Identity and Red Tape:

The Political Economy of Politician-Bureaucrat

Cooperation in India[*]

Rikhil R. Bhavnani[†]   Alexander Lee[‡]   Soledad Artiz Prillaman[§]

December 4, 2022

[†]Professor, Department of Political Science, University of Wisconsin–Madison, 110 North Hall, 1050 Bascom Mall, Madison, WI 53706. Email: bhavnani@wisc.edu.

[‡]Associate Professor of Political Science, University of Rochester, Harkness Hall, Rochester, NY 14627. Email: alexander.mark.lee@rochester.edu.

[§]Assistant Professor of Political Science, Stanford University, Encina Hall, Stanford, CA 94305. Email: soledadp@stanford.edu.

Abstract

When do bureaucrats help politicians achieve their goals? We argue that shared identity shapes politician-bureaucrat interactions, but that it can produce either cooperation or rivalry. We test this claim by examining the effect of caste on the approval times of pork barrel projects in India. All Members of Parliament (MPs) see projects approved more quickly when they are submitted to bureaucrats of the same caste or *jati*. However, when the MP and bureaucrat are of the same superordinate group (from the same *caste category*), approval times are slower in Northern India, where intra-category rivalry over the benefits of affirmative action is marked, but faster in Southern India, where there have been successful attempts at horizontal social mobilization along caste category lines. These results suggest that shared identity can supplement formal institutional controls in bureaucracies, and that how identities become relevant is a product of contingent historical factors.

1 Introduction

Politicians make promises to voters but are incapable of fulfilling these promises personally. For a politician's policies to be implemented, they must be able to collaborate effectively with bureaucrats. Whatever the formal rules, this is often easier said than done. Given limited time and insufficient incentives, bureaucrats may not implement politicians' priorities in a timely fashion. In some instances, bureaucrats may even attempt to "subvert" politician goals, either because they disagree with them or because they believe that implementing them would involve costly effort on their part (Gailmard 2002; Pepinsky, Pierskalla and Sacks 2017). Bureaucrats can delay policy implementation, do just what they are specifically ordered to, or even "forget" rules or policies they dislike. An extensive literature has focused on the ways institutions are structured to minimize agency losses of this nature (Kaufman 1967; McCubbins and Schwartz 1984; Weingast 1984), while another set of scholars has examined the effects of improved bureaucratic monitoring and sanctioning on service provision (Dasgupta and Kapur 2020; Gulzar and Pasquale 2017; Butler 2010; Brierley 2020).

The discussion of the institutional predictors of bureaucrat-politician cooperation has abstracted away from the more personal elements of these interactions. While we know that many individual factors influence political cooperation, including intrinsic motivation and pro-sociality (Gailmard and Patty 2007; Ashraf et al. 2020), one dyadic trait stands out: the role of shared identity. Ascriptive identities—ethnicity, religion, gender, caste etc.—play an important role in shaping the preferences of politicians (Franck and Rainer 2012; Kramon and Posner 2016; Chattopadhyay and Duflo 2004; Gulzar, Haas and Pasquale 2020) and bureaucrats (Bhavnani and Lee 2018, 2021; Dee 2005; Keiser et al. 2002; Meier and Dhillon 2022; Purohit 2022). Similarly, we know that identity can shape the ability of individuals to cooperate in lab (Habyarimana et al. 2007; Fehr, Hoff and Kshetramade 2008), economic (Hjort 2014; Akerlof and Kranton 2000) and political (Kalin and Sambanis 2018) settings, at both the individual and community levels (Easterly and Levine 1997; Alesina, Baqir and Easterly 1999; Singh and vom Hau 2016;

Lee 2018). Purohit (2022), for example, shows that gender incongruence in politician-bureaucrat pairs, typically with male principals, is associated with less cooperation and Chakrabarti (2021) demonstrates higher redistribution when marginalized caste groups are present both in politics and the bureaucracy.

But intragroup cooperation is not inevitable. We show that identity has two contradictory roles in shaping politician-bureaucrat interactions depending on group characteristics. Intuitively, shared identity can lead to intragroup solidarity, where the perceived similarity of individuals makes it easier for them to cooperate (Habyarimana et al. 2007; Singh 2015; Hassan 2020; Posner 2004). More subtly, shared identity can also lead to intragroup rivalry, as members of the same category compete with each other for a fixed pool of group-specific benefits (Dunning and Nilekani 2013). Which of these mechanisms dominates in a given situation depends on historical and political factors. We argue that where there is a history of group solidarity and mobilization, individuals will tend to identify with the group to the exclusion of other alternative identities and be willing to cooperate with group members they might have been suspicious of in different circumstances. By contrast, where there is a history of intragroup competition, such as when ethnically-tied benefits become available without a sense of shared history and shared fate, rivalry over benefits may lead to rivalry among subgroups and to difficulty in cooperation among individuals from those subgroups.

To study the role of identity in shaping politician-bureaucrat interactions, we study bureaucratic delays in the delivery of pork barrel projects in contemporary India. India presents an interesting case both because of the salience of social identities in politics and everyday interactions and because the composition of the political class (Jaffrelot 2003) and bureaucracy (Bhavnani and Lee 2021) have changed greatly over the past half-century in response to coordinated movements of caste mobilization and programs of caste-based affirmative action. Caste (*jati*) is a basic form of social organization across India, but *caste categories* of similar castes (Other Backward Classes or OBCs, Scheduled Castes or SCs, and Scheduled Tribes or STs), forms the official basis for affirmative actions. In Southern India, horizontal movements of socially similar jatis

2

formed in the early 20th century to successfully demand policies of affirmative action for caste categories. In Northern India, such movements were late to form and fiercely opposed, and affirmative action policies were only instituted by the national government. We expect that these histories will play out in bureaucrat-politician relationships, with evidence of caste category-based solidarity in the South and rivalry in the North.

To measure the quality of bureaucratic cooperation, we focus on a program of great personal interest to politicians, the Members of Parliament Local Area Development Scheme (MPLADS). Like similar programs in other democracies (including Ghana, Kenya, Philippines, Pakistan, Tanzania, and Zambia), this program gives every Member of Parliament (MP) a budget of approximately 680,000 US dollars for small public works within their constituency. After they identify a project, MPs submit the project to district officers (DO), who are legally required to approve and pass it along to their subordinates within the district bureaucracy. While virtually no projects are rejected, there is considerable variation in the degree to which projects are delayed, with many being delayed by months or even years. Since approval is not discretionary, but the amount of time wasted is almost entirely within the bureaucrat's control, we believe that these delays are a good measure of DO-MP cooperation, more specifically, the subversive use of "red tape." Revealingly, approval times are not correlated with project characteristics but are correlated with whether the MP is associated with the state's governing party.

To measure MP and DO identity, we use three different data sources: the Trivedi Centre for Political Data dataset of MP jati and caste category, Bhavnani and Lee's (2021) data on the caste category of IAS officers, and our own coding of IAS officer jati. By combining these data, we are able to identify the caste category and jati for both the proposing MP and the receiving DO at the time of project submission for some 149,156 MPLADS projects between 1999 and 2009.

Caste plays a major role in shaping bureaucrat-politician interactions. When DOs and MPs are from the same caste category in Southern states, they cooperate to reduce the number of days to project sanctioning and increase the probability of projects

being approved within the official time limit, increasing by six percentage points. The opposite is true in the North, where DO-MP caste category congruence leads to a decrease in the probability of on-time project approvals by ten percentage points. We show these results are robust to subsetting to early career bureaucrats, whose placement has been shown to be arbitrary, suggesting these dynamics are not the result of intentional selection decisions by MPs (Bhavnani and Lee 2018). We further argue and provide suggestive evidence that the regional variation in the effects of caste category congruence is associated with within-category economic inequalities and histories of political mobilization.

The results indicate that identity is a major factor in shaping bureaucrat-politician cooperation, with officers reducing the red tape load on the projects of coethnic politicians when they feel an affinity with coethnics. In weakly institutionalized settings where the possibilities for delay and subversion are large, shared identity may be a more reliable technique for ensuring bureaucratic compliance than more formal techniques of monitoring and sanctioning. Our results also contribute to the literature on why specific identities become socially and politically salient in some contexts but not in others (Miguel 2004; Posner 2004; Chandra 2007). We show that in addition to state propaganda and electoral coalition building, identity salience is shaped by shared histories of political struggle and shared competition for state resources. Where socially similar groups have a history of working together to win concessions from the state, they develop ideas of shared fate that transcend competition over those concessions and that influence individual behavior. When similar groups are linked only by shared treatment by outsiders rather than by the actions of their own elites, competition will tend to dominate. The political role of caste, like other forms of identity, is contingent and historically constructed.

2   Theory

2.1   The Problem of Bureaucratic Non-Compliance

In standard theoretical accounts of the state, politicians or principals delegate authority to bureaucrats or agents to implement projects.[1] However, delegation to the bureaucratic agent can cause politician principals to fail to receive their favored outcomes. The root causes of such agency problems are conflicting interests of principals and agents and imperfect information and monitoring capacity. If politicians and bureaucrats had identical interests or if politicians could perfectly monitor bureaucratic performance, there would be no agency losses.

Politicians' and bureaucrats' interests may be misaligned for several reasons. Politicians and bureaucrats might have different preferences over which constituents or projects are deserving. Alternatively, bureaucrats may prefer to exert as little effort as possible or extract rents for their efforts, creating a misalignment between the desires of the politician and the incentives of the bureaucrat. Misalignments may also be the result of bureaucrats being overworked and choosing to subordinate politicians' wishes to other, more pressing institutional mandates (Dasgupta and Kapur 2020).

Bureaucrats usually do not have the formal power to veto policy decisions made by politicians or even to formally refuse to implement them. Instead, bureaucrats may fatally cripple policy merely by not exerting effort to implement it or insist on the full satisfaction of complex or burdensome rules—"red tape" (Bozeman 2000). In the context of a labor dispute, this is similar to a "go slow" or a "work to rule." The passive ability of hostile bureaucrats to stymie policy is well-known, with the abilities of the US department of defense to "outlast" their political masters being particularly well-studied (Perry 2017). The Indian bureaucracy was similarly sluggish about implementing land reform laws in the 20th century, a failure with important long-term consequences (Banerjee et al. 2000).

---

[1]See Gailmard and Patty (2012) and Miller (2005) for reviews.

Given misaligned interests, the usual solution to bureaucratic shirking in well-institutionalized systems is improved monitoring and incentives. Monitoring can incentivize agents to provide politicians with their preferred outcomes, either through punishment for shirking or reward, such as pay or promise of promotion, for good performance (Banerjee et al. 2020). By solving the problem of asymmetrical information, monitoring places the power back in the hands of politicians to demand their preferred outcome, even when bureaucrats would prefer otherwise. However, formal monitoring mechanisms may fail to capture more nuanced forms of shirking, such as red tape and slacking, as they are difficult to define and observe consistently.

Alternatively, principals select agents whose interests are similar to their own and who would therefore produce politicians' favored outcomes even in the face of weak incentives and monitoring. Bureaucrats will work better when they are assigned to officials that they wish to serve well, either because they share the same policy preferences or because they internalize the benefits from the politicians' success or gain some intrinsic benefit from service. Selection is likely to play an important role in weakly institutionalized settings where monitoring is difficult.

Our simplified setting for bureaucrat-politician interactions thus involves a politician delegating authority to a bureaucrat, who may or may not exert effort to serve the politician's goals. For many reasons, politicians' and bureaucrats' incentives may be misaligned, which leads to agency losses. The simple solutions to these agency losses are either improved monitoring or improved selection.[2]

---

[2]Politicians and bureaucrats interact in other potentially interesting ways, such as the exchange of information, which we do not consider here. We also abstract away from the general equilibrium effects of bureaucratic non-compliance on the level of delegation and politician effort, though later we will consider the effect of non-compliance on bureaucratic selection.

2.2 How Identity Influences Bureaucratic Compliance

Unrecognized in many principal-agent models is that people—both principals and agents—have identities that have behavioral consequences. Indeed, a vast literature across the social sciences shows that people from all walks of life, including politicians and bureaucrats, are frequently motivated to act in particular ways due to their identities.[3] Here, we define identity as referring to social categories defined by membership rules and characteristic attributes, including ascriptive traits (Fearon 1999). For the purpose of this study, we will focus on ethnic identity, although our arguments are generalizable to other identities such as gender, religion, and sexual orientation.

How does taking identity into account alter the principal-agent relationship? Identity can shape both the likelihood of shared interests between politicians and bureaucrats and the costs of monitoring.

It is often assumed that a shared identity is likely to yield common preferences (Chen and Li 2009). This can be because shared experiences yield similar preferences or because group members have other-regarding preferences for members of their group (Habyarimana et al. 2007; Singh 2015). Due to shared and other-regarding preferences, common identity should be expected to yield a closer alignment of the incentives of principals and agents in a bureaucratic setting.[4]

Shared identity is also often assumed to reduce the costs of monitoring by easing social sanctioning, creating shared social networks that improve information flows, and standardizing common technologies such as language. For example, as in Habyarimana et al. (2007), ethnic group cooperation can be conceived of as equilibrium selection in a repeated coordination game, where coethnics are better able to select cooperative

---

[3]See Kalin and Sambanis (2018) on how identities influence political outcomes, and Akerlof and Kranton (2000) on how identities affect economic outcomes.

[4]Shared preferences can also emerge out of the geographic concentration of groups (as with many ethnic groups), shared experiences in the economic division of labor (as with gender), and historic group-based inequalities.

equilibria due to a fear of social sanctioning or simply a prior belief that coethnics are more trustworthy (see also Fearon and Laitin 1996). Even with the same equilibrium selection, identity can reduce information asymmetries if there are stronger network ties and communication pathways within as opposed to across identity groups.

While identity is often assumed to improve the conditions that generate agency losses, this is not a given. Given the multitude of layered identities each person holds, shared identity between principals and agents could potentially operate in the opposite direction. Important to this dynamic is an understanding of how an individual's identities intersect and compete. Each individual holds many social identities of varying salience. Some of these identities are nested, meaning that subordinate identities are embedded in larger supraordinate identities. For example, both Cuban Americans and Mexican Americans are often considered both being members of a supraordinate "Hispanic" or "latinx" identity.

Do both subordinate and supraordinate identities always improve the principal-agent relationship? Not necessarily. While it is likely that some shared identities will reduce agency losses via the mechanisms described above, it is not a given that all identities will do so. For instance, shared identity can imply competition if scarce resources are allocated within groups. For instance, in organizations that have strong sexist cultures and limited hiring of women, the women who do succeed are sometimes found to be hostile to promoting other women (Derks et al. 2011). Similarly, Latinos and Blacks in the United States share the problem of competition for resources and status in a white-dominated society, but this has often led to hostility rather than solidarity (Telles, Sawyer and Rivera-Salgado 2011). In such instances, we might expect a shared identity to lead to distrust and a fear of betrayal (i.e., a greater likelihood of choosing noncooperative equilibria). In a bureaucratic setting, such distrust would generate higher monitoring costs, differences in distributional preferences, and higher agency losses.

Thus, two competing logics emerge, which we will refer to as *cooperation* and *rivalry*. Cooperation predicts that principals and agents that have matched identities will work well together. Rivalry instead predicts that principals and agents that have matched

identities will undermine each other. Key to these dynamics is the multiplicity of identities within any given individual. It is not if identity breeds cooperation or rivalry but for which identities we expect cooperation and rivalry.

2.3 The Conditions of Cooperation and Rivalry

The bureaucrat-politician interactions that we study occur at the individual level. However, the salience of identities and the boundaries of groups are shaped by social and historical facts. Identity politics is influenced by the behavior of political elites. States may use the media and the school system as a means of encouraging identification with the nation (Miguel 2004) while politicians may appeal to specific ethnic groupings to build an electoral coalition (Posner 2004; Chandra 2007), and group members themselves can elevate shared identities in the media (Pérez 2021). In some cases, politicians and states attempt to mobilize identity groups against each other, while in other cases, they may attempt to bind them into a single category.

These alternative histories can explain when identity is expected to generate in-group cooperation versus in-group rivalry. We posit that when identities have historically been politically mobilized as a group, then in-group cooperation is most likely. When identities have historically been politically mobilized as competitors, then in-group rivalry is most likely.

Cooperation is perhaps the easier mechanism to understand. Politicians generally find large coalitions more politically effective than small ones and thus will attempt to fuse smaller groups into larger ones, at least up to the point that they have assembled an electorally viable group. Over time, this should lead to the elision of subgroup identities into a large and salient supraordinate identity. Posner (2004), for instance, finds that in areas where politicians have encouraged groups to adopt a common supraordinate identity, individuals from these groups are more likely to trust each other and interact with one another.[5] Individuals themselves may also see value in supraordinate identity creation if it helps to get access to politics and political benefits (Pérez 2021).

---

[5]Key to this mechanism is group size. If a subordinate identity group is sufficiently large to serve

However, there are costs to supraordinate identity creation. The combination of multiple subordinate identities means that political elites from each of those subordinate identities lose their monopoly of power in their group. As a result, rivalrous relationships between politicians from different subordinate identities might emerge as they vie for power within the same supraordinate identity. Rivalry is most likely to emerge when there is conflict over common pool resources that are exclusive to the supraordinate identity. Such common pool resources can include positions of power reserved for the identity group (Dunning and Nilekani 2013), affirmative action benefits specific to the identity group, or social and political dominance within a specific region that they inhabit. As individuals from different subordinate identities compete to gain these resources, they will internalize beliefs and norms of group competition, with the political and rhetorical becoming the social and behavioral (Posner 2004).

Internalized and socialized beliefs about identity are central to both shared preferences and coordination (equilibrium selection). An individual will only help members of their identity group if they believe that the imagined community of the group is real and that identity divisions are associated with differences in moral worth or similarity to the individual in question. Similarly, an individual will only prefer a strategy of cooperation if they believe that people with whom they share an identity are either more trustworthy than others or more likely to share social ties (Kramon and Posner 2016; Franck and Rainer 2012; Lee 2018). If instead, the internalized and socialized beliefs within an identity group are of competition, distrust, and moral unworthiness, then rivalry is likely to emerge (McClain et al. 2006).

Not all groups with common pool resources see rivalry. In most instances, common pool resources emerged not because of some exogenous gift but because of a sustained struggle by subordinate identities. Common pool resources typically result from long periods of social and political struggle that create a sense of shared fate and common history across subordinate identities. For example, Tanzanians care more about their nation than their ethnicity (and are more likely than Kenyans to trust non-coethnics)

the needs of the political elite, then there are few incentives to construct larger supraordinate identities.

because of a sustained program of education, resettlement, and propaganda designed to cultivate a sense of shared fate (Miguel 2004). While common pool resources sow the seeds of rivalry among subordinate identities, their existence also results from a sustained campaign of cooperation that tends to reduce rivalry. This yields a clear implication: In areas where subordinate identities have come together to mobilize in support of common pool resources for the supraordinate identity, cooperation among subordinate identities is expected. In areas where subordinate identities have a supraordinate identity that coincides with common pool resources imposed on them, rivalry among subordinate identities is expected.

3 The Indian Bureaucracy

3.1 Politicians and Bureaucrats in India

The problems of politician bureaucrat coordination are particularly marked in India, a country with strong traditions of both autonomous, meritocratic bureaucracy and powerful democratically elected politicians. The most important element of the Indian bureaucracy is the Indian Administrative Service (IAS), which inherits the traditions of the colonial Indian Civil Service. The IAS is a national service, recruited based on a written examination and interview. The exam is extremely competitive—in recent years, approximately one million candidates have taken the first round, of whom only the top 180 are selected. IAS officers, thus, tend to be excellent students, usually from educated urban middle-class backgrounds.

After a period of training, IAS officers are assigned to particular states where they will serve for the bulk of their careers. The allocation formula ensures that one-third of the IAS officers in each state come from the state itself, while the other two-thirds are "outsiders." Each state possesses a number of "subordinate" bureaucratic services, but all the most senior posts are held by IAS officers, and even the junior positions held by IAS officers are relatively powerful.

Within each state, the basic administrative unit is the district, of which there were 593 in 2001 and 741 in 2021. Each district is headed by a powerful bureaucrat whose title varies from state to state but who we will refer to as the district officer (DO). The majority of DOs are young IAS officers, though sometimes senior officers from the subordinate services fill in. The DO has very broad responsibilities—indeed, many have suggested that they have too many responsibilities to perform any of them adequately.[6] They must supervise and coordinate every aspect of district administration, including local government, law and order, tax collection, and a large variety of anti-poverty programs. Delegation is discouraged both by formal rules and the gap in background and status between the DO and most of their immediate subordinates.

The DO reports to the IAS bureaucrats in the state secretariat, who, in turn, report to the state chief minister (CM) and his cabinet, who are selected from the majority party or coalition in the state legislature. Both members of the state legislative assemblies (MLAs) and members of parliament (MPs) are elected from single-member districts using a plurality system for five-year terms. Each administrative district has several MLAs, but MPs represent larger constituencies that may combine parts of several districts.

Indian legislators face important practical and procedural obstacles in influencing legislation or major policies, which are tightly controlled by the centralized parties on whom members are also dependent for renomination (Lee 2020). However, both MLAs and MPs are closely involved in distributional politics in their constituencies, where they are the most important elected officials (Bussell 2019). For this purpose, they have access to dedicated sources of funds (discussed below) and seek to influence the distribution of jobs, the implementation of welfare schemes, and the construction of local public goods. Maximizing the amount of state spending in their constituency and ensuring that it reaches their supporters is a primary goal of legislators.

Since the district bureaucracy controls the main sources of patronage and pork described above, a good relationship or "equation" with the district officer is essential. Even if the district officer receives specific orders from legislators to pursue a particular

---

[6]Arora and Goyal (1995). See also Dasgupta and Kapur (2020).

objective, they can often frustrate them by failing to allocate the energy to navigate a particular initiative through the morass of the district bureaucracy, pleading the mass of other equally urgent competing priorities. The problem of initiatives being delayed or implemented poorly due to bureaucratic overload and the extraordinary growth of procedural requirements is a well-known problem in India (Dasgupta and Kapur 2020). As Bhavnani and Lee (2018) and Bhavnani and Lee (2021) have shown, the discretion of IAS officers is substantial enough that the personal characteristics of officers are associated with district-level outcomes.

IAS officers are promoted based on seniority and can only be fired for cause. However, the state government has absolute control over transfers of officers and uses this power to ensure that legislators, or at least legislators of the governing party, have sympathetic DOs. Opposition members may be punished by the posting of unsympathetic officers to their districts (Iyer and Mani 2012), or simply by seeing their projects delayed (Rivera 2020). As a result of the "transfer raj," DO tenures are very short—little more than a year in our data. National MPs are somewhat removed from this process, which is controlled by the state government.

3.2 Ascriptive Identities in Indian Politics

In Section 2, we suggested that shared identities might influence the extent of politician-bureaucrat cooperation. In our context, the three most important potential identities are region, religion, and caste. While nearly all politicians are residents of the state from which they are elected, a majority of IAS are not. These officers frequently do not know the language of the state in which they are posted until they arrive there and are generally unfamiliar with its politics and customs. Such "local" officers might possibly find cooperation with politicians easier based on their shared language and cultural background.[7] religion, while highly salient both socially and politically, is of limited importance in conditioning politician–bureaucrat interactions since over 90% of

---

[7]Note that local officers are never posted in their districts of origin.

both politicians and bureaucrats are Hindu.

This leaves caste. India contains several thousand castes or *jatis*, endogamous groups which generally share a common origin story and often a traditional occupation and formal or informal caste institutions. Jatis were traditionally ranked relative to each other, with higher ranked jatis being considered ritually "cleaner" than others and having a higher socio-economic status, often reinforced by political and social discrimination and religious belief. While jati-based discrimination is now formally illegal in India, it remains common, and jati often structures social interactions and is correlated with wealth and education. Jati is also predictive of vote choice (Huber and Suryanarayan 2016), and shared jati has been found to be predictive of individual cooperation in experimental studies (Fehr, Hoff and Kshetramade 2008).

While the problem of relative caste status is complex and contested, the Indian state has developed four caste categories into which jatis are sorted. The formerly untouchable Scheduled Castes (SCs) are at the bottom of the caste hierarchy, while the Other Backward Classes (OBCs) occupy the rung above them, and the Scheduled Tribes (STs) are poor indigenous groups only imperfectly incorporated into the traditional Hindu caste structure. The "general" category includes all other Indians. Most Indians would use the term "upper castes" more narrowly to describe a set of groups traditionally associated with literacy or political power. Of these castes, the Brahmins (traditionally priests) are the largest and are found in many different parts of India.

India has an extensive system of caste quotas in both politics and bureaucratic hiring. In politics, SCs and STs have electoral districts or constituencies "reserved" for them in proportion to their numbers in the state, where only members of those categories can run for office. An extensive literature has debated the effects of these reservations, either finding no effect (Jensenius 2017; Bhavnani 2017; Bhavnani and Lee 2018) or positive effects on distribution to the reserved group (Pande 2003).[8] A proportionate share of IAS vacancies is also reserved for SCs and STs and since 1994 for OBCs. Despite

---

[8]The literature on local government quotas is even more extensive. See for instance Gulzar, Haas and Pasquale (2020), Dunning and Nilekani (2013) and Chauchard (2017).

the fact that they performed worse on the recruitment exam than general candidates, bureaucrats from these groups have been found to perform better in the implementation of anti-poverty programs (Bhavnani and Lee 2021).

Importantly, all quotas are allocated to caste categories, not jatis. While the quota systems have meant that the Indian bureaucracy is roughly descriptively similar to the population in *caste category* terms, relatively educated jatis tend to be overrepresented in each category since, within each category, vacancies are distributed by merit. Similarly, in politics, relatively large and educated jatis tend to be overrepresented among legislators at all levels of the caste hierarchy.

3.3 Regional Differences in Within-Category Rivalry

The history of caste representation in Indian political life differs from region to region. In Southern and Western India, Brahmins were historically a small portion of the population, and missionary education, among other factors, created an educated elite within subaltern groups. Beginning in the colonial period, these elites mobilized to gain social recognition and state resources for their jati (Lee 2019). Given the small size of jatis, broader coalitions of low-status groups quickly organized themselves: "Non-Brahmin" movements proliferated throughout the South and West, with Maharashtra, Tamil Nadu, and Karnataka having particularly notable organizations that successfully contested elections. Meanwhile, a variety of organizations and parties were formed in this period claiming to represent Scheduled Castes, with BR Ambedkar's Maharashtra-based Scheduled Castes Federation being the best known. Other movements sought to "broaden" jati identities to merge several groups of similar status, a process especially marked in Southern India, where Dalits began to define themselves as aboriginal inhabitants of the state (i.e. "Adi-Andhras") rather than using their former jati names.

These "subaltern" movements are widely thought to have been stronger in South India than in the North. These differences are reflected in the fragmentary statistics available on the growth of caste organization in the colonial period. Ahuja (2019) found

that among colonial-era Dalit organizations, the ratio of narrow jati associations to organizations focusing on Dalits as a whole was 0/5 in Tamil Nadu and 2/30 in Maharashtra, but 2/1 and 2/2 in the northern states of Uttar Pradesh and Bihar. Lee (2019), examining petitions by Dalits to the colonial census authorities for reclassification of their caste at the 1931 census, found that the ratio of petitions demanding a common name for all Dalits to those demanding a new name only for their jati was 7/0 and 4/2 in the southern provinces of Hyderabad and Madras and 0/1 in both Uttar Pradesh and Bihar. In both instances, the pattern is clear: whereas lower castes mobilized as jatis in the North, they tended to mobilize as broader caste categories in the South.

These largely Southern movements were very successful in achieving caste category representation and concessions. While job and educational quotas ("reservations") for OBCs were not implemented nationally until 1994, in the states where broad lower caste movements were strongest, OBCs were guaranteed a portion of government hiring and education significantly earlier. All states of the old Bombay and Madras Presidencies had OBC reservations by the 1970s, but only two northern states had OBC reservations at that time (Lee 2019).[9] These reservations were buttressed by a strong presence of politicians from subaltern groups within the political system, including all the major parties (Jaffrelot 2003). Table 1 shows the strong association between the early implementation of reservation and a relatively small presence of upper caste politicians in politics in the 1960s, with both of these traits being higher outside the relatively poor, Northern ("BIMARU") states (marked in italics).

In the North of India, fewer low-caste groups had an educated elite, and the presence of the upper castes was larger. The growth of lower caste organizations was thus slow and fiercely contested (Lee 2019). While SC and OBC groups have risen in political prominence over the past half-century, creating a "silent revolution" in descriptive political representation (Jaffrelot 2003), upper castes remained more politically powerful and were able to stymie OBC reservations in education and the bureaucracy until the national government mandated the reservations in 1994. Indeed, in the North, the po-

_____

[9]Bihar and Punjab. Uttar Pradesh's 1970s reservation system was overturned in the courts.

litical ferment around reservations created an upsurge in political mobilization around caste and a corresponding upper caste backlash (Suryanarayan 2019).

As in the South, Northern politicians often appeal to social categories such as "OBCs" and "SCs." In practice, however, the lower caste politicians that did rise to power in the North were more interested in clientelism and rent-seeking than ideology (Witsoe 2013) and focused on a single jati rather than the whole category. The Bahujan Samaj Party, for instance, claimed to represent all SCs but was only successful in areas with large populations of the Chamar caste (Chandra 2007). This fragmentation fomented the deep-seated rivalries among subaltern politicians over leadership positions and among ordinary caste members over "hogging" of the benefits of reservation. In Bihar, Yadav and Kurmi politicians are rivals for leadership of the OBC category, while in Uttar Pradesh, Yadavs and Lodhs are rivals. In all states, the many small jatis within each category have generally been less socially and educationally successful than the larger ones; the tensions between Chamars and other SCs in Uttar Pradesh and between Paswans and other SCs in Bihar are examples of these tensions (Lee 2019).[10]

One indicator of these types of rivalries is the presence of parties based on narrow jati identities. Thachil and Teitelbaum (2015) code a set of 13 of India's 31 most successful[11]

---

[10]The same dynamics of intra-category rivalry appear in the South. In Andhra Pradesh, for instance, "Madigas, the most numerous Dalit caste, feel that the benefits of reservation have been cornered by the more advanced Mala caste, another prominent Dalit community" (Pathak 2013). However, the long history of joint political action against the upper castes has made such divisions less common and less politically salient. The Malas and Madigas, for instance, have tended to vote relatively similarly, while in the Hindi belt, intra-category splits in partisanship are often wide (Mishra, Attri and Mehta 2014). Southern states have also developed institutions to diffuse rivalry over reservations, notably subquotas that ensure that most jatis get their proportionate share of jobs. At present, there are five subcategories of OBC in Karnataka, four in Tamil Nadu, and six in Maharashtra. All but one of the states with subcategory quotas are Southern, and all but one Southern state has subquotas.

[11]Those that placed either first or second within-state assembly elections in 15 major Indian states

political parties as "ethnic," and then used data from the National Election Survey to measure the degree to which parties rely on the vote of a few jatis. This enables the authors to classify ethnic parties whose support is heavily concentrated within few jatis as "narrow," whereas those whose support draws on broader caste category, regional or linguistic identities are classified as "encompassing." As Table 1 shows, narrow ethnic parties are most successful in the Northern BIMARU states (especially Bihar and Uttar Pradesh) while encompassing ethnic parties are more successful in other states (especially Tamil Nadu).

The result of these historical differences is that caste category is a much more common source of popular identification in the South than in the North. A rough indicator of this is the proportion of people citing category when asked for their "caste" identity. We coded the self-chosen answers to the "what is your caste or tribe" question on the 2015/16 National Family Health Survey to identify those who gave their caste category as the answer. Given that the wording of the question was clearly intended to elicit jati, the base level of category identification is low. However, it is four times more likely outside the northern BIMARU' states: 0.56% vs. 0.15% in the BIMARU states.[12]

4   Data and Empirical Strategy

4.1   Measuring Bureaucratic Delay: MPLADS

Cooperation between politicians and bureaucrats manifests across a variety of issue areas and may even include cooperation in illegal activities (Brierley 2020). We focus on a single program that has the advantage of being both fairly transparent and of high salience to politicians: the Members of Parliament Local Area Development Scheme (MPLADS). Each member of parliament receives an annual budget of 50 million rupees

---

from 1967 to 2007.

[12]The difference is even higher when we focus on OBCs, or if Scheduled Tribes are excluded.

(680,000 US dollars) to build small-scale local public works within their constituency.[13] MPs can use their allocation on a wide variety of projects, though they cannot be used for operating expenses. Local road construction, the building of streetlights, the construction of social halls, and the construction of water pumps are common projects. Usefully, MPLADS projects, unlike most development programs in India, do not pass through multiple layers of bureaucracy, involving only MPs and district bureaucrats in project sanctioning. This allows for a cleaner evaluation of principal-agent cooperation than, say, project approvals that require inputs from several bureaucracies.

MPLADS projects, each one of which is labeled with a plaque bearing the MP's name, serve as a highly visible type of pork barrel project, for which beneficiaries might reward politicians (Stokes et al. 2013). Politicians use their funds strategically, spending more when their own districts are competitive (Keefer and Khemani 2009), when state legislators are copartisan (Bohlken 2018). When reelection is unlikely, they also spend more on the rich and divert funds to themselves or their associates, either by building projects for NGOs with which they are associated or by influencing which contractor builds the project (Nath 2014). Bureaucratic requirements for audits (by the central government), physical inspections (by the state government), and restrictions on grants to NGOs are thought to limit, but not eliminate, this behavior.

MPs are reliant on the district bureaucracy to implement their projects. The bureaucracy plans projects and tenders and monitors contracts. The district officer is almost always also the designated "district authority" for MPLADS purposes.[14] The district in which their constituency is located is the "nodal district" for MPLADS purposes, and MPs who represent more than one district must choose one as the nodal district. In the majority of cases for which we have data, the nodal district is also the district in which

---

[13]Before 2011-12, the allocation was 20 million rupees. Members are also allocated smaller amounts in case of natural disasters and for projects outside their constituency. A proportion of the budget must be expended in areas inhabited by SCs and STs.

[14]For a detailed account of MPLADS requirements and procedures see https://www.mplads.gov.in/MPLADS/UploadedFiles/MPLADSGuidelines2016English_638.pdf, accessed 3/24/21.

the project is located, the "implementing district."[15]

On receiving the recommendation from the MP, the district officer is responsible for studying the project and sanctioning (that is, approving) the proposal. The permissible reasons for not sanctioning projects are few and narrow: if the project is not for a public or non-profit institution, if the user agency does not agree to the project, or if the budget is insufficient (in which case the MP may add to it). Rejection is thus rare: Over 99% of all projects are sanctioned eventually. To ensure that the district administration does not delay projects indefinitely, the law imposes a set of deadlines on the district officer. Program rules state that: "All recommended eligible works should be sanctioned within 75 days from the date of receipt of the recommendation, after completing all formalities. The District Authority shall, however, inform MPs regarding rejection, if any, within 45 days from the date of receipt of recommendations, with reasons thereof (7)."[16] The district officer must thus, in theory, judge each project's validity within 45 days and then has another 30 days to assemble and personally approve the final paperwork. However, there is no internal mechanism in the program to ensure bureaucratic compliance, and 32% of sanctioned projects take longer than 75 days to approve. On the other hand, many projects are approved quickly—15% are sanctioned in a week or less.

Looking at sanctioned projects, we use the time until project sanctioning as our main measure of politician-bureaucrat cooperation. We operationalize this using a binary measure of whether a project was sanctioned within 75 days in the main models and a measure of the logged days to sanction in supplemental tests. This and other key variables for our analysis are summarized in Table 2. We believe that our measure of whether a project was approved in 75 days is an excellent test of cooperation, particularly relative to common outcomes in the literature (such as those in experimental

---

[15]The process for the approval of projects outside the nodal district is slightly more complicated and involves coordination between the nodal and implementing district. We will ignore these features in this discussion.

[16]https://www.mplads.gov.in/MPLADS/UploadedFiles/MPLADSGuidelines2016English_638.pdf, accessed 3/24/21.

games or project outcomes) for three reasons. First, in this context, the bureaucrat is explicitly the agent of a specific politician, without any formal intermediation from other levels of the bureaucracy or political system. Second, quick project approval is a formal responsibility of the bureaucrat, and there are relatively few legal or technocratic reasons for delay. Finally, unlike project completion, which can easily be delayed by material factors outside the bureaucrat's control, approval times can be traced to the individual officer and his immediate subordinates since it is a matter of the shuffling of paperwork—a relatively pure measure of red tape.

Data of MPLADS projects are supposed to be publicly available on the program website (https://www.mplads.gov.in.). However, the MPLADS system revamped its interface in recent years, and validation exercises suggest that the data on the current website are not comprehensive or reliable. This precludes us from including data from the most recent legislative session. Given these concerns, we use data collected by Rivera (2020) using the previous online portal (covering 2004–14, legislative sessions 14 and 15). We supplement these data with additional data provided by Bohlken (2018), which covers only North India from 1999 to 2004 or the 13th legislative session. Our results are robust to only analyzing the 14th and 15th legislative sessions, which include data for the entire country.

The project-level covariates available vary slightly by source, but for all, we have the date of proposal, date of sanctioning, and project cost. Projects are associated with the nodal district unless the implementing district is listed in the data as being different.[17]

---

[17]A small number of projects are received by one DO and then granted by another after the first DO's transfer. We attribute these projects to the DO who approved them, with the time to approval being the time between their taking office and approval, but control for the number of days the project had been under consideration by the previous DO.

4.2 Measuring Politician and Bureaucrat Identity

To measure politician-bureaucrat caste congruence, we combined four different data sources. First, for the jati of Indian MPs, we use the data collected by the Trivedi Centre for Political Data. In our period, this data identifies the caste category of 99.9% of MPs and the jati of 89%.

Second, to identify bureaucrats, we use the executive record sheet (ER sheet) for every IAS officer, which we scraped from the Ministry of Personnel website on July 17, 2020. The ER sheet has the exact dates for each posting in the officer's career, as well as their state of origin (determining whether they are "local" to the state they serve in), gender, and education. Politicians and bureaucrats are matched into dyads using constituency and district names. Through a careful process of manual matching, we were able to associate all projects with the district officer in place at the time of project submission.[18]

The ER sheet data do not include the caste category of bureaucrats (general, OBC, SC, or ST). We obtained this information from the dataset collected by Bhavnani and Lee (2021) that scrapes the caste category reported directly by each officer from official rankings at the time of selection. These data only include caste category for arbitrary years and so is "imputed" based on exam ranks for some recruitment years. Our results are robust to the exclusion of officers for whom caste category was imputed, as shown in Online Appendix Table A.1.

The Bhavnani and Lee (2021) data does not have information on officer jati. To code officer jati, we triangulated two approaches. First, we worked with a local data collection firm to contact journalists and others with regional expertise to provide a jati for each IAS officer. This yielded a coded jati for 67% of the IAS officers in our

---

[18]The manual match entailed confirming that district names and constituency-to-district matching were constant across data sets. In some instances, two DOs reported holding the same position for a short period of time. We validated these data by visiting district websites and determining the correct district officer in charge.

database. Second, using our own knowledge and several publicly available datasets of the caste and surname of Indian elites, we coded jati for roughly 32% of the IAS officers in our database. Where overlapping, the two coding strategies agreed in 73% of cases. We combined these two coding approaches for a more complete IAS officer jati coding, taking as the base the external jati coding and filling in our own coding for an additional 18 officers. Combined, we have data on officer jati for 70% of officers. Religious minorities (who are rare in the IAS) are counted as jatis for the purpose of this coding.

That said, our key variable is not officer or MP category/jati but whether or not officers and MPs share the same category/jati. This requirement allows us to fill in the variable for jati congruence in several cases where jati itself remains uncoded. To do so, we abide by two simple rules. First, given that jati is defined very locally, we assume that an IAS officer cannot share the same jati as the MP under which they serve unless the two originate from the same state. Second, we assume that IAS officers can only share the same jati as their MP if they also share the same caste category. Given these two additional rules alongside the jati coding we described above, we are able to determine jati congruence for 95% of IAS officers. So as not to exclude the remaining 5% of officers, we additionally include an indicator for jati congruence missing.

4.3   Models

To estimate the effect of caste congruence on project approval times, we employ OLS models with DO and MP fixed effects. We are thus estimating the effect of dyad-level covariates conditional on individual factors that might affect sanctioning time. We start by estimating the following two models:

$$Y_{ijp} = \alpha + \beta C_{ij} + \gamma J_{ij} + \delta \mathbf{X_{ijp}} + \theta_d + \eta_t + \epsilon_{ijtp} \tag{1}$$

$$Y_{ijp} = \alpha + \beta C_{ij} + \zeta(C_{ij} \times \alpha_r) + \alpha_r + \gamma J_{ij} + \delta \mathbf{X_{ijp}} + \theta_d + \eta_t + \epsilon_{ijtp} \tag{2}$$

where the outcome—a dummy for whether a project (p) proposed by an MP (i) is

approved by the DO (j) within the rule-mandated 75 days (Y)—is modeled as a function of C and J, which are set to one when the caste category and jati of the MP and DO match, respectively. To explore regional variation in the effects of caste, we interact the caste category variable with regional dummies (α_r) for projects in the Northern BIMARU states and in all non-Southern states in equation 2. Since the omitted category is Southern states, the equation allows us to compare the effects of our treatment on project approvals in BIMARU and Southern states. The equations control for district and year fixed effects (θ and η), which absorb most of the spatial variation in project implementation difficulty. The vector of other controls ($\mathbf{X}$) includes a measure of project complexity (the project cost), the log number of pending projects on the DO's desk as a measure of bureaucratic load, and, if applicable, the log number of days that the project sat on the previous DO's desk. It also includes dummies for MP and DO caste, jati, and gender, and an indicator for whether MPs are aligned with the state-level representative or MLA.

Identifying the causal effects of politician-bureaucrat identity congruence would require the two to be randomly paired. Our main specifications approximate this by controlling for a rich set of fixed effects and other politician and bureaucrat attributes. Still, endogeneity remains a theoretical possibility. To address this issue, we proceed on three fronts. First, we narrow the sample to four states—Andhra Pradesh, Karnataka, Rajasthan, and Uttar Pradesh—with 34% of the country's population where we are able to document the quasi-random assignment of IAS officers to districts.[19] For example, "IAS officers from the 2013 Andhra Pradesh cadre were assigned in alphabetical order of their names to districts that were ordered based on their serial number" (Bhavnani and Lee 2018, 78). Reflecting these rules, regressions suggest that caste category congruence is indeed orthogonal to 16 MP and district characteristics. See the leftmost panel of Figure 1.

Second, we narrow the sample to all early-career officers across the country. Although we are unable to document the (random or other) assignment of officers across all states,

---

[19]Bhavnani and Lee (2018) and Bhavnani and Lee (2021) use a similar identification strategy.
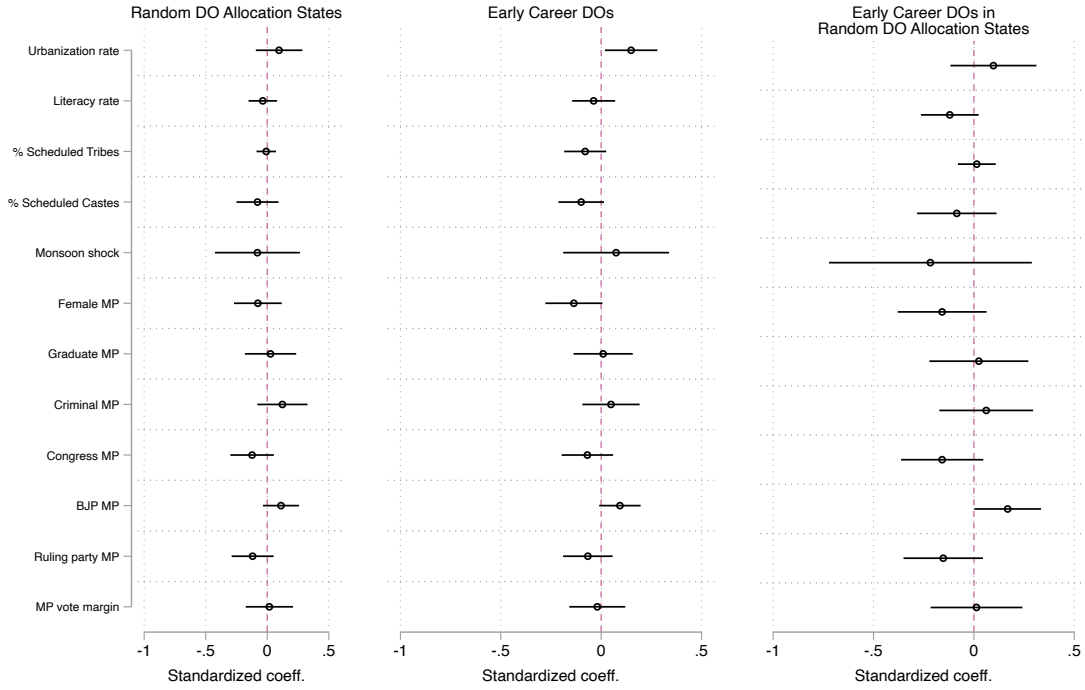
Figure 1: Balance tests for caste category congruence against district and MP characteristics

Note: All models include dyad clustered standard errors and session, fiscal year, and district fixed effects. Models also include an indicator for whether Jati is missing and an indicator for non-BIMARU/non-SOUTH states. Models include data from the 13th, 14th, and 15th sessions. Data from the 13th session include only BIMARU states. District officers with official caste category data included and caste category imputed for years when missing.

we do believe that officers early in their careers are quasi-randomly assigned to districts. Indeed, the fact that early-career DOs are new to their roles makes it less likely that they are selected by MPs. Consistent with this, the balance tests in the second panel of Figure 1 also suggest that the observable characteristics of early-career officers are largely orthogonal to MP and district characteristics.

Our last strategy is to combine these approaches, to focus on early-career officers from Andhra Pradesh, Karnataka, Rajasthan, and Uttar Pradesh. Again, and as the rightmost panel of Figure 1 suggests, caste congruence is orthogonal to MP and district-level confounds.[20]

---

[20]We are also able to reject the tests for the joint significance for the 16 observables in the three

5   The Effects of Shared Caste on Cooperation

We start by examining the overall relationship between the probability that a project is sanctioned within the 75-day statutory limit for project approvals on the one hand and caste category and jati congruence on the other. The regressions at the top panel of Table 3 implement equation 1. The first column controls for session and fiscal year fixed effects, the second for district fixed effects, and the third for all three. The fourth regression leverages data from the four states (with a third of the projects) in which we are able to document officers are quasi-randomly assigned to districts, the fifth focuses on early-career officers (three-fourths of projects were proposed under early-career officers), and the last focuses on early-career officers from the four states with documented quasi-random district assignments. Across these specifications, the average effect of caste congruence is small and statistically indistinguishable from zero. On the other hand, jati congruence is associated with a 14 percentage point greater probability of project approval (in the third, saturated model), and this effect holds in magnitude when subsetting to arbitrarily placed DOs, though the results are a bit noisier. Since 68% of projects are approved within 75 days, this is equivalent to a 20% increase in on-time project approvals.

We next move to our main analysis, where we compare the effects of caste category congruence in BIMARU and Southern states by interacting the caste congruence dummy with a dummy for BIMARU states (see equation 2).[21] The saturated model in column 3, with session, year, and district fixed effects, suggests that caste category congruence is associated with more on-time project approvals by a statistically and substantively significant 5.6 percentage points or 8.2% in the South. In BIMARU states, on the other hand, caste congruence is associated with a lower probability of on-time sanctioning by 10.4 percentage points, or 15.2%, as shown in the reported marginal effect at the

---

samples.

[21]To ensure that the omitted group are Southern states, we also include and interact a dummy for states in other regions.

bottom of the table. The difference in the marginal effects of caste category congruence across these regions is statistically significant: caste category is associated with a roughly 16 percentage point difference in the probability of on-time sanctioning between Southern and BIMARU states. These results and effect sizes are markedly robust across specifications, including in the subsets of plausibly exogenous officer assignments.

On the other hand, jati congruence has a positive, though less robust, effect on on-time project approvals across regions.[22] While the size of this effect holds once the sample is subset to those in "Random" DO allocation states or to early career officers, the estimates become noisier, likely the result of the rarity of jati congruence. In the full sample only 5% of DO-MP dyads (with 1% of projects) share the same jati.

These estimated effects are consistent with our theoretical priors. In Southern states, where caste categories that subsume jatis have been the basis of successful collective action, caste category congruence boosts on-time project approvals. In the North, where caste category-based political mobilization is fraught and riven by factionalism, caste category congruence decreases the likelihood of on-time project approvals. In all of these states, jati remains a useful identity resource. MPs that are matched with DOs from the same jati are more likely to have their projects approved within 75 days.

Our results on the importance of narrow jatis across all states and broader caste categories, specifically in the South, are robust to using the (log) number of days to project approval as the outcome (see Appendix Table A.2 replicates Table 3), estimating these effects with a Cox proportional hazard (see Appendix Table A.3), and removing states one-by-one to show no single state is driving the main results (see Appendix Figure A.1). They are also robust to the alternate identification strategies outlined earlier, namely restricting the data to the four states where we have confirmed that early-career DOs are quasi-randomly assigned to districts (column 4), to restricting the data to early-career officers (column 5) and to doing both (column 6). Additionally, Online Appendix Table A.4 documents that these effects are not driven by any one

---

[22]The interaction of jati congruence and a dummy for BIMARU states is statistically indistinguishable from zero, demonstrating that jati, as we are evaluating it, matters similarly across regions.

specific caste category but hold for all category groups.

In Online Appendix Table A.5, we further address the possibility of selection by examining three possible downstream consequences of our findings that might undermine our identification strategy. Specifically, if caste-congruent DO-MP pairs work better together in the South than in BIMARU states, we might expect caste congruence to be positively correlated with the chances that a DO will be chosen by an MP in the South and negatively correlated with such selection in the North. To examine this, we collapse the data to the MP-DO dyad level and then set a dummy for DO selection to 1 for DOs that an MP could have selected (that is, those that they did not inherit but were assigned after the MP took office). In the first two regressions, we find no such pattern in the data. We also find that the length of a DOs term in office is not correlated with congruence in any region, even for only DOs that are inherited by MP. Consistent with our identification strategy, this suggests that MPs do not appear to select new DOs (or to lengthen or shorten the DO terms) based on caste congruence.[23]

6   Mechanisms: The Roots of Coethnic Cooperation and Competition

Before we turn to examine the mechanisms driving these region-based differences in the effects of caste category congruence, we rule out two proximate mechanisms that could explain the observed variation. In particular, the coethnicity advantage in the South could be explained by a common language or being from the same state rather than by caste category. As suggested by Habyarimana et al. (2007), shared language and region are expected to proxy for shared technologies and shared networks that might facilitate easier collaboration. To examine whether shared language and shared state of birth

---

[23]An observable implication of our argument is that MPs would select DOs based on their identities, yet we find no evidence in support of this behavior. This is not surprising given that DOs serve multiple principals (including state legislators), and so MPs do not have perfect discretion in DO transfers.

explain our observed effects, we add these covariates along with their interaction with region dummies to our original model specification in Table 4. If our effects disappear, this would demonstrate that our measure of caste category was really just proxying for shared language or shared state. In fact, we find that not only does caste category remain statistically significant in both the South and BIMARU regions, but the size of the effect is also unchanged upon the inclusion of these other identity covariates, including in the subsample of states and DOs with plausibly exogenous allocation. In fact, shared caste category is the most robust correlate of on-time project approval in these models. This confirms that the varying effects of caste category are not driven by a common language or state of origin.

Why then might we see differential consequences of caste category congruence for bureaucratic performance in the North and South of India? Our argument posits that histories of group mobilization can generate norms of cooperation, whereas histories of group rivalry, likely the result of externally imposed supraordinate identity groups and common pool resource competition, can generate norms of competition. In Section 3, we detailed a brief history of caste-based mobilization in India, documenting how a shared history of collective action in pursuit of caste-category-based affirmative action in the South has yielded greater trust and solidarity with caste categories. To explore whether the shared histories of successful collective action by caste categories in the South enable MP-DO cooperation, we replace "BIMARU," a geographical construct, with a more specific proxy for successful caste category-based collective action. Recall that in 1993 the national government mandated reservations for OBC throughout the country. Prior to this, several states, mostly in the South, had autonomously elected to implement these reservations. Some states, largely in the North, had failed to institute these reservations themselves, and so had the reservation policy thrust on them by national mandate. We, therefore, proxy for lack of caste category collective action using a dummy for whether a state instituted OBC reservations only after the 1993 mandate. Panel A of Table 5 presents the results using this dummy instead of region dummies.

In states that implemented the OBC reservation ahead of the national mandate,

caste category congruence either does not significantly affect bureaucratic performance (fully saturated model 3) or improves bureaucratic performance (models 4 and 6) in states with random DO allocation. On the other hand, in states that implemented the OBC reservation only after the national mandate, caste category congruence worsens bureaucratic performance: congruent DOs were seven percentage points or 10% less likely to sanction MPLADS projects within the 75-day period (see the marginal effect at the bottom in the third, saturated model).[24] These results provide suggestive evidence for a link between histories of identity-based mobilization and intragroup cooperation, suggesting that these histories may be what underlies the regional dynamics shown above.

Another implication of our theory is that supraordinate groups with greater intragroup inequality, especially when such inequality falls along subordinate group lines, have likely developed norms of competition. This could be because inequality is the result of histories of intragroup competition or because supraordinate groups were comprised of dissimilar subordinate groups, and inequalities have been sustained despite the new group identity. More equal supraordinate groups, on the other hand, are more likely to develop norms of solidarity, as what is seen to benefit one is likely to benefit all. To explore whether greater within-caste category equality explains the positive effects of caste category congruence in the South, we calculate a state-level measure of within-category, between-jati income inequality using data from the 2016 National Family Health Survey.[25] We assume that where within-category, between-jati income inequality is high, within-category rivalry is more likely. On the other hand, where within-category, between-jati income inequality is low, within-category solidarity is more likely. Panel B of Table 5 presents the results using this variable instead of region dum-

---

[24]It is important to highlight that these results include all states in India, not just those in the South and in the BIMARU region. As a result, many states in the Northeast are included as not having implemented the reservation prior to 1993, as shown in Table 1.

[25]Few surveys and data sources include data on jati limiting our ability to get time-varying or more disaggregated measures of inequality.

mies.

Intra-category, inter-caste economic inequality robustly and significantly negatively moderates the relationship between caste-category congruence and the speed of bureaucratic sanctioning of MPLADS projects. In states with the lowest levels of intra-category, inter-caste inequality, caste category congruence significantly speeds up bureaucratic sanctioning by 7% points (Panel B, model 3). In states with the highest levels of intra-category, inter-caste inequality, caste category congruence significantly slows down bureaucratic sanctioning by 10% points (Panel B, model 3, marginal effect at bottom). Again, our results are robust and in line with theoretical expectations.

While neither of these tests provides definitive causal evidence of the roots of competition and cooperation, as both historical mobilization and inequality are non-random, a clear pattern emerges alongside the regional evidence provided in Table 3. Intra-group relations, whether they are shaped by historical mobilization patterns or present-day inequalities, can inhibit present-day cooperation and heighten agency losses between principals and agents.

7   Conclusions

In both India and in other parts of the world, bureaucrats are formally the servants of politicians, and bureaucracies are designed to make this control real. However, even where bureaucrats have no formal autonomy, their willingness to overcome red tape may vary considerably. In the context of MPLADS, a large public distribution scheme in India, shared identity plays an important role in shaping bureaucratic behavior, with shared politician-bureaucrat caste leading to bureaucrats approving politicians' projects more quickly, and with shared caste category, a supraordinate socially constructed identity, having variable effects. The results complement existing work on the institutional predictors of bureaucratic subversion by showing that identity plays a role as well. The results have implications for the study of the effect of ethnic diversity on institutional quality.

31

The second implication of the findings is that shared identity is not always positive, and that the balance between solidarity and rivalry can be influenced by political action. In states with a long history of caste category mobilization, solidarity effects mean that shared category improves bureaucrat performance, but in states with no such history, rivalry dominates, and congruent bureaucrats clear red tape more slowly. The result echoes existing findings that broad ascriptive identities can be made more or less salient relative to narrow ones through political effort and that these changes can be persistent historically. It extends this literature by showing that shared identity can actually have negative effects in some circumstances due to rivalry and that the effects of this identity mobilization can extend to the bureaucracy as well as to political violence and electoral politics.

The paper also contributes to the literature on South Asia in two respects. First, it provides the first systematic evidence that bureaucratic behavior in India is shaped by caste. Expanding on accounts predicting bureaucratic performance as a result of "quality" and incentives, it hints at the role of personal factors such as identity in the networks of influence that link politicians and bureaucrats and run through the Indian state. Second, it provides evidence for how caste politics operates differently in different parts of the country and why caste-based self-assertion may have a different influence on state performance in different parts of the country. Both questions are worthy of sustained future investigation.

Bibliography

Ahuja, Amit. 2019. *Mobilizing the marginalized: Ethnic parties without ethnic movements.* Modern South Asia.

Akerlof, George A and Rachel E Kranton. 2000. "Economics and identity." *The quarterly journal of economics* 115(3):715–753.

Alesina, Alberto, Reza Baqir and William Easterly. 1999. "Public Goods and Ethnic Divisions." *The Quarterly Journal of Economics* 114(4):1243–1284.

Arora, Ramesh Kumar and Rajni Goyal. 1995. *Indian public administration: institutions and issues.* New Age International.

Ashraf, Nava, Oriana Bandiera, Edward Davenport and Scott S Lee. 2020. "Losing prosociality in the quest for talent? Sorting, selection, and productivity in the delivery of public services." *American Economic Review* 110(5):1355–94.

Banerjee, Abhijit, Esther Duflo, Clement Imbert, Santhosh Mathew and Rohini Pande. 2020. "E-governance, accountability, and leakage in public programs: Experimental evidence from a financial management reform in india." *American Economic Journal: Applied Economics* 12(4):39–72.

Banerjee, Abhijit V et al. 2000. Prospects and strategies for land reform. In *Annual World Bank Conference on Development Economics 1999.* World Bank pp. 253–84.

Bhavnani, Rikhil R. 2017. "Do the effects of temporary ethnic group quotas persist? Evidence from India." *American Economic Journal: Applied Economics* 9(3):105–23.

Bhavnani, Rikhil R. and Alexander Lee. 2018. "Local Embeddedness and Bureaucratic Performance: Evidence from India." *The Journal of Politics* 80(1):71–87.

Bhavnani, Rikhil R and Alexander Lee. 2021. "Does Affirmative Action Worsen Bureaucratic Performance? Evidence from the Indian Administrative Service." *American Journal of Political Science* 65(1):5–20.

Bohlken, Anjali Thomas. 2018. "Targeting Ordinary Voters or Political Elites? Why Pork Is Distributed Along Partisan Lines in India." *American Journal of Political Science* 62(4):796–812.

Bozeman, Barry. 2000. *Bureaucracy and red tape.* Prentice Hall Upper Saddle River, NJ.

Brierley, Sarah. 2020. "Unprincipled principals: Co-opted bureaucrats and corruption in Ghana." *American Journal of Political Science* 64(2):209–222.

Bussell, Jennifer. 2019. *Clients and constituents: Political responsiveness in patronage democracies.* Oxford University Press.

Butler, Daniel M. 2010. "Monitoring bureaucratic compliance: using field experiments to improve governance." *Public Sector Digest* 5.

Chakrabarti, Poulomi. 2021. "The Politics of Dignity: How Status Inequality shaped Redistributive Politics in India." *Available at SSRN* .

Chandra, Kanchan. 2007. *Why ethnic parties succeed: Patronage and ethnic head counts in India.* Cambridge University Press.

Chattopadhyay, Raghabendra and Esther Duflo. 2004. "Women as policy makers: Evidence from a randomized policy experiment in India." *Econometrica* 72(5):1409–1443.

Chauchard, Simon. 2017. *Why representation matters: The meaning of ethnic quotas in rural India.* Cambridge University Press.

Chen, Yan and Sherry Xin Li. 2009. "Group identity and social preferences." *American Economic Review* 99(1):431–57.

Dasgupta, Aditya and Devesh Kapur. 2020. "The political economy of bureaucratic overload: Evidence from rural development officials in India." *American Political Science Review* 114(4):1316–1334.

Dee, Thomas S. 2005. "A teacher like me: Does race, ethnicity, or gender matter?" *The American Economic Review* 95(2):158–165.

Derks, Belle, Naomi Ellemers, Colette Van Laar and Kim De Groot. 2011. "Do sexist organizational cultures create the Queen Bee?" *British Journal of Social Psychology* 50(3):519–535.

Dunning, Thad and Janhavi Nilekani. 2013. "Ethnic quotas and political mobilization: caste, parties, and distribution in Indian village councils." *American Political Science Review* 107(01):35–56.

Easterly, William and Ross Levine. 1997. "Africa's growth tragedy: policies and ethnic divisions." *The Quarterly Journal of Economics* pp. 1203–1250.

Fearon, James D. 1999. "What is identity (as we now use the word)." *Unpublished manuscript, Stanford University, Stanford, Calif*.

Fearon, James D and David D Laitin. 1996. "Explaining interethnic cooperation." *American political science review* 90(4):715–735.

Fehr, Ernst, Karla Hoff and Mayuresh Kshetramade. 2008. "Spite and development." *The American Economic Review* pp. 494–499.

Franck, Raphael and Ilia Rainer. 2012. "Does the Leader's Ethnicity Matter? Ethnic Favoritism, Education, and Health in Sub-Saharan Africa." *American Political Science Review* 106:294–325.

Gailmard, Sean. 2002. "Expertise, subversion, and bureaucratic discretion." *Journal of Law, Economics, and Organization* 18(2):536–555.

Gailmard, Sean and John W Patty. 2007. "Slackers and zealots: Civil service, policy discretion, and bureaucratic expertise." *American Journal of Political Science* 51(4):873–889.

Gailmard, Sean and John W Patty. 2012. "Formal models of bureaucracy." *Annual Review of Political Science* 15:353–377.

Gulzar, Saad and Benjamin J Pasquale. 2017. "Politicians, bureaucrats, and development: Evidence from India." *American Political Science Review* 111(1):162–183.

Gulzar, Saad, Nicholas Haas and Benjamin Pasquale. 2020. "Does Political Affirmative Action Work, and for Whom? Theory and Evidence on India's Scheduled Areas." *American Political Science Review* 114(4):1230–1246.

Habyarimana, James, Macartan Humphreys, Daniel N Posner and Jeremy M Weinstein. 2007. "Why does ethnic diversity undermine public goods provision?" *American Political Science Review* 101(04):709–725.

Hassan, Mai. 2020. *Regime threats and state solutions: Bureaucratic loyalty and embeddedness in Kenya*. Cambridge University Press.

Hjort, Jonas. 2014. "Ethnic divisions and production in firms." *The Quarterly Journal of Economics* 129(4):1899–1946.

Huber, John D and Pavithra Suryanarayan. 2016. "Ethnic inequality and the ethnification of political parties: Evidence from India." *World Politics* 68(1):149–188.

Iyer, Lakshmi and Anandi Mani. 2012. "Traveling agents: political change and bureaucratic turnover in India." *Review of Economics and Statistics* 94(3):723–739.

Jaffrelot, Christophe. 2003. *India's silent revolution*. Orient Blackswan.

Jaffrelot, Christophe and Sanjay Kumar. 2012. *Rise of the plebeians?: The changing face of the Indian legislative assemblies*. Routledge.

Jensenius, Francesca R. 2017. *Social justice through inclusion: The consequences of electoral quotas in India*. Oxford University Press.

Kalin, Michael and Nicholas Sambanis. 2018. "How to think about social identity." *Annual Review of Political Science* 21:239–257.

Kaufman, Herbert. 1967. *The forest ranger: A study in administrative behavior.* Resources for the Future.

Keefer, Philip and Stuti Khemani. 2009. "When do legislators pass on pork? The role of political parties in determining legislator effort." *American Political Science Review* 103(01):99–112.

Keiser, Lael R, Vicky M Wilkins, Kenneth J Meier and Catherine A Holland. 2002. "Lipstick and logarithms: Gender, institutional context, and representative bureaucracy." *American political science review* 96(3):553–564.

Kramon, Eric and Daniel N Posner. 2016. "Ethnic Favoritism in Education in Kenya." *Quarterly Journal of Political Science* 11:1–58.

Lee, Alexander. 2018. "Ethnic diversity and ethnic discrimination: Explaining local public goods provision." *Comparative Political Studies* 51(10):1351–1383.

Lee, Alexander. 2019. *From Hierarchy to Ethnicity: The Politics of Caste in Twentieth Century India.* Cambridge University Press.

Lee, Alexander. 2020. "Incumbency, Parties, and Legislatures: Theory and Evidence from India." *Comparative Politics* 52(2):311–331.

Lee, Alexander. 2021. "Does Affirmative Action Work? Evaluating India's Quota System." *Comparative Political Studies* 54(9):1534–64.

McClain, Paula D, Niambi M Carter, Victoria M DeFrancesco Soto, Monique L Lyle, Jeffrey D Grynaviski, Shayla C Nunnally, Thomas J Scotto, J Alan Kendrick, Gerald F Lackey and Kendra Davenport Cotton. 2006. "Racial distancing in a southern city: Latino immigrants' views of Black Americans." *The Journal of Politics* 68(3):571–584.

McCubbins, Mathew D and Thomas Schwartz. 1984. "Congressional oversight overlooked: Police patrols versus fire alarms." *American journal of political science* pp. 165–179.

Meier, Kenneth J and Anita Dhillon. 2022. "Gender and the state politics of policy implementation in education: the interaction of bureaucratic and legislative representation in India." *State Politics & Policy Quarterly* pp. 1–27.

Miguel, Edward. 2004. "Tribe or nation? Nation building and public goods in Kenya versus Tanzania." *World Politics* 56(03):328–362.

Miller, Gary J. 2005. "The political evolution of principal-agent models." *Annual Review of Political Science* 8:203–225.

Mishra, Jyoti, Vibha Attri and Nitin Mehta. 2014. "The Bahujan Vote in 2014 Elections: Voting Pattern among Dalits, Adivasis, and Backward Castes." *Research Journal Social Sciences* 22(2).

Nath, Anusha. 2014. Political competition and elite capture of local public goods. Technical report Working paper.

Pande, Rohini. 2003. "Can mandated political representation increase policy influence for disadvantaged minorities? Theory and evidence from India." *The American Economic Review* 93(4):1132–1151.

Pathak, Vikas. 2013. "Telangana state may help settle old caste war." *The Hindustan Times* .
URL: https://www.hindustantimes.com/india/telangana-state-may-help-settle-old-caste story-YDzr2zVN3qTceT8keeChBK.html

Pepinsky, Thomas B, Jan H Pierskalla and Audrey Sacks. 2017. "Bureaucracy and service delivery." *Annual Review of Political Science* 20:249–268.

Pérez, Efrén O. 2021. *Diversity's Child: People of Color and the Politics of Identity.* University of Chicago Press.

Perry, Mark. 2017. *The Pentagon's Wars: The Military's Undeclared War Against America's Presidents.* Hachette UK.

Posner, Daniel N. 2004. "The political salience of cultural difference: Why Chewas and Tumbukas are allies in Zambia and adversaries in Malawi." *American Political Science Review* 98(04):529–545.

Purohit, Bhumi. 2022. "Bureaucratic Resistance Against Female Politicians: Evidence from Telangana, India.".

Rivera, Carlos Velasco. 2020. "Loyalty or incentives? How party alignment affects bureaucratic performance." *The Journal of Politics* 82(4):1287–1304.

Singh, Prerna. 2015. *How solidarity works for welfare: Subnationalism and social development in India.* Cambridge University Press.

Singh, Prerna and Matthias vom Hau. 2016. "Ethnicity in Time Politics, History, and the Relationship between Ethnic Diversity and Public Goods Provision." *Comparative Political Studies* p. 0010414016633231.

Stokes, Susan C, Thad Dunning, Marcelo Nazareno and Valeria Brusco. 2013. *Brokers, voters, and clientelism: The puzzle of distributive politics.* Cambridge University Press.

Suryanarayan, Pavithra. 2019. "When do the poor vote for the right wing and why: Status hierarchy and vote choice in the Indian states." *Comparative Political Studies* 52(2):209–245.

Telles, Edward, Mark Sawyer and Gaspar Rivera-Salgado. 2011. *Just Neighbors?: Research on African American and Latino Relations in the United States.* Russell Sage Foundation.

Thachil, Tariq and Emmanuel Teitelbaum. 2015. "Ethnic parties and public spending: New theory and evidence from the Indian states." *Comparative Political Studies* 48(11):1389–1420.

Weingast, Barry R. 1984. "The congressional-bureaucratic system: a principal agent perspective (with applications to the SEC)." *Public choice* 44(1):147–191.

Witsoe, Jeffrey. 2013. *Democracy Against Development: Lower-caste Politics and Political Modernity in Postcolonial India.* University of Chicago Press.

Table 1: Caste Category Mobilization in India by State

State	Year Reservation Began	Post 1993 Reservation OBC	Within Category Jati Inequality	% Upper Between Category MLAs in 1967	OBC Subquota Year	% of 2019 Vote for Encompassing Ethnic Parties	% of 2019 Vote for Narrow Ethnic Parties	% Reporting Caste Category when asked Jati
BIMARU/Northern states								
Bihar	1978	0	7.9	44.8	1978	0.0	37.2	0.7
Chhattisgarh	1994	1	33.0	See MP		0.0	2.3	0.6
Jharkhand	1978	0	37.5	See Bihar		0.0	0.0	2.5
Madhya Pradesh	1994	1	33.5			0.0	2.4	5.2
Rajasthan	1994	1	30.4	46.8		0.0	0.0	1.2
Uttarakhand	1994	1	24.9	See UP		0.0	4.5	3.5
Uttar Pradesh	1994	1	37.5	43.3		0.0	37.5	1.3
Southern states								
Andhra Pradesh	1947	0	20.7	5.9	1970	39.6	0.4	0.2
Karnataka	1977	0	24.0	8.8	1977	0.0	9.7	14.1
Kerala	1964	0	17.2	40.0		0.0	0.0	0.3
Tamil Nadu	1947	0	27.6	3.0	1989	51.2	0.5	11.2
Other states								
Assam	1994	1	27.9	27.0		8.2	0.0	4.1
Gujarat	1978	0	30.3	40.0		6.5	0.0	1.8
Haryana	1991	0	22.3		1995	0.0	5.6	2.1
Himachal Pradesh	1994	1	13.3	5.9		0.0	0.0	14.8
Maharashtra	1947	0	33.0		1964	0.0	23.5	2.0
Orissa	1994	1	31.5	35.0		0.0	0.0	9.9
Punjab	1964	0	17.6			27.8	3.5	9.6
West Bengal	1994	1	34.7	40.0		0.0	0.0	1.4

Notes: Small states and union territories are not included for reasons of space. Figures for Orissa in column 2 are for 1974. The data for columns 1 and 5 are from Lee (2021), and for column 4 are from Jaffrelot and Kumar (2012). The numbers in columns 6 and 7 were calculated using data from the Election Commission of India and Thachil and Teitelbaum (2015). The numbers in columns 3 and 8 are based on the 2015/16 National Family Health Survey. The survey data uses the Hindu population over 18.

Table 2: Summary Statistics

	Mean	Std. Dev.	Min.	Max.
Project Sanctioned Within 75 days	0.68	0.46	0.00	1.00
Log Days to Project Sanction	3.55	1.46	0.00	8.60
MP-DO Caste Category Congruence	0.43	0.49	0.00	1.00
MP-DO Jati Congruence	0.01	0.10	0.00	1.00
MP-DO Speak the Same Language	0.57	0.50	0.00	1.00
MP-DO Are From the Same State	0.24	0.43	0.00	1.00
MP is General	0.55	0.50	0.00	1.00
MP is Other Backward Class	0.18	0.39	0.00	1.00
MP is Scheduled Caste	0.17	0.38	0.00	1.00
MP is Scheduled Tribe	0.10	0.29	0.00	1.00
MP is Female	0.11	0.31	0.00	1.00
DO is General	0.55	0.50	0.00	1.00
DO is Other Backward Class	0.25	0.43	0.00	1.00
DO is Scheduled Caste	0.12	0.33	0.00	1.00
DO is Scheduled Tribe	0.08	0.28	0.00	1.00
DO is Female	0.12	0.33	0.00	1.00
MP is from the Same Party as MLA	0.53	0.50	0.00	1.00
Log Number of Pending Projects	3.73	1.47	-9.21	6.54
Log Project Cost/100,000 (Rupees)	0.29	1.15	-9.21	4.61
Log Days Under Previous District Officer	0.00	0.14	0.00	5.20
BIMARU States	0.34	0.47	0.00	1.00
Southern States	0.24	0.43	0.00	1.00
States Where OBC Reservations Implemented After 1993	0.50	0.50	0.00	1.00

Table 3: Caste Congruence and Bureaucratic Performance

	Sanctioned in 75 Days					
Panel A:						
Caste Category Congruence	-0.009	-0.031	-0.036	-0.005	-0.006	0.017
	(0.022)	(0.020)	(0.019)*	(0.024)	(0.021)	(0.028)
Jati Congruence	0.005	0.168	0.135	0.208	0.146	0.315
	(0.106)	(0.075)**	(0.069)**	(0.172)	(0.077)*	(0.201)
N	149156	149153	149153	54721	113889	42276
R-Squared	0.184	0.317	0.323	0.299	0.326	0.316
Panel B:						
Caste Category Congruence	0.024	0.044	0.056	0.088	0.082	0.122
	(0.044)	(0.031)	(0.031)*	(0.036)**	(0.037)**	(0.045)***
Caste Category Congruence X BIMARU	-0.112	-0.141	-0.160	-0.135	-0.137	-0.164
	(0.052)**	(0.035)***	(0.036)***	(0.043)***	(0.042)***	(0.052)***
Jati Congruence	0.009	0.170	0.139	0.220	0.142	0.299
	(0.101)	(0.074)**	(0.069)**	(0.169)	(0.079)*	(0.201)
ME of Caste Congruence in BIMARU	-0.088	-0.098	-0.104	-0.047	-0.055	-0.042
	(0.029)***	(0.027)***	(0.027)***	(0.028)*	(0.027)**	(0.032)
N	149156	149153	149153	54721	113889	42276
R-Squared	0.186	0.318	0.324	0.301	0.327	0.318
States	All	All	All	Random DO Allocation	All	Random DO Allocation
DOs	All	All	All	All	Early Career	Early Career
Session Fixed Effects	✓		✓	✓	✓	✓
Fiscal Year Fixed Effects	✓		✓	✓	✓	✓
District Fixed Effects		✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Note: ***, **, * indicates significance at the 1%, 5%, and 10% level respectively. All models include dyad clustered standard errors and fixed effects as specified. When specified, models also control for MP and DP jati fixed effects, MP and DO caste category, MP and DO gender, MLA-MP alignment, log number of pending projects, log amount sanctioned for project, and log number of days project sat on desk of prevoius DO. Models also include an indicator for whether Jati is missing and an indicator for non-BIMARU/non-SOUTH states. Models include data from the 13th, 14th, and 15th sessions. Data from the 13th session include only BIMARU states. District officers with official caste category data included and caste category imputed for years when missing.

Table 4: Caste Category Congruence Not a Proxy for Language or State Identity

	Sanctioned in 75 Days					
Caste Category Congruence	0.056	0.059	0.062	0.122	0.126	0.127
	(0.031)*	(0.031)*	(0.031)**	(0.045)***	(0.046)***	(0.046)***
Caste Category Congruence X BIMARU	-0.160	-0.162	-0.163	-0.164	-0.167	-0.168
	(0.036)***	(0.036)***	(0.036)***	(0.052)***	(0.052)***	(0.053)***
Jati Congruence	0.139	0.146	0.127	0.299	0.298	0.325
	(0.069)**	(0.070)**	(0.070)*	(0.201)	(0.201)	(0.203)
Speaks Same Language		-0.081	-0.079		-0.035	-0.044
		(0.029)***	(0.028)***		(0.040)	(0.040)
Speaks Same Language X BIMARU		0.123	0.109		0.060	0.077
		(0.044)***	(0.047)**		(0.063)	(0.064)
From Same State			0.001			0.060
			(0.043)			(0.098)
From Same State X BIMARU			0.034			-0.082
			(0.051)			(0.105)
N	149153	149153	149153	42276	42276	42276
R-Squared	0.324	0.325	0.325	0.318	0.318	0.318
States		All		Random DO Allocation		
DOs		All		Early Career		
Session Fixed Effects	✓		✓	✓	✓	✓
Fiscal Year Fixed Effects	✓		✓	✓	✓	✓
District Fixed Effects		✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Note: ***, **, * indicates significance at the 1%, 5%, and 10% level respectively. All models include dyad clustered standard errors and fixed effects as specified. When specified, models also control for MP and DP jati fixed effects, MP and DO caste category, MP and DO gender, MLA-MP alignment, log number of pending projects, log amount sanctioned for project, and log number of days project sat on desk of prevoius DO. Models also include an indicator for whether Jati is missing and an indicator for non-BIMARU/non-SOUTH states. Models include data from the 13th, 14th, and 15th sessions. Data from the 13th session include only BIMARU states. District officers with official caste category data included and caste category imputed for years when missing.

Table 5: Congruence and Bureaucratic Performance by State History and Inequality

	Sanctioned in 75 Days					
Panel A:						
Caste Category Congruence	0.017	0.001	0.001	0.088	0.025	0.122
	(0.030)	(0.027)	(0.026)	(0.036)**	(0.028)	(0.045)***
Caste Category Congruence X Post-1993 Reservation	-0.067	-0.064	-0.071	-0.135	-0.067	-0.164
	(0.039)*	(0.033)*	(0.032)**	(0.043)***	(0.036)*	(0.052)***
Jati Congruence	0.013	0.184	0.153	0.220	0.151	0.299
	(0.102)	(0.075)**	(0.069)**	(0.169)	(0.077)*	(0.201)
ME of Caste Congruence in Post-1993 Reservation States	-0.050	-0.062	-0.070	-0.047	-0.042	-0.042
	(0.029)*	(0.024)***	(0.023)***	(0.028)*	(0.026)	(0.032)
N	148339	148337	148337	54721	113296	42276
R-Squared	0.190	0.318	0.324	0.301	0.327	0.318
Panel B:						
Caste Category Congruence	0.121	0.044	0.068	0.265	0.040	0.368
	(0.010)***	(0.013)***	(0.013)***	(0.025)***	(0.018)**	(0.031)***
Caste Category Congruence X Intra-category Inequality	-0.480	-0.280	-0.374	-0.865	-0.178	-1.146
	(0.035)***	(0.043)***	(0.043)***	(0.077)***	(0.059)***	(0.097)***
Jati Congruence	0.010	0.181	0.150	0.211	0.149	0.279
	(0.013)	(0.016)***	(0.016)***	(0.032)***	(0.020)***	(0.043)***
ME of Caste Congruence in States with Max Inequality	-0.058	-0.061	-0.073	-0.059	(0.007)***	-0.062
	(0.005)***	(0.006)***	(0.006)***	(0.008)***	(0.007)(0.007)***	(0.011)***
N	148315	148313	148313	54721	113272	42276
R-Squared	0.187	0.318	0.324	0.301	0.326	0.318
States	All	All	All	Random DO Allocation	All	Random DO Allocation
DOs	All	All	All	All	Early Career	Early Career
Session Fixed Effects	✓		✓	✓	✓	✓
Fiscal Year Fixed Effects	✓		✓	✓	✓	✓
District Fixed Effects		✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Note: ***, **, * indicates significance at the 1%, 5%, and 10% level respectively. Standard errors clustered at the dyad-level in Panel A and not clustered in Panel B. All models include fixed effects as specified. When specified, models also control for MP and DP jati fixed effects, MP and DO caste category, MP and DO gender, MLA-MP alignment, log number of pending projects, log amount sanctioned for project, and log number of days project sat on desk of prevoius DO. Models also include an indicator for whether Jati is missing. Models include data from the 13th, 14th, and 15th sessions. Data from the 13th session include only BIMARU states. District officers with official caste category data included and caste category imputed for years when missing.

Online Appendix

Table A.1: Caste Congruence and Bureaucratic Performance: Excluding Imputed Category

	Sanctioned in 75 Days					
Panel A:						
Caste Category Congruence	-0.007	-0.019	-0.021	-0.030	0.013	-0.013
	(0.029)	(0.028)	(0.028)	(0.035)	(0.029)	(0.045)
Jati Congruence	0.267	0.183	0.134	-0.167	0.134	-0.310
	(0.114)**	(0.129)	(0.121)	(0.137)	(0.107)	(0.165)*
N	83116	83110	83110	30032	65236	23451
R-Squared	0.196	0.315	0.321	0.294	0.330	0.294
Panel B:						
Caste Category Congruence	0.038	0.030	0.047	0.067	0.022	0.088
	(0.055)	(0.033)	(0.033)	(0.040)*	(0.042)	(0.059)
Caste Category Congruence X BIMARU	-0.142	-0.151	-0.176	-0.147	-0.102	-0.141
	(0.064)**	(0.053)***	(0.054)***	(0.052)***	(0.063)	(0.070)**
Jati Congruence	0.246	0.146	0.102	-0.211	0.099	-0.375
	(0.110)**	(0.125)	(0.118)	(0.133)	(0.103)	(0.156)**
N	83116	83110	83110	30032	65236	23451
R-Squared	0.202	0.317	0.323	0.295	0.331	0.295
ME of Caste Congruence in BIMARU	-0.104	-0.121	-0.129	-0.080	-0.080	-0.053
	(0.040)***	(0.047)***	(0.047)***	(0.044)*	(0.051)	(0.053)
States	All	All	All	Random DO Allocation	All	Random DO Allocation
DOs	All	All	All	All	Early Career	Early Career
Session Fixed Effects	✓		✓	✓	✓	✓
Fiscal Year Fixed Effects	✓		✓	✓	✓	✓
District Fixed Effects		✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Note: ***, **, * indicates significance at the 1%, 5%, and 10% level respectively. All models include dyad clustered standard errors and fixed effects as specified. When specified, models also control for MP and DP jati fixed effects, MP and DO caste category, MP and DO gender, MLA-MP alignment, log number of pending projects, log amount sanctioned for project, and log number of days project sat on desk of prevoius DO. Models also include an indicator for whether Jati is missing and an indicator for non-BIMARU/non-SOUTH states. Models include data from the 13th, 14th, and 15th sessions. Data from the 13th session include only BIMARU states. Only district officers with official caste category data included.

Table A.2: Caste Congruence and Bureaucratic Performance

	Log days to sanction					
Caste Category Congruence	0.012	0.105	0.098	-0.046	0.027	-0.104
	(0.085)	(0.073)	(0.072)	(0.079)	(0.074)	(0.088)
Jati Congruence	-0.061	-0.039	0.026	-0.186	-0.115	-0.800
	(0.255)	(0.196)	(0.177)	(0.296)	(0.221)	(0.352)**
N	149156	149153	149153	54721	113889	42276
R-Squared	0.266	0.461	0.465	0.440	0.478	0.444
Caste Category Congruence	0.079	-0.017	-0.049	-0.240	-0.185	-0.362
	(0.151)	(0.124)	(0.122)	(0.134)*	(0.118)	(0.145)**
Caste Category Congruence X BIMARU	0.099	0.264	0.299	0.281	0.368	0.403
	(0.174)	(0.133)**	(0.133)**	(0.154)*	(0.150)**	(0.178)**
Jati Congruence	-0.059	-0.037	0.027	-0.209	-0.097	-0.760
	(0.243)	(0.195)	(0.179)	(0.293)	(0.224)	(0.356)**
ME of Caste Congruence in BIMARU	0.178	0.247	0.250	0.041	0.183	0.041
	(0.109)	(0.092)***	(0.093)***	(0.090)	(0.103)*	(0.105)
N	149156	149153	149153	54721	113889	42276
R-Squared	0.269	0.462	0.466	0.441	0.478	0.445
States	All	All	All	Random DO Allocation	All	Random DO Allocation
DOs	All	All	All	All	Early Career	Early Career
Session Fixed Effects	✓		✓	✓	✓	✓
Fiscal Year Fixed Effects	✓		✓	✓	✓	✓
District Fixed Effects		✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Note: ***, **, * indicates significance at the 1%, 5%, and 10% level respectively. All models include dyad clustered standard errors and fixed effects as specified. When specified, models also control for MP and DP jati fixed effects, MP and DO caste category, MP and DO gender, MLA-MP alignment, log number of pending projects, log amount sanctioned for project, and log number of days project sat on desk of prevoius DO. Models also include an indicator for whether Jati is missing and an indicator for non-BIMARU/non-SOUTH states. Models include data from the 13th, 14th, and 15th sessions. Data from the 13th session include only BIMARU states. District officers with official caste category data included and caste category imputed for years when missing.

Table A.3: Caste Congruence and Bureaucratic Performance: Cox Hazard Model

	Log days to sanction					
Caste Category Congruence	-0.032	-0.090	-0.099	-0.022	-0.072	0.009
	(0.054)	(0.057)	(0.056)*	(0.077)	(0.071)	(0.090)
Jati Congruence	-0.004	0.523	0.434	0.236	0.729	0.478
	(0.184)	(0.191)***	(0.159)***	(0.273)	(0.139)***	(0.339)
N	140728	140728	140728	52173	108710	40939
Caste Category Congruence	0.045	0.085	0.113	0.159	0.099	0.232
	(0.121)	(0.106)	(0.109)	(0.148)	(0.108)	(0.145)
Caste Category Congruence X BIMARU	-0.167	-0.325	-0.368	-0.262	-0.334	-0.350
	(0.137)	(0.124)***	(0.126)***	(0.166)	(0.144)**	(0.174)**
Jati Congruence	0.009	0.530	0.444	0.250	0.716	0.457
	(0.178)	(0.185)***	(0.155)***	(0.270)	(0.144)***	(0.342)
N	140728	140728	140728	52173	108710	40939
States	All	All	All	Random DO Allocation	All	Random DO Allocation
DOs	All	All	All	All	Early Career	Early Career
Session Fixed Effects	✓		✓	✓	✓	✓
Fiscal Year Fixed Effects	✓		✓	✓	✓	✓
District Fixed Effects		✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Note: ***, **, * indicates significance at the 1%, 5%, and 10% level respectively. Cox proportional hazard model estimates reported. All models include dyad clustered standard errors and fixed effects as specified. When specified, models also control for MP and DP jati fixed effects, MP and DO caste category, MP and DO gender, MLA-MP alignment, log number of pending projects, log amount sanctioned for project, and log number of days project sat on desk of prevoius DO. Models also include an indicator for whether Jati is missing and an indicator for non-BIMARU/non-SOUTH states. Models include data from the 13th, 14th, and 15th sessions. Data from the 13th session include only BIMARU states. District officers with official caste category data included and caste category imputed for years when missing.

Table A.4: Caste Congruence and Bureaucratic Performance

	Sanctioned in 75 Days					
Panel A:						
GEN Category Congruence	-0.016	0.002	-0.006	0.005	-0.017	-0.016
	(0.044)	(0.032)	(0.031)	(0.042)	(0.037)	(0.055)
OBC Category Congruence	0.007	-0.078	-0.075	-0.049	0.012	0.038
	(0.065)	(0.052)	(0.051)	(0.063)	(0.058)	(0.065)
SC/ST Category Congruence	-0.014	-0.058	-0.063	0.022	0.000	0.074
	(0.053)	(0.042)	(0.041)	(0.058)	(0.050)	(0.079)
Jati Congruence	0.005	0.166	0.134	0.219	0.147	0.322
	(0.106)	(0.075)**	(0.069)*	(0.174)	(0.077)*	(0.195)*
N	149156	149153	149153	54721	113889	42276
R-Squared	0.184	0.317	0.323	0.299	0.326	0.316
Panel B:						
GEN Category Congruence	-0.005	0.063	0.073	0.098	0.076	0.119
	(0.061)	(0.039)	(0.039)*	(0.054)*	(0.048)	(0.068)*
OBC Category Congruence	0.147	0.065	0.081	-0.055	0.125	-0.139
	(0.103)	(0.087)	(0.090)	(0.066)	(0.089)	(0.113)
SC/ST Category Congruence	0.036	-0.017	-0.009	0.090	0.082	0.097
	(0.075)	(0.104)	(0.102)	(0.102)	(0.101)	(0.123)
Jati Congruence	0.005	0.158	0.125	0.220	0.111	0.270
	(0.100)	(0.074)**	(0.069)*	(0.168)	(0.079)	(0.187)
GEN Category Congruence X BIMARU	-0.105	-0.165	-0.192	-0.153	-0.172	-0.227
	(0.060)*	(0.042)***	(0.043)***	(0.058)***	(0.049)***	(0.069)***
OBC Category Congruence X BIMARU	-0.188	-0.141	-0.148	0.008	-0.081	0.202
	(0.113)*	(0.098)	(0.100)	(0.082)	(0.093)	(0.121)*
SC/ST Category Congruence X BIMARU	-0.073	0.015	0.013	-0.101	-0.032	-0.078
	(0.084)	(0.124)	(0.120)	(0.118)	(0.130)	(0.140)
N	149156	149153	149153	54721	113889	42276
R-Squared	0.188	0.319	0.325	0.301	0.328	0.319
States	All	All	All	Random DO Allocation	All	Random DO Allocation
DOs	All	All	All	All	Early Career	Early Career
Session Fixed Effects	✓		✓	✓	✓	✓
Fiscal Year Fixed Effects	✓		✓	✓	✓	✓
District Fixed Effects		✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Note: ***, **, * indicates significance at the 1%, 5%, and 10% level respectively. All models include dyad clustered standard errors and fixed effects as specified. When specified, models also control for MP and DP jati fixed effects, MP and DO caste category, MP and DO gender, MLA-MP alignment, log number of pending projects, log amount sanctioned for project, and log number of days project sat on desk of prevoius DO. Models also include an indicator for whether Jati is missing and an indicator for non-BIMARU/non-SOUTH states. Models include data from the 13th, 14th, and 15th sessions. Data from the 13th session include only BIMARU states. District officers with official caste category data included and caste category imputed for years when missing.

Table A.5: Caste Congruence and Bureaucratic Selection

	DO was Selected			DO Duration		
Caste Category Congruence	-0.080	-0.031	-18.466	-4.188	10.061	1.997
	(0.033)**	(0.061)	(25.758)	(50.229)	(57.343)	(114.391)
Caste Category Congruence X BIMARU		-0.060		-18.124		-43.239
		(0.067)		(58.036)		(123.224)
Jati Congruence	0.103	0.110	135.631	111.222	-154.917	-130.275
	(0.088)	(0.091)	(133.295)	(127.869)	(178.485)	(192.438)
N	1304	1304	1303	1303	233	233
R-Squared	0.158	0.159	0.244	0.266	0.382	0.401
ME of Caste Congruence in BIMARU		-0.090		-22.312		-41.242
		(0.041)**		(31.618)		(59.349)
States	All	All	All	All	All	All
DOs	All	All	All	All	Inherited	Inherited
Session Fixed Effects	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Note: ***, **, * indicates significance at the 1%, 5%, and 10% level respectively. All models include MP clustered standard errors and session year fixed effects. Models also control for MP and DP jati fixed effects, MP and DO caste category, and MP and DO gender. Models also include an indicator for whether Jati is missing and an indicator for non-BIMARU/non-SOUTH states. Models include data from the 13th, 14th, and 15th sessions. Data from the 13th session include only BIMARU states. District officers with official caste category data included and caste category imputed for years when missing.
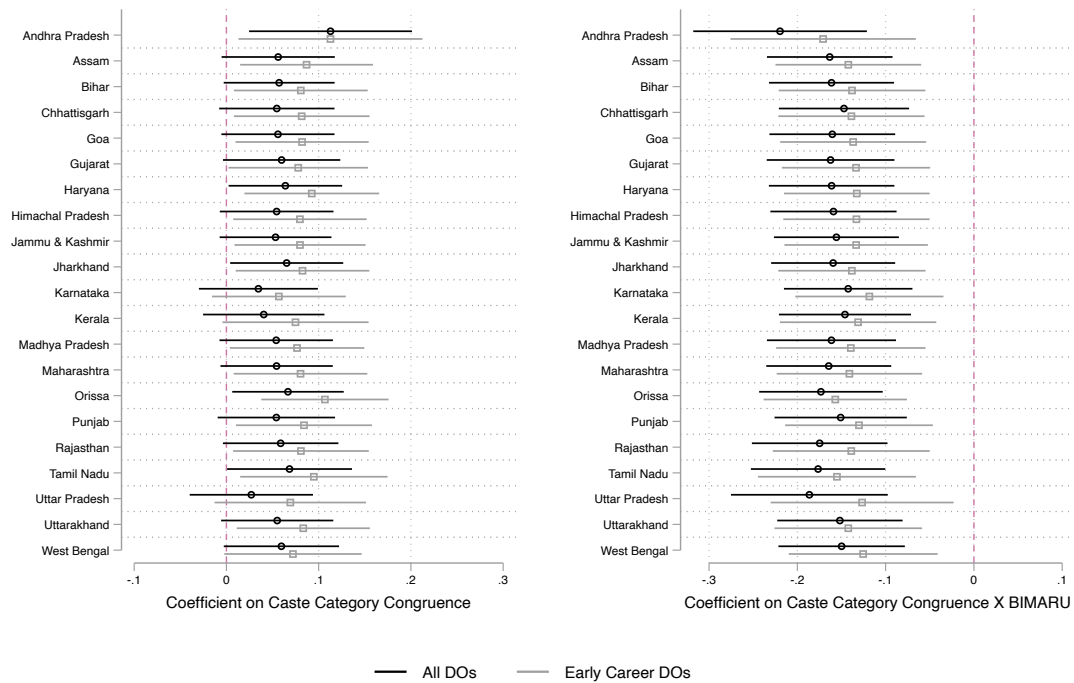
Figure A.1: Coefficient Estimates Removing States One-by-One

Note: Each coefficient represents the estimates from equation 2 for the sample with all DOs and early career DOs with session, fiscal year, and district fixed effects when running the equation removing data from the state on the y-axis.