

# WHO IS IN JUSTICE?

**Caste, Religion and Gender in the  
Courts of Bihar over a Decade\***

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# Abstract

Bihar is widely regarded as one of India's poorest and most divided states. It has also been the site of many social movements that have left indelible marks on the state's politics and identity. Little is currently known about how structural inequalities have affected the functioning of formal systems of justice in the state. This paper uses a novel dataset of more than one million cases filed at the Patna high court between 2009 and 2019 together with a variety of supplementary data to analyze the role of religion, caste and gender in the high court of Bihar. The analysis finds that the courts are not representative of the Bihari population. Muslims, women and scheduled castes are consistently under-represented. The practice of using "caste neutral" names is on the rise. Though there is little evidence of "matching" between judges and petitioners or judges and filing advocates on the basis of names, there is evidence that petitioners and their advocates match on the basis of identity such as the use of "caste neutral" names. These results suggest that the social movements that disrupted existing social structures in the past may have inadvertently created new social categories that reinforce networks and inequalities in the formal justice system.

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## 1. Introduction

For much of its recent history, Bihar has been one of India's poorest and most lawless states. Rigid social divisions along the lines of caste and religion have impeded economic development and improvements in welfare in the state. In the past decade, Bihar has experienced a growth turnaround, intensified social sector investments, and rolled out some exemplary development programs (Singh, 2015; Kumar 2018). Yet it remains among the bottom three states in India's recent index of "Sustainable Development Goals" (Niti Aayog, 2019).<sup>1</sup>

Behind its weak economic record however, lies a parallel tale of considerable social change: agrarian movements, caste movements and student movements emerged after Indian independence to challenge the age-old feudal power structures in the countryside (Bhatia, 2005; Shah, 1977, 1977a, 1977b; Kumar and Ranjan, 2005; Rodgers and Rodgers, 2011; Sharma and Rodgers 2012; Kumar, 2018).<sup>2</sup> These mobilization efforts were often localized, disruptive, and impeded the emergence of subnational solidarity in the state (Singh, 2015). A growing body of academic evidence however argues that even symbolic movements may be influential in creating new forms of collective identity, building new organizational capacity, opening up new political opportunities and changing the incentives of leaders (Tilly 2006; Amenta et al., 2010; Della Porta, 2015).

Bihar's political trajectory, and record of public policies, bears the marks of these social movements. In the years after independence, the Indian National Congress (INC) dominated the political landscape of the state. In the 1970s and 1980s, pressure from the newly mobilizing castes in the countryside led to the establishment of some of India's most ambitious reservation policies. After 1990, the national adoption of reservation policies recommended by the Mandal Commission, whose author incidentally hailed from the state, changed the dynamics of politics in the state. The INC was increasingly eclipsed by regional parties. Moreover, upper caste leaders were increasingly eclipsed by leaders whose base of support was drawn from previously marginalized groups such as Other Backward Classes (OBCs), the Dalits, the Mahadalits, Muslims and Adivasis (Robin, 2012; Jaffrelot and Kumar, 2012; Kumar, 2018).

Gains in political representation however have not always translated into greater economic or social opportunities for Bihar's traditionally marginalized groups. Upper caste Hindus continue to have advantages in education as well as resource ownership in this largely rural state. A recent survey of the eight poorest districts, for example, finds that literacy rates for elite Bhumihars is 84%. This is twice as high as scheduled caste (SC) households. Similarly, the average forward caste household owns relatively 2 acres of land, while the average Scheduled Caste (SC) household owns just 0.176 acre (Rao, Joshi and Kochhar, 2018).

A large body of academic work demonstrates that the fault lines of caste, religion and gender affect citizens access to political and economic opportunities in Bihar (Kumar, 2012; Kumar and Somnathan, 2017, Jassal, 2020). Most of this literature however focusses either on the issues of political representation or the impacts of poverty alleviation programs (for example, Murlidharan and Prakash, 2017; Dutta, Murgai, Ravallion, and Van de Walle, 2014). A growing literature argues that around the year 2000, a sub-national identity and sense of solidarity has emerged in Bihar and the era of caste-based divisiveness may be giving way to an era of strong state investment in the state's social sector (Chakrabarti, 2013; Singh, 2015; Kumar, 2018).

One lacuna in this literature however is the formal system of justice. To date, there is no analysis of identity and social stratification in the courts of Bihar. On that note, there are actually very few empirical studies

1 See <https://niti.gov.in/sdg-india-index>. Accessed on October 26, 2020.

2 We define political social movements as actors and organizations seeking to alter power deficits and to effect social transformations through the state by mobilizing regular citizens for sustained political action (Giugni, Adam and Tilly, 1999).

on inclusion and representation in the courts of India more broadly (Gadbois, 2011; Chandrachud, 2014; Tata Trusts, 2020). Most empirical literature in the fields of economics, political science and the study of India have focused on the executive and legislative branches of government (Chemin 2009, Chemin 2020). A large body of work demonstrates that inclusive institutions play a critical role in the process of development, particularly in plural societies (Acemoglu and Robinson, 2012; Acemoglu and Robinson, 2017). Inclusion and representation are critical in the judiciary -- the credible and legitimate dispensation of justice after all, requires compassion, empathy and a deep understanding of context in which conflicts occur (Nussbaum, 1996; Bhushan, 2009; Gadbois 2011). A deeper understanding of the issues of representation and identity in the processes of justice in the courts of Bihar would provide important insights into the processes of social mobilization that have been at play in the state for decades.

This paper provides new insights into the functioning of Bihar's judiciary. We use a novel dataset of more than one million cases, all listed in the public domain, filed at the Patna High Court between 2009 and 2019. We supplement these data with additional data on other institutions as well as a detailed biography of all judges who have served in the court in this time-frame to analyze the roles of religion, caste and gender in accessing justice.

We ask three basic questions: (a) Who participates in the justice system of Bihar? How does this compare to other institutions in India? (b) Is there any observable pattern of networks based on caste, religion and gender in the data? (c) How do these networks get reflected in the processes of justice? Specifically, do we see “matching” between petitioners, lawyers and judges on the basis of social identity?

We find that the courts are not representative of the Bihari population. Muslims, women and scheduled castes are consistently under-represented among lawyers, judges and petitioners, even in comparison to the other state institutions. We study the last names used by petitioners, respondents and judges in the courts themselves and find that a small number of last names account for almost half the cases heard at the courts in this time period. We also find that almost half of the Hindu petitioners have caste-neutral names, i.e. surnames that are not associated with any specific caste identity.

We use a very simple statistical framework to examine whether petitioners and advocates “match” together on the basis of their identities. We test the null-hypothesis of no-matching between different categories: petitioners and judges, advocates who file the cases and judges, and finally, petitioners and their advocates. We reject the null hypothesis of no matching in two cases. We find that petitioners with caste-neutral names or Muslim last names are more likely to be represented by an advocate with a similar name to file the cases. We cannot reject the null hypothesis for caste- and religion-based matching between the filing advocates and judges. We find no evidence of any kind of matching, at any level, on the basis of gender. Female petitioners do not seem to be more likely to be represented by female advocates. The matching effects are similarly negligible at all levels for names that distinctly signal scheduled-caste status. This practice may have been intended to reduce the importance of caste-based stratification in the state, but we find that caste-neutral names cluster together as petitioners and advocates, suggesting that it appears to now be a new form of stratification in its own right.

This research, which is very novel, has important limitations. The data are new and may be subject to issues of quality (Verma, 2018). Our applications of simple methods of machine-learning, allow us to address these issues, but algorithms cannot overcome all constraints. For petitioners, respondents and lawyers, we lack data on socio-economic status, income, assets, educational attainments and other attributes. While we acknowledge this reality, empirical evidence suggests that caste, religion and gender are critical markers of identity in Bihar. The income distributions by caste and religion for the eight of the poorest districts of Bihar illustrate that Muslims, and SC groups, are truly disadvantaged relative to all other groups in the population (Rao, Joshi and Kochhar, 2018, 2019). Moreover, groups have highly overlapping distributions of income. Moreover, gender disparities in Bihar are some of the highest in India. So even though *other*

identities such as class and education may be important, the attributes that we do study are known to be important and relevant in their own right. While our results must be interpreted cautiously, they are nonetheless important as a steppingstone for more research on identity and stratification in formal institutions in Bihar.

The remainder of this paper is organized as follows: Section 2 provides background literature on the social stratification and the justice system of Bihar; Section 3 contains details of our data; Section 4 focusses on the issue of representation through the analysis and categorization of surnames; Section 5 features a simple statistical model to examine whether there is “matching” between petitioners, advocates and lawyers based on group identity, while actually litigating cases; and the final section concludes.

## 2. Background: Social Structures and Justice in Bihar

Bihari identity is multi-faceted. A person is defined by their religion, caste, gender, geographic location, class, language(s), culture(s), and membership in organizations (Singh, 2008). For the purpose of this paper however, we focus primarily on religion, caste and gender. These markers of identity are salient, determined (mostly) at birth, and known to be remarkably important in the context of Bihar.

### 2.1 Religion

Hindus and Muslims together account for more than 95 percent of the population of Bihar. Divisions between the two groups largely emerged during the period of governance by the British East India Company when Bihar was part of the broader Bengal Presidency, one of the earliest strongholds of British colonial rule in India. The political events in the years of British rule deepened these divisions even further. Since Indian independence, several events in recent Indian history – such as the demolition of the Babri Masjid – have also contributed to episodic tension. Recent ethnographic research however highlights the many shared narratives that bind the two communities and the continued practices of mutual respect and interdependence at the grassroots level (Gottschalk, 2005). In the realm of politics and governance however, Hindus (84.3 percent) and Muslims (15.5 percent) are referred to as separate “vote banks” and treated differently in the implementation of development policies (Gottschalk, 2005).

### 2.2 Caste

Caste is understood in a variety of ways in Bihari society. In the realm of official records and policies, the population of Bihar is routinely defined in broad groups such as *Forward Caste*, *Scheduled Caste* and *Scheduled Tribe* (Table 1). In everyday life however, for Hindus and even many Muslims in the state, identity is experienced and practiced as *jāti* (henceforth, jati) (Bayly, 1999; Jodhka, 2017). These are hereditarily formed endogamous groups whose identities are manifested in a variety of ways that include (but are not restricted to) naming conventions, geographic location, occupation, property ownership, diet, gender norms, social practices, and religious practices. The population of Bihar comprises hundreds of individual jati groups that have distinctive economic, political and social identities. The placement of jatis in broad government “caste” categories has always been complicated. A single category can include jatis that display considerable inter- and intra-level inequality (Joshi, Kochhar, & Rao, 2017).

Upper caste Hindus, now also known as forward castes, are largely dominated by Brahmins, Rajputs, Bhumihars, and Kayasthas. These castes are a small share of Bihar’s population (Table 1), but for most of Bihar’s recent history they have owned arable land and dominated state politics. In the years before Indian independence, the Kayasthas were dominant and were recruited heavily into the colonial government. After Indian independence, the other upper-caste groups entered the political arena. Though the groups competed, together they dominated the Indian National Congress (INC) that ruled the state almost continuously until 1977 (Mooij, 2001). The privileged position of these groups is evident in the numbers presented earlier: even now, they are about twice as likely to be literate and hold land than their lower-status counterparts.

The “Backward class” category once included about half the population of Bihar. Over time, this has been further stratified into additional categories (Blair, 1980). Today, the term Scheduled Castes (SC) includes the jatis who were historically landless and engaged in manual labor. Additional categories such as Backward Caste (BC) and Extremely Backward Caste (EBC) have also been recently defined to include certain groups within this broad category as well as some Muslim groups.<sup>3</sup> In recent years, there has also been an effort to recognize a new category of Mahadalits to refer to the most marginalized of the SC group.<sup>4</sup> Scheduled Tribes (STs) once a significant minority in the undivided state of Bihar, now account for just about 1% of the population; most of the tribal areas are part of the newly created state of Jharkhand.

The power struggle between the upper-castes and the landless “backward” groups of Bihar has been a frequent driver of political instability, social unrest and outright violence in the state (Mooij, 2001; Jaffrelot & Kumar, 2012; Robin, 2012; Kumar, 2018). The 1980s were marked by the emergence of private caste armies that defended and represented the interest of upper castes and landed backward castes (Kumar, 2008, Chakrabarti, 2013). In the 1990s, backward caste mobilization intensified under the leader Lalu Prasad Yadav, who openly declared war on the *Bhura Bal* (Bhumihars, Rajputs, Brahmins and Kayasthas) (Kumar, 2008). For much of this period, law and order languished in Bihar, and most development policies were designed and implemented almost entirely in caste terms. The absence of a pan-state identity and sub-national solidarity presents a striking contrast with many other Indian states (Singh, 2015).

These pressures however, while eroding law and order and stifling development in the state, have also contributed to the emergence of some of the most ambitious affirmative action policies in India (Kumar, 2018). In 1977, the first non-INC government instituted policies that reserved 20 percent of public sector jobs for Bihar’s Other Backward Classes (OBCs) (Singh, 1991). This term refers to groups who are educationally or socially disadvantaged, but not SC or ST. In 1991, reservations policies for OBCs were implemented all over India. The architect of the report that inspired the policies – Bindheshwari Prasad Mandal – was the former Chief Minister of Bihar and hailed from an OBC community.

Today lists of OBCs are maintained by both the National Commission for Backward Classes and the states of India. In Bihar, this group includes jatis such as Bania, Yadav, Kurmi, and Koiri.<sup>5</sup> These OBCs are now widely understood to be agrarian communities who have acquired land, adopted improved agricultural technology, and benefitted from the reservation policies in public sector education and employment, particularly after 1991 (Chauchard, 2017; Kumar, 2018). Unlike other states of India, in Bihar this group is large enough to change the balance of political power in the state. The Yadavs for example, account for 15% of the Bihari population, have made a distinct mark on electoral politics and the composition of the legislature and leadership of the state (Jaffrelot & Kumar, 2012; Robin, 2012; Kumar, 2008).

Overall, caste has proved to be a particularly durable form of inequality in Bihar: inequality between broad caste-groups remains significant even though some jatis have improved their socio-economic position as a result of their efforts to mobilize in recent years (Joshi, Kochhar, & Rao, 2018). The early 2000s brought momentous changes to Bihar – Nitish Kumar, and the elites who enabled his ascendancy to power have overtly rejected caste-based politics and social identity and emphasized a distinct “Bihari” identity that transcends caste and religion (Chakrabarti, 2013; Singh 2015). Investments in the social sector of the state

3 This officially includes the following Hindu and Muslim groups: Ayyaraka, Kasi Kapidi, Padra, Gajula Balija, Nagarulu, Pondara, Kurakula, Qureshi (Muslim Butchers), Palaekaria, Kapu, Balija, Telaga and Ontaries.

4 The Mahadalit community consists of the following sub-castes: Bantar, Bauri, Bhogta, Bhuiya, Chaupal, Dabgar, Dom (Dhangad), Ghasi, Halalkhor, Hari (Mehtar, Bhangi), Kanjar, Kurariar, Lalbegi, Musahar, Nat, Pan (Swasi), Rajwar, Turi, Dhobi, Chamar and Dusadh.

5 For a List of OBCs in Bihar see,

[http://www.ncbc.nic.in/User\\_Panel/GazetteResolution.aspx?Value=mPICjsL1aLt5iq8E5sHcb9aZw5ZegRBykGFGf48OgIp4fJY6woN7b1j2zCe3l0aO](http://www.ncbc.nic.in/User_Panel/GazetteResolution.aspx?Value=mPICjsL1aLt5iq8E5sHcb9aZw5ZegRBykGFGf48OgIp4fJY6woN7b1j2zCe3l0aO). Accessed on November 12, 2020.



have intensified and Bihar has been the site of numerous innovative development programs, particularly aimed at women and minorities (Kumar, 2018).

### 2.3 Gender

Bihar has some of the highest levels of gender-inequality in India.<sup>6</sup> According to the Census of 2011, only 63% of adult women were literate, and even though estimates from surveys since then suggest that the ranks of literate women are growing, Bihar has the lowest percent of girls completing secondary education in India and it ranks at the bottom of the education index used by the Government of India (Niti Aayog, 2020).<sup>7</sup> With 916 females per thousand males, its sex-ratio remains below the Indian average. With just 9 percent of women participating in the formal labor force, Bihar also has the lowest rate of female labor force participation in the country (World Bank, 2016). Though women's groups have gained considerable power in the state through livelihoods programs and self-help groups, and have even managed to achieve a prohibition of alcohol in 2016 (we say more about this later in this paper), women continue to be underrepresented in markets as well as formal institutions. Women from disadvantaged caste groups face the double disadvantage of caste- and gender-based inequality (Joshi, Kochhar, & Rao, 2019).

### 2.4 Justice in Bihar

The Patna High Court is about 100 years old. It was first established by the British in 1912 and began hearing cases in 1916, with a Chief Justice and six other judges. The sanctioned strength of the court has expanded several times over the years.<sup>8</sup> There are currently 22 permanent judges, including the Chief Justice and 14 additional judges while the sanctioned strength was a total of 53 judges in 2019.<sup>9</sup>

The people of Bihar have faced barriers to access and representation in the courts for most of its history. During the colonial era, the court's legitimacy was undermined by the top-down imposition of laws by the British, who had limited understandings of the customary practices in the area (Metcalf and Metcalf, 2006). After India's independence, the development of the court has been constrained by weaknesses of state capacity, caste-based conflict and the episodic violence in the state (Chakravarti, 2001; Kumar, 2012). Political battles, often accompanied by complex allegations of corruption and criminality have often found themselves being decided in the Patna High Court, straining the courts political neutrality (Roy, 1997; Ananth, 2013). We will soon see that in the past few years, the growing burden of cases due to a controversial prohibition law has changed the mix of cases heard in the court (Dar and Sahay, 2018).

## 3. Data

Our data were drawn from the publicly accessible records of the Patna High Court. We used several methods to access the case data and scrape them into a comprehensive dataset, such as compilation via filing date, cause list, judge name, and case status. To get a comprehensive understanding of the functioning of the court and related ecosystems, we used auxiliary data from police stations, district courts, and judge biographies that are available on the court websites. We focus on the time period 2009-2019. This gives us a total of 1,076,041 unique cases in the high court, 362,837 of these are civil and 713,204 are criminal cases.

A trend of these cases is presented in Figure 1. Note that the number of criminal cases has been rising since 2015. This is likely a result of the controversial Bihar Prohibition law that was imposed by Nitish Kumar's government in 2015, declared unconstitutional by the Patna High Court in 2016 and then reimposed by the Supreme Court of India later that year, allowing the government to continue with the ban (Dar and Sahay,

<sup>6</sup> Bihar - Gender (English). India state briefs Washington, D.C.: World Bank Group. 2016.

<sup>7</sup> <http://social.niti.gov.in/edu-new-ranking/state-ranking/OTQ%253D>.

<sup>8</sup> Aside from Bihar, the Patna High Court exercised jurisdiction over Orissa and Jharkhand until the Orissa High Court was established in 1948 and the Jharkhand High Court was established in 2000.

<sup>9</sup> [https://main.sci.gov.in/pdf/CourtNews/24062020\\_163746.pdf](https://main.sci.gov.in/pdf/CourtNews/24062020_163746.pdf) Accessed on November 11, 2020.



2018). Anecdotal evidence from the courts suggests that more than 200,000 people have been booked under the Bihar Prohibition and Excise Act 2016 and more than 50,000 bail applications are pending at the High Court of Patna.<sup>10</sup>

We supplement the judicial data with additional data from several sources, all of which are fully publicly available: (a) Socio-economic Caste Census (SECC) aggregates for Bihar;<sup>11</sup> (b) A database of about 1 million registered farmers from the Bihar Cooperative Department;<sup>12,13</sup> (c) A database of 300,000 employees of the Bihar state-government who have disclosed their financial status;<sup>14</sup> (d) A database of all judges who have served at the Patna High Court, which includes not only their years of service at the court, but also their age, recruitment source, date of appointment as an additional judge, date of appointment as a permanent judge, and retirement date from handbooks from the years 2014, 2017 and 2020. For descriptive research we also draw on a newly compiled dataset of Indian surnames from Ancestry.com and familysearch.org, two leading websites that have attempted to gather detailed ancestral records for individuals who once served in the British Indian Army or the British Indian government that was present in India until 1947. Given that Bihar was one of the earliest regions that was placed under British administration, these records provide excellent insights into the prevalence of certain names and identities in the history of Bihar.

A summary of the data, with additional summary statistics that will be discussed in the sections below, is presented in Table 1.

#### 4. Representation in the Judiciary

Who participates in the justice system of Bihar? How does this compare to other institutions in India? These questions about inclusion and representation are important in not only Bihar, but India more generally. We answer these questions by first examining the specific surnames (also known as last names) in the data. Western European surnames have been shown to provide important insights into identity, ancestry and family history (Clark & Cummins, 2014). Indian last names, particularly Hindu last names, are arguably more complex. They are derived from religion, occupation and region, much like European names. But there is a fourth determinant: caste (Jayaraman, 2005; Clarke, 2015). The analysis of such names has been shown to provide important insights into social mobility in modern India (Clarke, 2015).

We first look at the incidence of last names, and then use some simple machine learning algorithms to assign caste status to individuals based on their names.

##### 4.1 Surnames

In Bihar, an individual's given name and surname generally provide insight into a person's gender and religion (Christian, Muslim or Hindu). Some last names (such as *Jha* or *Paswan*) are clear markers of a caste group affiliation. In recent years, caste identification through last names has become quite complicated

10 <https://timesofindia.indiatimes.com/articleshow/72304617.cms> Accessed on November 9, 2020.

11 Asher, Sam, Tobias Lunt, Ryu Matsuura and Paul Novosad. "The Socioeconomic High-resolution Rural-Urban Geographic Dataset on India (SHRUG)" (2019).

12 The registered farmers' data are available on the Co-operative department website (<http://cooperative.bih.nic.in/FarmerDB.htm>) and the data can be accessed district wise.

13 We have no information on the criteria that were used to include farmers in this database. It is quite likely that the most well-connected and well-placed farmers were able to register and take loans in the early stages of this registration effort. However, this makes the data set particularly well-suited to understand who benefits from agrarian policies in Bihar. We analyze the last names of the farmers to understand how their identity may influence their status.

14 The asset data are available at <http://bpsm.bihar.gov.in/assets/>. They can be accessed via the employee's department, district, or the public sector undertaking that they are a part of.

because Indians have increasingly adopted caste-neutral last names in public settings, largely to remove the age-old marker of caste from the name (Singh, 2008; Jayaraman, 2005; Clarke, 2015).

Many individuals in India lack official records of their names. India's official Registration of Births and Deaths Act (RBD Act), which required all Indians to register births and deaths, was not passed until 1969. The act also allowed state governments to formulate their own rules for its implementation. In Bihar, even as late as 1995, only 20% of births were being registered (United Nations, 2020).<sup>15</sup> Those individuals who lack official birth records but enter state records for the first time via the judiciary may have flexibility in defining their names – they may simply choose caste-neutral surnames simply because it is a growing social norm.

Those who have records may also change their name to a caste-neutral name. The official rules require a person to follow a three-step procedure that includes signing an affidavit, publishing the name change in two local newspapers and notifying the Central Gazette of India, which is located in Delhi either through an in-person visit or else via registered mail. Once the change of name is approved, a citizen can change their name in all documents (other than past educational documents) and use their new name. Since past educational records still remain a valid form of identification in many official settings however, these rules (theoretically at least) enable a person to use multiple names in their lifetime.<sup>16</sup>

Before we attempt to classify and interpret last names, we simply explore the prevalence of different names in our data. A rough tabulation of last names reported by household heads in the SECC data yields approximately 50,000 unique last names, even with some corrections for multiple spellings of specific names.<sup>17</sup> Yet, the full scale of this diversity is not evident in the institutional data sets. There are only 2,922, 1,295 and 789 unique last names in the farmers database, senior government employee database and advocate databases, respectively. Even if we concede that the same local name can be spelled in English in a variety of ways that we have not addressed in our corrections, the lack of diversity is quite striking. The over- and under-representation of certain groups is consistent with previous studies from India. Clarke (2015) for example, examines the distributions of last names of physicians in Kolkata between 1860 and 2011 and finds that Kulin Brahmins are more than four times as frequent among physicians registered in recent decades as in the general population. Furthermore, education reservations have led some marginalized groups to reap disproportional gains, while others seem to have experienced almost no representation at all.

The data also illustrate a high concentration of specific last names in different data sets (Figure 1). The top 10 last names across all these data sets (except the judges) are *Kumar*, *Singh*, *Sinha*, *Mishra*, *Prasad*, *Yadav*, *Ram* and *Jha*. These specific names account for 58% of senior government employees, 59% of farmers, 40% of petitioners and 29% of respondents, and 25.2% in the SECC data.<sup>18</sup> Even within this group, there is considerable variation. The last name Singh is common everywhere – it accounts for 10% of senior government employees, 14% of farmers, 12% of petitioners in the Patna High Court and 6% in SECC. In contrast to this, Kumar accounts for 19% of all senior government employees but only 7% of farmers and 2% in the SECC data (Figure 1).

15 We draw information from the United Nations Statistics Division, Civil Registration and Vital Statistics Knowledgebase, Birth Registration in India, Status and Strategies for Improvement (2020).

16 We found lots of lawyers and websites to conduct name changes in Bihar. All followed the procedures listed at the Gazette of India (<http://egazette.bih.nic.in/>).

17 The same name with multiple spellings (for example, “Chaudhary” and “Chowdhry”) is considered here to be different names, but to deal with simple spelling mistakes, we restrict the sample to include only those names that are reported by at least five distinct people.

18 The SECC data are at the household level. Therefore, numbers referring to this dataset should be read as percentages of households, not individuals.

Another interesting name in the context of Bihar is *Yadav*. These individuals accounted for 11% of the Bihari population in the 1931 Census of India, 14% in the 2011 Census of India and 7% in the SECC data. In our data however, they account for 3% of government employees, 7% of farmers, 4% of petitioners in the Patna High Court and just 0.2% of respondents. The high proportion of *Yadavs* among the farmers is likely driven by the reality that they are historically an agrarian pastoral caste. As mentioned earlier, they have mobilized quite effectively in recent years and have emerged as an important political group, particularly under the leadership of the former Chief Minister Lalu Prasad Yadav, whose alliance with Muslims propelled him to power both in Bihar and at the center of Indian politics for nearly two decades (Singh, 2015). It is noteworthy that they are poorly represented in the judiciary. As argued earlier, inclusion and representation are critical issues in judiciaries – the causes of under-representation may indeed be complex and may be driven by a range of factors that include geographic location, educational attainment, and other opportunities for employment. These are worthy of further investigation.

One of the most striking findings here is actually that *most* of the surnames in the top-10 list of names in the institutions we consider here are caste-neutral, i.e. they conceal a person's caste. In daily life, the names *Kumar*, *Singh*, *Sinha*, *Mishra* and *Prasad* are often regarded as caste-neutral (Singh, 2008). In the SECC data, respondents with these names show considerable variation in their self-reported caste-status. For the purposes of rigor, in our data we flag a name as “caste-neutral” if at least 15% of respondents report a different status than the rest of the group. Using this threshold, of the 22,390,585 households in the SECC data, approximately 23% reported caste-neutral names.

In the courts, the practice is not confined to just petitioners, respondents and advocates alone. Interestingly, of the 84 judges who have served in the Patna High Court during our sample period, we find that 35% have caste-neutral last names.

Adoption of caste-neutral names is a growing trend in India (Jayaraman, 2006). The records of the British Indian army in the year 1912, for example, contain more than 100,000 names, but we find no records of any individuals with the name *Sinha* and very few instances of individuals with the last name *Kumar* (N=65). We do however find many instances of the name *Singh* (N=8,562). We acknowledge of course, that certain names may be overrepresented in colonial administrations, particularly in light of policies that preferred specific castes for these positions. But the fact that we see no records of *Kumar* in the census documents of that time either is noteworthy. It is hard to argue that migration, and fertility across these groups would be so different over the past 100 years to drive the current name distribution in the population.

The rise of caste-neutral last names is widely seen all over India, but in Bihar the practice is believed to have become widespread in the aftermath of the Bihar movement of the 1970s (Shah, 1977; Shah, 1977a; Shah, 1977b; Singh, 2008). Further research into the timing of this shift, and a comparison with other parts of India would be a fascinating topic of further research.

## 4.2 Caste, religion and gender

Our next step is to examine representation from certain groups in the judiciary. We use simple machine learning algorithms to draw inferences about caste, religion and gender from reported names in the case-level data.

Our first task was to identify gender. We first formatted individual names to ensure that each individual could be identified by an honorific title, a first name and a last name. Honorifics such as Shri, Sri, Smt, Mr, Mrs, and Ms. provided a starting point to identify gender. We further used a publicly available corpus of common Indian first names to refine this identification process, and to extend it to those names without an honorific in the data, and trained classifiers to identify gender based on the statistics of co-occurrence of alphabets in spellings of names, and length of the name. In order to reduce the generalization error, we trained multiple classifiers, including a logistic regression model and a random forest classifier to make

predictions.<sup>19</sup> A voting procedure is then used on the outcomes of these models to generate a final prediction of the gender for each name.<sup>20</sup> These machine learning methods thus allow us to assign a gender to each participant in the courts.

Religion and caste can be inferred using a similar approach. We perform the analysis at the household (rather than individual level) since the SECC enumeration process asked the head of the household their name, caste and religion. Muslims can be recognized in the data through the distinctiveness of Muslim names: common names such as *Khan* and *Ahmed* can easily be assigned and coded, but for others we use the occurrence of specific alphabets (such as Q and Z), to identify additional names. Caste assignment is more complicated because the same last name can be associated with multiple caste groups. The name *Kumar*, for example, could be the name of a person belonging to SC, ST or Other category. In the case of such names, we generate the distributions of the name across the different caste categories. We use this distribution to generate a prediction in an ensemble along with predictions from a random forest and a logistic regression model. We assign a caste to each household based on a simple majority vote between these models.

Table 1 presents the breakdown of groups that are represented in the court system along the lines of gender, religion and caste. We look at the following categories: Women, SC, ST, Muslim and “Hindu other”. These categories are broad and have obvious limitations (Joshi et al., 2018). Yet the graphs still present three striking features of social groups in Bihar. It is immediately apparent that no professional group displayed here perfectly represents the population of the state. Even in this unequal playing field however, judges are quite distinctive. Almost all Judges fall into the category “Hindu Other”, which includes all Hindus *except* SCs and STs. There are no ST Judges and very few other minority judges. Of the 84 judges observed over the 11-year period, only 6% are women and less than 10% are Muslim. This corroborates the findings of other studies (Tata Trusts, 2019).

The chart also shows that women are underrepresented everywhere, again a finding that others have also reported. At the time of writing this paper, there is no woman serving as a judge at the Patna High Court. They constitute half of the population, but their share in the different professions varies between 10% (judges) and 26% (government employees). The professional group that comes closest to representing the population of Bihar is the group of government employees. Several affirmative action programs have reserved seats at these institutions for SCs and STs (Singh, 1991; Jaffrelot and Kumar, 2012; Robin, 2012; Prakash, 2020).

### 4.3 Trends in cases

Figures 4 and 5 show the time-trends in the share of cases in the Patna High Court contested by different groups. Figure 3 shows the breakdown over time by two significant groups: the government and the individuals who use caste-neutral last names. Petitioners and respondents in these groups are depicted separately.

Several interesting observations can be made. First, we note that the government is the respondent in more than two-thirds of the cases, with a distinct upward trend over the sample period. The government is almost

19 The features (x-values) in all the models were hand-engineered co-occurrence statistics of blocks of alphabets in various locations within the names.

20 The voting procedure is a way to ensemble models so as to reduce the generalization error. For instance, if we had three prediction algorithms for gender and all of them make a prediction of M or F, then we use the majority vote as the final prediction of the ensemble. In this case, at least two of the algorithms would have predicted the same class and we use this as our final prediction. We used the cross-entropy function as the loss function to quantify how well a given classifier did and obtained an accuracy of 0.92 for the ensemble model.

never the petitioner.<sup>21</sup> The high share of cases with the government as the respondent may be an indication that the courts are open to citizens and firms with grievances against the state.

The chart also illustrates that judges, petitioners and respondents display a high proportion of caste-neutral names. Here too there is a discernible upward trend. Although it requires more research to analyze the drivers of this trend, we propose some possible interpretations. This could be an indication that citizens seek to insulate their pursuit of justice without drawing any attention to their caste at all. It could also be systemic bias that prevents certain individuals from accessing justice. The presence of systematic structural inequality along the lines of caste for much of Bihar's recent history would suggest that this is a reasonable concern. But this could also be a self-selection mechanism, where citizens who adopt caste-neutral names have a greater demand for judicial services.

Finally, the share of women respondents has been decreasing over time. This is a puzzling fact, a priori we would expect the opposite, that with further development and the growing voice of women in grassroots politics, more women should gain access to formal systems of justice. The decline in female participation has been seen in other types of markets in India in recent years. Women's participation in the formal labor force for example, has been declining throughout this period.

Another hypothesis is that the growing proportion of criminal cases in the courts (Figure 1), likely driven by the controversial alcohol prohibition laws passed in 2016, resulted in a greater number of male bail applications, and thus an apparent reduction in the proportion of cases involving women. Indeed, considerable some evidence from Bihar in recent years supports this claim (Dar and Sahay, 2018).

Finally, we observe that the fraction of petitioners and respondents who are classified as SC is quite steady, while the fraction of Muslims has been declining. As noted earlier, descriptive analysis of a large data set provides limited insights into the drivers of these trends. More research is needed to fully interpret them.

## 5. Group Identity and Matching between Petitioners, Advocates and Judges

How do last names and group identities correlate with the process of justice within the court? While the complexity of the processes of justice make this difficult to study, we believe that one answer to the question comes from the analysis of last-name networks within court cases.

We examine the incidence of co-occurrences of specific judges and specific lawyers, in their roles as representatives of petitioners and respondents. The large number of cases makes it difficult to see a clean picture. Figure 5 illustrates the network within the court in the form of a chart in which edges depict pairs of last names of judges, litigants or advocates who appear at least 1,000 times in the case data. The thickness of an edge is proportional to the number of times that pair of last names appears.<sup>22</sup> If last names did not matter at all, and judges and advocates were all similar in terms of case-loads and relationships, we would expect very little structure to emerge here. We see considerable structure – there are clearly some judges and some lawyers who appear together quite frequently.

The co-occurrence of judges and lawyers may be driven by a variety of factors that have nothing to do with their identities: seasonality, the composition of judges at the court at a particular time, the preferences of a specific chief justice, and the specifics of the “not before me” lists that exclude certain judges from working with specific lawyers who they may be related to are just a few examples of variables. Any estimates

21 Here we include the state government, national government and all agencies that fall within the definition of “state” under Article 12 of the constitution. We do not include prosecutors (who act as petitioners in criminal cases).

22 Here, the thinnest line indicates a pair appearing about 1,000 times and the thickest indicates a pair (between Advocates named Singh and litigants named Singh) appearing about 21,000 times. The size of the node, representing a last name by category (judges, litigants or advocates), is proportional to the weighted degree of the node, i.e., the total number of pairs of last names by category containing the given last name and category.

obtained from the framework may be biased due to un-observables that may affect both the dependent and independent variables. To better understand the robustness of the relationships described by Figure 5, we use a statistical framework to test some hypotheses about matching between (a) petitioners and judges; (b) advocates and judges; and (c) petitioners and advocates.

Our hypotheses are constructed based on our understandings of the processes at the courts themselves. At an abstract level, the pipeline of justice involves some distinct steps. A petitioner files a case against a respondent. Both have legal representation through advocates. The advocate who files the case is widely known as the filing lawyer. The case is assigned to a judge by the Chief Justice. After that point, any additional lawyers may provide services to argue the case in court. Arguing lawyers are often selected for their courtroom-specific skills and their performance in front of judges (Galanter and Robinson, 2013). Neither the filing lawyer, nor the arguing lawyer however, can be present on the judge's "not before me" list.

We start with the matching between judges and petitioners directly. Under the official parameters, there is no legal way for a petitioner to *choose* a judge or influence the court to be heard by a specific judge. Through the roster system, which contains the allocations of cases to specific judges as decided by the chief justice, the court strives to ensure that case-assignment is as objective as possible. Unless a case is already at the final argument stage (after completion of evidence, etc.), a change in the roster results in a change in the judge hearing the case. The court strives to ensure that judges do not work with parties with whom they have had any familial or social connection. This suggests that there should be no affinity between judges and petitioners themselves. In other words, there should be no mechanism by which an influential petitioner, with high social status, can ensure that their case is heard by a specific judge from the same social group. This leads to what we call ***Hypothesis (A): Caste, gender or religion of the petitioner should not be associated with the identities of the judges assigned to the case.***

Next, we turn to the case of matching between advocates and judges. The rules allow for a petitioner to switch advocates during a case: one advocate can file the case and another advocate can argue a case. If a judge is known to have a strong working relationship with a specific lawyer, and the lawyer has been known to argue well in front of a specific judge, a petitioner is allowed to recruit that lawyer to represent them. If we make the further assumption that people with a similar group identity may have a greater ease of communicating in the courtroom, it is plausible that we may see some matching between judges and lawyers (with the caveat that these lawyers are not on the judge's official list of excluded people which contains the judge's familial and social network). However, in our data, for now, we only observe the filing advocates. As these advocates are chosen before the assignment of judges to a case, random assignment leads us to ***Hypothesis (B): Caste, gender and religion of petitioner advocates filing the case in the high court should not be associated with the identities of the judges assigned to the case.***

Finally, we examine the matching between petitioners and the lawyers who represent them. Here the official rules provide considerable freedom of choice. In some cases, such as bail applications (which are an increasing fraction of cases at the Patna High Court), a petitioner seeking justice in the courts of India is permitted to file a case in the lower court as well as the high court, and transfer a dismissed case between the two courts.<sup>23</sup> In the event that the case needs to move between these institutions, a file must be transferred over. Given the enormous complexity of the courts, the backlog of cases, and the hierarchical structure of the courts in India, reliance on an advocate from a single community confers considerable advantages. Lawyers in close touch with their client can rely on their network to ensure that the file is transferred to the right person at the right time. This leads us to ***Hypothesis (C): Caste, gender and religion***

23 Anecdotal evidence suggests that this is a common practice in the courts of Bihar.

*of the advocates representing petitioners should show strong association with the identities of the petitioners.*

To analyze matching patterns between judges and petitioners and petitioner advocates, we consider the following model:

$$y_{cymdt} = \beta_0 + \beta_1 JudgeCasteNeutral + \beta_2 JudgeForwardCaste + \beta_3 JudgeOBC + \beta_4 JudgeMuslim + \theta X_c + \alpha_y + \gamma_m + \vartheta_d + \phi_{ymdc} + \varepsilon_{cymdt}$$

Here  $y_{cymdt}$  denotes either petitioners or petitioner advocates of case  $c$  of type  $t$  in year  $y$  month  $m$  and district  $d$  and whether or not they are women, Muslim, Scheduled Caste, or have a caste-neutral last name.  $JudgeCasteNeutral$ ,  $JudgeForwardCaste$ ,  $JudgeOBC$  and  $JudgeMuslim$  are dummy variables indicating whether at least one of the judges are, respectively, of caste-neutral last names, Forward Caste, Other Backward Classes (OBC) or Muslim. We include some judge characteristics as controls, such as judge age, whether a judge was Chief Justice of any high court, the number of years a judge has been a permanent judge at the Patna High Court and whether or not a judge has been transferred to or from another court. We include year, month, district and case type and interaction term fixed effects. Standard errors are clustered at a district-year level. We restrict our sample only to first orders of any case and exclude any case where the government is either a petitioner or a respondent.

The simplicity of our framework makes us cautious about the interpretation of our results. We believe that it is most prudent to interpret the estimated coefficients as a test of the null hypothesis of no matching on the basis of identity.

Results for hypotheses (A) and (B) are presented in visual form in the panels of Figure 5. We do not find any clear matching patterns between caste-neutral or Scheduled Caste petitioners or petitioner advocates and judges but our results reveal some patterns for Muslim and women. Female petitioner advocates match significantly more often with Muslim and Forward Caste judges. While we do not find any such effect for female petitioners themselves, we do find that Muslim petitioners match more often with Muslim or OBC judges. This would appear to contradict hypotheses (A) and (B) of random matching between judges and petitioners and between judges and petitioner advocates. However, roughly 1 out of 10 tests show statistical significance. Corrections for multiple hypothesis testing would rule out statistical significance at conventional levels.

Results to test hypothesis (C) are in Table 1. Here we see strong evidence of matching for two groups of petitioners: petitioners who are Muslim and petitioners who have caste-neutral last names are approximately 9% and 6% more likely to match with advocates who share those identities and these results are statistically significant at the 1% level. Since the proportion of petitioners who are Muslim is 16.03%, the increase of 9% is noteworthy. Likewise, the proportion of petitioners who have caste-neutral last names is 25.07%, so 6% is a smaller increase relative to this baseline. We see no statistically significant effect of being from the SC community or being female.

To a careful observer of the courts of Bihar or district courts in India more broadly, the magnitude of the coefficients in these regressions may appear to be too small – the strong networks between petitioners and their advocates for example, may just be a normal feature of institutional realities that are specific to courts (Mamidi, 2012). In our own discussions with participants in the courts, we find strong narratives about certain communities that are drawn into specific types of cases: SC groups in rural areas for example, may be disproportionately more likely to be accused of violating prohibition laws, and may rely on lawyers from their own communities to get bail applications at the lower courts. The size of the obtained regression coefficients is driven by the fixed-effects. Controlling for year, month, district and type of cases means that estimates that are specific to case-types, courts and time driven downwards by the fixed-effects in our



model. We refrain from presenting the estimates for specific courts, years, seasons and case-types without a deep contextual analysis to interpret these findings.

In summary, we assessed the degree of homophily in three different dyads: petitioners and judges, advocates and judges, and petitioners and advocates. We find evidence against random matching between judges and muslim petitioners and between judges and female advocates. As expected, matching is strongest between petitioners and their advocates, where we find strong effect for Muslims and petitioners with caste-neutral last names. We consistently find evidence for limited representation and power for women and individuals who are from the SC community. The significance of caste-neutral names is a key finding of this paper. While the practice was adopted to reduce the salience of caste in formal institutions in Bihar, paradoxically, the groups that have adopted this practice may have formed strong networks of their own. From the standpoint of studying the impact of social movements, this finding is not a surprise: social movements are known to disrupt existing social orders (in this case, caste networks) but inadvertently create new social categories that perform a similar role.

## 6 Conclusion

In the analysis of more than one million cases heard at the Patna High Court between 2009 and 2019, we find evidence of structural inequalities. Key participants in the courts are not representative of the Bihari population. Muslims, women and scheduled castes are consistently under-represented. The practice of using caste-neutral names is on the rise throughout the period of our study. We also find evidence that specific last names cluster together in the courts. To explore this further, we examine whether caste, religion and gender are related to the “matching” between judges and lawyers in the cases that were filed over this time period. We test for three hypotheses for matching: (a) Between petitioners and judges; (b) Between advocates and judges; and (c) Between petitioners and their advocates. We find almost no evidence for any matching between petitioners and judges or between (filing) advocates and judges. Instead, we find strong evidence of matching between petitioners and their advocates. Specifically, Muslims and Hindus who use caste-neutral last names cluster together. We find no evidence of any form of matching for women or SCs. These results suggest that the social movements that disrupted existing social structures in the past may have inadvertently created new social categories that reinforced networks and inequalities in the formal justice system.

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## Tables and Figures

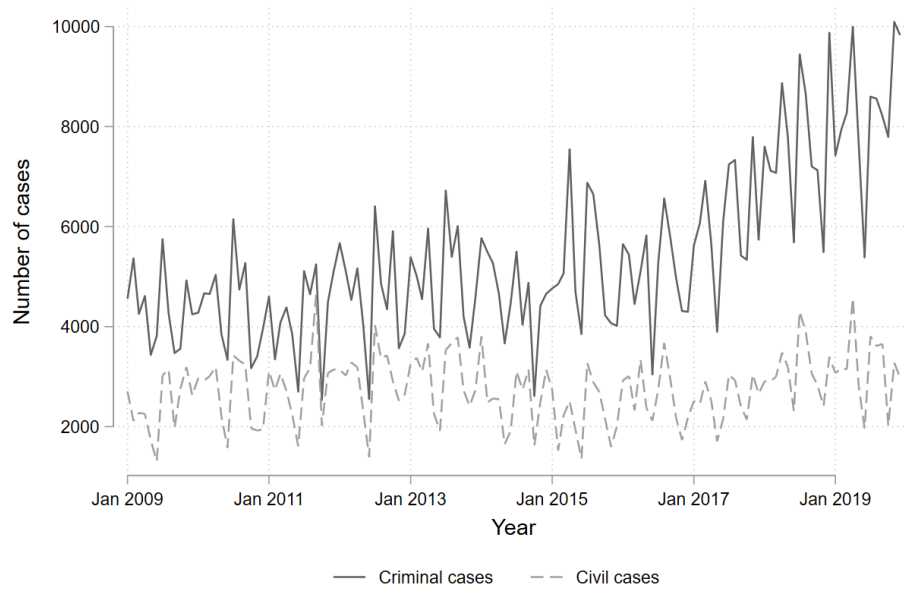


Figure 1: Criminal and Civil cases at the Patna High Court, 2009-2019.

	<i>N</i>	<i>Women</i>	<i>Muslim</i>	<i>SC</i>	<i>ST</i>	<i>Hindu Other</i>
<i>SECC</i>	22,400,539	9.7%	15.22%	16.99%	1.99%	67.23%
<i>Farmers</i>	956,861	21.08%	13.15%	12.78%	2.89%	56.68%
<i>Government Employees</i>	210,389	25.85%	10.88%	17.57%	3.56%	58.80%
<i>Advocates</i>	23,703	16.79%	10.86%	14.56%	0.06%	61.07%
<i>Petitioners</i>	189332	23.65%	16.03%	10.15%	0.49%	84.95%
<i>Respondents</i>	60157	18.65%	9.35%	5.2%	0.20%	53.01%
<i>Judges who have served at the Patna High court between 2009-2019</i>	84	9.52%	5.95%	3.57%	0.00%	89.29%

*Table 1: Descriptive statistics of the different samples.*



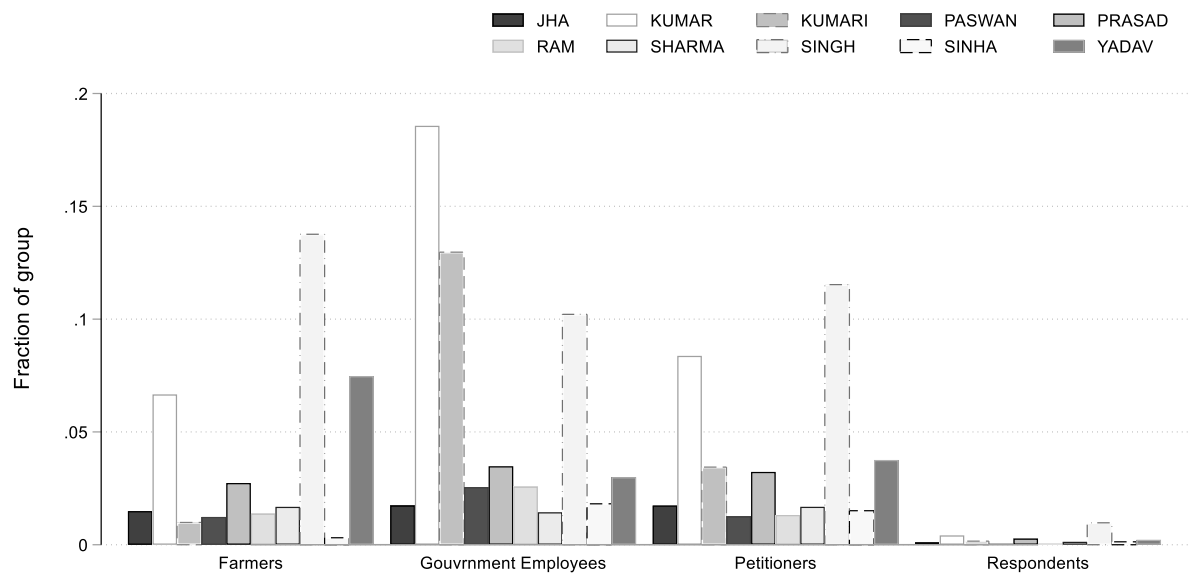


Figure 2: Proportion of sample, by top-10 last names

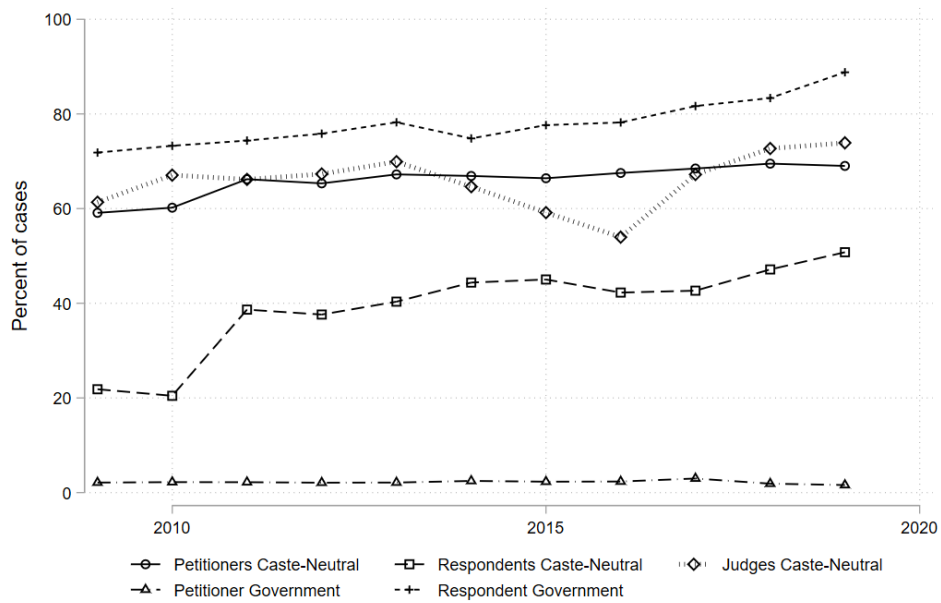


Figure 3: Cases over time: petitioners, respondents and judges

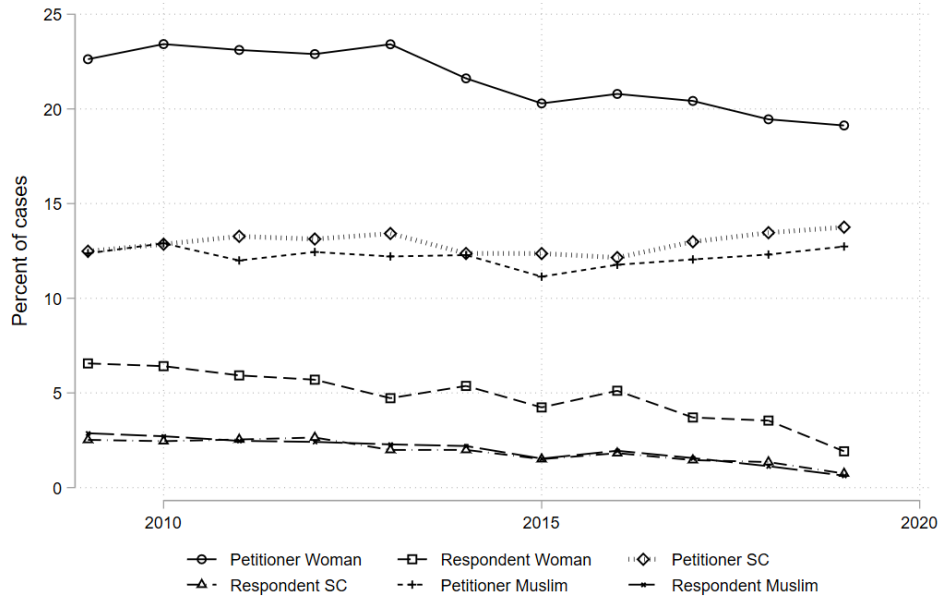


Figure 4: The percent of cases by gender, caste and religion

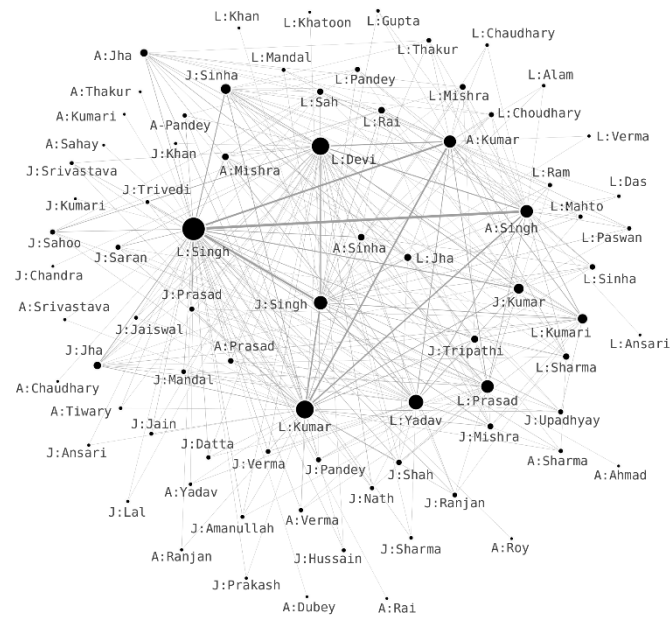
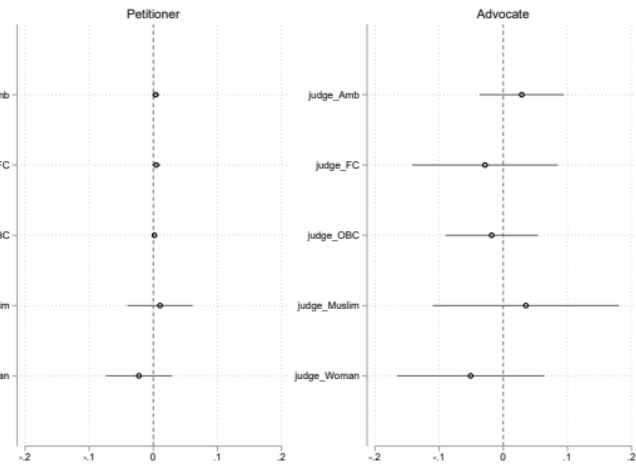
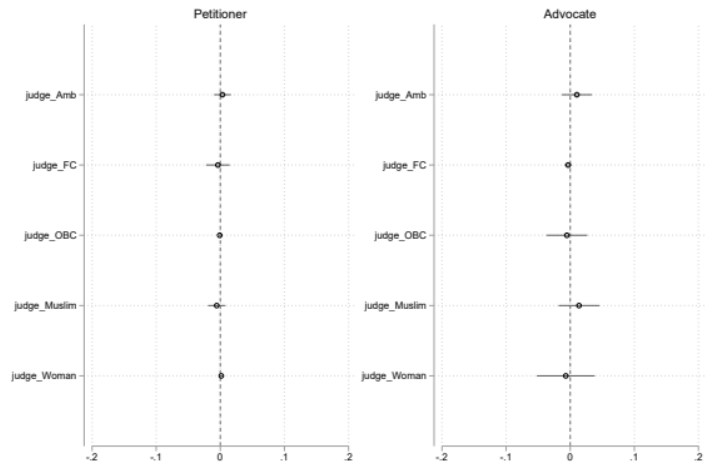


Figure 5: Networks between judges and lawyers, 2009--2019; data restricted to the names that appear at least 1000 times; "J: Judge", "A: Advocate", "L: Litigant"; size of the node is proportional to the weight of the edges that are associated with it. Lowest weight is 1000; Highest weight is 20,000.

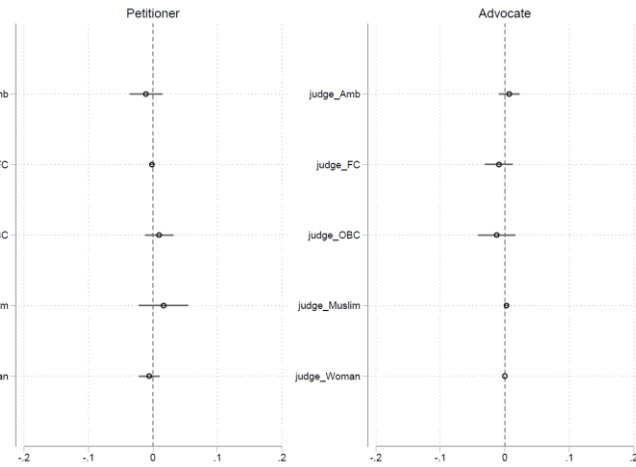
Panel (A): Ambiguous Last Name



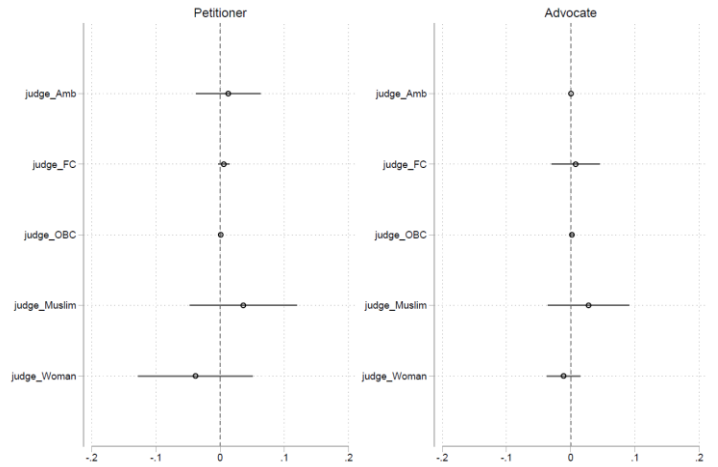
Panel (B): Scheduled Caste



Panel (C): Muslim



Panel (D): Woman



6: Tests of Hypothesis (A) and (B): Petitioner attributes are regressed on judge-attributes to test whether petitioners or petitioner advocates “match” with specific judge attributes. The regressions include controls for district, year, month, and the type of case (interacted with each other). The confidence interval displayed correspond to 5% statistical significance, corrected for multiple hypotheses testing.

	(1) Petitioner's Advocate is caste neutral	(2) Petitioner's Advocate is SC	(3) Petitioner's Advocate is a woman	(4) Petitioner's Advocate is Muslim
Petitioner Caste-Neutral	0.058*** (0.014)			
Petitioner SC		-0.001 (0.001)		
Petitioner Woman			0.006 (0.005)	
Petitioner Muslim				0.085*** (0.020)
Constant	0.569*** (0.005)	0.111*** (0.000)	0.134*** (0.001)	0.095*** (0.001)
R-Squared	0.132	0.113	0.108	0.121
N	327,156	271,676	327,156	327,156
Year FE	yes	yes	yes	yes
Month FE	yes	yes	yes	yes
District FE	yes	yes	yes	yes
Case type FE	yes	yes	yes	yes
Year*Month*District*Case-type FE	yes	yes	yes	yes

Table 2: Test of Hypothesis (C): Matching between petitioners and their advocates. Sample includes (i) cases where at least one party is an individual, i.e. not the government, a company or an institution; (ii) first-orders issued for a case. Standard errors are clustered at the district-year level and are corrected for multiple hypotheses testing. The difference in observations in column two is explained by data limitations on caste assignment.