Divine Intervention? Religious Organizations and Public Service Delivery in India

Kartikeya Batra*and Avantika Prabhakar‡

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Abstract

Religious institutions wield considerable influence over societies, particularly in resource-constrained settings such as in developing countries with limited state capacity. In such environments, they can potentially evolve into important socio-political actors. Yet, our knowledge of how these institutions interact with the state is largely restricted to certain religions and regions, resulting in important gaps in our understanding. In this paper, we explore the impact of the presence of a specific type of religious institution on public service delivery in northern India. Through a primary census exercise conducted across 6000 villages in the state of Punjab, we construct a novel geocoded dataset of localized religious institutions, or *deras*. We employ an instrumental variable strategy based on birth locations of historical religious leaders as well as a local control strategy, and find that the presence of such institutions leads to higher provision of public services by the state. These effects are particularly significant for government-sponsored facilities related to health and education. Using primary data from a telephonic survey of village council members across 640 villages, we find that partial funding of such services is a potential mechanism, facilitating coordination that aligns the interests of both the *deras* and local governments in ensuring service delivery. These findings add to existing literature, which primarily point to a substitutive relationship between religious organizations and the state.

*The Centre for Effective Governance of Indian States

†University of Virginia

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1 Introduction

Approximately 80% of the global population professes belief in a higher power (World Values Survey 2017-22). While economists have increasingly explored the economic causes and consequences of religious behavior, our understanding of how religious institutions interact with state functions remains limited to certain religions and geographies. This interaction is particularly important in developing regions where religious adherence is high and state capacity is weak. In such contexts, religious institutions can significantly influence governance with profound effects on development trajectories and social stability.

Specifically, religious institutions can impact state efforts in service delivery, although the direction of the effect is arguably ambiguous. For instance, literature suggests that religious organizations frequently step in as parallel power centers to provide essential services, potentially filling critical gaps by acting as *substitutes* to the state (Hungerman, 2005). Theoretically speaking, such substitution can, in the long run, lead to lower provision of public goods by the government. Conversely, these institutions can influence governance structures by assuming roles that integrate with or even steer state functions. Leaders affiliated with such institutions usually maintain close relations with their communities and possess a deep understanding of local needs, making them powerful advocates for their communities. They can mobilize resources, both financial and human, and leverage their social networks to support community development initiatives. In fact, the effects of the presence of such institutions may also operate through more passive channels. For instance, the presence of religious institutions may raise economic activity, or may encourage higher levels of diligence from local politicians, who may fear the former's rise as parallel power centers.

In this paper, we examine the impact of the presence of *deras*, a unique religious institution in the Indian state of Punjab, on the provision of public services/amenities by the government. *Deras* are physical establishments, led by living leaders who are considered divine by the local population. These institutions are not entirely associated with any of the major religions of India. Instead, they often practice a combination of practices from different faiths, and their influence is confined to specific regions and/or communities. Their prevalence across northern

India has often been talked about, although there is no quantitative evidence regarding the same. By means of a primary census exercise spanning 6,000 villages (roughly 50% of Punjab), we construct the first ever database documenting the presence of such institutions at the village-level. We merge this database with data on public amenities from the Population Census of India 2011, and other covariate data from different sources.

Acknowledging that the location where a *dera* is situated may not be exogenous, we estimate treatment effects using two different empirical strategies. First, we instrument the presence/absence of a *dera* in a village by that village's distance to the nearest birthplace of a historical religious leader. This is inspired by the fact that at least a part of the genesis of these institutions can be traced back to the nature of Sikhism-the state's dominant religion-which allowed for the proliferation of sects under the leadership of historical religious leaders, who were different from the top leaders of Sikhism itself. Next, we estimate treatment effects using a local control strategy, where we compare contiguous villages with and without *deras* within a 4 kilometer radius.

Our analysis reveals that the presence of a *dera* within a village significantly enhances the provision of public services. Using an index based on 69 government services from the 2011 Population Census of India, we find that *deras* positively impact the state's level of service delivery. Specifically, our IV estimates, indicate an effect of 19.3 percentage points over a control mean of 31%. This translates to a 62% increase in these amenities compared to villages without *deras*. As per the local control strategy, this effect is roughly 2.5 percentage points over the same control mean. The varying magnitudes (with similar signs) of the two estimates can be attributed to the differences in the underlying strategies: IV provides localized average treatment effects (LATE), whereas the local control strategy provides overall average effects.

Disaggregated estimates show that the impact of *deras* varies significantly across different types of services. The most pronounced effect is observed on services associated with health sector, with a 29.2 percentage point increase in the health services index. We further examine the impact by the level of government responsible for service provision, and find that *deras* have the

most substantial influence on services managed by state and district governments, with a 22.0 percentage point increase. In contrast, the impact on federal government services is smaller at 7.5 percentage points, and the effect on village council services is positive but not statistically significant. It is puzzling that while the presence of *deras* impacts services provided by the district office/state government, it does not impact services provided by the local village bodies. While several explanations may justify these results, a potential argument could be that *deras* may be interested in resolving only certain kinds of issues, i.e. those involving access to higher offices (such as district office). It is also possible that *deras* are aware that healthcare and education are among the most pressing issues that Indians face, and that dealing with them may create the highest impact. Given that both these issues fall under the purview of the state government, *deras* may be forced to interact with those offices. Another possibility that the activities of these institutions may be creating positive externalities. For instance, *deras* may be organizing events that may crowd in amenities related to sectors associated with the state government (such as health camps). It is also possible that even if *deras* want, local village councils may not engage with them, fearing the establishment of parallel power centers. In the absence of data, it is difficult to discuss all such possibilities.

Hence, we focus on a limited set of questions related to mechanisms. We do so by means of a telephonic survey with village council members across 640 villages. Results provide interesting insights. There is evidence that some *deras* fully fund state activities, such as health and education services, which, although legally classified as government services, effectively substitute state efforts. However, the evidence for partial funding is much stronger, with respondents consistently indicating that *deras* supplement state funding across both extensive and intensive margins of service provision. Additionally, there is some indication that *deras* help mitigate information asymmetries by conveying local needs to the government. Despite multiple channels at play, partial funding emerges as the most prevalent and supported mechanism.

This arrangement resembles a form of public-private partnership, though the lack of clarity regarding the presence of legal contracts raises concerns. The potential absence of formal agreements could undermine democratic relationships, as it shifts citizens' reliance from the government, with whom they have a social contract, to *deras*, who are neither elected nor

officially mandated to perform these roles. This shift may erode the foundational democratic principle that citizens' expectations and services should be governed by elected officials rather than religious institutions.

This study contributes to two strands of literature. First, we add to the work on the economics of religion, by addressing the challenge of empirically estimating the impact of religion. Literature in this field has tended to view religiosity as the dependent variable (Viner, 1978; Barro and McCleary, 2003; Buser, 2014; Iyer, 2016). We instead evaluate the treatment impacts of a religious institution on economic variables.

We also contribute to the work on analyzing the interactions between state and religion. In developing countries, at least two types of interactions have been studied: Religiosity can impact state policy and development outcomes through state-actor identity (Mehmood and Seror, 2023; Reinikka and Svensson, 2004), or religious institutions can work in parallel to state capacity to achieve development goals (Castello-Climent et al 2017). Moreover, the literature on this topic tends to focus on how religious organizations provide services of their own and may substitute the state in public service delivery (Iyer, Velu and Weeks, 2014; Iyer, Velu and Mumit, 2014; Berman 2009 Hungerman and Gruber, 2008; 2007; Hungerman, 2005; Chaves 2004). We add to this literature by highlighting the dual role of religious institutions in state capacity and public service delivery, i.e., by showing that religious organizations can also *complement* state capacity. Further, the context, i.e., religiosity in developing countries as well as Sikhism and its traditions, have been relatively understudied in the literature.

Finally, we also contribute to the research focused on assessing which institutions impact public services in developing countries. Discourse on the political economy of public service delivery has tended to emphasize two agents – state capacity and community or civil society. The evidence highlights elite capture of resources and public goods through political clientelism (Bardhan and Mookherjee, 2012), group and political identity (Banerjee and Somanathan, 2006; Besley et al. 2004) or social and religious fragmentation (Balasubramaniam et al 2014;Banerjee, Iyer and Somanathan, 2005). We add to this literature by focusing on another contemporary institution, i.e., cult leaders in India, which function separately from the state but also impact public service

delivery.

The rest of this paper is organized as follows: Section 2 explains the empirical context that we study and provides a historical background of religious movements in Punjab. Section 3 outlines the empirical strategy. Section 4 describes the data. Section 5 presents the main results. Section 6 proposes potential mechanisms and provides suggestive evidence for these. Section 7 concludes.

2 Background

Non-institutional religious movements in India manifest as organizations separate from, and often unrecognized by, traditional religions such as Hinduism, Islam or Sikhism. These organizations are centered around an individual leader, often referred to as a *guru* or *baba*, and are deeply intertwined with the social and cultural evolution of the country (Takhar, 2014; Nesbitt, 2014; Oman, 1908). In this, they diverge from deviant movements like cults in the West, which are marked by charismatic and manipulative leaders and tend to exist in isolation from mainstream society. Indian movements however, function more openly and at least on the surface, maintain a symbiotic relationship with both the state and the community. These organizations often play significant roles in local communities, providing social services such as education, healthcare, and contributing to welfare activities. This societal integration further contrasts sharply with Western cults, which are generally more secretive and are viewed with suspicion by both the public and the law. Additionally, while many Western cults have emerged relatively recently, often within the last century, a substantial proportion of Indian non-mainstream religious movements trace their origins, or at the very least, the origins of their core ideologies, back to much earlier periods, reflecting long-standing traditions of religious and social reform movements.

The leaders of these movements in India are colloquially known as *gurus* or *babas*. India exhibits extensive inter-state diversity, with various states experiencing distinct religious traditions and *guru*-centric sub-movements over time. While there is no official estimate of the number of such *gurus* in India, a 2019 Pew Research survey indicates that at least 42% of Indians follow

one. These *gurus* are regarded by their followers as divine figures, not only due to their claimed spiritual powers but also because of their perceived ability to heal, provide guidance on personal and societal matters, and embody moral authority. This elevates them beyond the role of a typical temple or church priest, as they are seen as direct intermediaries between the divine and their adherents. However, they do not necessarily need to perform divine acts, such as "miracles", to attract adherents. Influential *gurus* like Baba Ramdev and Sri Sri Ravi Shankar have capitalized on cultural practices such as meditation, yoga, and traditional medicine to garner large audiences. In contrast, *Guru* Ram Rahim has risen as a prominent leader among historically disadvantaged communities.

Although there is no official data on the size and scale of these organizations, our primary field research offers some insight. In a survey conducted among local village council members, where they were asked about their opinions and knowledge of local *gurus* and their establishments, 79% reported that the establishment was singular with no other branches. So, there is no one central *dera*, rather, they represent various religious movements or sects of the root religion they emerge from. The average *guru* in India likely maintains a localized following, predominantly within their own district or state. Their influence is often limited in scale, characterized by smaller financial resources and a narrower reach. For instance, many *gurus* operate within a single region, providing spiritual guidance to a localized community rather than achieving nationwide or international acclaim. However, several of these organizations have expanded significantly, amassing considerable financial resources and gaining international recognition. For instance, Sri Sri Ravi Shankar's organization, The Art of Living Foundation, is estimated to have 300 million followers across more than 100 countries, with a net worth exceeding USD 100 million[1]. Similarly, Osho, a *guru* from the 1970s, established a commune in Oregon, USA, that attracted thousands of followers, and the Beatles' interaction with Maharishi Mahesh Yogi in India during the 1960s is said to have influenced their music.

[1]https://timesofindia.indiatimes.com/business/india-business/indias-richest-saints-babas-and-their-net-worth/photostory/101618747.cms?picid=101618775

2.1 Punjab: Background and Religious Context

2.1.1 Current Economic Status

We study the socio-economic impact of these *guru*-based organizationsm, called *deras*, in the north-western region of the Indian subcontinent, in particular, the state of Punjab. Prior to the partition of India in 1947, the Punjab province was under British colonial rule and encompassed areas that are now in present-day Pakistan, the Indian state of Punjab, and some parts of three other states in modern India.

With a population of nearly 28 million (2011 Census), Punjab was a major beneficiary of the innovations of the Green Revolution of the 1960s which marked its status as a predominantly agrarian state and one of the wealthiest in the country. But over the last two decades, Punjab's growth rate has decelerated significantly. As of 2023, Punjab ranks 16th among all Indian states in terms of Gross State Domestic Product (Reserve Bank of India, 2023). The state has also become plagued by a debt trap resulting in fiscal distress. On several development indicators such as literacy levels and healthcare metrics, while Punjab had witnessed major improvements, this trend has seen some reversal as well. It now ranks in the mid-range among all states in the country. Gender inequalities continue to exist, evident in low child sex ratio and female labor force participation. Caste disparities persist as well with unequal participation in literacy and healthcare access (World Bank 2018[2]).

2.1.2 Religious History

The present-day Indian state of Punjab stands out as one of the few non-Hindu dominated states in the country. The region witnessed the rise of Sikhism, a monotheistic religion founded in the 15th century by Guru Nanak Dev. He was succeeded by nine additional teachers (also called "*Gurus*") who further developed the religion and its doctrines over the next two centuries. The tenth teacher, Guru Gobind Singh, ended the tradition of following living *gurus*. Instead, he declared the central Sikh scripture, the *Guru Granth Sahib* as the final *Guru* and ultimate spiritual authority. Consequently, contemporary orthodox Sikhism follows the teaching of the central scripture exclusively and does not recognize a living teacher or *guru*. Nearly 60 percent

[2]https://www.worldbank.org/en/country/india/brief/india-states-briefs-punjab

of Punjab's population identifies as Sikh, making it the only Sikh-majority state in the country.

In addition to Sikhism, the Punjab region has witnessed various other religious movements. The area saw the rise of numerous Sufi saints, such as Baba Farid, whose shrines continue to attract devotees from different religious backgrounds and whose legacies have left a lasting cultural impact (Dhavan, 2014). Furthermore, with a third of its population identifying as Hindu (2011 Census), Punjab has a rich history of Hindu practices. Between the 15th and 17th centuries, the Bhakti Movement, a religious movement originating from Hinduism, produced numerous poet-saints and also influenced Punjab and Sikhism. For example, the central scripture of Sikhism, the *Guru Granth Sahib*, includes hymns written by Bhakti saints like Kabir and Ravidas (Nesbitt, 2014). Thus, while the state is predominantly Sikh, it has experienced other religious influences that have shaped contemporary religious movements and traditions in the area.

2.2 "*Deras*" and Alternate Religious Movements

Parallel to the development of Sikhism, and even preceding its formal establishment, the Punjab region experienced the rise of alternative spiritual movements that diverged from traditional religions. Many distinct sects emerged out of different religions like Sikhism, Hinduism and Islam, with their own historical origins and ideologies. These movements were considered "deviant" because, while they drew heavily from a root religion, they also exhibited unique practices that set them apart from that root religion and led to their rejection or non-recognition by orthodox authorities (Nesbitt, 2014). For example, members of the Nirankari sect, founded in the mid-1800s by Dyal Das, practice Sikh traditions but deviate from the established doctrine by following living *gurus* and their lineages, a practice which contradicts Sikh doctrine.

India has experienced the emergence of numerous alternative religious movements across its major faiths. One significant form of these movements is the *guru*-centered organizations in Punjab and nearby regions. These movements are culturally referred to as "*deras*," reflecting local conventions that distinguish them from more traditional religious institutions. The term "*dera*" literally translates to a residential establishment, but across Punjab, over time, it has evolved to refer to a religious establishment led by a religious or spiritual leader (or *guru).* Devo-

tees gather at *deras* for spiritual instruction, blessings and collective worship. Depending on their scale, *deras* offer services in the community, ranging from lower-cost services like communal meals and free health camps (like eye or dental check-ups) to high-cost infrastructure-based services such as operating their own schools and hospitals.

Different *deras* may align with distinct sects in terms of their beliefs and historical roots. Many *deras* are managed by religious trusts or incorporated entities and have their own systems for selecting leaders. A typical *dera's* organizational structure is centered around the *guru*, who serves as both the spiritual and administrative head. The extent of the *guru*'s involvement in the day-to-day activities often depends on the scale of the organization's operations. For small-scale *deras*, there is usually just one establishment with its *guru* that functions independently of other *deras*. The *gurus* or these *deras* may be more involved in managing daily activities. Larger *deras* with multiple branches often exhibit a hierarchical structure with various administrative roles delegated to trusted followers or family members of the *guru*. For example, the Radha Soami Satsang Beas (RSSB) organization is headquartered in Punjab, India and has centers across the world. But despite the diversity in their organizational structures, a common theme across all *deras* is the central role of the *guru*, whose charisma and popularity are pivotal in attracting and maintaining followers. RSSB, for instance, is led by Gurinder Singh Dhillon, who is the spiritual head of the organization.

Based on findings from our field research, we differentiate between four types of *deras* in Punjab: Non-Sikh *deras*, Hindu *deras*, Pir *deras* and Sikh *deras*. Our primary data suggests that the most common category are non-Sikh *deras*. These are *deras* that have some commonalities with Sikhism but differ significantly from traditional orthodox Sikhism in their doctrines and organizational structures. First, and most importantly, non-Sikh *deras*, like all other *deras*, are led by a spiritual leader who is considered an intermediary between ordinary followers and the divine. Most leaders today are regarded as divine beings themselves, capable of miracles and communication with god. Sikhism, on the other hand, adheres to the teaching of the *Guru Granth Sahib*, the central scripture, and strictly rejects the idea of a living *guru*. Second, Sikhism maintains a centralized organizational structure. The Golden Temple in Amritsar, Punjab is home to the *Akal Takht*, the highest seat of authority in Sikhism, and edicts issued from here are binding for

all practicing Sikhs and gurdwaras. The administrative management of Sikh places of worship, called *gurdwaras*, comes under the ambit of the Shiromani Gurdwara Parbandhak Committee (SGPC). Non-Sikh *deras*, however, operate independently of the Akal Takht and the SGPC, with their own unique governance structures and administrative hierarchies.

Some of these non-Sikh *deras* emerged as anti-caste movements (Ram, 2016) and have become important institutions advocating caste-equality[3]. Finally, Sikhism, as mentioned, follows only the teachings of the central scripture, the *Guru Granth Sahib* and its own prescribed practices. In contrast, non-Sikh *deras* encompass various types of practices and tend to embrace syncretic traditions. For instance, it is not uncommon to find images or symbols of deities and leaders from diverse religious traditions within *deras*, spanning Sikhism, Hinduism, Jainism, Islam, and Christianity. Caste-based *deras* may display pictures of important leaders of anti-caste movements in the region.

Hindu and Pir *deras* share similarities with non-Sikh *deras* in their organizational structures centered around a divine *guru*. However, their distinct religious origins determine their traditions. Hindu *deras* trace their roots to Hinduism, in particular, Shavite and Vaishnavite sects, while Pir *deras* are influenced by Sufi and Islamic practices, often situated in the vicinity of significant shrines. Finally, Sikh *deras* represent a newer development initiated by Sikh authorities to align previously *guru*-centered *deras* with orthodox Sikh practices. These Sikh *deras* blend orthodox Sikhism, including adherence to the central scripture, with elements of the non-orthodox tradition of following a living guru.

Deras range widely in terms of scale and scope of operations. Major large-scale *deras* are those that have grown significantly and acquired vast resources and political capital. Examples include Dera Sacha Sauda and Radha Soami Satsang Beas which have evolved from small scale operations to large multi-faceted organizations with millions of followers in India and at international branches, extensive economic assets, land and real estate, and immense political influence. Such *deras* build and operate their own schools and healthcare facilities and engage in large scale social service programs. In contrast, mid- to small-scale *deras* operate at a more localized level. Mid-size *deras* may have their influence extending over a sub-district, district

[3]While Sikh doctrine does not prescribe a caste hierarchy, casteism is practiced in the Punjab region

or a small cluster of districts, while a small-scale *dera's* influence will be limited to the village in which it is based and possibly some neighboring villages in the immediate vicinity. These *deras* usually control fewer resources, and so, may not be able to engage in very large-scale social activities, but will instead focus on less resource-heavy services such as food distribution, organizing health camps or blood donation drives. They also organize fairs involving sports events and entertainment as a means to attract funding.

2.3 Social prominence, Role in Public Service Delivery and Interaction with State Capacity

Anecdotal evidence suggests that *deras* play a multifaceted role in the social, economic, and political life of Punjab. There are several factors that have led to their proliferation in Punjab. First, the spiritual leader, i.e., the *guru*, is considered divine and provides tangible and personalized access to God, which the priest of a traditional temple or *gurdwara* cannot provide. For the communities that follow them, the *gurus* have "proved" their charisma in some manner, generally through stories or rumors of supposed miracles (usually health related, like curing someone of an incurable disease). For a follower, this represents the potential of an immediate solution to one's spiritual or material problems. Second, *deras* often boast an inclusive, egalitarian approach, at least in theory, which draws followers from marginalized communities. In fact, some *deras* originated in anti-caste movements and were established in answer to the marginalization of lower-caste groups. For example, Dera Sachkand Ballan is an influential organization that follows the teachings of Ravidass, an important spiritual leader for lower-caste groups in the region[4]. This *dera* has established its own scripture, religious practices, traditions and community and considers itself completely separated from Sikhism. Third, since most *deras* adopt syncretic traditions, they are able to accommodate a wide range of beliefs and customs which in turn attracts a diverse following. Finally, *deras* organize events and provide services in their areas of influence that deepens their ties to the local community. Many *deras* with access to vast resources often fill gaps in state-provided services, thereby compensating for weaknesses in state capacity. Their role in providing education, healthcare and social services

[4]https://www.hindustantimes.com/punjab/10-facts-about-dera-sachkhand-balan-and-guru-ravidass-arvind-kejriwal-in-punjab-dalits/story-G9lgXKUT2XA1SXnSLajNuN.html

is especially prominent in areas where the state's reach is inadequate. For example, the Radha Soami Satsang Beas organization operates four hospitals in rural areas targeted at providing free services to citizens that may be underserved by the state such as low-income and lower-caste groups. Additionally, *deras* contribute to the local economy through their various enterprises and events, creating jobs and stimulating economic activity in their areas of operation.

While *deras* engage in service provision of their own, they may also interact with local state capacity to influence governance. This interaction is complex and depends on the *dera's* scale of influence and resources. For instance, the political influence wielded by large *deras* can intersect with state functions. Leaders of influential *deras* may engage with political leaders and parties who recognize the potential voter base in the followers of the *gurus*. This engagement potentially ends up shaping electoral outcomes and influencing governance and policy decisions. This political dimension can both bolster and challenge state capacity, depending on the nature of the interactions and the interests involved.

Political parties often seek their endorsements to gain support from their followers. For instance, in the run up to the National Elections of 2014, Baba Ramdev and Sri Sri Ravi Shankar expressed their support for the Bharatiya Janata Party (BJP). Since 2007, political parties in the northern states of Punjab and Haryana have courted Baba Ram Rahim in order to benefit from his follower base. One can think of this arrangement as a barter system, through which such institutions, after attracting followers, transfer their loyalty to the local socio-political elite in exchange for the latter's aid in the expansion of the religious institution's sphere of influence. As a result, in areas where such organizations exert influence, state capacity may fall, i.e., local governments may under-provide public goods in order to allow *deras* to flourish as informal power centers that provide their own public services. Governments may also shirk their responsibilities, simply because they wish to free-ride.

In contrast, anecdotal evidence suggests that leaders of smaller *deras* may gain popularity by acting as mediators between citizens and government, and therefore, nudge governments to provide more (and better quality) public goods. They are also involved in collective action campaigns related to corruption or social programs. For instance, Swami Agnivesh led cam-

paigns against bonded labor and participated in anti-corruption campaigns. *Deras* and their leaders frequently act as mediators in local disputes between village councils and citizens, providing a platform for conflict resolution that might be more trusted or accessible than formal legal systems. Such conflict resolution could lead to matching preferences of the political elite and their constituents, improving service delivery in these areas.

3 Estimation Strategy

3.1 Identification and Endogeneity Concerns

A naive linear regression aimed at ascertaining the effect of the presence of a *dera* on state provision of public services at the village level is shown in Equation (1). As per this specification, y_v, i.e. outcomes related to public services provided by the government in village v are regressed on a binary variable $DeraPresence_v$ that equals 1 if a *dera* exists within the geographical territory of the village and zero otherwise, along with a vector of village-level controls (X_v). Here, β is the coefficient of interest.

$$y_v = \alpha + \beta DeraPresence_v + X_v'\gamma + \epsilon_v \tag{1}$$

However, this naive OLS estimation strategy is likely to yield biased estimates due to the potentially non-random nature of *dera* locations. For instance, factors such as a village's caste dynamics, political relevance, and its religious composition may influence both the establishment of *deras* and the provision of public goods by the state in villages. If *deras* come up in locations with higher concentration of lower caste households, and such areas are usually associated with lower levels of public service delivery, the estimate for β may be biased downwards. Similarly, if *deras* come up in areas with high levels of political influence, and such areas are associated with higher levels of public service delivery, the estimate for β may be biased upwards.

Further, reverse causality may also bias simple OLS estimates. For instance, *deras* may have been established in areas plagued by low state capacity in order to address deficiencies in public service provision. The existence of such reverse causality may further compromise the validity of the OLS estimate. To address these identification challenges, we use a two-stage least squares

strategy that exploits the fact that certain random variables may partially explain the location of a *dera*. We supplement this strategy with a local control strategy, where we compare treated ($dera$) and control ($non - dera$) villages within a very close vicinity.

3.2 2SLS Estimation Strategy

3.2.1 Instrumental Variable: Intuition

Our IV design is inspired by an understanding of the origins of *deras*. A potential explanation behind the genesis of these institutions is the rise of deviant leaders, who did not agree with the succession plan implemented to choose the ten Sikh Gurus between the 15^{th} and the 18^{th} century (Atri, 2022). Movements established by these leaders diverged from Sikhism in their ways and practices. Furthermore, some movements and their leaders predated the formal establishment of Sikhism, and may persist till date in the form of *deras*. In addition to Sikhism, the Punjab region also experienced the growth of Sufi and Hindu traditions under the tutelage of different religious leaders. Their ideologies were different from those of Sikhism. After extensive literature research, we compile a list of such saints who may have led such movements (Figure 1). We exploit the fact that distance between a village and the birthplaces of these leaders may potentially be one of the factors that determine whether a village has a *dera* or not. We posit that this distance is exogenous, and that it qualifies as a potential instrument of interest.

As shown in Figure 1,the founders of these alternative religious movements were primarily born across the Punjab region, which includes the present-day Indian state of Punjab and parts of Pakistan. These leaders were born between the 1300s and the 1800s. We posit that the closer a village is to a historical religious leader's birth location, the more likely it is to have a *dera* associated with the sect or traditions promoted by that leader. This likelihood is supported by the fact that religious movements of the time, such as the Bhakti, Sufi, and Sikh traditions, often involved leaders undertaking pilgrimages to disseminate their teachings and ideologies. As a result, villages close to these historical leaders' birth locations would have witnessed greater activity associated with the traditions espoused by that leader. The entire process would have paved way for the establishment of *deras* in the vicinity of their birth locations.

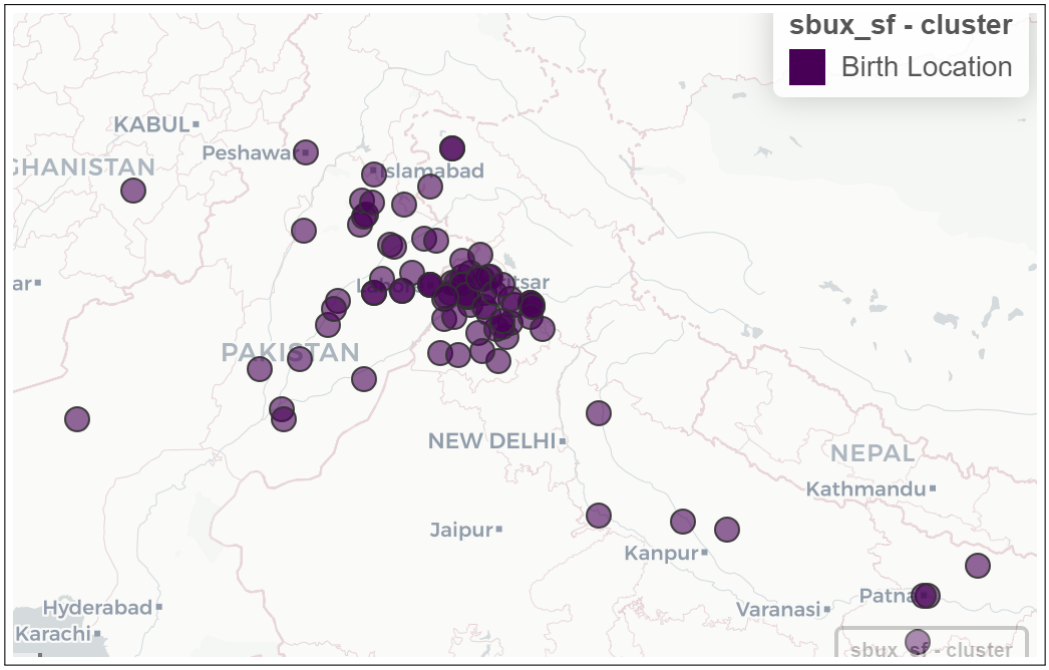

Figure 1: Birth Locations

3.2.2 2SLS Specifications

Accordingly, the first stage of this specification is shown below (Equation (2)).

First Stage

$$DeraPresence_{vbi} = \alpha_1 + \alpha_2 LogDistBirthPlace_{vbi} + X'_{vbi}\alpha_3 + \lambda_{1i} + \kappa_{1b} + \epsilon_{vbi} \quad (2)$$

Here, $DeraPresence_{vbi}$ represents the *dera* status of village v in block b, for which the closest birthplace is birthplace i. This status equals 1 if a dera exists within this village, and zero otherwise. [5] We control for village-level geographic covariates X_{vbi}, birth place fixed effects λ_{1i} and block fixed effects κ_{1b}. In the benchmark specification, we report robust standard errors, for we exploit randomness in a village's distance to birthplace location. We do so based on anecdotal information that when deciding the locations of their establishments within a region, historical religious leaders chose among individual villages, and not clusters. Based on our priors, we expect a negative α_2, i.e. the farther away a village is from a historical leader's birthplace, the lower the likelihood of the presence of a *dera* today. Once we estimate the first

[5] While it is reasonable to assume that it is highly likely that a *dera* in a treated village may be affiliated to the sect related to the religious leader whose birthplace is the closest to the village, due to absence of data, we cannot confirm this hypothesis.

stage, we use $\widehat{DeraPresence}_{vbi}$, i.e. the predicted value of $DeraPresence_{vbi}$ from Equation (2), and plug it into the second stage specification, as shown in Equation (3).

Second Stage

$$PubServicebyState_{vbi} = \beta_1 + \beta_2 \widehat{DeraPresence}_{vbi} + X'_{vbi}\beta_3 + \lambda_{2i} + \kappa_{2b} + \epsilon_{vbi} \tag{3}$$

In Equation (3), $PubServicebyState_{vbi}$, i.e. the presence of public services provided by the state in village v is regressed on $\widehat{DeraPresence}_{vbi}$, along with the same covariates and fixed effects as in the first stage. β_2 provides us with a causal estimate of the impact of the presence of a *dera* in village v. A positive β_2 will suggest that the presence of a *dera* in a village leads to a higher likelihood of presence of public services provided by the state in that village.

The usage of an IV strategy implies that apart from the relevance condition discussed above, we also need to show that the exclusion restriction is not violated. In other words, we need to show that the instrument (distance to birthplace) impacts the outcome variable (presence of public services provided by the state) through no other channel apart from the endogenous regressor (presence of deras). For instance, areas close to birthplaces may have received higher political patronage, which may impact the validity of the instrument. In subsequent sections, we run empirical tests and provide qualitative evidence to argue that the exclusion restriction is not violated.

3.3 Local Control Strategy

We supplement the IV estimation strategy with a local control strategy, wherein we compare each treated village (village with *dera*) with all control villages (without *dera*) within a 4 kilometer radius. The identifying assumption for this specification is that villages within such close vicinity are similar in all aspects except treatment status. The strategy is visually illustrated in Figure 2. Each concentric circle is a cluster with a radius of 4 kilometers, with a treatment village in the center, represented by triangles. Each such village is surrounded by several control villages, represented by squares. In some occasions, a control village may appear across multiple clusters (such as the one in the overlapping area in Figure 2).

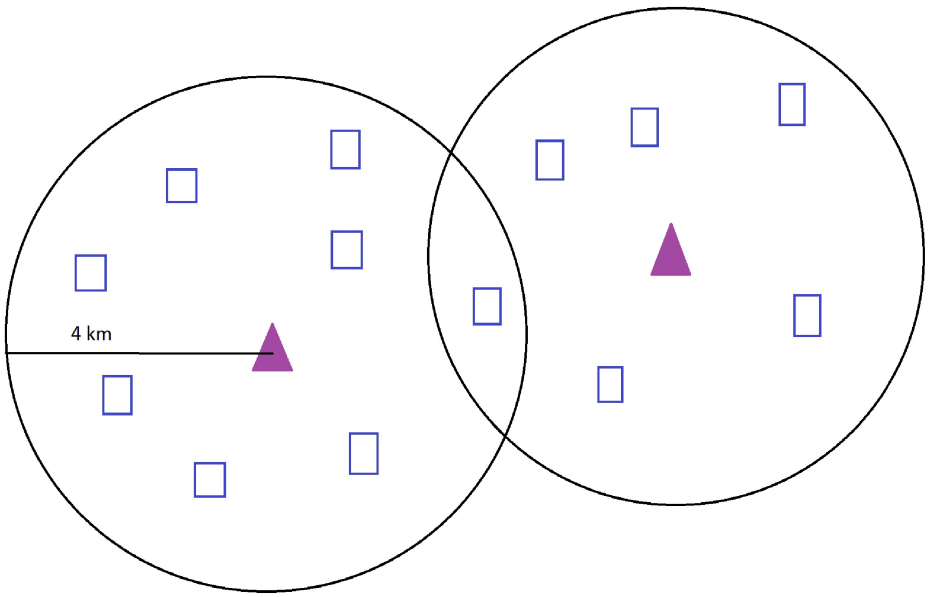

Figure 2: Local Control: An Illustration

The specification for this strategy is shown below (Equation (4)). Presence of public services provided by the state in village v assigned to cluster c ($PubServicebyState_{vc}$) is regressed on a binary variable ($DeraPresence_{vc}$) that equals one for treated villages and zero for control villages. We control for a vector of village-level controls X'_{vc}, along with cluster fixed effects (λ_{2c}). The coefficient of interest, γ_2, captures the impact of *deras* on the provision of public goods. ϵ_{vc} is the error term. Based on our qualitative understanding that historically, the choice of a *dera* location was at the level of village, we argue that within such proximity, that choice would have been random. Hence, following Abadie et al. (2017), we cluster standard errors at the level of village. A positive γ_2 would indicate a favorable effect of *deras* on public goods provision, while a negative γ_2 would suggest the opposite.

$$PubServicebyState_{vc} = \gamma_1 + \gamma_2 DeraPresence_{vc} + X'_{vc}\gamma_3 + \lambda_{2c} + \epsilon_{vc} \tag{4}$$

4 Data

4.1 Treatment: Village-level data on presence of *Deras*

To accurately estimate the impact of *deras* on public service provision, we require credible data indicating their presence at the village level. To the best of our knowledge, such information is unavailable and no public organization has constructed such a dataset. Additionally, there are no reliable estimates of the total number of *deras* in Punjab[6]. Although large-scale organizations have websites containing the locations of their branches, it remains challenging to ascertain the locations of small and mid-sized *deras*, as many lack an online presence. It is also plausible that small and mid-sized *deras* outnumber large ones, making it inappropriate to focus exclusively on large *deras* as the treatment group.

To address this data gap, we conducted the first-ever primary census of 6100 villages across 10 districts in Punjab during January-March 2024, covering nearly 50% of the villages in the state[7]. Enumerators visited every village in the sample to determine if a *dera* was located in its geographical territory. To do this, they inquired with knowledgeable villagers active in the community, like local shopkeepers, village council members, or elderly long-term residents of the village. Upon confirmation of the presence of a *dera*, the enumerators were instructed to visit the location of the establishment to record its GPS coordinates. For the purpose of this study, an establishment was recorded as a *dera* if it fulfilled a specific condition: it had to be recognized as a place of worship by the villagers and associated with a living *guru* who either resided there (for small *deras*) or visited it periodically (mid-size and large *deras* with multiple branches). Enumerators also recorded the activity status of the *deras*. A *dera* was considered "active" if, at the time of the visit, it was open to the public and had a *guru* operating inside. For branches of large organizations, a *dera* was deemed active if, at the time of the visit, it was open to the public and if a *guru* regularly visited or if his underlings presided over and operated

[6]We attempted to generate a dataset of village-level *dera* presence by using the keyword "*dera*" on Google Maps and scraping the locations of any establishments that included "*dera*" in their name. This strategy suffered from two sources of measurement error. First, Google Maps contains user-fed information, meaning we were only able to identify *deras* whose locations had been entered on the platform, likely capturing only larger and more popular *deras*. Second, the word "*dera*" in Punjab also means a home and is commonly used in other proper nouns, including names of restaurants and other establishments. Consequently, we incorrectly recorded such locations as religious *deras*. Field verification of a sample of 200 locations revealed a significant discrepancy between the Google Maps data and reality, leading us to abandon this strategy.

[7]The remaining state could not be covered due to lack of financial resources.

the *dera* in his name. A *dera* was classified as inactive if the establishment was closed at the time of the visit but had been operational in the recent past (within the last 5-10 years). Since we use the Census 2011 data for public service provision, i.e., the outcome variable, we consider these inactive *deras* as treatment villages, as long as they had been active up to 2011. Finally, villages with establishments that had been closed for longer than 10-15 years were not recorded as *dera* villages. Figure 1 shows a village-level map of Punjab, distinguishing between villages with and without *deras* based on the census data.

In addition to this, enumerators also collected details about these *deras* such as name, name of the *guru*, date of establishment, approximate area of the establishment. However, since collecting this kind of information necessitates conversations with *dera* members, these variables suffer from significant missing data due to the fact that such organizations are usually hesitant to reveal information. Many *deras* are mired in controversy in public and are unwilling to discuss such details. Asking such specific questions raises suspicion so enumerators were instructed to only collect this information if possible to discern on their own from, say, publicly displayed plaques in the *deras* or through casual conversations with the adherents inside. If there were multiple *deras* in one village, enumerators collected all of the above information separately for each *dera*. We are able to match 5061 villages, out of 6100 from this census to other datasets for outcomes and include only these in the final specifications. Of these, 28% of villages had at least one *dera* within its geographical boundary. We consider these to be treatment villages. 86% of the treatment villages had one *dera* while the remaining had two or more.

4.2 Outcomes: Village-level Public Services

We use village-level data on available amenities from the 2011 Population Census of India to construct our outcome variables of interest. The village directory provides detailed information on the presence and/or number of establishments or structures associated with various amenities, covering both publicly and privately provided services. For this study, our analysis is confined to publicly provided amenities—specifically, those that are financed and administered by the government. We identify 69 state-provided services, deliberately excluding privately

provided services and those with ambiguous ownership[8]. The dataset records the number of each type of service, but our focus is on the extensive margin, constructing binary variables to indicate the presence of each service. We then compute the mean of all 69 services to derive an index reflecting the availability of government services.

We further disaggregate this index along two dimensions. First, we construct indices based on the *type* of services by grouping related amenities into distinct categories. Specifically, we create four categories: education (comprising 14 indicators, including primary, secondary, and higher education institutions), health (11 measures representing various public health initiatives), information technology, communication, and transport infrastructure (16 services including postal services, road networks, and public transport facilities), and water and sanitation (18 components addressing access to groundwater, piped water, sewage systems, and public sanitation services).

Second, we focus on 13 specific services and classify them according to the tier of government responsible for their financing and operation, following the framework in Asher et al. (2018). Services such as electricity supply, postal infrastructure, and paved roads fall under the jurisdiction of the federal government. In contrast, educational and healthcare facilities are administered by the state government[9]. Village councils (panchayats) are responsible for managing local services, including sanitation and the upkeep of village-level amenities like sports fields. Based on this classification, we construct three indices corresponding to the respective levels of government.

4.3 Instrument: Distance to Nearest Birth Location of a Historical Religious Leader

We construct a dataset of historical leaders by tracing the founders of nearly 20 sects and subsects of Sikhism as well as leaders of the Sufi movement and some Hindu leaders, pinpointing their birth locations with GPS coordinates and recording their years of birth where possible. We compiled this list after a detailed search of available literature and qualitative interviews with

[8]For instance, internet cafes may be privately owned or operated under government-initiated Common Service Centres (CSCs), with the dataset not specifying the ownership of such services.

[9]These are typically implemented by district and sub-district administrations

academicians in the field. In total, our dataset includes 86 founders of sects and sub-traditions that are distinct from mainstream Sikhism. This encompasses Sikh sects, Sufi movements, and some Hindu movements, like the Bhakti movement. Most of these birth locations are situated in the modern-day Indian Punjab region and Pakistan, with birth years ranging from the 1300s to the early 1800s. Figure 2 shows a map of Punjab with birth locations of historical sect founders highlighted.

4.4 Covariates

We use various datasets as sources of covariates. We use the Fick and Hijmans (2017) high resolution (1 km2) dataset for 1970-2000 on climate covariates that includes temperature, precipitation, elevation, among others. We also use soil data for crop suitability from the FAO Global Agro-Ecological Zones (GAEZ) database. We get data on rivers from the HydroSHEDS database. The Population Census of India (2011) includes data on the proportion of low-caste households at the village level. We also include covariates on distance to the state's capital city, Chandigarh, and district headquarters.

4.5 Mechanisms: Primary Surveys of Village Council Members

The exploration of mechanisms driving the interaction between *deras* and state capacity suffers from a lack of data on this subject. There is no reliable qualitative study that documents how religious leaders interact with the local bureaucracy or even the nature of this interaction: competitive or cooperative. To address this, we conducted telephonic surveys with village council members to gather evidence related to mechanisms. For each of the treatment villages, within a range of 4 kilometers, we chose one randomly selected control village for a total sample of xxx. The survey had a response rate of xx%. These surveys included questions related to the interactions of the village councils with local *dera* leaders and their involvement in public service provision.

5 Results

5.1 Validity of 2SLS Strategy

We first establish the validity of our instrument. The relevance condition in the two-stage least squares approach utilized in this study requires that the distance to the nearest birthplace of a historical religious leader is strongly correlated with the presence of a *dera* in the village. Specifically, villages in closer proximity to a historical birth location are hypothesized to have a higher likelihood of having a *dera*.

In Table 1, we report the estimates from the first stage specification. This specification omits villages within a 5 kilometer radius of birthplaces in order to omit any disproportionate impact that the religious importance of such places may have on the socio-economic development of contiguous areas.[10] Estimates shown in Table 1 suggest that for every 100% increase in distance to a birthplace, the probability that a village will have a *dera* reduces by 12.3 percentage points. This coefficient is statistically significant at the 1% level. The F-statistic of 26.97 exceeds the conventional threshold of 10, reinforcing the instrument's strength.In Appendix Table A1, we report the first stage estimates using the entire sample. The coefficient remains negative and statistically significant, with an F-statistic of 16.5.

Next, we test for potential violations of the exclusion restriction. For the instrument to be valid, it must influence the outcome exclusively through its effect on the endogenous regressor, with no direct impact or alternative pathways. Specifically, the distance from a village to the nearest historical birth location of a sect leader should affect present-day public service provision solely through its influence on the presence of contemporary *deras*. In order to test the same, we run placebo checks. As shown in Table 2, we use geographical variables as placebo outcomes, and estimate the first stage. Results suggest that estimates are either insignificant, or they are very small (relative to the control mean) and significant. For context, when standardized, the magnitude of the coefficient for the first stage using the endogenous regressor is almost four times the size of the highest magnitude among the placebo outcomes. Regardless, we control

[10]Estimates for both the first stage as well as the second stage do not change substantially even if we do not omit those observations.

for all these variables in the benchmark specification.

5.2 Main Results: Impact of Presence of *Dera* on State-Funded Services

The primary specification investigates the impact of the presence of a *dera* on the provision of public services within villages, utilizing an index that aggregates 69 government services from the 2011 Population Census of India. Results obtained after estimating Equation (3) are reported in Table 3. Estimates indicate that the presence of a *dera* leads to increased provision of public services. Specifically, the OLS estimate suggests that the presence of a *dera* is associated with a 1.8 percentage point increase in the public services index (significant at the 1% level). However, when instrumenting for the presence of a *dera* using the distance to the nearest historical birth location of a sect leader, the IV estimate is significantly larger at 19.3 percentage points (significant at the 5% level). The difference in magnitudes between the OLS and IV estimates suggests the presence of downward bias in the OLS estimates, potentially due to reverse causality or omitted variable bias.

As per the IV estimates, if out of 100 services, 31 services exist in the average village with no *dera*, then villages with *deras* will have 50 services. This translates to a substantial 61% increase over a control mean of 0.31, highlighting the significant role *deras* may be playing in improving public service provision.

5.2.1 Impacts by Types of Services

Next, we estimate treatment effects disaggregated by different types of services. These are reported in Table 4. Results demonstrate considerable heterogeneity across different sectors, with the most pronounced effect observed in the health sector. IV estimates indicate that the presence of a *dera* leads to higher access to healthcare services (29.2 percentage points over a control mean of 9%). Economically significant results are also obtained for the education sector.

IV estimates suggest that presence of a dera leads to higher access to educational services (9.4 percentage points over a control mean of 15%). For the other two categories, i.e. IT and Transport, and Water and Sanitation, we see positive but statistically insignificant treatment effects. In fact, the reported effects on health and education facilities are significant, given that access to these services can be a costly affair for households, and hence, any action along these margins can make a significant impact on their lives.

5.2.2 Impacts by Level of Government

Finally, in Table 5, we report IV results disaggregated by the level of government responsible for different kinds of services. Interestingly, the most substantial impact is seen in services managed by the state and district governments, with IV estimates showing a 22.0 percentage point increase over a control mean of 0.59, representing a 37.3% increase. While IV estimates also point to positive effects on services provided by the federal government as well as village councils, stronger results related to state and district governments might be indicative of their ability to influence state government initiatives or mobilize resources at mid-level governance. These results are consistent with the strong and positive effects that we find for the health and education sectors, for the latter fall under the purview of state governments.

While null effects on services provided by the federal government are understandable, those on services provided by village council services are puzzling. After all, *deras* operate in their proximity and should, ideally be able to influence them the most. A potential argument could be that village council leaders may not entertain *dera* leaders, for they may fear the establishment of parallel power centers. At the same time, it is possible that *dera* leaders work better at or are more interested in resolving coordination failures that are usually associated with services provided by district-level authorities, instead of resolving routine issues at the grassroots. For instance, *dera* leaders may be interested in resolving issues related to healthcare and education, for they are crucial to socio-economic development of their followers. However, policy matters related to these sectors fall under the purview of the state government and are executed by district authorities. Similarly, *dera* leaders may also realize that village leaders easily accessible to the public, and that their value addition may lie in resolving coordination failures associated

with higher authorities at the level of the district.

5.3 Local Control Strategy

Next, we report results using the local control strategy. As a first step, we run balance checks using Equation (4). Results are reported in Table 6, and suggest that overall, the control and treatment units are balanced. In Table 7, we report the main results using the local control strategy. Although when compared to the IV estimate (0.193), the point estimate obtained from the local control strategy is smaller (0.025), the direction remains the same. This is understandable given that the IV strategy is a localized average treatment effect (LATE).

Similarly, as reported in Table 8, as per the local control strategy, we find positive effects on services related to health and education. When disaggregated by the level of government, estimates obtained using the local control strategy are significant for all 3 levels of government (Table 9). This is different from the IV estimates, as per which, we find significant effects only for services administered by state governments and district offices. However, the direction of the coefficients is the same between the two strategies across all 3 categories, even though estimates obtained using the local control strategy are smaller than those obtained using the IV strategy. Once again, the localized nature of the latter may be responsible behind these differences.

6 Pathways of *Deras'* Influence on State Service Delivery

Our empirical analysis so far indicates a significant positive impact of *deras* on the provision of public services by the state. This effect is particularly pronounced in sectors characterized by pressing community needs, such as health and education. This analysis reveals considerable heterogeneity in treatment effects across different tiers of government. Specifically, as is evident from results obtained from both of our empirical strategies, *deras* seem to especially impact services administered at the state and district levels, suggesting that their organizational capacities are most effectively leveraged in interactions with mid-level government authorities.

In this section, we explore some questions related to potential channels through which the presence of *deras* might be impacting the provision of public services by the government. While

there may be several channels through which this may be happening, we focus on one dimension: coordination between *deras* and local governments. Using primary survey data, we try to understand ways in which this coordination might be happening, as well as reasons behind both parties to cooperate with each other.[11]

6.1 Coordination with Government

6.1.1 Role of *Deras* in Service Provision

?? presents summary statistics detailing the characteristics of the *deras* and the villages included in the survey. Approximately 39% of the surveyed villages have a *dera* within their geographical boundary. Among these, about 75% are small-scale operations, consisting of a single establishment with no additional branches, suggesting that their influence is likely confined to the originating village. Our respondents are former or current village council members, tasked with overseeing local governance, which primarily involves executing various development projects within the village and conducting regular meetings with citizens to assess local needs. Consistent with common challenges faced by many Indian villages, close to a third of the respondents identify limited government funding as the primary obstacle to implementing development and social programs. Additionally, 14% of respondents report facing issues of cooperation with state actors. Finally, we validate the prevalence of an issue peculiar to Punjab's context, i.e. drug addition. 70% of respondents indicate that this issue impacts their village.

Our survey inquired about the types of services provided by *dera* organizations within the village, extending this question to respondents from non-*dera* villages as well. This inclusion was necessary because it is not uncommon for *deras* to occasionally offer low-cost services to nearby villages. We present statistics to assess whether there is a significant difference in the extent of service provision between *dera* and non-*dera* villages. The services discussed in this section are distinct from those provided by the state. Anecdotal and qualitative evidence suggests that *deras* are recognized for delivering their own services to their followers (Ram, 2007). However, only the larger and financially prosperous *deras* potentially possess the capacity to offer services that

[11] Our primary survey consists of responses from 940 village council members across 640 villages. These respondents were asked about their opinions related to *deras*. They were also quizzed on the functioning of these institutions.

require high fixed costs and directly compete with state facilities, such as their own schools or hospitals. In contrast, most *deras*, being smaller establishments with limited financial resources, are more likely to engage in low-cost activities, such as providing free cooked food (a practice common in Punjab and Sikh establishments), organizing fairs, hosting mass weddings for lower-income households, and assisting residents in accessing state services, as seen in **??**.

Table 12 presents the mean values and differences between *dera* and non-*dera* villages in the role of *deras* in influencing state service delivery. The survey specifically inquired about the role of *deras* in coordinating with the state across both extensive and intensive margins of service delivery. For instance, respondents were asked whether a *dera* was involved in the construction of a government school and whether it also played a role in addressing shortages of supplies at the school, such as textbooks. Beyond services related to physical infrastructure-based activities, we also inquired whether *deras* were involved in supporting social welfare programs, such as addressing wage payment delays for government employment schemes or coordinating grain delivery for the Public Distribution System (PDS). 57% of respondents from *dera* villages reported that *deras* were involved in coordinating over at least one service. Across different services, on both, the extensive and extensive margin, *dera* villages consistently were involved significantly more in coordinating over the provision of the service than in non-*dera* villages.

These survey findings align with our empirical evidence, which indicates a complementary, rather than substitutive relationship between *dera* influence and key state services such as healthcare and education. Given the limited capacity of these smaller *deras* to offer competing services, *deras* seem to complement state efforts in two ways: by coordinating with the state to increase the *state's* own provision of services and second, providing low-cost services that the state does not address.

6.1.2 Channels of Complementarity

The coordination between *dera* leaders and the state likely operates through several mechanisms that enhance public service delivery. In our survey with village council members, we probed the methods of *dera*-involvement, offering distinct options based on hypothesized channels. A

primary mechanism involves *dera* leaders financing public activities, either fully or partially. The distinction between these levels of funding is crucial for interpreting the role of *deras*. Full funding by *deras* suggests a substitution effect, where *deras* essentially replace state efforts, whereas partial funding indicates a complementary role, supporting the state. However, since these services are still legally recorded as state enterprises, the interpretation can be somewhat nuanced. In Table 13, we observe that while instances of *deras* fully funding an activity are non-zero, they are significantly more common in health and education services compared to non-*dera* villages. This finding underscores the critical role of *deras* in essential services and suggests that the *deras* engaging in such activities are likely the larger, financially robust institutions.

A more straightforward interpretation arises with the partial-funding mechanism. With their access to resources and social capital, *dera* organizations can supplement state-funded community projects or public services, particularly in areas where state support may be insufficient. This additional funding helps fill gaps in state provision, thereby enhancing access to essential services. Importantly, while *deras* contribute financially, the services remain public and are ultimately provided by the state, positioning *deras* as complementary rather than substitutive to state efforts. Table 13 demonstrates that *deras* consistently provide partial funding across various types of services, including both extensive and intensive margins. Unlike the fully-funding mechanism, which is more limited, partial funding is prevalent across all services. Anecdotal evidence gathered from discussions with sub-district and district government officers suggests that this coordination is bidirectional, with government officers sometimes approaching influential *deras*, and at other times, the *deras* taking the initiative to collaborate.

Another mechanism is the mitigation of information asymmetries. *Dera* leaders, possessing deep-rooted connections within their communities, are well-positioned to convey local needs and preferences to government officials. By bridging the information gap between state authorities and the community, *dera* leaders ensure that public services are more effectively aligned with local requirements, thereby improving their efficacy. This role is particularly crucial in rural areas, where state officials may have limited direct knowledge of local conditions and needs. Additionally, *dera* leaders can mediate conflicts and disputes between citizens and local governance structures, whether at the village council level or within district and sub-district

administrations. Their role as trusted community figures enables them to facilitate dialogue and resolution, fostering a cooperative relationship between the state and the community. Such mediation can improve public service implementation by enhancing community support and cooperation with state initiatives. The survey provides limited support for the role of *deras* in resolving information asymmetries. As shown in Table 13, respondents were asked whether *deras* were instrumental in addressing information-related issues. The results indicate that this is not as strong as the partial-funding channel.

6.2 Incentives of *Dera* Leaders in State Service Coordination

We examine the underlying incentives that drive *dera* leaders to engage with the state, particularly in the context of coordinating over public service provision. One explanation is that *dera* leaders are driven by altruistic motives, seeking to maximize social utility. From this perspective, *dera* leaders, motivated by a sense of moral duty, engage in activities that promote public welfare by advocating for improved public services and mobilizing resources for community development. This hypothesis suggests that the positive impact of *deras* on public service provision arises from the philanthropic objectives of their leaders and their commitment to enhancing social welfare.

Another hypothesis posits that *dera* leaders are incentivized to improve public services as a means of expanding their follower base. By improving the quality of life within their communities, *dera* leaders can attract more devotees, thereby increasing their influence and "spiritual capital" (Iyer et al. 2014). This dynamic is particularly salient in contexts where state-provided services are inadequate, rendering the contributions of *dera* leaders more visible and valued by the community. In this view, the alignment of interests among state actors, citizens, and *dera* leaders facilitates cooperation. For instance, improving infrastructure such as roads in villages where *deras* are located serves both the *dera* leaders' interest in accessibility and the state's objective of service provision, creating a mutually beneficial outcome.

Moreover, *dera* leaders may seek to consolidate power by fostering dependency on their leadership. By positioning themselves as crucial intermediaries between the state and the community, *dera* leaders can centralize authority and control. This dependency for access to public ser-

vices increases their leverage over both the community and the state, reinforcing their power and influence. In this scenario, coordination between *dera* leaders and the state is strategically motivated by the desire to solidify their dominance and ensure that their leadership remains indispensable to the local community.

These incentives are not mutually exclusive, and multiple motivations could be at play simultaneously. Table 14 presents the mean responses and the mean differences between treatment and control villages regarding the perceived interdependence between *deras* and their followers. When examining the reasons why citizens follow *dera gurus*, we observe a significant difference between treatment and control areas concerning the role of *deras* in service provision and coordination with the state. Although a non-negligible proportion of respondents attribute the influence of *deras* to perceptions of divinity, this factor is statistically weaker compared to their tangible involvement in service provision and state coordination. We also inquired about respondents' views on the motivations behind *deras'* involvement in service provision. An intriguing finding is that 25% of respondents believe that *deras* provide services to increase local dependence on them as leaders. While this percentage is not statistically different from that in non-*dera* villages, the relatively high mean suggests that this motivation cannot be entirely dismissed. A notable difference emerges in the perception of benevolence; 25% of respondents also believe that *deras'* actions are driven by benevolence, a belief that is statistically significantly different from those held in non-*dera* villages. This may indicate that the influence of *deras'* presence extends to shaping people's beliefs as well.

6.3 Strategic Incentives for State Actors

State actors and politicians also have strategic incentives to engage with *dera* leaders. A key motivation is vote trading; by enhancing public services in areas with a strong *dera* presence, politicians can secure the support and votes of the *dera* leaders' followers. This exchange of public services for electoral support represents a strategic move for politicians aiming to bolster their electoral base and secure political viability. In return, *dera* leaders can endorse candidates, mobilize their followers to vote, and actively campaign on behalf of politicians who support their communities. Moreover, politicians may seek to avoid potential hostility from villagers by co-

operating with *dera* leaders. Failure to coordinate with these influential figures could lead to resistance and opposition, making it necessary for politicians to work closely with *deras* to ensure stable governance and effective public service delivery.

We solicited respondents' opinions on these nuances, but given that they are politicians themselves, we interpret these statistics cautiously. Table 15 highlights the significant role of *deras* in politics. Rather than adversarial, the relationship between politicians and *dera* leaders appears to be transactional or amicable. Approximately two-thirds of respondents report that local politicians personally visit *deras*, indicating not only adherence but potentially strategic alliances. Furthermore, 55% of respondents suggest that new political parties contesting elections seek the "blessing" of the local *dera* leader, while 15% note that candidates invite *dera* leaders to political rallies. Interestingly, *deras* seem to be polarizing figures among citizens. When asked how citizens might react if a politician were to disparage a *dera* leader, 33% believe that citizens would turn against the politician, while 31% believe the backlash would be directed at the *dera* leader. These results remain somewhat speculative, and future research will aim to further unpack these incentives.

7 Conclusion

Religion plays a profound and pervasive role in shaping societies, influencing not only personal beliefs and social norms but also extending its reach into the realms of politics and governance. The intertwining of religious institutions with state functions is particularly evident in regions where religious leaders hold significant sway over their followers. This relationship between religion and state is crucial for understanding the broader dynamics of governance, especially in developing countries where state capacity is often constrained. Religious institutions, with their deep-rooted presence and organizational capacity, can steer state functions, thereby impacting the delivery of public services and overall societal welfare.

In this paper, we delve into the relatively underexplored domain of religious organizations, specifically *deras*, in the Indian state of Punjab. Our primary objective is to investigate how these religious institutions influence local state capacity and the provision of public services

by the state. We employ a novel dataset of geocoded locations of *dera* establishments and combine this with village-level data on public amenities. This comprehensive analysis provides new insights into the role of religious organizations in enhancing state functions, offering a fresh perspective on the interaction between religion and governance.

Methodologically, our study addresses the potential endogeneity of *dera* locations by employing an instrumental variable strategy. We use the distance between villages and the birth locations of historical sect leaders as an instrument, arguing that this distance is exogenous and a strong predictor of *dera* presence. We supplement this strategy with a local control strategy, where we compare treatment (*dera*) and control (non-*dera*) villages within close proximity. These strategies allow us to establish a causal relationship between *dera* presence and public service delivery. Our findings reveal that the presence of *dera* establishments leads to higher access to essential services. The impact of *deras* on public services is primarily driven by health and education facilities, and by services that are provided by state or district administration.

We also explore some potential mechanisms underlying these findings. Our surveys of village council leaders indicate that *dera* leaders often mediate between the community and the state, especially by providing supplemental funding to the government. The suggestive evidence from our surveys highlights the complex interplay between religious institutions and state functions, providing a nuanced understanding of how *deras* can enhance governance and service delivery.

The policy implications of our findings are significant. The study highlights the potential implications of community-led initiatives to address governance and development challenges. Our study also underscores the need for further research into the societal costs associated with these religious institutions and their broader implications for state capacity and governance. On the other hand, While the presence of *deras* may lead to higher public service provision, the social costs imposed by these organizations are unclear. Future research should continue to explore these dynamics in other contexts and investigate the diverse roles that religious institutions play in shaping governance outcomes.

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Tables

Table 1: First Stage Results

	Presence of *Dera*
Distance to Historical Birth Location	-0.123***
	(0.023)
Observations	4715
F-stat	26.97
R-squared	0.34

Robust standard errors in parentheses

*$p<0.10$, **$p<0.05$, ***$p<0.01$

The sample includes *deras* in 10 districts of the Indian state of Punjab. Villages in a radius of 5km around all historical birth locations were dropped. The outcome variable is a binary variable indicating the presence of a *dera* in a village. We use distance to the *nearest* historical birth location as the instrument. The regression controls for birthplace fixed effects, block fixed effects and geographical covariates.

Table 2: Placebo Checks

	Distance to Birthplace (log)	Control Mean	N
Distance to Nearest River	-0.047	2.45	4789
	(0.078)		
Annual Precipitation	0.957	683.09	4789
	(1.025)		
Precipitation Seasonality	-0.073	122.47	4789
	(0.048)		
Annual Mean Temperature	0.005	23.46	4789
	(0.004)		
Annual Temperature Range	-0.016*	33.99	4789
	(0.008)		
Crop Suitability: Wheat	0.016***	1.96	4789
	(0.002)		
Crop Suitability: Rice	0.026***	2.47	4789
	(0.004)		
Crop Suitability: Cotton	-0.004	3.97	4789
	(0.003)		

Robust standard errors in parentheses

* $p<0.10$, ** $p<0.05$, *** $p<0.01$

Table 3: Impact of Presence of *Dera*: State Provision of Public Services

	(1)	(2)
	OLS	IV
Presence of *Dera*	0.018***	0.193**
	(0.003)	(0.076)
Control Mean	.31	.31
Strategy	OLS	IV Strategy
Cragg-Donald F Stat		23.46
N	4786	4786

Robust standard errors in parentheses

*p<0.10, **p<0.05, ***p<0.01

The sample includes villages in 10 districts of the Indian state of Punjab. Birth locations are also restricted to the state of Punjab. Villages in a radius of 5 kilometers around all historical birth locations were dropped. The outcome variable is an index of 69 village-level government services and amenities from the Population Census of India 2011. The index was constructed by calculating the mean of binary variables indicating the presence of each government amenity/service. The regression controls for block fixed effects, birth location fixed effects and geographical covariates.

Table 4: Impact of Presence of *Dera*: State Provision of Public Services - Disaggregated by Type of Service

	Education		**Health**		**IT and Transport**		**Water and Sanitation**	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Presence of *Dera*	0.024***	0.094**	0.021***	0.292***	0.016***	0.086	0.007	0.003
	(0.003)	(0.046)	(0.005)	(0.092)	(0.005)	(0.061)	(0.004)	(0.055)
Control Mean	.15	.15	.09	.09	.33	.33	.35	.35
Strategy	OLS	IV Strategy	OLS	IV Strategy	OLS	IV Strategy	OLS	IV Strategy
Cragg-Donald F Stat		25.63		25.63		25.63		25.63
N	4786	4786	4786	4786	4786	4786	4786	4786

Robust standard errors in parentheses

*p<0.10, **p<0.05, ***p<0.01

The sample includes villages in 10 districts of the Indian state of Punjab. Birth locations are also restricted to the state of Punjab. Villages in a radius of 5 kilometers around all historical birth locations were dropped. The outcome variables are indices of different types of government services and amenities from the Population Census of India 2011. Each index was constructed by calculating the mean of binary variables indicating the presence of each government amenity/service. The education index was consructed using 14 services, the health index was constructed using 11 services, the IT and Transport index was constructed using 16 services and the sanitation index was constructed using 18 services. The regression controls for block fixed effects, birth location fixed effects and geographical covariates.

Table 5: Impact of Presence of *Dera*: State Provision of Public Services - Disaggregated by Level of Government

	Federal Government		**State and District Government**		**Village Council**	
	(1)	(2)	(3)	(4)	(5)	(6)
Presence of *Dera*	0.020***	0.075	0.019***	0.220**	0.005	0.091
	(0.005)	(0.067)	(0.006)	(0.098)	(0.006)	(0.088)
Control Mean	.54	.54	.59	.59	.42	.42
Strategy	OLS	IV Strategy	OLS	IV Strategy	OLS	IV Strategy
Cragg-Donald F Stat		25.63		25.63		25.63
N	4786	4786	4786	4786	4786	4786

Robust standard errors in parentheses

*p<0.10, **p<0.05, ***p<0.01

The sample includes villages in 10 districts of the Indian state of Punjab. Birth locations are also restricted to the state of Punjab. Villages in a radius of 5 kilometers around all historical birth locations were dropped. The outcome variables are indices of different types of government services and amenities from the Population Census of India 2011. Each index was constructed by calculating the mean of binary variables indicating the presence of each government amenity/service. The federal government index was consructed using 5 services, the state government index was constructed using 4 services and the village council index was constructed using 4 services. The regression controls for block fixed effects, birth location fixed effects and geographical covariates.

Table 6: Balance Checks: Local Control Strategy

	Local Control	Control Mean
Distance to Nearest River	-0.022	2.46
	(0.035)	
Annual Precipitation	-0.572***	672.18
	(0.172)	
Precipitation Seasonality	0.017	123.32
	(0.011)	
Annual Mean Temperature	-0.002	23.49
	(0.001)	
Annual Temperature Range	-0.002	33.93
	(0.003)	
Crop Suitability: Wheat	-0.000	1.95
	(0.002)	
Crop Suitability: Rice	-0.008**	2.54
	(0.004)	

Robust standard errors in parentheses

*p<0.10, **p<0.05, ***p<0.01

Controls include distance to Chandigarh. Cluster fixed effects are used.

Table 7: Impact of Presence of *Dera*: State Provision of Public Services - Local Control

	(1)	(2)
	IV	Local Control
Presence of *Dera*	0.193**	0.025***
	(0.076)	(0.004)
Control Mean	.31	.3
Strategy	IV Strategy	Local Control
Cragg-Donald F Stat	25.63	
N	4786	9445

Robust standard errors in parentheses

*p<0.10, **p<0.05, ***p<0.01

The sample includes villages in 10 districts of the Indian state of Punjab. Birth locations are also restricted to the state of Punjab. Villages in a radius of 5 kilometers around all historical birth locations were dropped. For local control estimates, we use cluster fixed effects, whereas for IV estimates, we use block and nearest birthplace fixed effects. The outcome variable is an index of 69 village-level government services and amenities from the Population Census of India 2011. The index was constructed by calculating the mean of binary variables indicating the presence of each government amenity/service.

Table 8: Impact of Presence of *Dera*: State Provision of Public Services - Disaggregated by Type of Service - Local Control

	Education		**Health**		**IT and Transport**		**Water and Sanitation**	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Presence of *Dera*	0.094**	0.032***	0.292***	0.029***	0.086	0.016***	0.003	0.005
	(0.046)	(0.004)	(0.092)	(0.006)	(0.061)	(0.005)	(0.055)	(0.004)
Control Mean	.15	.14	.09	.08	.33	.33	.35	.34
Strategy	IV Strategy	Local Control	IV Strategy	Local Control	IV Strategy	Local Control	IV Strategy	Local Control
Cragg-Donald F Stat	25.63		25.63		25.63		25.63	
N	4786	9445	4786	9445	4786	9429	4786	9429

Robust standard errors in parentheses

*p<0.10, **p<0.05, ***p<0.01

The sample includes villages in 10 districts of the Indian state of Punjab. Birth locations are also restricted to the state of Punjab. Villages in a radius of 5 kilometers around all historical birth locations were dropped. For local control estimates, we use cluster fixed effects, whereas for IV estimates, we use block and nearest birthplace fixed effects. The outcome variables are indices of different types of government services and amenities from the Population Census of India 2011. Each index was constructed by calculating the mean of binary variables indicating the presence of each government amenity/service. The education index was consructed using 14 services, the health index was constructed using 11 services, the IT and Transport index was constructed using 16 services and the sanitation index was constructed using 18 services.

Table 9: Impact of Presence of *Dera*: State Provision of Public Services - Disaggregated by Level of Government - Local Control

	Federal Government		**State and District Government**		**Village Council**	
	(1)	(2)	(3)	(4)	(5)	(6)
Presence of *Dera*	0.075	0.022***	0.220**	0.017***	0.091	0.014**
	(0.067)	(0.005)	(0.098)	(0.006)	(0.088)	(0.006)
Control Mean	.54	.53	.59	.59	.42	.42
Strategy	IV Strategy	Local Control	IV Strategy	Local Control	IV Strategy	Local Control
Cragg-Donald F Stat	25.63		25.63		25.63	
N	4786	9429	4786	9445	4786	9429

Robust standard errors in parentheses

*p<0.10, **p<0.05, ***p<0.01

The sample includes villages in 10 districts of the Indian state of Punjab. Birth locations are also restricted to the state of Punjab. Villages in a radius of 5 kilometers around all historical birth locations were dropped. For local control estimates, we use cluster fixed effects, whereas for IV estimates, we use block and nearest birthplace fixed effects.The outcome variables are indices of different types of government services and amenities from the Population Census of India 2011. Each index was constructed by calculating the mean of binary variables indicating the presence of each government amenity/service. The federal government index was consructed using 5 services, the state government index was constructed using 4 services and the village council index was constructed using 4 services.

Table 10: Village Council Survey - Details of Respondents and *Deras*

	Mean	N
Respondent Details (N=No. of Respondents)		
Male	0.91	939
Council Head	0.20	939
Council Member	0.75	939
Challenges in Village		
Funding problems for public services	0.30	939
Government is not supportive	0.14	939
Village Citizens are not supportive	0.10	939
Drug addiction problem	0.70	910
Presence of dera (N=No. of villages)		
Village has a dera	0.47	640
Size of Following (N=No. of dera villages)		
Up to 50 a day	0.33	272
50-100 a day	0.37	272
More than 100 a day	0.30	272
Does the dera have branches?		
Single dera without other branches	0.75	296

Table 11: Services Provided by *Deras*

	Dera	No Dera	Diff.	N (Villages)
Any essential services like food/health	0.31	0.33	0.02	603
Free distribution of food/medicine	0.20	0.07	-0.13***	603
Run dispensary/blood donation camps	0.16	0.27	0.12***	603
Any social services - events/social problems	0.46	0.30	-0.16***	603
Spiritual services	0.27	0.11	-0.16***	603
Organize fairs/sports events	0.09	0.03	-0.06***	603
Organize weddings	0.13	0.11	-0.02	603
Help in drugs-related rehabilitation	0.17	0.09	-0.07***	603
Any bureaucracy related coordination	0.15	0.08	-0.07***	603
Coordinate with government and village citizens	0.03	0.01	-0.02	603
Help village citizens access state services	0.13	0.06	-0.06**	603
Negative influence: creates drug addiction problems	0.07	0.10	0.03	603

Table 12: Do *dera* leaders coordinate over state-provided public services?

	Dera	No Dera	Diff.	N
Coordinated over at least one service	0.57	0.37	0.21***	902
Coordinated over service - extensive	0.14	0.05	0.09***	902
Roads	0.07	0.03	0.04***	902
Sports Field	0.07	0.02	0.06***	902
Primary School	0.11	0.04	0.07***	902
Bus Stop	0.05	0.01	0.03***	902
Toilets	0.03	0.02	0.02*	902
Irrigation Facility	0.04	0.01	0.03***	902
Public Health Centre	0.06	0.02	0.04***	902
Coordinated over service - intensive	0.14	0.04	0.10***	902
Roads	0.07	0.03	0.04***	902
Sports Field	0.06	0.02	0.04***	902
Primary School	0.11	0.03	0.08***	902
Bus Stop	0.05	0.02	0.03***	902
Toilets	0.04	0.01	0.03***	902
Irrigation Facility	0.04	0.01	0.03***	902
Public Health Centre	0.06	0.02	0.05***	902
Coordinated over other services	0.50	0.34	0.16***	902
Permission to use grounds for events	0.39	0.25	0.14***	902
Getting tap water access for households	0.06	0.06	-0.00	902
Getting electricity access for households	0.05	0.07	-0.01	902
NREGA wage payment delays	0.08	0.06	0.01	902
PDS grain shortage	0.08	0.07	0.01	902
Help in voter registration	0.05	0.07	-0.01	902
Assist in women's safety	0.13	0.08	0.05**	902

Table 13: Type of Coordination: *Deras* and Public Service Provision

	Fully Fund			**Partially Fund**			**Solve Information Asymmetries**		
	Dera	No Dera	Diff.	Dera	No Dera	Diff.	Dera	No Dera	Diff.
Extensive									
Roads	0.02	0.01	0.01*	0.04	0.02	0.03**	0.02	0.01	0.01
Sports Field	0.02	0.00	0.01*	0.05	0.01	0.05***	0.02	0.01	0.01
Primary School	0.03	0.02	0.02	0.08	0.02	0.06***	0.04	0.01	0.03***
Bus Stop	0.02	0.01	0.01	0.02	0.00	0.02***	0.01	0.00	0.01
Toilets	0.01	0.00	0.01	0.02	0.01	0.01	0.01	0.00	0.00
Irrigation Facility	0.02	0.01	0.01	0.01	0.00	0.01**	0.01	0.00	0.01**
Public Health Centre	0.03	0.01	0.02**	0.03	0.01	0.02**	0.02	0.01	0.01*
Intensive									
Roads	0.02	0.01	0.01	0.04	0.02	0.03**	0.02	0.01	0.01
Sports Field	0.02	0.01	0.01	0.04	0.01	0.03***	0.02	0.01	0.01
Primary School	0.04	0.01	0.03***	0.09	0.02	0.06***	0.04	0.01	0.02**
Bus Stop	0.02	0.01	0.01	0.03	0.01	0.02***	0.02	0.01	0.01
Toilets	0.01	0.00	0.01	0.02	0.00	0.02**	0.02	0.00	0.01*
Irrigation Facility	0.01	0.01	0.01	0.02	0.00	0.02***	0.02	0.00	0.01**
Public Health Centre	0.02	0.01	0.01	0.04	0.01	0.03***	0.03	0.01	0.02**

Table 14: Interdependence between *Deras* and their Followers

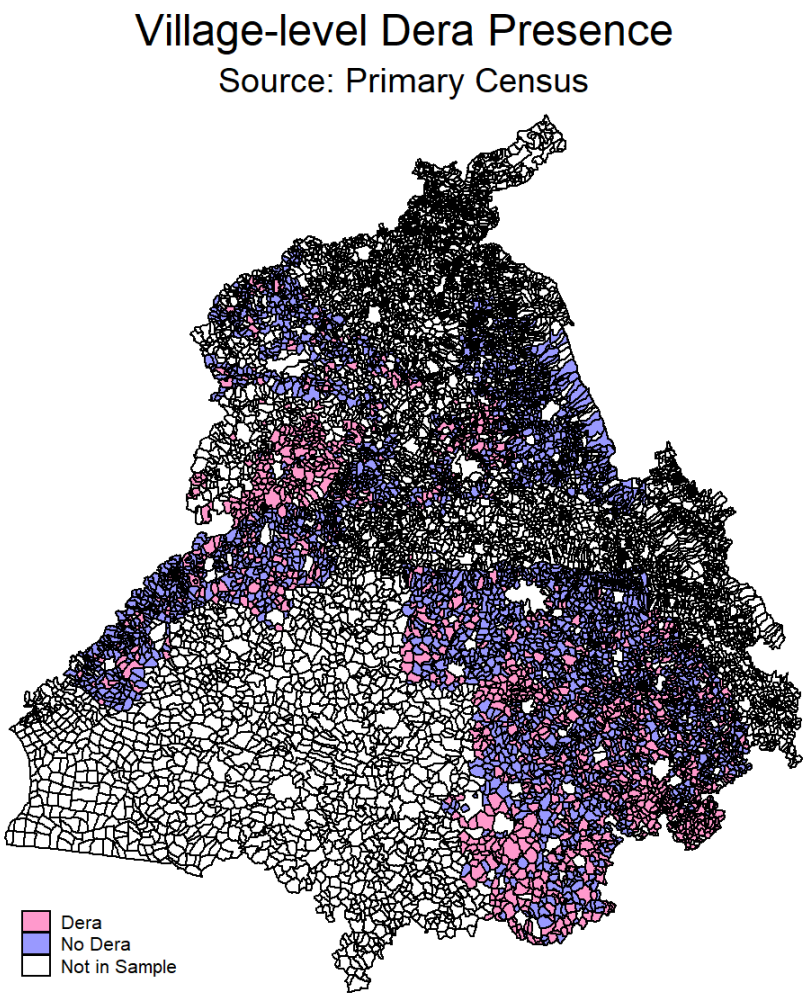
	Dera	No Dera	Diff.	N
Why do village citizens follow dera leaders?				
Dera leaders do not discriminate against vulnerable pop	0.37	0.31	-0.06**	939
Perception of divinity	0.20	0.15	-0.05**	939
Deras provide services	0.12	0.03	-0.09***	939
Dera leaders help in coordination with government	0.18	0.13	-0.05**	939
Why do deras provide services?				
Benevolent reasons	0.25	0.09	-0.16***	939
Increase popularity/dependence amongst local population	0.25	0.23	-0.01	939
Increase leverage with politicians	0.00	0.00	-0.00	939
Influence political views	0.06	0.02	-0.03***	939

Table 15: Involvement in Politics

	Mean	N
Reaction of citizens towards politician who bad-mouths guru		
Against	0.33	939
In favor	0.31	526
Relationship between local politicians and gurus		
Friendly/Transactional	0.67	586
Adversarial	0.01	873
Involvement in politics		
New political party gets blessing of *dera* leaders	0.55	708
Local politicians visit *dera* leaders	0.65	710
Candidates invite *dera* leaders for rallies	0.15	703

Figures

Figure 3: Map of Villages Covered during Primary Census of Punjab



Appendix A

	Presence of *Dera* (1)	Presence of *Dera* (2)
Distance to Historical Birth Location	-0.057***	-0.123***
	(0.014)	(0.023)
Observations	5061	4715
F-stat	16.49	26.97
R-squared	0.33	0.34
Excludes Villages Close to Birth Locations	No	Yes

Robust standard errors in parentheses

*$p<0.10$, **$p<0.05$, ***$p<0.01$

The sample includes *deras* in 10 districts of the Indian state of Punjab. Column 1 includes all villages and column 2 drops villages in a radius of 5km around all historical birth locations. The outcome variable is a binary variable indicating the presence of a *dera* in a village. We use distance to the *nearest* historical birth location as the instrument. The regression controls for birthplace fixed effects, block fixed effects and geographical covariates.