Historical Legacies at the Grassroots: Local Public Goods in Agra District, 1905-2011

Alexander Lee*

September 20, 2020

Abstract

Accounts of the historical origins of spatial inequality often use aggregated spatial units, and do not measure outcomes between the time of treatment and the present day. This paper analyses a new panel dataset of local public goods provision in a single North Indian district with observations at the village decade level going back to 1905, and detailed information on colonial land tenure institutions, landholding patterns and demographics. A historical factor often thought to influence rural politics in India, the presence of large or absentee colonial landowners, explains little variation in local public goods conditional on population and spatial location, while villages inhabited by upper caste groups had an advantage only during the mid-20th century. This non-effect is in part a result of changing effects over time. In particular, while villages have always been more likely to gain public goods while a member of the village's largest caste group was in power at the state level, changes in the composition of Northern India's political class have meant that this favoritism has benefited different groups in different periods. The results illustrate the changing and contingent nature of effects of institutional differences

Keywords: Historical Legacies, State Capacity, Public Goods

PRELIMINARY WORK: DO NOT CITE WITHOUT PERMISSION

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

1 Introduction

In the past two decades, there has been an explosion of literature on the long term effects on historical institutions on economic development and public goods provision (Acemoglu, Johnson and Robinson, 2002; Dell, 2010; Lee and Schultz, 2012; Iyer, 2010; Sellars and Alix-Garcia, 2018; Dasgupta, 2018; Nunn and Wantchekon, 2011; Besley and Reynal-Querol, 2014). At its best, this literature fills an important lacuna in the literature on the political economy of development, which often analyses the impact of factors such as state capacity, economic inequality, social trust and ethnic diversity in cross-section without examining the origins of variation in these factors.

However, analyses of historical persistence often take two analytical shortcuts that limit their ability to make generalizations about this type of historical persistence. Firstly, the unit of analysis is often distinct from either the unit of treatment, either because of change in the structure of units over time or the unavailability of disaggregated data. This approach leads to the well-known problems associated with ecological inference and inference based on modifiable areal units. Results may vary widely based on the level of aggregation, particularly when the units of aggregation themselves are correlated with preexisting geographical conditions and subsequent historical events. Secondly, the outcome of interest is often not measured for a long part of the period between the historical treatment and the present day, making in impossible to access changes in effect size over time. In fact, perhaps the most common design is cross-sectional, with only suggestive evidence on how or whether an institution's effect persisted over the decades (or, sometimes, millennia) between treatment and measurement.

India, with its profound regional inequalities, has been a center for studies of both public goods provision and historical institutions. One institution that has been intensely studied is land tenure. In some areas, the colonial state transferred property rights to a few large landlords, while in other areas these rights were divided among ordinary cultivators. In a widely cited paper, Banerjee and Iyer (2005) showed that Indian districts where large landlords were more common had higher levels of local public goods provision and agricultural investment in the 20th century, though both this finding and the mechanism behind it have since been extensively debated (Iversen, Palmer-Jones and Sen, 2013; Lee, 2019*c*; Verghese and Teitelbaum, 2014; Sarbahi, 2016; Mukherjee, 2013). The other major hypothesis for explaining spatial variation in public service delivery in India is caste. The "ranked" social differences characteristic of the caste system are

widely thought important in shaping political patterns (**?**Suryanarayan, 2017; Waring and Bell, 2013; Singh and Spears, 2017; Frankel and Rao, 1989; Anderson, Francois and Kotwal, 2015; Banerjee and Somanathan, 2007) with areas inhabited by high status or politically powerful group having higher levels of public service provision.

While most of these studies attempt to explain processes that occur at the local or even individual level, they measure both outcomes and treatments either by state (Lee, 2019*a*; Frankel and Rao, 1989) or district (Banerjee and Iyer, 2005; Iversen, Palmer-Jones and Sen, 2013; Lee, 2019*c*; Banerjee and Somanathan, 2007). Given the complex and endogenous relationship between land tenure institutions and caste and district and state-level characteristics, this approach requires strong identifying assumptions. Furthermore, while historical land tenure does not vary over time, and local caste is relatively stable, the political context in which rural Indians operate has changed markedly in the past century, with the state making major, though only inconsistently successful, attempts to weaken the power of colonial landlords and high status caste groups.

To examine these hypotheses, this paper analyses a new dataset of public goods outcomes and historical institutions in a single district in the North Indian state of Uttar Pradesh, Agra. This data is collected at the village level, the basic level at which public goods are assigned. For many villages, it includes detailed information on the structure of landholding in the late colonial era, collected from unpublished colonial records from the local archives. These are supplemented with colonial census data, which gives detailed information of local caste and occupational breakdowns in the late colonial period, and data on post-independence elections. This data on local conditions supplements panel data on the provision of local public goods in each village that collected (roughly) every decade from 1905 to 2011.

The data show that only very limited support for existing hypotheses about the origins of public goods in India. While ownership of the village by a single group of landlords, or by absentee landlords, in colonial times is associated with lower levels of public goods provision in the late 20th and 21st centuries, this effect is insignificant after conditioning on village population and spatial location. The effect of the presence of specific politically powerful caste groups varies over time. The presence of upper caste groups had a positive influence in the "Congress" era (1947-1989) but null or negative effects in the colonial period in the more competitive conditions that have prevailed since 1991.

The most straightforward interpretation of these findings is that the gradual rise to political influence of lower status caste groups in northern India, and the legal reforms taken by the government to expropriate large landowners, have reversed the political inequalities that existed in mid-century India. Panel results support this assertion: Villages are more likely to gain public goods when a member of the plurality caste is in office at the state level.

The results suggest a nuanced picture of the role of land and identity in shaping rural Indian politics. While upper caste groups were once politically preeminent in rural northern India, as other social groups became more prominent in the political process at the national and regional levels, this advantage melted away, or even reversed itself. The legacy of historical institutions and demographic characteristics appear to depend on when the question is asked.

2 Theoretical Framework

2.1 Distributional Politics in Poor Countries

Perhaps the most fundamental source of political conflict is how state resources should be distributed.[1] Many resources—jobs, ration cards, pensions—are distributed to individuals, but others—schools, roads, electrical connections—are distributed to geographical communities. Within these communities, these goods are usually non-excludable (anyone in the community can use them) and non-rival (more users does not reduce the good's quality). These services are thus usually termed "local public goods" though they differ in some respects from public goods formally defined.

In the face of a budgetary constraint, only some communities can receive these local public goods. In some cases, these decisions may be based on publicly announced "programmatic" criteria, such as population (Stokes et al., 2013). In many others, however, bureaucrats or politicians have some discretion as to which communities will receive transfers, making them "pork." Even where distribution is formally program-

[1] At the national level, there are important tradeoffs between taxation and redistribution. However, in India (and in many other developing countries) state, district and local governments have little taxing autonomy, and focus on spending money raised by other agencies. The discussion in this paper will thus focus entirely on the distributional side of the game.

matic, the publicly announced criteria may be written to benefit certain categories of people such as those in poverty. In theory, communities might be able to provide local public goods through taxation, but in practice this is rare, given the poverty of rural communities in developing countries and legal or de facto monopoly that the state enjoys over certain types of services (Lee, 2018).

The bureaucrat or politician with discretion is thus the key actor in most theories of distributional politics. Three broad classes of explanations stand out for why a decisionmaker might favor some communities over others. A decisionmaker might have an affective preference for some communities over others, because they are inhabited by friends, relatives or coethnics. Communities might be able to informally reward or sanction a decisionmaker for choosing them, either through outright bribery or promises of some other type of favor—"lobbying." Finally, in a democracy a community can reward politicians who favor them and punish those who do not distribute resources to them, leading politicians to use resource distribution to build winning coalitions.

This discussion has treated the community as a unitary actor. Some accounts, particularly those influenced by cooperative accounts of provision such as Habyarimana et al. (2007), argue that lobbying and political organization require collective action on the part of communities, and that since local public goods are non-excludable there are incentives to free ride. Communities who can solve the collective action problem, in this view, are more likely to receive resources. Note, however, that while collective action may be a predictor of distribution, it is not a necessary one. If the individual value of the good is high enough relative to the cost of lobbying, a small group within a community, or even a single individual, will have an incentive to advocate on their communities behalf.

2.2 Distributional Politics in Rural India

How do these theories apply to the context of rural India? Perhaps the best known story hinges on differences in colonial land tenure systems, which have been widely claimed to have shaped the development trajectories of modern India, with areas with landlord-centered systems having lower levels of state capacity, public goods provision, and economic activity (**?**Verghese and Teitelbaum, 2014; Sarbahi, 2016; Mukherjee, 2013). The most common version of this story hinges on cooperation. Tenure systems that gave power to landlords created higher levels of economic inequality, which inhibits cooperation both by creating het-

erogenous demand for public goods and by encouraging destructive and distracting conflict over economic redistribution, particularly of land. If the landlords were absentees, as they often were, the effects might be more negative still, since non-residents had no incentive to lobby for public goods from which they will not benefit.

In rural India, the major local public goods discussed in the literature are provided at the village level: schools, access roads, electrical connections. However, the studies of colonial land tenure have generally been conducted at the district level. However, here is no reason to expect the effects of these institutions to be the same at different levels. Lee (2019*c*), for instance, finds that colonial land tenure systems weakened state capacity at the province and district level, but makes no conclusions about what within district comparisons might reveal. Moreover, the distribution of colonial land tenure systems had a strong spatial component, being most common in the East and North of the subcontinent, making cross-district comparisons vulnerable to confounding by pretreatment traits and post-treatment historical events.

Another commonly told stories hinges on the role of ethnic identity, and in particular the role of individual castes (*jatis*).[2] The most common story centers on the hierarchical nature of the caste system. The Indian caste system is, at least in theory, a "ranked" system where some individuals claim a higher status than others (Lee, 2019*b*), Such a system might well generate antipathies that would inhibit cooperation, and experimental evidence has found that cooperation across status differences is in fact exceptionally difficult (Waring and Bell, 2013; Singh and Spears, 2017). Even if cooperation is unimportant, decisionmakers drawn disproportionately from the upper caste might favor individuals from their own status level (Lee, 2018) or even refuse to provide goods entirely (Suryanarayan, 2017) rather than give resources to those they consider inferior. A closely related argument is that decisionmakers from politically powerful groups ("dominant castes") might have an incentive to avoid distributing benefits if they believe that they will undermine their political position in the long term by weakening patterns of clientelistic dependence, especially when they do not constitute a majority of the population (Anderson, Francois and Kotwal, 2015). This echoes claims made in other contexts that intergroup economic inequality hurts support for public goods provision (Baldwin and

[2]While in the non-Indian literature accounts of ethnicity and public goods tend to focus on the negative role of diversity (Habyarimana et al., 2007; Alesina and Ferrara, 2005), there is at best limited evidence for such an effect in the Indian context, due to the extraordinarily high levels of caste diversity and the small role of cooperation in public (see Banerjee and Somanathan (2007) and (Lee, 2018)).

Huber, 2010; Shayo, 2009).

Like land tenure, the role of identity might plausibly vary across levels of aggregation (Gisselquist, Leiderer and Niño-Zarazúa, 2016; Gerring et al., 2015). Also like land tenure, the distribution of high status castes is uneven, with with high status groups being especially common in the north of the subcontinent, and with complex patterns of regional and subregional variation. The relative political importance of caste groups also varies from place to place, in part due to the redistributions of land and caste identities that occurred in the colonial period (Lee, 2017)

2.3 Distributional Politics in Time

The theories discussed in the last section are theories of democratic politics in India. While historical events are important, they work by shaping the distribution of economic resources and identities that shape contemporary competition. In a limited sense, this division between a parameter-shaping past and a distributional present recognizes that most of the public goods we observe were provided (and, in some cases, invented) in the 20th century, long after the major distributional policies of the colonial regime were well-established. However, the Indian state has been building schools, post offices and roads in rural areas for well over a century. Was the effect of "historical legacies" the same throughout this period?

In fact, the rules of political competition in rural India have changed considerably over the past century and a half. In the colonial period, local power was shared between a tiny number of colonial officials, a slightly larger number of upper caste elite leaders (often landlords, traditional rulers or professionals) on whom they relied for political support, and a few local and provincial legislative bodies elected on an extremely limited franchise (Reeves, 1963; Metcalf, 1979). After independence in 1947, universal suffrage was introduced, but the dominance of a single party (the Indian National Congress) and the limited spread of education meant that most high level decisionmakers were still wealthy upper caste mean, and that rural landowners still could influence the votes of other villagers (Kothari, 1964; Jaffrelot, 2003). Beginning the 1960s, the power of these wealthy upper caste brokers and politicians began to decline in tandem with mass education and Congress hegemony. Since the1990s, many (though not all) senior politicians are from traditionally low status groups, appeals to these groups are part of everyday political discourse, and the brokers and party worker who make up the base of the system are much more representative of the population as a whole—

Jaffrelot's (2003) "silent revolution." This period also saw the development of village self-government on a limited scale, and the reduction of bureaucratic autonomy, reducing the importance of the still heavily upper caste bureaucracy.

The patterns discussed in the last section might have different effects under these political regimes. Consider the case of a community inhabited primarily by upper castes. In the colonial and congress periods, when members of these groups dominated the bureaucracy and elected office, this community might be more likely than others to be a target for resource distribution, either because decisionmakers favor coethnics for affective reasons, seek to reward them for providing political support, or be more vulnerable to lobbying or social sanctioning by coethnics. However, once members of lower status groups rose to political power after 1990, this advantage should diminish or even reverse.[3]

3 The Context

3.1 Agra District

Agra district is located in northern Indian state of Uttar Pradesh, in the basin (*doab*) of the Yamuna river, about 140 miles southeast of Delhi. Topographically, the region is quite typical of the doab regions, being generally flat and having fertile alluvial soils, though there are some low hills and less fertile area of sandy soil. The administrative district has existed in some form since the early 16th century, though it was once larger than it is now. This paper focuses on the district boundaries that existed between 1872 and 1989, and thus include some areas that have been part of Firozbad district since 1989. Within these boundaries, the district is divided into 8 subdistricts (*tehsils*), which have changed little since the 19th century,[4], and each tehsil contains between 100 and 200 villages. In 2011, the historical district had 31 towns (many of which were quite small and had only attained self-governing power very recently) and 1134 inhabited villages. This paper will focus on areas that had village status in 1901, thus excluding the tehsil and district headquarters towns.

[3] Banerjee and Iyer (2005) and (Acemoglu, Johnson and Robinson, 2002) make related arguments that institutional arrangements that are not negative under one (low growth) set of economic conditions might be negative under other (high growth) conditions.

[4] One new tehsil was created in 1989.

The administrative center of Agra district, and the scene until recently of virtually all of its non-agricultural economic activity, is the city of Agra. Agra's period of glory was the late 16th and early 17th century, when it (or the nearby, now abandoned Fatepur Sikri) was the capital of the Mughal empire. During this period, a set of spectacular monuments were constructed, including the Agra Fort and the Taj Mahal, that have made Agra a modern center of the Indian tourist trade. The city never really recovered from Shah Jahan's decision to move the court to Delhi in 1648, but it, and in particular the fort, remained a regional and military center in the subsequent century and a half, with the provincial governors of the Mughal, Jat and Maratha empires using the city as their administrative center for the doab. However, outside the walls, the local administration and taxing apparatus of the Mughals fell into decay in this period, with local warlords, peasants and landowners defying the central authorities from their mud walled forts. The conquest of Agra by the British (1803) ended this period of political instability, and began a period of profound, and often disruptive changes in local fiscal and land tenure systems, the consequences of which will be discussed below. It briefly brought Agra back its status as a provincial capital, though after 1858 Agra was left as an ordinary divisional and district headquarters.

Figure 1: Agra District

(a) Within India

(b) In 1905

Notes: Subfigure A shows the current boundaries of Agra within Indian and Uttar Pradesh. Figure B shows Agra within its 1905 boundaries.

Sources: https://commons.wikimedia.org/wiki/File:Uttar_Pradesh_district_location_map_Agra.svg Accessed 7/20/20. Nevill (1905, np)

Both in the colonial period and after independence, Indian districts like Agra have had very little policy

autonomy. Outside the cities, only democratically elected bodies are the district and the recently founded village panchayats, which are handicapped by limited legal scope and financial resources. Most importance decisions are made by bureaucrats (the district magistrate and his subordinates) who are recruited from a statewide cadre and are subject to the policy dictates of the state government. The policies adopted in Agra thus closely resemble those in Uttar Pradesh as a whole, and most important aspect of local politics is the election of state-level representatives.

Like many other parts of India, the post-independence politics of Uttar Pradesh can be divided into two phases and the transition between them. Between 1947 and 1967, the state was dominated by the Congress party, and the Congress party was in turn dominated by narrow groups of upper caste politicians. Political conflicts tended to be internal struggles between factions of these politicians and their client networks. Beginning in the 1960s, the Congress began to be challenged by other parties, often led by lower caste politicians and promising to improve distribution to the lower castes.

Since 1989, this process has turned UP into one of the most politically competitive places in the world, with four major parties, numerous smaller ones, constantly shifting alliances, and extremely close elections—in 2012 the average winning candidate gained only 35% of the vote. Two of the major parties, the Bahujan Samaj Party (representing former untouchables in general and the Chamar caste in particular) and the Samajwadi Party (representing the "Other Backward Classes" (OBCs) in general and the Yadav caste in particular), have put their devotion to enhancing the power of lower caste groups at the center of their political strategies, and even the "upper caste parties" eagerly promote lower caste politicians and political brokers. Thanks to the quotas in government hiring introduced in 1994 after the belated implementation of the Mandal Commission report, has led to a substantial increase in the proportion of OBCs in the upper bureaucracy, previously monolithically upper caste.

3.2 Identity Groups

The caste groups (jatis) of Agra district are typical of northern India as a whole. Overall, the distribution is highly fragmented. The largest caste (the Chamars) composed only 16.3% of the male population in 1931,

and in 1929 only 26% of villages had a caste that made up more that 50% of the population.[5] Other than the Chamars (a traditionally poor and stigmatized groups associated with leatherwork), the largest castes are the Brahmins (traditionally priests), the Rajputs and the Jats (traditionally soldiers and cultivators). All three of these groups owed a large portion of the land in colonial times, (respectively 28.2%, 27.1% and 7.5% at the turn of the century), and two small commercial castes (the Banias and the Kayasths) owned another 19.1% (Nevill, 1905, 86). This distribution reflects centuries of policy: Rajput and Jat dynasties controlled most of the district during the 18th century interregnum, and had been among the "martial" groups favored by the colonial government. The Brahmins, Banias, and Kayasths, on the other hand, had been among the first groups to enter the colonial bureaucracy, and had been well-positioned to acquire land in the unstable period after the colonial conquest. These groups monopolized power in Uttar Pradesh until relatively recently, making up the majority of the state legislature until the 1960s and the majority of senior bureaucrats for much longer.

There are dozens other caste groups in the Agra district, all were historically considered "low," and all comprised less than 6% of the population in colonial times.They were also historically marginalized by the colonial land tenure system. In 1905 the approximately 69% of the population who were not from clean Hindu castes owned only 17% of the land. However, politicians from some of these groups, like the Chamars and Yadavs, have become politically powerful in the state as a whole since independence. Despite its long history of Muslim rule, Agra's contemporary Muslim population is less than the national average and relatively poor.

3.3 Land Tenure Policies

Despite the recent history of policy uniformity, there are dimensions of diversity within Agra district. The best known of these are differences in the land tenure systems adopted during the colonial period. Each system placed the responsibility for paying the land tax, and thus legal "ownership" of the land, on a different group. The British adopted sharply different land tenure systems in different parts if India, in some areas adopting institutions that transferred property rights and administrative power to large landholders (*zamindars*), while in others giving these rights to peasant cultivators (either individual or collectively) supervised

[5]Independent India does not collect figures on jati numbers, making the 1931 census the most recent source on this topic.

by local bureaucrats.[6] These tenures, and the quasi-political role associated with them, have not been formally significant since Indian independence, after which all the colonial land tenures were abolished, and zamindars permitted to keep only the land they cultivated themselves.

Of the four major land tenure systems of colonial India discussed by Banerjee and Iyer (2005) and Lee (2019*c*) , two were represented in practice in Agra. Systems which placed the revenue responsibility on a single landlord with an occasionally reassessed tax assessment (temporary zamindari), or those that placed the responsibility on the village community jointly.[7]. Both in theory and in practice, the legal distinction between these categories was less meaningful than the differences in the number of landowners. When the "village community" was comprised of only a single family, the system was not meaningfully different from a zamindari system (Iversen, Palmer-Jones and Sen, 2013), while when a zamindari became subdivided over time a significant proportion of the local population might possess revenue rights. I have used these de facto classifications throughout, though in practice the correspondence with the legal distinction is high.[8]

The villages with landlord and non landlord tenures were scattered across the district, with landlord controlled villages being especially common east of the Yamuna in Etmadpur and Firozabad tehsils. This reflected the complicated and unsystematic way in which the tenures we distributed by settlement officers during the first decades of colonial rule. Landlords tended to retain control in areas where petty warlords had flourished during the 18th century, imposing their will on peasants while resisting appropriation from more central authorities, and then navigate the transition to colonial rule without seeing their estates transferred to the cultivators as a punishment for disloyalty or late payment. In practice, this meant that zamindari villages tended be of moderate economic value, less common both on the hillier periphery of the district

[6]For a brief review of these differing systems, see Lee (2019*c*). For a longer discussion, see Baden-Powell (1892).

[7]In official terminology, this meant either perfect *patidari* (where the holders had divided the land amongst themselves but maintained a joint liability for the revenue) or *bhaiachara* or imperfect *patidari* (where the holders maintained some communal land from which the revenue demand was theoretically drawn).

[8]In fact, colonial revenue officials sometimes reclassified zamindari villages with a large number of sharers as pattidari and pattidari villages with a small number of sharers were sometimes divided into zamindari estates (Evans, 1880, 17). Metcalf (1979, 119-20) also notes that over time land sales to outsiders made joint responsibility difficult to enforce, and the legal distinctions among the various legal tenures less important.

and in the immediate neighborhood of Agra city. Overall, tax levels (which were based on agricultural productivity) were quite similar between the two systems. In 1881 the zamindari villages paid an average of Rs. 1.54 per acre, while the pattidari mahals paid Rs. 1.58. We will return to the issue of selection into land tenure systems below. However, it is worth noting that the unobserved differences between villages within a single district are very modest relative to the those within India as a whole, the potential confounds in existing studies. In particular, the differences in local government spending and state bureaucracy that Lee (2019*c*) finds are associated with land tenure systems are not present within a single district without ryotwari tenure.

The majority of villages in Agra district were held in village-based system. In all these villages, the number of holders was large, with the average village possessing several dozen landowners, and some several hundred. In most cases, the original set of sharers had been members of a single caste, and often a single clan or family, almost always upper caste, who had established the village and divided the land among themselves and their heirs. Given the small size of the average holding, the landowner usually cultivated it himself. In the late colonial period, many villages still approximated this pattern, with a text single caste owning the vast majority of the land. However, in the majority (76%) of these villages the landowning caste did not constitute a majority of the village population, being outnumbered by the members of small low status castes who lived in the village and worked as laborers or craftsmen for the landowners. Given their economic dependence and low levels of prestige, these villagers played little role in village politics during the colonial period.

However, not all systems with village based tenures were the property of a single caste. During the during the late colonial period, during the 19th century there we many transfers to outsiders during the 19th century. This was particularly common during the first decades of British rule, when the colonial regime set tax rates that were unsustainably high and collected much more consistently and inflexibly than Maratha revenue demands, leading to many landowners being forced to sell out, often being replaced by individuals with connections to the colonial bureaucracy, or urban traders and money lenders (Metcalf, 1979). While this trend slowed later in the 19th century, there were still many land transfers to individuals from traditional landowning castes, often a consequence of debt. Other transfers had occurred in the more distant past, as donations to holy men or concessions to tenants. In these villages, where land and caste were decoupled, political power was shared among the landowning families, but the elite lacked the unity that came from a

common identity. These villages also tended to have slightly higher levels of absentee proprietorship than those dominated by a single caste—in 1929, 44.7% of landowners in these villages were absentees.

A final set of village (some 25.6% of the total), the government gave land rights to a single zamindar, though these rights were sometimes subdivided among brothers, and occasionally minor portions passed into the hands of the government or others. In practice I have coded all villages were four or fewer individuals held over 90% of the arable land and having a "landlord" tenure system. Given the large scale of their holdings, most of these landowners did not live in the village that they held, and virtually none cultivated their land directly: Of villages with data in 1929, on 18% of landlords in these villages lived in the villages they owned, as opposed to 77% of landowners in other villages. Most of the "big" zamindars in Agra were small relative to those in other parts of India, owning fewer than five villages. However, one exceptional family the Rajas of Bhadawar, held 32 villages in Bah Tehsil (on the Eastern edge of the district).[9]

4 The Data:

4.1 Outcomes and Controls

Since independence, the provision of village level public goods has been a central activity of the Indian state, and collection of information about this provision and important form of official knowledge and legitimation. The decennial census of 1951 included a list of primary schools in each village, and subsequent censuses have expanded this exercise into a comprehensive "village directory" of public goods in the village. While recent years have included the total number of goods, for consistency all were recoded as binary measures of the presence of the good. The variables used in this study, and their availability, by year, are summarized in Table 1, which also shows the proportion of villages in each year possessing the good.[10] While the modern censuses collect data on a very wide range of goods, I have focused on those with limited private provision in rural areas, long periods of temporal coverage, and where the definition of the good has not shifted over time: schools, electricity post offices and good roads (coded as "pucca" but the census). An additional In

[9]Of these villages, 23 were held revenue free and 6 on a fixed rent, giving the Rajas financial status similar to landlords in eastern India, with "permanently settled" zamindari tenure.

[10]Some additional information for 1951 was gathered from other published sources, including *New directory of high schools in India & Pakistan*, 1951 edition.

addition to the village directory data, the census also includes more conventional demographic data that are used in some models, including population, area, literacy, occupational structure and presence of the scheduled caste category.

The 1991, 2001 and 2011 census are available electronically, while the 1951, 1961 and 1971 data were entered by hand. The 1981 census is in the process of being entered by hand. Great efforts were made to match villages across years, a difficult problem given the numerous changes in village name and transliteration that have taken place over the past century. Difficult cases were resolved using scanned historical census and revenue maps. Fortunately, village boundaries are much more stable than village names. A few "splits" have been dealt with by adding the component parts to approximate the colonial boundaries. A few villages disappear from the data, due to the suburban expansion of Agra City, changes in the course of the Yamuna, or minor changes in district boundaries. Overall, there were 1204 inhabited villages and towns in the district in 1901 and 1165 in 2011. Agra City and all the tehsil headquarters towns are dropped. However, villages that attained municipal status after 1947 are retained in the dataset, which includes 1131 villages.

Table 1: Public Goods in Agra District, 1904-2011

	1905	1914	1924	1932	1951	1961	1971	1981	1991	2001	2011
Primary School	11	11	12	20	28		62		80	90	95
Middle School	0	0	0	0			12		20	25	63
High School	0	0	0	0		0	3		5	5	23
Post Office	2	3	2			9	19		24	25	24
Electricity	(0)	(0)	(0)	(0)		0	33		73	80	100
Quality Access Road							34		56	82	90

Notes: Numbers represent the proportion of villages possessing each good in each census year. Figures are rounded to the nearest whole percentage. Zeros in parentheses are imputed from secondary sources.

Before independence, data on selected public goods were available from the *Gazetteers of the United Provinces*, the Agra volume of which was first issued in 1905, with statistical supplements updating the public goods list issued irregularly thereafter, with the last colonial issue being in 1932. The range of information included in the gazetteers is narrower than that in the census, thought this in part reflects the narrow range of goods provided by the colonial state.

There is a division between the data between primary schools and post offices, which were provided in some villages even during the colonial period, and the other four goods, which were not available (or, in the case of improved roads, not measured) before 1971. Post offices and primary schools will thus be the focus of the analysis in the colonial period

4.2 The Data: Caste and Land Tenure

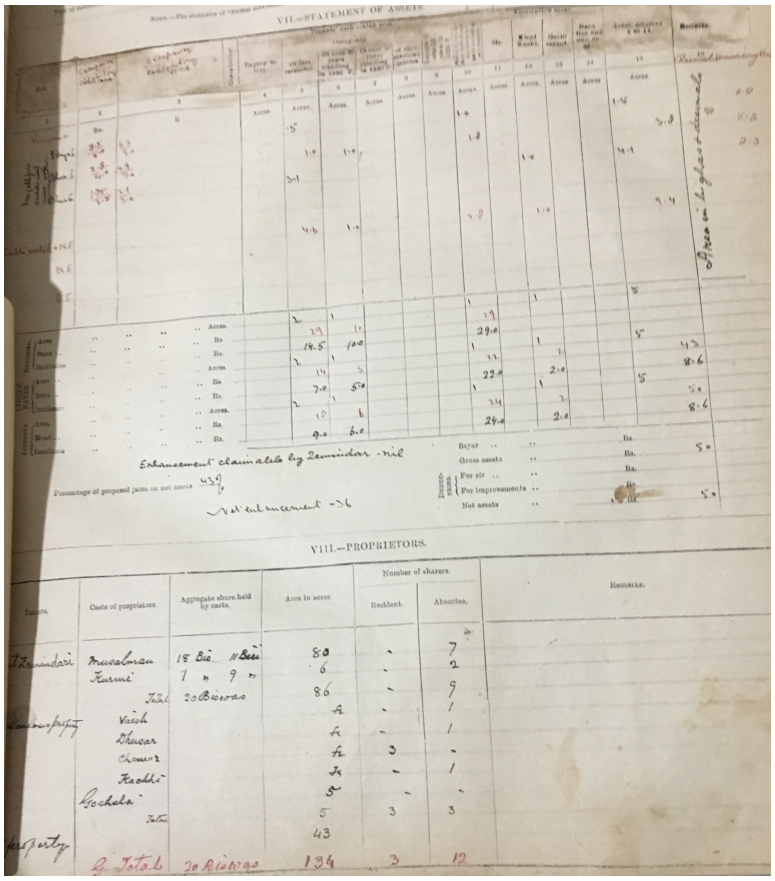
The measurement of colonial land tenure systems at the village level is a surprisingly difficult problem: While aggregated statistics at the district level are widely available, information on individual villages is only available in local archives, and highly susceptible to physical decay or loss. Agra district is remarkable for preserving a large set of colonial land records, though the available data covers only 29% of villages, scattered evenly throughout the district. The archive staff were not able to offer guidance on the source of this missingness, though it is certain that records for all villages once existed. Table A.2 compares the villages with land tenure data to the rest of the data on 2011 and 1891 traits. The 336 villages without records are extremely similar to the 796 villages without records on observables, consistent with the idea that the selective preservation records is a results of processes within the archives orthogonal to the characteristics of the villages themselves. The proportions of different tenures recorded in the preserved files are also very close the aggregate figures reported in the 1930 settlement report: 25.6% of villages in the sample had landlord tenure in 1930, vs. 23.8% of villages with single zamindari in the district overall (Mudie, 1930, 4a).

The primary archival source was the records of the last colonial land settlement, which occurred between 1929 and 1930. All types of land tenure in Agra district, even the revenue free ones, were liable to a periodic reassessment of the tax rates, which in theory was to occur every 30 years, though fact the 1930 settlement was the first since 1880. The settlement officers collected detailed information on each village and on individual holdings within the village, with the goal of increasing or reducing tax rates in proportion to local resources. An example of the summary reports on each village is given in Figure 2. The most important information for our purposes was the breakdown of cultivated acreage in the village by landlord caste (which allows a calculation of the percentage of land owned by fewer than five individuals, and the number of absentee and resident proprietors holding this acreage.

The settlement information focuses on land tenure, rather than the population of the village as a whole. However, in 1891 the census authorities printed a detail set of village census statistics for each district, the Agra volume of which has been preserved in the British Library.[11] This volume includes data on village

[11] A similar effort was conducted in 1921, but the Agra volume is not available in any world library to the author's knowledge.

Figure 2: Sample Page of 1929 Settlement Records



population, literacy levels, a rough occupational breakdown, resident religion, and resident caste (though only for the largest caste in the village, or other castes with over 25% of the population). From these figures, I calculated a set of binary indicators for whether more than 25% of a village's population was from one of the five most common castes in the rural parts of Agra district: Chamars, Brahmins, Rajputs, Jats and Yadavs. Of these, the Brahmins, Rajputs are of traditionally high status, owned large amounts of land during the colonial period and were prominent in the political system, both in Agra and UP as a whole, during the congress period. The Jats also owned a large amount of land, but were of slightly lower status, and only became politically prominent in the later years of the Congress era. The Yadavs and Chamar were of traditionally low status, owned little land during the colonial era, and were marginalized politically in the post-independence years. However, since the 1990s they have become the two most politically important groups in the state, with major parties organized around their interests

4.3 General Trends in Public Goods Provision

Figure A.2 shows the basic temporal trends in the provision of six public goods: The lines traces the proportion of villages *not* having the good at each census or gazetteer year—"failure" . Only the presence of the good is tracked, rather than the size or quality of the good or the number of such goods. Overall, the provision of these public services has improved dramatically over time, with primary schools, electricity, roads and irrigation have become universal or virtually universal by 2011.

The trends also differ across types of goods. Primary schools provision have been increasing continuously towards a norm of at least one per village since the colonial period. Post offices increased during the colonial period, but plateaued in the 21st century. Provision of high schools, middle schools and electricity was virtually nonexistent in rural areas before 1971, but became very common afterwards, with electricity provision becoming virtually universal.

Note that while public goods provision is increasing overall in Agra district, these public goods may decay or be removed as well as created. Between 2001 and 2011, for instance, 87 villages gained a primary school, but the only primary school in 31 villages disappeared. The problem of goods disappearance was especially marked in the colonial period, when government funding for rural public services was parsimonious—86 primary school disappeared during the depressed and unstable 1930s and 40s.

5 Analysis

5.1 Estimation

To reflect existing practice in the literature, the initial models are cross-sectional, with a series of regression models reporting naive correlations between public goods presence and the land tenure and caste composition variables.

Later cross-sectional models attempt to account for geographical or technocratic factors that could influence public goods provision. Since villages are positioned in space, there is a strong possibility of spatial-autocorrelation—that error terms are correlated either due to spatially correlated unobservables variables

or that the acquisition of a good in one village encourages its acquisition in nearby villages.[12] To account for spatial interdependence, all models include a spatial lag of the dependent variable, weighted by inverse euclidian distance. Since distance to the city of Agra, the largest city and district headquarters, might have a large effect on public goods provision, all models also include the euclidian distance to Agra, as well as to the subdistrict headquarters town. In addition to these spatial variables, I control for logged population in 1891 (since a rational government seeking to serve large numbers of people would seek or provide goods to the largest villages first), and 1891 literacy rate (a proxy for village wealth).[13] The estimating equation for the cross sectional models is:

$$PublicGood_v = \alpha + \beta X_v + \theta Z_v + \varepsilon_v \tag{1}$$

Where $PublicGood_v$ is a binary measure for whether a village possesses a particular public good, Z_v a vector of controls, and X_{vy} are the historical and caste factors of theoretical interest. To estimate the influence of time varying factors within units, or the changing effect of time invariant traits over time within units, I estimate a series of dynamic panel models. The estimating equation for the panel models is:

$$PublicGood_{vy} = \mu PublicGood_{vy-1} + \mu PreviousPublicGood_{vy} + \lambda_y + \gamma_v + \beta X_{vy} + \theta SpatialLag_{vy} + \varepsilon_{vy} \tag{2}$$

Where λ_y is a vector of year fixed effects, γ_v is a vector of village fixed effects, and $PreviousPublicGood_{vy}$ is a measure of whether any of the lags of the DV are equal to one.

Given the relatively small number of time periods in the panel ($t = 10$), Nickell bias is a potential concern. In the Appendix, Table A.5 reports the results of a series of Arellano-Bond system GMM dynamic panel models, which give similar results.

While results are reported for six public goods, our outcome of interest in the overall distribution of public

[12] Calculations of Moran's I easily reject the no autocorelation null for all years and outcomes.

[13] Other potential proxies for wealth, such as the proportion of laborers or specialized workers in the population, the average 1929 rent rate, and the possession of cows and ploughs, predict little additional variation in public goods provision.

goods, and we have non theoretical prediction about the effects on specific goods. To reflect this, all the main tables include average treatment effects calculated using the seemly unrelated procedure described by Anderson (2008). NOTE TO DISCUSSANT: THIS IS DONE, BUT NOT YET INCORPORATED IN THE TABLES.

5.2 Cross Sectional Results: Landholding

Are colonial landholding patterns correlated with contemporary public goods provision at the village level? No matter what point in the 20th or early 21st century is selected, the answer appears to be no. Table 2 shows the results of a series of simple linear regression models of public goods provision in 2011, 1991 and 1924. These years were chosen as being the last years with full data coverage for the three political eras discussed in Section Three: The Colonial, "Congress," and "Mandal."

Villages where 80% of the land was owned by fewer than five people in 1929 do not appear to be less likely than other villages to have acquired local public goods in any of these years. While a few coefficients are statistically significant, they are evenly distributed between positive and negative coefficients. Even in simple models without controls (Tables A.3 A.4), there is little evidence for a negative association. In fact, the association during the colonial period (in 1924) appears to have been positive rather than negative, and statistically significant.

Table 3 substitutes an alternative measure of colonial landlords with little incentive to invest locally, the proportion of landowners who were absentees in 1929. Unlike the measures of concentration, absenteeism does have a first order negative correlation with public goods provision for some goods, particularly in the earlier years (Tables A.3 A.4). However, there is reason to be skeptical of this association, since landowners were most likely to live elsewhere when the villages in which they owned land were small, poor and isolated. Table 3 shows that once population, spatial lags and distance from Agra are included in the model, there is no consistent association between the two variables.

The results indicate that after accounting for population and spatial interdependence, there is no evidence for a robust negative correlation between colonial land tenure arrangements *at the village level* at any point in the past century. While these arrangements may have had broader negative impacts (on the structure of the state), they have not reduced the state's treatment of otherwise similar villages within a small region.

Table 2: Colonial Single Landlords

VARIABLES	(1) Primary Sch.	(2) Post Office	(3) Middle Sch.	(4) High Sch.	(5) Pucca Road	(6) Electricity
Panel A: 2011						
Landlord Village	0.0447	0.0377	-0.0302	0.0363	0.0685*	-0.0118*
	(0.0291)	(0.0493)	(0.0574)	(0.0501)	(0.0405)	(0.00698)
Observations	309	309	309	309	309	309
R-squared	0.067	0.261	0.159	0.192	0.053	0.134
Controls	YES	YES	YES	YES	YES	YES
Panel B: 1991						
Landlord Village	-0.0815*	0.0549	-0.0357	0.0590**	-0.0879	-0.0503
	(0.0426)	(0.0490)	(0.0506)	(0.0286)	(0.0609)	(0.0493)
Observations	309	309	309	309	309	309
R-squared	0.261	0.284	0.209	0.089	0.104	0.291
Controls	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES
Panel C: 1924						
Colonial Single Landowner	0.0403	0.0381**				
	(0.0389)	(0.0156)				
Observations	316	316				
R-squared	0.141	0.085				
Controls	YES	YES				

Notes: The tables show the coefficient estimates from a series of linear regressions with the presence of the good in 2011 as the dependent variable. The controls are a spatial weight calculated based on inverse distance, distance from Agra, distance from the subdistrict capital, logged population in 1891 and literacy rate in 1891. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 3: Colonial Absentee Landlords

VARIABLES	(1) Primary Sch.	(2) Post Office	(3) Middle Sch.	(4) High Sch.	(5) Pucca Road	(6) Electricity
Panel A: 2011						
Prop. Absentee Owners	0.0604	0.0366	0.0664	0.0279	-0.00751	-0.0201*
	(0.0448)	(0.0736)	(0.0867)	(0.0751)	(0.0651)	(0.0113)
Observations	254	254	254	254	254	254
R-squared	0.097	0.237	0.176	0.199	0.044	0.190
Controls	YES	YES	YES	YES	YES	YES
Panel B: 1991						
Prop. Absentee Owners	-0.0102	0.0274	-0.0402	0.0454	-0.0686	0.0187
	(0.0653)	(0.0718)	(0.0744)	(0.0396)	(0.0912)	(0.0761)
Observations	254	254	254	254	254	254
R-squared	0.251	0.262	0.202	0.048	0.121	0.317
Controls	YES	YES	YES	YES	YES	YES
Panel C: 1924						
Prop. Absentee Landlords	-0.0105	-0.00692				
	(0.0527)	(0.0202)				
Observations	261	261				
R-squared	0.110	0.056				
Controls	YES	YES				

Notes: The tables show the coefficient estimates from a series of linear regressions with the presence of the good in 2011 as the dependent variable. The controls are a spatial weight calculated based on inverse distance, distance from Agra, distance from the subdistrict capital, logged population in 1891 and literacy rate in 1891. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

5.3 Cross Sectional Results: Caste

Do villages inhabited by politically powerful caste groups tend to get more local public goods? Here, I focus on four castes that have been especially prominent in western Uttar Pradesh, the Brahmins, Jats, Yadavs and Chamars. Recall that the Brahmins and Jats are relatively high status groups that have been influential throughout the period, while the Yadavs and Chamars are relatively low status groups that have gained political power more recently.

Table 4: Politically Powerful Castes

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Primary Sch.	Post Office	Middle Sch.	High Sch.	Pucca Road	Electricity
Panel A: 2011						
Brahmin Vill.	0.00588	0.0463	-0.00128	0.0668**	0.0110	-0.00183
	(0.0177)	(0.0329)	(0.0386)	(0.0339)	(0.0251)	(0.00271)
Jat Vill.	0.0161	0.108***	0.0574	0.00143	-0.00962	0.00181
	(0.0219)	(0.0403)	(0.0472)	(0.0413)	(0.0313)	(0.00336)
Yadav Vill.	0.0323	0.0800	0.0871	0.0303	0.0187	-0.000582
	(0.0268)	(0.0494)	(0.0584)	(0.0509)	(0.0380)	(0.00410)
Chamar Vill.	0.0142	0.0241	0.0707*	0.0255	0.0698***	-0.000697
	(0.0171)	(0.0317)	(0.0373)	(0.0326)	(0.0243)	(0.00262)
Observations	1,005	1,005	1,005	1,005	1,005	1,005
R-squared	0.039	0.269	0.179	0.181	0.056	0.053
Controls	YES	YES	YES	YES	YES	YES
Panel B: 1991						
Brahmin Vill.	0.0386	0.0158	0.0648**	0.0364*	0.00478	0.0636**
	(0.0299)	(0.0319)	(0.0315)	(0.0193)	(0.0410)	(0.0323)
Jat Vill.	0.0349	0.0717*	0.00356	0.00834	0.0955*	0.0994**
	(0.0368)	(0.0390)	(0.0385)	(0.0236)	(0.0501)	(0.0404)
Yadav Vill.	0.0416	-0.0517	0.0249	-0.0224	-0.0992	0.0667
	(0.0451)	(0.0480)	(0.0478)	(0.0291)	(0.0617)	(0.0490)
Chamar Vill.	0.0282	0.0178	0.0235	-0.00358	-0.0625	0.0591*
	(0.0289)	(0.0308)	(0.0305)	(0.0186)	(0.0396)	(0.0313)
Observations	1,005	1,005	1,005	1,005	1,005	1,005
R-squared	0.276	0.307	0.223	0.098	0.127	0.308
Controls	YES	YES	YES	YES	YES	YES
Panel C: 1924						
Brahmin Vill.	-0.0514*	-0.0145				
	(0.0264)	(0.0131)				
Jat Vill.	-0.00656	0.000539				
	(0.0323)	(0.0160)				
Yadav Vill.	-0.0315	-0.0219				
	(0.0399)	(0.0197)				
Chamar Vill.	-0.0292	-0.00506				
	(0.0256)	(0.0126)				
Observations	1,005	1,005				
R-squared	0.178	0.062				
Controls	YES	YES				

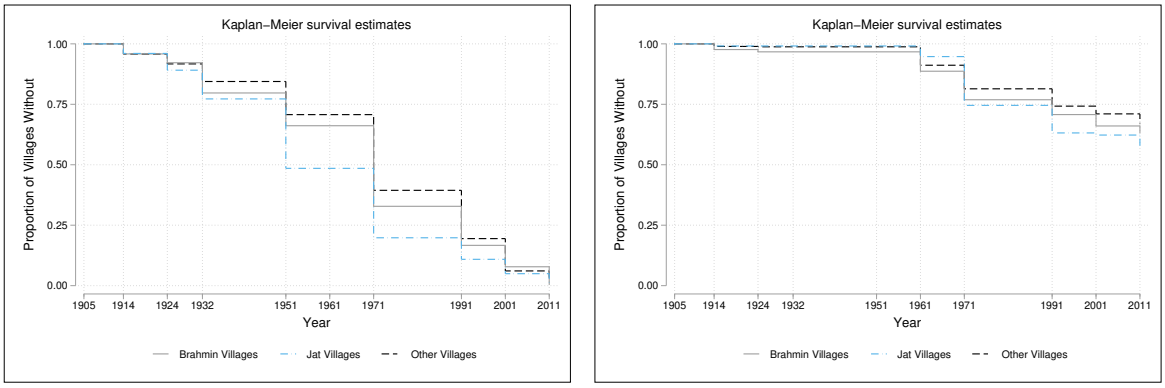
Notes: The tables show the coefficient estimates from a series of linear regressions with the presence of the good in 2011 as the dependent variable. The controls are a spatial weight calculated based on inverse distance, distance from Agra, distance from the subdistrict capital, logged population in 1891 and literacy rate in 1891. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 4 shows the conditional relationship between a sizable presence of these four groups and public goods provision. In all periods, Chamar and Yadav villages do not have a consistent and statistically significant

association with increased public goods provision, though there does seem to be a gradual upward trend in the coefficients over time. Jats and Brahmin villages, on the other hand, appear relatively similar to other types of villages in 1924 and 2011 but to have higher levels of public goods provision in 1971 and 1991.

Figure 3: Trends in Provision by Largest Castes

(a) Primary Schools **(b) Post Offices**



Notes: The subfigures show the proportion of villages without a good in each census or gazetteer year. The three categories are villages where Brahmins were the largest castes in 1891, where Jats were the largest caste in 1891, and others.

Figure 3 shows this pattern for primary schools and post offices. Levels of public goods provision were low for all types of villages in the colonial period. However, after independence provision in Brahmin and (especially) Jat villages surged ahead. However, this advantage has somewhat, though not entirely, reversed itself since 1971. While a "higher" caste status does seem associated with provision, this effect appears to vary greatly over time.

These trends are also seen in Figure 5, which shows the results of a series of panel regression models with village fixed effects. Relative to their rate in the post-1991 period, Jat villages had higher rates of provision in the colonial period, while Brahmins villages had higher rates of provision during the Congress period, with both differences being statistically significant. Members of these specific, politically empowered high status castes found it *relatively* easier to obtain public goods for their villages in the 20th century than they do today. This In the next section, we will explore the mechanisms for this finding.

Table 5: Caste and Public Goods: Panel Models

VARIABLES	(1) Primary Sch.	(2) Post Office	(3) Middle Sch.	(4) High Sch.	(5) Pucca Road	(6) Electricity
Jat Vill.*Colonial Era	0.0665**					
	(0.0292)					
Yadav Vill.*Colonial Era	-0.0529					
	(0.0342)					
Chamar Vill.*Colonial Era	-0.0206					
	(0.0235)					
Brahmin Vill.*Colonial Era	0.0111					
	(0.0228)					
Jat Vill.*Congress Era	0.0815**	-0.0451*	-0.0663*	-0.0178	0.0785	0.0568
	(0.0325)	(0.0262)	(0.0353)	(0.0265)	(0.0477)	(0.0387)
Yadav Vill.*Congress Era	-0.0417	-0.0547	-0.0471	-0.00337	-0.0161	0.132***
	(0.0486)	(0.0346)	(0.0503)	(0.0291)	(0.0557)	(0.0465)
Chamar Vill.*Congress Era	0.0233	-0.00478	-0.00298	-0.000292	-0.0883**	0.0361
	(0.0303)	(0.0205)	(0.0303)	(0.0182)	(0.0396)	(0.0306)
Brahmin Vill.*Congress Era	0.0513*	-0.00969	0.0452	-0.000809	0.00696	0.0685**
	(0.0295)	(0.0207)	(0.0302)	(0.0189)	(0.0408)	(0.0296)
Observations	8,048	5,030	4,024	5,030	3,018	4,024
R-squared	0.573	0.089	0.335	0.181	0.293	0.504
Number of VillageCode	1,006	1,006	1,006	1,006	1,006	1,006
Spatial Lags	YES	YES	YES	YES	YES	YES
Time Lags	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Village FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: The tables show the coefficient estimates from a series of panel linear regressions with the presence of the good as the dependent variable. Standard errors are clustered by village. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

6 Mechanisms

6.1 Ethnic Favoritism

One of the most widely attested mechanisms for inequality in public goods provision is ethnic favoritism. Studies in developing countries, including many in Northern India, have found that politicians or bureacrats distribute resources to members of there own group in preference to others (Franck and Rainer, 2012; Kramon, 2013; Burgess, Jedwab and Miguel, 2015; Bates, 1983; Lindberg, 2010; Besley et al., 2004; Hodler and Raschky, 2014; Bhavnani and Lee, 2018). This may be either due to to affective preferences for ones own group (Adida, 2015), superior ability to monitor and socially sanction in group members (Munshi and Rosenzweig, 2008; Bhavnani and Lee, 2018), or superior ability to form a clientelistic network within ethnic groups (Chandra, 2007; Schneider, 2014; Chauchard, 2016; Chauchard and Sircar, 2018).

By itself, ethnic favoritism should not influence levels of public goods provision over the long term in an egalitarian democracy. Over time, rotation in office will ensure that all ethnic groups receive approximately

equal levels of provision. However, as Lee (2018) notes, many systems of ethnic division are associated with entrenched patterns of political inequality even in democracies, meaning that certain groups will never "get their turn." If the ruler is already chosen from the same group, or if one group is extralegally disenfranchised, it is easy to see how that group will always receive resources. However, such structures of power may be more subtle: Even if the leader changes, an advantaged group may still be overrepresented in the bureaucracy or among political donors and activists, they may be able to exert influence directly.

We have already mentioned the high levels of intercaste political inequality in India, and the high salience of caste as an identity in distributional politics. Uttar Pradesh is especially notable in these regard, and Chandra's (2007) theory of distributional politics was developed to explain the adversarial caste politics that has developed there. Not only are there many economic and social inequalities between caste groups, but despite universal enfranchisement and quotas for formerly untouchable castes, levels of descriptive representation have remained persistently high. Consider the case of a set of four of most politically influential castes in Agra district, the Brahmins, Rajputs, Jats and Yadavs, who collectively made up 30.6% of the state's population at the 1931 census (Jaffrelot and Kumar, 2012, 32).[14] However, these groups provided 52.5% of legislatures in 1952, and 50.2% in 2017. Muslims, and members of the many small occupational castes, have remained politically unrepresented throughout the state's history.

However, the composition of the overrepresented groups has changed over the state's history, as has there formal. Brahmins, and several smaller educated castes, were heavily represented in the years after independence, and retained power into the 1980s. A Brahmin was chief minister for 20 of the 41 years between 1946 and 1989 and A Brahmin was prime minister for 40.[15] Jats enjoyed a political renaissance in the 1960s and 70s under the leadership of the mercurial Charan Singh (CM 1967-8 and 1970, PM 1979-80). However, the major political story of the past several decades was the rise of the Yadavs and Chamars. While both groups had always been political influential, both achieved a breakthrough in the 1990s under the leadership Mayawati (the Chamar leader of the Bahujan Samaj Party) and Mulayam Singh Yadav and his son Akhilesh leaders of the Samajwadi Party. These parties, explicit in their focus on their caste base, dominated UP politics after the defeat of the Congress in 1989, serving as CM for 19 of the 25 years with a CM in this

[14]This is the most recent census where caste data were tabulated. Chamars are not discussed here, due to the quotas for these groups.

[15]Two year with no CM are ignored. A Bengali Brahmo of Brahmin decent was CM for another 3.5 years.

period. Christophe Jaffrelot (2003) has described these changes as a "silent revolution" in North Indian politics, empowering large caste groups with traditional little social power

6.2 Empirical Tests

Are these changes reflected in the distribution public goods in Agra district? Panel of Table 6 shows the results of a series of panel regression models with village and year fixed effects. The key independent variable is a binary measure of the proportion of years in the period since the previous handbook or census that the UP Chief Minister was from a caste that had over 25% of the village population in 1891, or was the largest caste. Jat Villages, for instance, take on a value of .25 in 1971 (since a Jat was in office for 2.5 of the previous ten years), and zero in all other years.

Table 6: Ethnic Favoritism: Panel Models

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Primary Sch.	Post Office	Middle Sch.	High Sch.	Pucca Road	Electricity
Panel A: Chief Minister Caste						
CM Same Caste	0.0733**	-0.00992	0.101**	0.0261	0.103**	-0.00811
	(0.0329)	(0.0266)	(0.0401)	(0.0282)	(0.0455)	(0.0327)
Observations	5,060	5,060	4,048	5,060	3,036	4,048
R-squared	0.415	0.087	0.334	0.180	0.291	0.501
Number of VillageCode	1,012	1,012	1,012	1,012	1,012	1,012
Spatial Lags	YES	YES	YES	YES	YES	YES
Time Lags	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Village FE	YES	YES	YES	YES	YES	YES
Panel B: MLA Caste						
MLA Majority Party	-0.0144	-0.00250	0.107	-0.0125	-0.0422	-0.0124
	(0.0521)	(0.0478)	(0.0659)	(0.0439)	(0.0722)	(0.0611)
MLA Same Caste	-0.0257	0.0212	0.0718*	0.00257	0.0549	-0.0138
	(0.0317)	(0.0295)	(0.0405)	(0.0286)	(0.0451)	(0.0350)
Observations	2,549	2,549	2,549	2,549	2,096	2,549
R-squared	0.199	0.041	0.364	0.204	0.254	0.495
Number of VillageCode	725	725	725	725	725	725
Spatial Lags	YES	YES	YES	YES	YES	YES
Time Lags	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Village FE	YES	YES	YES	YES	YES	YES

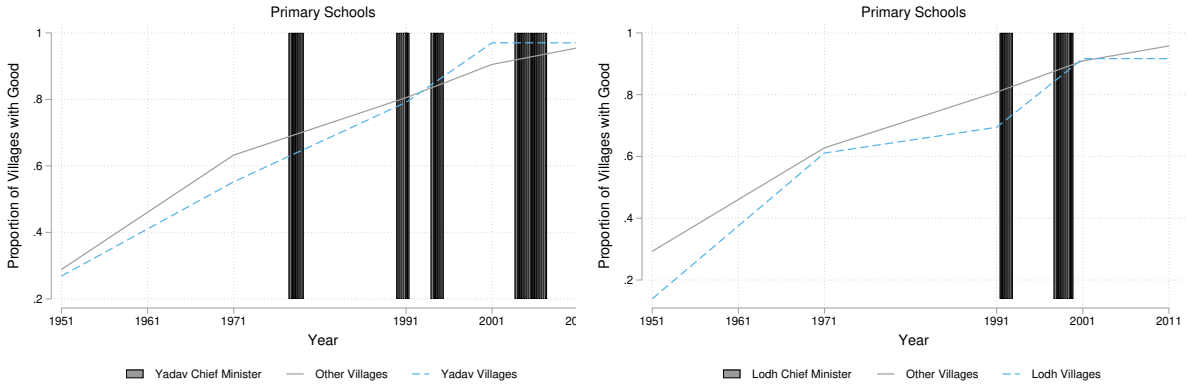
Notes: The tables show the coefficient estimates from a series of panel linear regressions with the presence of the good as the dependent variable. Standard errors are clustered by village. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

The results show that having a coethnic CM in office is positively and statistically significantly associated with having public goods in the village, with the effect being statistically significant for three of the six goods and on average across all six. The effect can be seen graphically in Figure 4 which shows the percentage of villages with primary schools over time to two selected castes, overlaid against the years a member of the groups was Chief Minister. The rise of the Yadavs from a caste with below average public school

provision in their villages tow one with above average provision in their villages is gradual but noticeable. More dramatic is the effects on the Lohdas, a small group that became politically prominent within the BJP coalition during the 1990s when Kalyan Singh, a Lohda, was Chief Minister. During this decade Lohda villages in Agra went from being less likely to have school than other villages to being just as likely, before declining in relative terms after Singh left office.

Figure 4: Trends in Primary School Provision by Large Village Caste and Chief Minister Caste

(a) Yadavs **(b) Lodhas**



Notes: The subfigures show the proportion of villages with primary schools in each census or gazetteer year. The dark shaded years are those when a member of the caste was chief minister.

Since these figures focus on elected chief ministers, they cannot examine variation during the colonial period, when the key decision makers were unelected British bureaucrats with no ascriptive ties to the local population. However, the patterns appear broadly consistent with the ethnic favoritism, with very low levels of coethnic power being linked to very low levels of provision in this period. The low level of provision in Brahmin villages and high levels of provision to Jat villages in this period (see Figure 3) also corresponds to colonial preferences: Brahmins were regarded with suspicion for their links to the nationalist movement, while Jats were regarded as a loyal "martial race."

7 Discussion and Conclusion

The results show that in predicting local public goods provision, the level of aggregation can have a strong influence on the results. Results that have strong empirical support at the district level, such as the influence

of colonial land tenure, have only very limited support at the village level, once population and district location are accounted for. While these variables may be correlated with political and cultural differences with a strong association with public goods provision, within a single, not untypical north Indian district these variables have no effect.

An even more striking pattern is that the effect of village traits can shift over time. While a large population of traditional upper castes has a negative effect on public service provision in the colonial era and a null effect after 1991, it had a positive effect during the period of congress hegemony after independence. This appears attributable to shift in the balance of ethnic power at the state level, with shifts in power towards specific lower caste groups benefiting even the poor village dwellers of Agra district. While the upper caste members were effective at transferring state resources to their communities in the era of Congress Party dominance, the presence of such groups has had a negative effect on public service provision in the more democratic political order that has emerged since 1990.

More broadly, the results suggest that at the local level historical institutions are not destiny, and cannot put communities on immutable "good" or "bad" trajectories. Rather, they distributions of social resources that operate differently in different contexts. Some effects, such as the presence of traditionally powerful castes, can be either blessings or curses depending on the time in which they are studied. When considering the effect of historical policies, it is thus necessary to consider contemporary ones as well.

References

Acemoglu, Daron, Simon Johnson and James A Robinson. 2002. "Reversal of fortune: Geography and institutions in the making of the modern world income distribution." *Quarterly journal of economics* pp. 1231–1294.

Adida, Claire L. 2015. "Do African voters favor coethnics? Evidence from a survey experiment in Benin." *Journal of Experimental Political Science* 2(01):1–11.

Alesina, Alberto and Eliana La Ferrara. 2005. "Ethnic Diversity and Economic Performance." *Journal of Economic Literature* 43(3):762–800.

Anderson, Michael L. 2008. "Multiple inference and gender differences in the effects of early intervention: A reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects." *Journal of the American statistical Association* 103(484):1481–1495.

Anderson, Siwan, Patrick Francois and Ashok Kotwal. 2015. "Clientelism in Indian villages." *The American Economic Review* 105(6):1780–1816.

Baden-Powell, Baden Henry. 1892. *The Land-systems of British India: Being a Manual of the Land-tenures and of the Systems of Land-revenue Administration Prevalent in the Several Provinces*. Clarendon Press.

Baldwin, Kate and John D Huber. 2010. "Economic versus cultural differences: Forms of ethnic diversity and public goods provision." *American Political Science Review* 104(04):644–662.

Banerjee, Abhijit and Lakshmi Iyer. 2005. "History, Institutions, and Economic Performance: The Legacy of Colonial Land Tenure Systems in India." *The American Economic Review* 95(4):1190–1213.

Banerjee, Abhijit and Rohini Somanathan. 2007. "The political economy of public goods: Some evidence from India." *Journal of development Economics* 82(2):287–314.

Bates, Robert H. 1983. Modernization, ethnic competition, and the rationality of politics in contemporary Africa. In *State versus ethnic claims: African policy dilemmas*. Vol. 152 Boulder, CO: Westview Press p. 171.

Besley, Timothy and Marta Reynal-Querol. 2014. "The legacy of historical conflict: Evidence from Africa." *American Political Science Review* 108(2):319–336.

Besley, Timothy, Rohini Pande, Lupin Rahman and Vijayendra Rao. 2004. "The politics of public good provision: Evidence from Indian local governments." *Journal of the European Economic Association* 2(2-3):416–426.

Bhavnani, Rikhil R and Alexander Lee. 2018. "Local embeddedness and bureaucratic performance: evidence from India." *The Journal of Politics* 80(1):71–87.

Burgess, Robin, Remi Jedwab and Edward Miguel. 2015. "The Value of Democracy: Evidence from Road Building in Kenya." *The American economic review* 105(6):1817–1851.

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

Chauchard, Simon. 2016. "Unpacking ethnic preferences: Theory and micro-level evidence from North India." *Comparative Political Studies* 49(2):253–284.

Chauchard, Simon and Neelanjan Sircar. 2018. "Courting votes without party workers." http://www.simonchauchard.com/wp-content/uploads/2014/02/politicalbrokerage_022618.pdf.

Dasgupta, Aditya. 2018. "Technological Change and Political Turnover: The Democratizing Effects of the Green Revolution in India." *American Political Science Review* 112(4):918–938.

Dell, Melissa. 2010. "The Persistent Effects of Peru's Mining Mita." *Econometrica* 78(6):1863–1903.

Evans, HF. 1880. *Report on the Settlement of the Agra District, North-Western Provinces*. Northwestern Provinces and Oudh Government Press.

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(02):294–325.

Frankel, Francine R and Madhugiri Shamarao Ananthapadmanabha Rao. 1989. *Dominance and State Power in Modern India: decline of a social order*. Vol. 1 Oxford University Press Oxford.

Gerring, John, Strom C Thacker, Yuan Lu and Wei Huang. 2015. "Does diversity impair human development? A multi-level test of the diversity debit hypothesis." *World Development* 66:166–188.

Gisselquist, Rachel M, Stefan Leiderer and Miguel Niño-Zarazúa. 2016. "Ethnic Heterogeneity and Pub-

lic Goods Provision in Zambia: Evidence of a Subnational "Diversity Dividend"." *World Development* 78:308–323.

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.

Hodler, Roland and Paul A Raschky. 2014. "Regional favoritism." *The Quarterly Journal of Economics* p. qju004.

Iversen, Vegard, Richard Palmer-Jones and Kunal Sen. 2013. "On the colonial origins of agricultural development in India: a re-examination of Banerjee and Iyer." *Journal of Development Studies* 49(12):1631–1646.

Iyer, Lakshmi. 2010. "Direct versus indirect colonial rule in India: Long-term consequences." *The Review of Economics and Statistics* 92(4):693–713.

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.

Kothari, Rajni. 1964. "The Congress' System'in India." *Asian survey* pp. 1161–1173.

Kramon, Eric. 2013. Vote Buying and Accountability in Democratic Africa PhD thesis Stanford University.

Lee, Alexander. 2017. "Redistributive Colonialism: Caste, Conflict and Development in India." *Politics & Society* .

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

Lee, Alexander. 2019*a*. *Development in Multiple Dimensions: Social Power and Regional Policy in India*. University of Michigan Press. Unpublished Manuscript https://www.rochester.edu/college/faculty/alexander_lee/wp-content/uploads/2014/09/chapter1revised.pdf.

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

Lee, Alexander. 2019*c*. "Land, State Capacity, and Colonialism: Evidence From India." *Comparative Political Studies* 52(3):412–444.

Lee, Alexander and Kenneth A Schultz. 2012. "Comparing British and French colonial legacies: A discontinuity analysis of Cameroon." *Quarterly Journal of Political Science* 7(1-46).

Lindberg, Staffan I. 2010. "What accountability pressures do MPs in Africa face and how do they respond? Evidence from Ghana." *The Journal of Modern African Studies* 48(01):117–142.

Metcalf, Thomas R. 1979. *Land, landlords, and the British Raj: northern India in the nineteenth century [Uttar Pradesh]*. University of California Press.

Mudie, R.F. 1930. *Final Report of Settlement Operations in District Agra*. Allahabad: Government press.

Mukherjee, Shivaji. 2013. "Colonial Origins of Maoist Insurgency in India: Long Term Effects of Indirect Rule." Working Paper.

Munshi, Kaivan and Mark Rosenzweig. 2008. The efficacy of parochial politics: caste, commitment, and competence in Indian local governments. Technical report National Bureau of Economic Research.

Nevill, HR. 1905. *Agra: A Gazetteer being Vol. VIII of the District Gazetteers of the United Provinces of Agra and Oudh*. Superintendent of Government Press, Allahabad.

Nunn, Nathan and Leonard Wantchekon. 2011. "The Slave Trade and the Origins of Mistrust in Africa." *American Economic Review* 101(7):3221–3252.

Reeves, Peter Dennis. 1963. The Landlords' Response to Political Change in the United Provinces of Agra & Oudh, India, 1921-1937 PhD thesis Australian National University.

Sarbahi, Anoop. 2016. "Land Tenure and Communist Insurgency in India." APSA Annual Meeting Paper.

Schneider, Mark. 2014. Does clientelism work? A test of guessability in India. In *Annual Meeting of the Midwest Political Science Association*.

Sellars, Emily A and Jennifer Alix-Garcia. 2018. "Labor scarcity, land tenure, and historical legacy: Evidence from Mexico." *Journal of Development Economics* 135:504–516.

Shayo, Moses. 2009. "A model of social identity with an application to political economy: Nation, class, and redistribution." *American Political science review* pp. 147–174.

Singh, Prerna and Dean Spears. 2017. How status inequality between ethnic groups affects public goods provision: Experimental evidence on caste and tolerance for teacher absenteeism in India. Technical report WIDER Working Paper.

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. 2017. "Hollowing out the state: Franchise expansion and fiscal capacity in colonial India." *Available at SSRN 2951947* .

Verghese, Ajay and Emmanuel Teitelbaum. 2014. "Colonialism and Armed Conflict in the Indian Countryside.".

Waring, Timothy M and Adrian V Bell. 2013. "Ethnic dominance damages cooperation more than ethnic diversity: results from multi-ethnic field experiments in India." *Evolution and Human Behavior* 34(6):398–404.

Online Appendix

Contents

List of Tables

List of Figures

Table A.1: Summary statistics

Variable	Mean	Std. Dev.	N
Dominant Caste: Land	0.148	0.356	3100
Colonial Single Landowner	0.256	0.436	3360
Dominant Caste: Population	0.262	0.44	9910
Largest Caste Upper Caste	0.499	0.5	9920
Largest Caste Rajput	0.145	0.352	11320
Bah Tehsil	0.178	0.383	11320
Log. Population 1891	6.079	0.966	9920
Literacy Rate 1891	0.025	0.024	9890
Distance to Agra	21.864	11.69	11320
Prop. Absentee Owners Landlords	0.523	0.348	2780
Area	634.61	709.207	5760
Primary School	0.455	0.498	10188
Middle School	0.152	0.359	9056
High School	0.04	0.197	10188
Electricity	0.573	0.495	5660
Pucca Road	0.264	0.441	11207
Post Office	0.134	0.341	9056

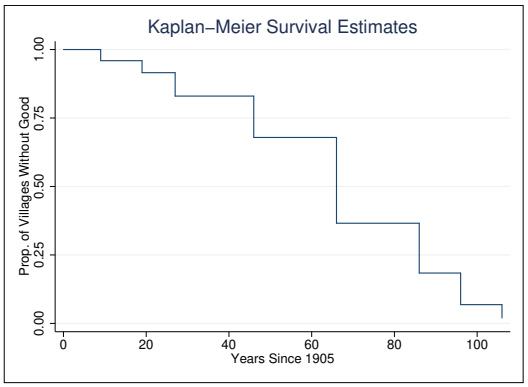
Table A.2: The 1929 Land Data Sample and the Overall Sample

Variable	No Land Data	Land Data	Difference
2011 Data			
Population	2,913.03	2,739.76	-173.27
Prop. Irrigated	0.934	0.926	-0.008
Area	388.449	400.652	12.203
Primary School	0.935	0.956	0.021
Middle School	0.652	0.618	-0.034
High School	0.238	0.22	-0.018
Electricity	0.991	0.999	0.008**
Pucca Road	0.893	0.905	0.008
Post Office	0.244	0.235	-0.009
1891 Data			
Prop. Muslim	0.05	0.045	-0.005
SC Caste Largest	0.235	0.201	-0.034
Upper Caste Largest	0.532	0.484	-0.048
Majority Caste	0.248	0.269	0.021
Log. Population	6.106	6.067	-0.04
Literacy Rate	0.026	0.024	0.002
Traders PC	0.047	0.051	0.004

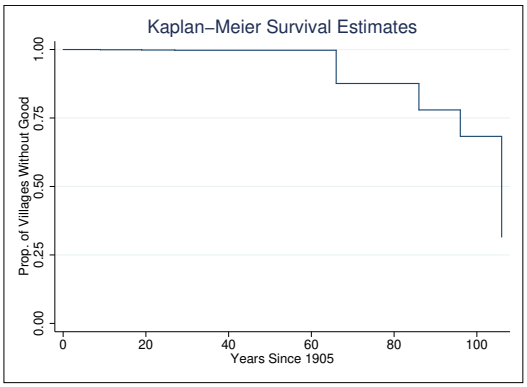
The column refer to the samples with and without 1929 $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Figure A.1: Trends in Provision of Six Public Goods 1905-2011

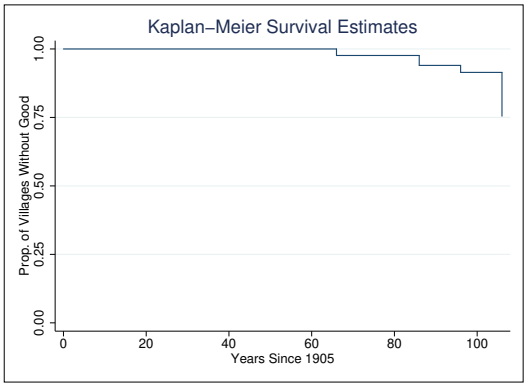
(a) Primary Schools



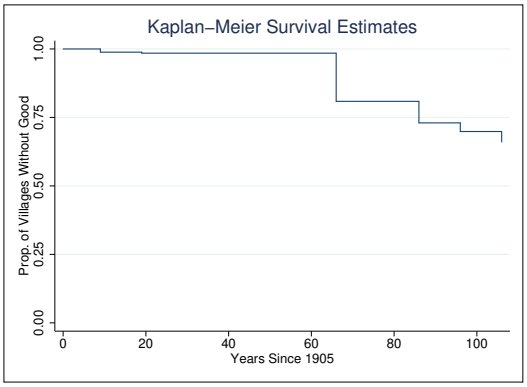
(b) Middle Schools



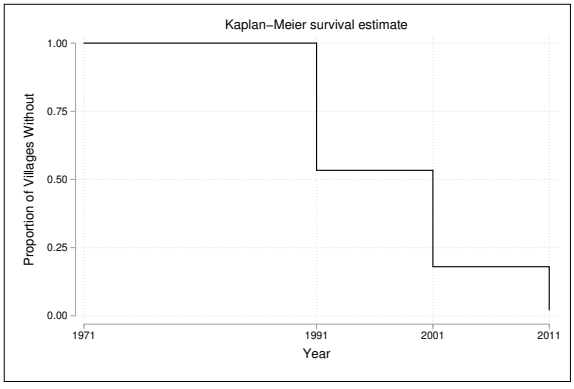
(c) High Schools



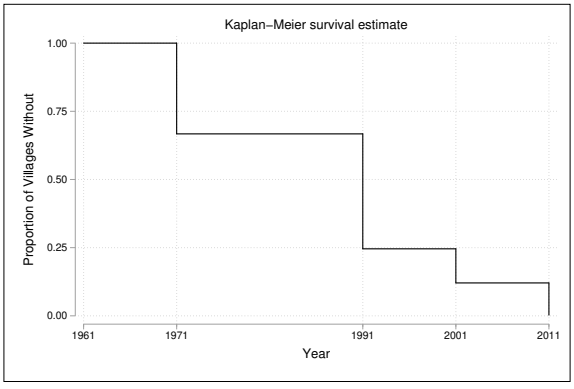
(d) Post Offices



(e) High Quality Roads



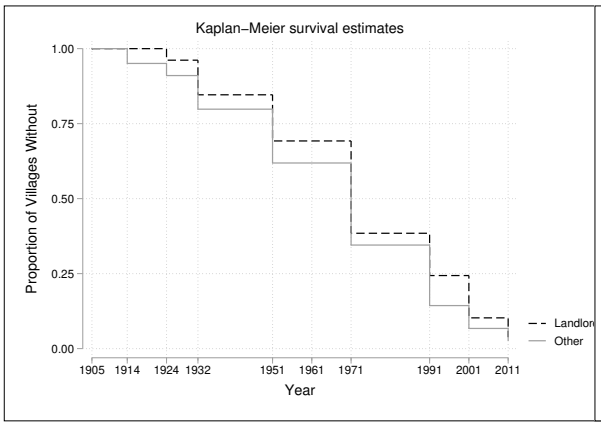
(f) Electricity



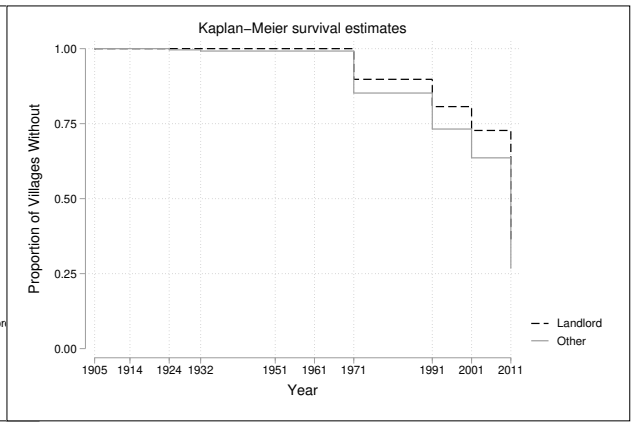
Notes: The subfigures show the proportion of villages without a good in each census or gazetteer year, except for subfigure E, which shows the proportion of villages without quality roads among the 66% of villages without a quality road in 1971.

Figure A.2: Trends in Provision of Six Public Goods by Colonial Land Tenure 1905-2011

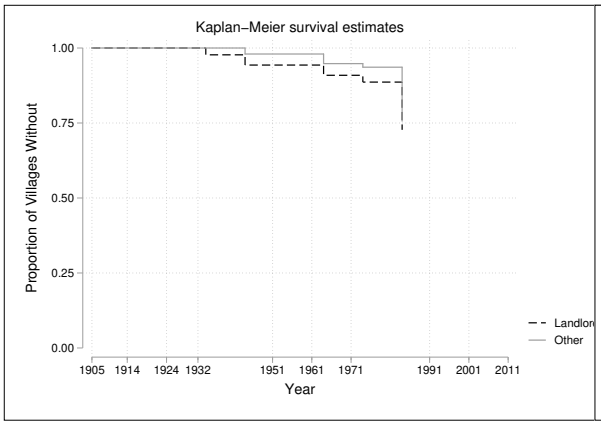
(a) Primary Schools



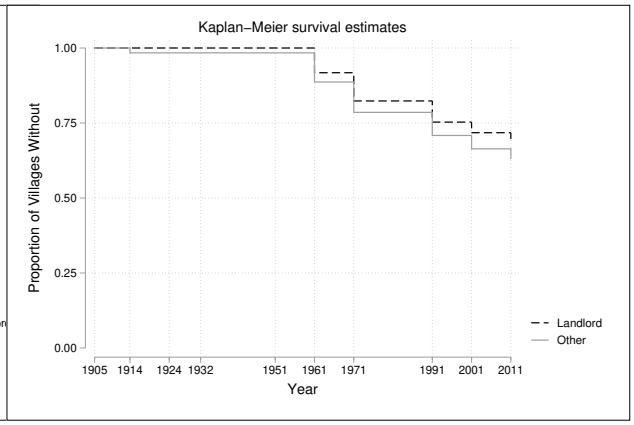
(b) Middle Schools



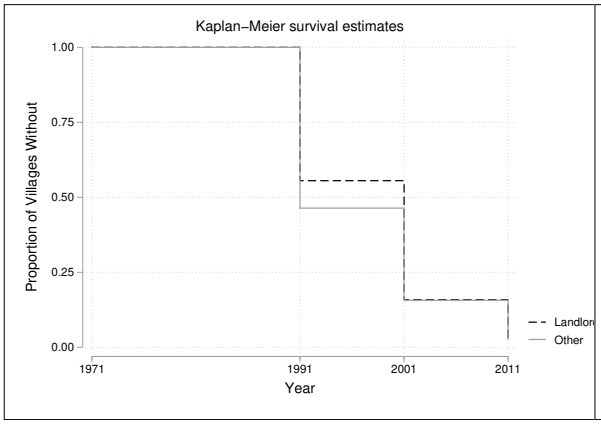
(c) High Schools



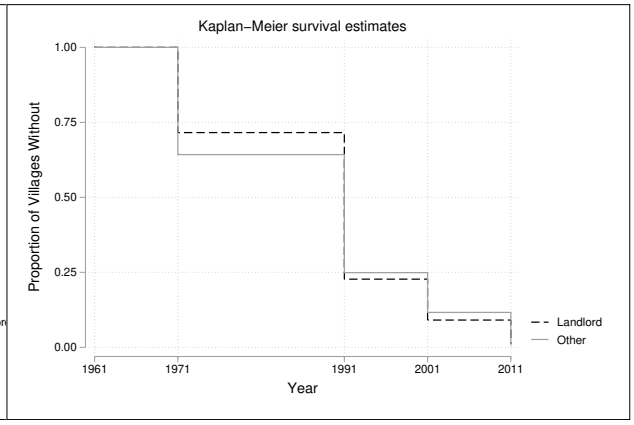
(d) Post Offices



(e) High Quality Roads



(f) Electricity



Notes: The subfigures show the proportion of villages without a good in each census or gazetteer year, except for subfigure E, which shows the proportion of villages without quality roads among the 66% of villages without a quality road in 1971. The trends are shown by 1929 landholding pattern: Villages with fewer than five landowners owning 80% or more of the land, villages with a single caste owning 80% or more of the land, and all other villages. Villages that a missing land tenure data from 1929 are not included. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A.3: Cross Sectional Evidence, 2011

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Primary Sch.	Post Office	Middle Sch.	High Sch.	Pucca Road	Electricity
Panel A: Landlord Dominated Villages						
Landlord Village	0.0411	0.0158	-0.0633	0.00819	0.0659*	-0.00363
	(0.0309)	(0.0538)	(0.0596)	(0.0534)	(0.0386)	(0.0118)
Constant	0.924***	0.240***	0.668***	0.236***	0.876***	0.992***
	(0.0157)	(0.0272)	(0.0302)	(0.0270)	(0.0195)	(0.00597)
Observations	336	336	336	336	336	336
R-squared	0.005	0.000	0.003	0.000	0.009	0.000
Controls	NO	NO	NO	NO	NO	NO
Panel B: Absentee Landlords						
Prop. Absentee Owners	-0.0254	-0.160**	-0.124	-0.0462	-0.0232	-0.0154
	(0.0447)	(0.0714)	(0.0825)	(0.0732)	(0.0567)	(0.0178)
Constant	0.941***	0.307***	0.709***	0.258***	0.890***	0.997***
	(0.0281)	(0.0448)	(0.0518)	(0.0460)	(0.0356)	(0.0112)
Observations	278	278	278	278	278	278
R-squared	0.001	0.018	0.008	0.001	0.001	0.003
Controls	NO	NO	NO	NO	NO	NO
Panel C: Politically Powerful Castes						
Brahmin Vill.	0.00530	0.0496	-0.0167	0.0413	-0.00515	-0.00462*
	(0.0174)	(0.0365)	(0.0406)	(0.0357)	(0.0247)	(0.00267)
Jat Vill.	0.0264	0.169***	0.131***	0.0949**	0.00169	1.18e-05
	(0.0215)	(0.0452)	(0.0502)	(0.0441)	(0.0305)	(0.00330)
Yadav Vill.	0.0218	0.0591	0.0720	0.0247	0.0214	1.18e-05
	(0.0271)	(0.0571)	(0.0634)	(0.0557)	(0.0386)	(0.00417)
Chamar Vill.	0.0101	0.0299	0.0870**	0.0449	0.0741***	3.31e-05
	(0.0173)	(0.0365)	(0.0406)	(0.0356)	(0.0247)	(0.00267)
Constant	0.948***	0.210***	0.600***	0.199***	0.889***	1.000***
	(0.0104)	(0.0219)	(0.0243)	(0.0214)	(0.0148)	(0.00160)
Observations	1,006	1,006	1,006	1,006	1,006	1,006
R-squared	0.002	0.014	0.012	0.005	0.011	0.004
Controls	NO	NO	NO	NO	NO	NO

Standard errors in parentheses
*** p¡0.01, ** p¡0.05, * p¡0.1

Notes: The tables show the coefficient estimates from a series of linear regressions with the presence of the good in 2011 as the dependent variable. The controls are a spatial weight calculated based on inverse distance, distance from Agra, distance from the subdistrict capital, logged population in 1891 and literacy rate in 1891. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A.4: Cross Sectional Evidence, 1991

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Primary Sch.	Post Office	Middle Sch.	High Sch.	Pucca Road	Electricity
Panel A: Landlord Dominated Villages						
Landlord Village	-0.0998**	-0.00381	-0.0776	0.0490*	-0.0964	0.0162
	(0.0480)	(0.0541)	(0.0528)	(0.0288)	(0.0616)	(0.0555)
Constant	0.844***	0.248***	0.252***	0.0440***	0.608***	0.728***
	(0.0243)	(0.0274)	(0.0267)	(0.0146)	(0.0312)	(0.0281)
Observations	336	336	336	336	336	336
R-squared	0.013	0.000	0.006	0.009	0.007	0.000
Controls	NO	NO	NO	NO	NO	NO
Panel B: Absentee Landlords						
Prop. Absentee Owners	-0.203***	-0.193***	-0.208***	0.00316	-0.111	-0.0149
	(0.0658)	(0.0706)	(0.0696)	(0.0365)	(0.0848)	(0.0794)
Constant	0.923***	0.321***	0.321***	0.0451*	0.648***	0.706***
	(0.0414)	(0.0444)	(0.0437)	(0.0230)	(0.0533)	(0.0499)
Observations	278	278	278	278	278	278
R-squared	0.033	0.026	0.031	0.000	0.006	0.000
Controls	NO	NO	NO	NO	NO	NO
Panel C: Politically Powerful Castes						
Brahmin Vill.	0.0321	0.00595	0.0765**	0.0414**	0.0127	0.124***
	(0.0336)	(0.0364)	(0.0342)	(0.0194)	(0.0417)	(0.0370)
Jat Vill.	0.104**	0.157***	0.0787*	0.0290	0.143***	-0.0434
	(0.0415)	(0.0451)	(0.0423)	(0.0240)	(0.0516)	(0.0457)
Yadav Vill.	0.0131	-0.0808	0.00571	-0.0317	-0.108*	0.160***
	(0.0525)	(0.0569)	(0.0534)	(0.0303)	(0.0651)	(0.0577)
Chamar Vill.	0.0284	0.0234	0.0290	-0.00532	-0.0687*	0.0694*
	(0.0335)	(0.0364)	(0.0342)	(0.0194)	(0.0416)	(0.0369)
Constant	0.778***	0.230***	0.173***	0.0466***	0.571***	0.690***
	(0.0201)	(0.0218)	(0.0205)	(0.0116)	(0.0250)	(0.0221)
Observations	1,006	1,006	1,006	1,006	1,006	1,006
R-squared	0.006	0.016	0.007	0.009	0.017	0.021
Controls	NO	NO	NO	NO	NO	NO

Standard errors in parentheses
*** p¡0.01, ** p¡0.05, * p¡0.1

Notes: The tables show the coefficient estimates from a series of linear regressions with the presence of the good in 2011 as the dependent variable. The controls are a spatial weight calculated based on inverse distance, distance from Agra, distance from the subdistrict capital, logged population in 1891 and literacy rate in 1891. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A.5: Arellano-Bond Panel Models: Ethnic Favoritism

VARIABLES	(1) Primary Sch.	(2) Post Office	(3) Middle Sch.	(4) High Sch.	(5) Pucca Road	(6) Electricity
Panel A: Chief Minister Caste						
CM Same Caste	0.0569*	-0.0168	0.142***	0.0426*	0.128**	0.0233
	(0.0326)	(0.0302)	(0.0425)	(0.0235)	(0.0541)	(0.0347)
Observations	5,060	4,048	3,036	4,048	2,024	3,036
Number of VillageCode	1,012	1,012	1,012	1,012	1,012	1,012
Controls	YES	YES	YES	YES	YES	YES
Spatial Lags	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Subdistrict FE YES	DV Lags	DV Lags	DV Lags	DV Lags	DV Lags	DV Lags
Panel B: MLA Caste						
MLA Majority Party	-0.0423	0.117*	0.183**	-0.0199	-0.0731	0.00684
	(0.0594)	(0.0627)	(0.0813)	(0.0529)	(0.121)	(0.0696)
MLA Same Caste	0.00249	0.0739*	0.0633	-0.0203	-0.000549	0.0635
	(0.0420)	(0.0443)	(0.0596)	(0.0378)	(0.0675)	(0.0505)
Observations	2,549	2,549	2,096	2,549	1,450	2,096
Number of VillageCode	725	725	725	725	725	725
Controls	YES	YES	YES	YES	YES	YES
Spatial Lags	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Subdistrict FE YES	DV Lags	DV Lags	DV Lags	DV Lags	DV Lags	DV Lags

Standard errors in parentheses
*** p¡0.01, ** p¡0.05, * p¡0.1

Notes: The tables show the coefficient estimates from a series of dynamic Arellano-Bond panel regressions with the presence of the good as the dependent variable. As the regressors are all first differenced, the district fixed effect is not present in the equation. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.