes
Control for state and general elections	yes	yes	yes	yes
Mean of dependent variable	0.52	0.52	0.52	0.52
Observations	6191	6191	6191	6149
R-squared	0.07	0.07	0.07	0.07

Robust standard errors in parentheses, corrected for state-level clustering.

* significant at 10%; ** significant at 5%; *** significant at 1%

"Political turnover" is measured as the proportion of incumbents who lost in the previous election.

Table 4: Which Officers and Positions are Most Affected by Political Change?

Dependent variable = 1 if officer was transferred during the year

	Transfer with promotion	Lateral transfer	Transferred to central government	Transferred to state Secretariat	Transferred to district level position	Length of tenure	Home state effect	Ability ranking		
	All officers	All officers	All officers	All officers	All officers	All officers	All officers	Direct recruits only	Direct recruits only	Direct recruits only
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
New CM dummy	0.046*** (0.014)	0.005 (0.005)	0.042*** (0.014)	-0.000 (0.003)	0.032** (0.012)	0.014** (0.007)	0.047** (0.020)	0.028* (0.014)	0.005 (0.012)	0.028* (0.014)
New CM * female dummy							-0.028** (0.012)	-0.027** (0.012)	-0.029** (0.013)	-0.028** (0.013)
New CM * Years of experience							0.029** (0.012)	0.027** (0.013)	0.033*** (0.010)	0.032** (0.013)
New CM * direct recruit							-0.017 (0.020)			
New CM * home state								0.028** (0.011)	0.028** (0.011)	0.028** (0.011)
New CM * length of tenure in post							-0.011* (0.006)	-0.013* (0.006)		-0.015** (0.007)
New CM * top 10 rank in cohort									-0.029** (0.012)	-0.017 (0.015)
Mean of dependent variable	0.49	0.15	0.34	0.06	0.30	0.49	0.56	0.53	0.53	0.53
Officer and year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Control for years of experience (quadratic)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Control for state & general elections	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	69097	68007	68007	69097	69097	69097	58505	55218	51669	47407
R-squared	0.11	0.05	0.08	0.12	0.12	0.13	0.08	0.06	0.06	0.07

Robust standard errors in parentheses, corrected for state-level clustering

* significant at 10%; ** significant at 5%; *** significant at 1%

Column (4) omits officers in the first two years of their career, as well as a few outliers with job tenures greater than 90 months.

Table 5: Bureaucrat Transfers and District Outcomes

	Proportion of children completely immunized 2001		Completion of road projects 2007			Change in poverty 1987-93	Change in poverty 1993-99	Change in poverty 1987-99
	(1)	(2)	Sanctioned in 2000	Sanctioned in 2001	Sanctioned in 2003	(6)	(7)	(8)
Mean political transfers in last 5 years	0.007 (0.070)		0.316 (0.197)	0.120 (0.127)	-0.022 (0.217)	-0.053 (0.044)	0.055 (0.040)	
Mean other transfers in last 5 years	0.038 (0.066)		-0.118 (0.082)	0.012 (0.137)	-0.099 (0.179)	-0.005 (0.055)	-0.004 (0.035)	
Mean political transfers in last 10 years		0.026 (0.047)						0.028 (0.039)
Mean other transfers in last 10 years		0.007 (0.059)						-0.059 (0.044)
Initial poverty level						-0.511*** (0.070)	-0.702*** (0.044)	-0.717*** (0.042)
State FE	yes	yes	yes	yes	yes	yes	yes	yes
Mean of dep var	0.58	0.58	d for	0.62	0.40	-0.06	-0.07	-0.13
Observations	365	365	436	482	430	365	365	365
R-squared	0.69	0.68	0.51	0.43	0.23	0.33	0.62	0.68

Robust standard errors in parentheses, clustered at state-level
 * significant at 10%; ** significant at 5%; *** significant at 1%

Appendix Table 1 : Correlations of bureaucrat transfers and state characteristics

	Transfers 1980-89 (1)	Transfers 1990-2004 (2)
Total population	0.0011 <i>16</i>	-0.1176 <i>16</i>
Population density	-0.3989 <i>16</i>	-0.2844 <i>16</i>
% Scheduled Castes in population	-0.1375 <i>15</i>	0.3232 <i>16</i>
% Scheduled Tribes in population	0.3796 <i>13</i>	-0.2395 <i>16</i>
Literacy rate	-0.3974 <i>15</i>	-0.179 <i>16</i>
Gross State Domestic Product	-0.2723 <i>16</i>	-0.2395 <i>19</i>
Gross State Domestic Product per capita	-0.3938 <i>16</i>	-0.1035 <i>19</i>
Growth rate of GSDP	0.073 <i>16</i>	-0.1851 <i>19</i>
Total crimes per 1000 population		0.0566 <i>19</i>
Riots per 1000 population		-0.0591 <i>19</i>

Notes: Demographic variables (population, population density, % Scheduled Castes, % Scheduled Tribes, Literacy) are from 1981 Census for the 1980-89 transfers, and 1991 census for transfers 1990-2004. GSDP data are state-level averages of annual data; the period is 1980-89 for transfers 1980-89, and 1993-2004 for transfers 1990-2004. Growth rate of GSDP is between 1980-89 for correlations in column (1) and 1993-2003 for correlations in column (2). Crime variables are averages of state-level data from 1991-2003.

Figures in italics are the number of state-level observations used for the correlations.

Appendix Table 2: Correlation between different political events

Panel A: New Chief Ministers and Party changes

	No new party in power	New party in power	Total
No new CM	269	0	269
New CM	62	74	136
Total	331	74	405

Panel B: New Chief Ministers and Election years

	No election	Election	Total
No new CM	248	21	269
New CM	65	71	136
Total	313	92	405

Data is for 19 major states from 1980-2004.
Years of Presidents Rule are excluded.

Appendix Table 3: Robustness Checks for State-level Regressions

Dependent variable: state-level bureaucrat transfers

	Controls for									
	Corrected General Election dates (2)	New Prime Minister (1)	Dropping years of President's Rule (3)	SDP and crime (1991- 2003) (4)	First-time CM (5)	Party power in central government (6) (7)		1980-89 (8)	1990-2004 (9)	Regional party effect (10)
New Chief Minister dummy	0.040*** (0.011)	0.041*** (0.012)	0.040*** (0.012)	0.050*** (0.017)	0.048*** (0.016)	0.047** (0.019)	0.047** (0.017)	0.008 (0.013)	0.056*** (0.018)	0.091*** (0.022)
General election dummy (corrected)	0.020 (0.036)									
New Prime Minister dummy		-0.004 (0.031)								
CM is a first-time CM					0.010 (0.014)					
New CM * CM is a first-time CM					-0.015 (0.020)					
CM's party is in power at center						0.006 (0.007)				
New CM * CM's party is in power at center						-0.013 (0.018)				
CM belongs to the same party as Prime Minister							0.006 (0.008)			
New CM * CM belongs to the same party as Prime Minister							-0.014 (0.016)			
CM's party is a national party										0.017 (0.018)
New CM * CM's party is a national party										-0.062** (0.022)
State and year fixed effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Control for state and general elections	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	415	415	405	209	405	405	405	160	255	405
R-squared	0.36	0.37	0.37	0.47	0.37	0.37	0.37	0.27	0.45	0.39

Robust standard errors in parentheses, adjusted for clustering at state level.

* significant at 10%; ** significant at 5%; *** significant at 1%

Figure 1: State-wise mean transfer rates 1980-2004

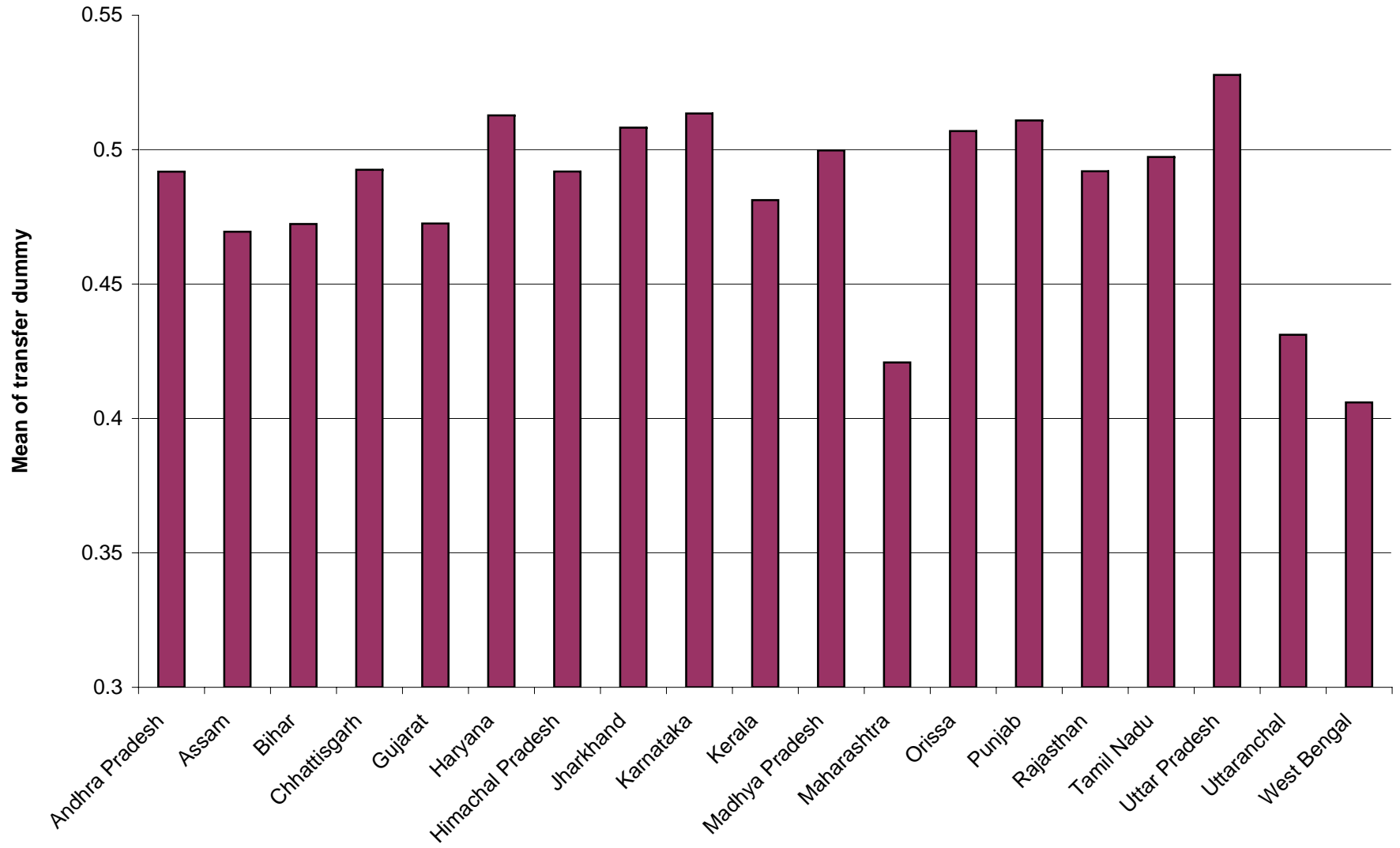


Figure 2: Chief Minister Changes and Bureaucrat Transfers

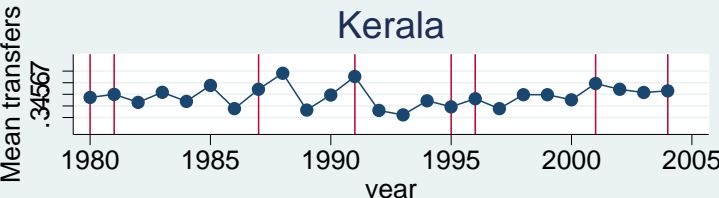
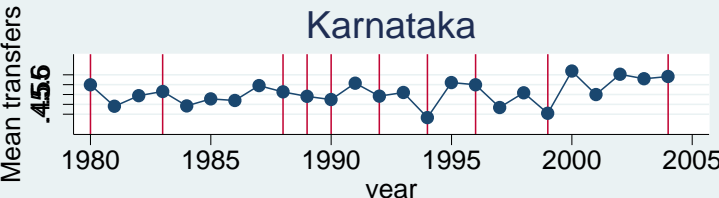
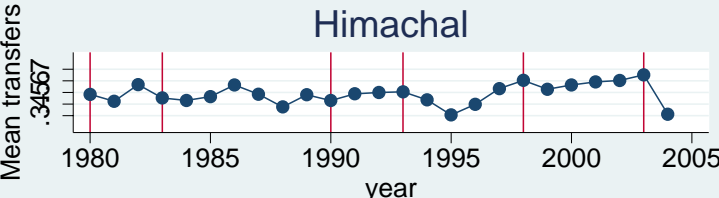
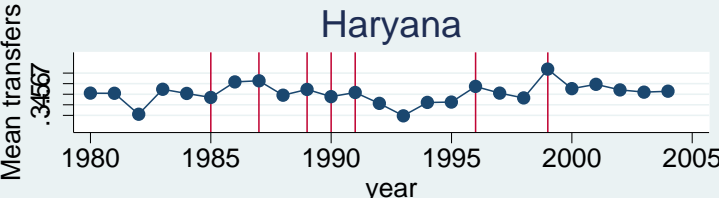
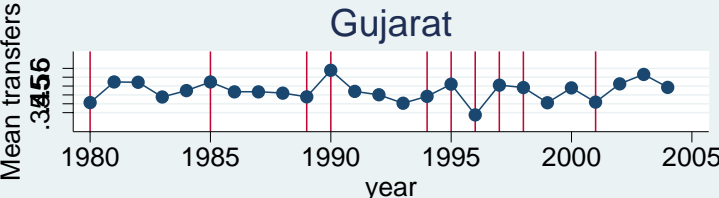
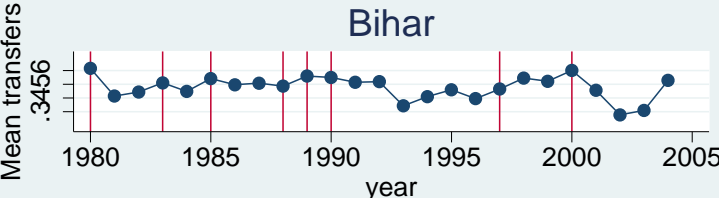
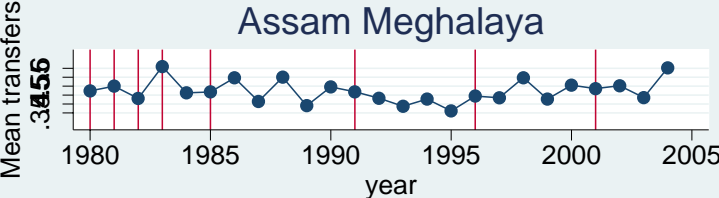
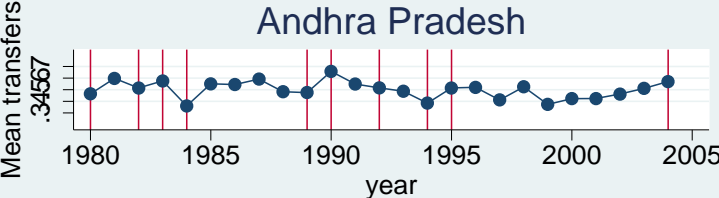


Figure 2 (contd)

