

RESEARCH ARTICLE

# Caste Aside? Names, Networks and Justice in the Courts of Bihar, India

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## Abstract

This study investigates the impact of social identity on judicial processes and outcomes at the Patna High Court over a decade (2009 to 2019). We employ machine learning algorithms to infer caste status from surnames (names) in court records. We note that a majority of court participants have ‘caste-neutral’ names. Though we find no evidence of name-based ‘matching’ between litigants and judges, caste-neutral petitioners are 3.3% more likely to choose a caste-neutral advocate. Matching, whether intentional or coincidental, yields notable consequences. Litigants with caste-neutral names who matched with similar judges face a higher likelihood of case dismissal and lower success rates in overturning appeals. However, advocates with caste-neutral names experience less disadvantage in these scenarios. Notably, the adoption of caste-neutral names, while offering some protection, does not fully mitigate the vulnerabilities faced by citizens within India’s judicial institutions.

## 1 Introduction

A lot rides on a person’s name. When printed on top of a resume, application form or petition in an institutional setting, a name can provide clues about an applicant’s gender, race, religion, ethnicity, and socioeconomic background. This can become the basis of discrimination (Small and Pager 2020). In the United States, names that appear to be distinctively black have been associated with higher mortality (Cook, Logan, and Parman 2016), fewer responses to job-search applications (Bertrand and Mullainathan 2004), and less mentorship in educational institutions (Milkman, Akinola, and Chugh 2012). In Germany, unpopular or “negative” names are associated with neglect in online dating platforms, low achievement, and weak self-esteem (Gebauer, Leary, and Neberich 2012).

Names can be even more powerful in post-colonial societies with strong traditional institutions. In India, names often reveal religion, birthplace, and inherited caste (Das and

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Copeman 2015; Hoff and Pandey 2006; Banerjee et al. 2009; Gidla 2017; Parmar 2020).<sup>1</sup> These names function as crucial identifiers within paper-heavy bureaucratic systems, profoundly influencing how state institutions interact with and serve individuals (Hull 2012; Steinberg 2015). Constitutional prohibitions on identity-based discrimination have not fully curbed the tendency of people to scrutinize names for markers of their origins (Deshpande 2011). Names affect call-back rates for jobs (Banerjee et al. 2009; Thorat and Attewell 2007), the outcomes of job interviews (Deshpande and Newman 2007), loan approvals (Fisman, Paravisini, and Vig 2017), purchasing behavior (Mazzarella 2015), and even children's cooperative behavior (Hoff and Pandey 2006; Hoff, Kshetramade, and Fehr 2011).

Widespread concerns about name-based discrimination have spurred efforts to modify or conceal names. In the U.S., immigrants often adopt non-ethnic names for their children to aid assimilation (Abramitzky, Boustan, and Eriksson 2020). Organizations increasingly use algorithms to screen resumes, aiming to eliminate human biases (Rambachan et al. 2020). In parts of India, a significant movement after independence led many Indians to adopt caste-neutral names to mitigate historical inequalities (Jayaraman 2005; Parmar 2020; Das and Copeman 2015).<sup>2</sup> Some of India's most famous celebrities have changed their names.<sup>3</sup>

In certain regions, such as Bihar – the focus of this paper – name “doubling” is now widespread, i.e. a citizen adopts a “caste-neutral” surname (also known as last names or family names, henceforth just “names”) for school, work and official settings, but retains a traditional name for personal interaction or to access certain state schemes (Das and Copeman 2015). Name doubling is particularly common among vulnerable communities (Mazzarella 2015; Parmar 2020).

In this study we explore the influence of names, particularly caste-neutral names, in recent cases at the Patna High Court (2009–2019) on the outcomes of justice. Bihar, with its population exceeding 100 million, is an ideal setting for this study – it is a large and predominantly rural state that is deeply stratified along caste and religious lines (Joshi, Kochhar, and Rao 2022; Chakrabarti 2013; Kumar 2018). Official names are the *sole* visible marker of a person's identity in legal settings (Chen, Moskowitz, and Shue 2016; Berdejo and Chen 2017). This creates a compelling context for examining the relationship between names and judicial outcomes.

Our study examines name distribution in the Patna High Court, comparing it to other state institutions. Using machine learning, we infer caste, religion, and gender from names in our legal data. We categorize Hindu names into three groups: caste-neutral, Scheduled Castes (SC), and other caste-indicative names. We analyze caste-neutral and SC names together as potentially ‘low-status’, while also comparing them separately. This approach

<sup>1</sup> Caste is a form of rigid social stratification that is unique to the South Asian context and has been a central organizing tenet of South Asian society for hundreds of years (Bayly 2001; Jodhka 2017).

<sup>2</sup> According to the Gazette of India, the process takes three steps. First, an individual must sign an affidavit with the old and new names, as well as the reasons for changing the name. Next, they must publish the name change in two local newspapers (one English newspaper and one regional newspaper published in the official language of the State). Finally, the applicant must notify 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. This information can be found at [https://www.deptpub.nic.in/sites/default/files/Change-of-Name-and-Gender\\_1.PDF](https://www.deptpub.nic.in/sites/default/files/Change-of-Name-and-Gender_1.PDF)

<sup>3</sup> India's most successful actor, Amitabh Bachchan was originally named Inquilab Srivastava, Akshay Kumar was named Rajiv Hari Om Bhatia, Govinda was named Govind Arun Ahuja, Madhubala was Begum Mumtaz Jehan Dehelvi, Dilip Kumar was originally named Muhammad Yusuf Khan, Meen Kumari was originally Mahjabeen Bano, and the renowned comedian who is widely known as Ajit was Hamid Ali Khan.

allows us to investigate differences in legal outcomes and evaluate the effectiveness of caste concealment and lawyer-judge matching strategies.

Our analysis reveals minimal judge-litigant matching based on name-derived identity measures. However, we observe significant matching between litigants and advocates. Notably, petitioners with caste-neutral names are 3 percentage points (pp) more likely to select low-status advocates compared to high-caste petitioners. Interestingly, this pattern is entirely absent among low-caste petitioners whose names indicate their caste status.

We also see that name-based matching can have modest but yet noticeable impacts on both judicial processes and outcomes. Low-status petitioners matched with low-status judges face subtle but significant disadvantages, including a 1.1 pp increase in dismissal rates and a 0.7 pp decrease in successful cases. These disadvantages are primarily concentrated among caste-neutral petitioners. Advocates, regardless of caste classification, do not appear to face any significant differences in outcomes on the basis of their names. However, low-status petitioners with low-status advocates are 0.7 pp less likely to have their case allowed, while low-status respondents with low-status advocates are 4.5 pp more likely to have their case dismissed, with these effects mainly observed in caste-neutral groups.

Our study reveals that using caste-neutral names in India's courts is a double-edged sword. While it may offer some protection against overt bias, it also prevents litigants from receiving necessary accommodations. This strategy fails to improve judicial outcomes and may inadvertently reinforce the social hierarchies it aims to overcome, highlighting the persistence of caste-based inequalities in the legal system.

The rest of our paper is organized as follows. Section 2 provides an overview of the context, Section 3 provides an overview of data, Section 4 gives an overview of the names and their concentration in the data, Section 5 gives a summary over identities of petitioners, respondents and judges at the Patna HC, Section 6 analyses matching between judicial actors, Section 7 studies how judicial actor's identities and matching between them are related to case outcomes, Section 8 provides a discussion and the final section concludes.

## 2 Context: Politics, Society and Justice in Bihar

Bihar, one of India's historically poorest states, has long grappled with lawlessness, caste violence, and underdevelopment. These issues, rooted in colonial land systems, have profoundly shaped the state's social hierarchy and justice system, underscoring the significance of name-changing practices in this context.

### 2.1 Caste

Hindus account for 82% of Bihar's population (Verma 2023). Hindus are organized in broad caste categories such as Forward Caste (FC), Scheduled Caste (SC) and Scheduled Tribe (ST).<sup>4</sup> In everyday life however, identity is experienced and practiced as *jāti* (henceforth, *jati*) (Bayly 2001; Jodhka 2017). These are hereditarily formed endogamous groups with distinctive practices that include (but are not limited to) naming conventions, occupations, property ownership, diet, gender norms, and religious rituals. Bihar has hundreds of *jatis*, with complex placement in official categories and significant inter- and intra-level inequality (Joshi, Kochhar, and Rao 2022).

<sup>4</sup> The groups "Scheduled Caste" (SC) and "Scheduled Tribe" (ST) are officially designated groups of people and among the most disadvantaged socioeconomic groups in India. Lists for each state, as specified by the government of India, are available here: <https://socialjustice.gov.in/common/76750>.

The placement of castes in an official hierarchy began in the colonial period when British used caste as an official identity marker that determined eligibility for recruitment into the army and bureaucracy (Dirks 1989; Bayly 2001). Post-independence, India's Constitution addressed caste inequality: Article 14 guarantees equality and prohibits discrimination, while Articles 15(4) and 16(4) allow for special provisions for backward classes, enabling reservations in education and public employment for SC, ST, and OBCs.

Despite these provisions, caste continues to characterize the social structure of the state. FCs at the top includes jatis such as Brahmins, Rajputs, Bhumiars, and Kayasthas and accounts for about 15–20% of the population (Kumar 2018; Verma 2023).<sup>5</sup> These groups have wielded significant power in the aftermath of colonial rule (Diwakar 1959).<sup>6</sup> Recent evidence suggests that they are about twice as likely to be literate and hold land than their lower-status counterparts (Joshi, Kochhar, and Rao 2018). They also have the highest levels of income and asset ownership than any other caste-group (Tewary 2023).

Bihar's "backward classes" comprise a significant portion of the population. SCs make up 19.7% while other categories include OBC, BC, and EBC, with OBCs accounting for 27.1% (Verma 2023; Tewary 2023).<sup>7</sup> Scheduled Tribes now represent only 1.7% of Bihar's population, as most tribal areas are now part of Jharkhand.

Power struggles between caste groups have frequently driven instability in Bihar (Jaffrelot and Kumar 2012). The 1980s saw private caste armies (Chakrabarti 2013). In the 1990s, law and order deteriorated, and development policies were caste-centric. Until recently, Bihar has lacked the pan-state identity that has been seen elsewhere (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 (Blair 1980; Kumar 2018). In 1977, the first non-INC government instituted policies that reserved 20 percent of public sector jobs for OBCs (Chakrabarti 2013).<sup>8</sup> This group includes jatis such as Bania, Yadav, Kurmi, and Koiri – all agrarian communities that have acquired land, adopted improved agricultural technology (Kumar 2018). The group now wields considerable political power in the state (Jaffrelot and Kumar 2012).

Caste and religion continue to be salient forms of identity in Bihar. The complex interplay between entrenched social hierarchies and aspirations for a more egalitarian society has contributed to the emergence of name "doubling" among Bihar's citizens. Though this practice has received little academic analysis, it remains an established convention in many communities in India (Jayaraman 2005; Das and Copeman 2015; Buswala 2023).<sup>9</sup> With districts consisting of approximately 4 million people, individuals and communities can generally use

<sup>5</sup> We are unable to access the formal report and are thus relying on secondary sources for these estimates.

<sup>6</sup> In the years before Indian independence, the Kayasthas were dominant in colonial governance structures. After Indian independence however, the other upper-caste groups entered the political arena and together dominated the Indian National Congress that ruled the state almost continuously until 1977.

<sup>7</sup> In the 2011 Census SCs make up 15.7% (India 2011).

<sup>8</sup> In 1991, reservation 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.

<sup>9</sup> In an anecdotal account of moving from Bihar to the neighboring state of Uttar Pradesh, one person writes "It is an irony that in a place like Bihar where caste-identities are so strong, markers of caste – the surnames or the family names – are seldom used. I never realized how unusual it was until I ventured out of the state for higher studies, first to Allahabad (UP) and later to the United States. I do not use Shahi, my family name, in official documents or in informal introductions. None of my classmates (except when they were Bengalis, Marwaris or Muslims) in Bihar used it either (<https://avinashkishoreshahi.wordpress.com/2008/04/08/where-people-have-no-surnames/>).

their official names in official settings and their given names in personal settings throughout their lives.

## 2.2 Justice System

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. There are currently 22 permanent judges, including the Chief Justice and 14 additional judges. Bihar has sent more justices to the Supreme Court than any other Indian state (Chandrachud 2020).

Prior research on the Indian justice system has argued that the system's colonial roots continue to influence the courts in a variety of ways. Colonial courts were designed by colonial administrators and sought to secure Indian subjecthood rather than serve citizens (Menski 2006). After India's independence, the development of the Patna High Court has been constrained by weaknesses of state capacity, caste-based conflict and the episodic violence in the state (Chakrabarti 2013; Jaffrelot 2010; Kumar 2018). Political battles, often accompanied by complex allegations of corruption and criminality, have often found themselves being decided in the Patna High Court, straining the court's political neutrality (Roy 1997). In recent years, however, the challenges of the Patna High Court largely align with those of the Indian justice system more broadly (Sen 2017).

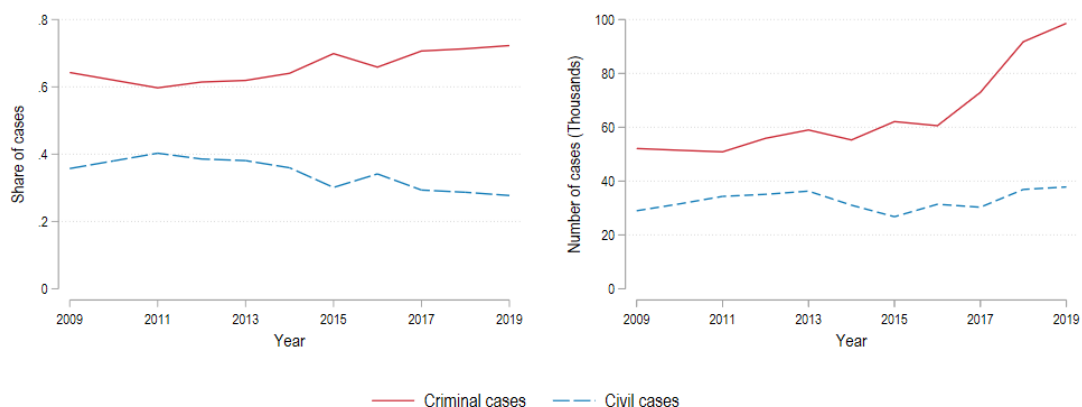
## 3 Data

### 3.1 Patna High Court Cases

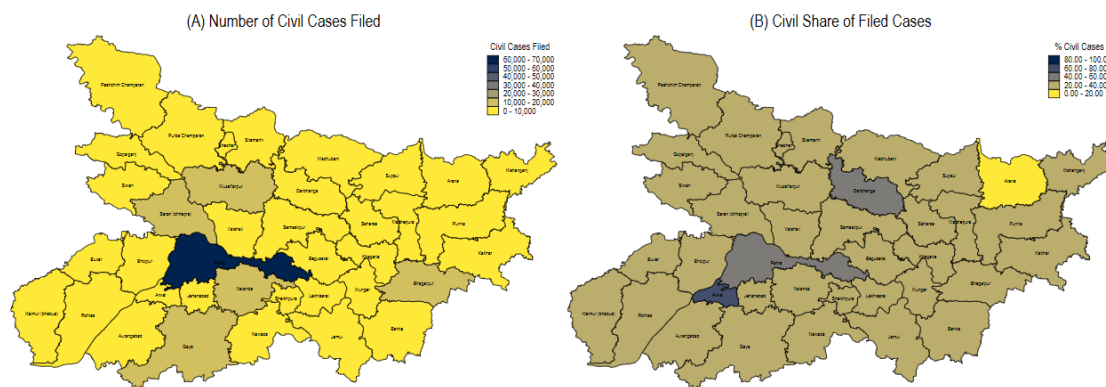
Our dataset comprises of 1,071,068 judgements which correspond to 986,024 unique cases heard at the Patna High Court from 2009–2019, scraped from public records. We gather data on case attributes (type of case, lawyer, etc.) as well as auxiliary data from police stations, district courts, and judge biographies. The dataset consists of 360,432 (34%) civil cases and the remainder are criminal cases.

Figure 1 shows case trends, with criminal cases rising since 2015. This increase likely stems from the controversial Bihar Prohibition law, implemented in 2015, briefly overturned, then reinstated (Dar and Sahay 2018). Reportedly, over 200,000 people have been charged under this act, with 50,000+ bail applications pending at the Patna High Court.

Figure 2 displays the spatial variation of civil cases (Panel A) and the share of civil cases of all filed cases (Panel B) across Bihar's districts. While the district of Patna strikes out as having by far the highest number of civil filings, there is much less spatial heterogeneity in the share of civil cases.



**Figure 1.** Time Trends of Criminal and Civil Cases Filed at the Patna High Court, 2009-2019. The figure depicts time trends of the number (Panel A) and share (Panel B) of civil and criminal cases filed per year in the Patna High Court between 2009 and 2019. Calculations are based on the full sample of 1,071,068 cases filed in this time period.



**Figure 2.** Spatial Distribution of Civil cases filed at the Patna High Court, 2009-2019. Panel (A) displays the total number of civil cases filed per district in the Patna High Court between 2009 and 2019. Panel (B) plots the share of cases filed per district which are civil cases.

### 3.2 Additional Data on Names

For the purpose of comparing the courts to other institutions in Bihar, we supplement the judicial data with additional data from several public sources:

**Socio-economic Caste Census (SECC) for Bihar:** The SECC data has not been officially released by the Government of India. We rely on the replication files of existing research to access these data (Sood and Laohaprapanon 2018).<sup>10</sup>

**Registered Farmers:** We use a database of about 1.3 million registered farmers from the Bihar Cooperative Department.<sup>11</sup> We have no information on the criteria that were used to include farmers in this database. It is quite likely, however, that the most well-connected and

<sup>10</sup> These data were scraped from the public records of the MGNREGA website in 2020 ([http://164.100.129.6/netnrega/secc\\_list.aspx](http://164.100.129.6/netnrega/secc_list.aspx)) and made available on the Harvard University dataverse.

<sup>11</sup> The registered farmers' data is available on the Co-operative department website (<http://cooperative.bih.nic.in/FarmerDB.htm>). The data can be accessed district-wise, we scraped the data in June 2020.

**Table 1.** Breakdown of the Population by Gender, Religion and Caste.

	N	Woman	Muslim	SC	ST	Other Hindu
<b>Patna State Sources</b>						
Farmers	1,341,181	27.62	6.17	10.28	1.05	82.74
Government Employees	210,389	29.01	9.35	13.28	1.67	76.00
<b>Patna HC</b>						
Judges	83	9.64	6.02	6.41	1.28	92.31
Petitioners	1,013,871	22.17	10.99	11.53	1.02	76.81
Respondents	63,374	34.89	10.53	9.93	1.20	78.80
Advocates	210,389	29.01	9.35	13.41	1.67	75.88

Note: (i) Since the SECC was conducted by interviewing the designated head of the household, and only 9.7% of women in Bihar were coded as household heads, we do not present the estimates of gender from this survey; (ii) Estimates for Advocates, Petitioners, Respondents and Judges are calculated using our data from the Patna High Court, 2009–2019.

well-placed farmers were able to register and take loans in the early stages of this registration effort. This, however, makes the dataset particularly well-suited to understand who benefits from agrarian policies in Bihar.

**Government Employees:** We draw on a database of 210,389 employees of the Bihar state-government who have officially disclosed their financial status to comply with policies of the Government of India.<sup>12</sup>

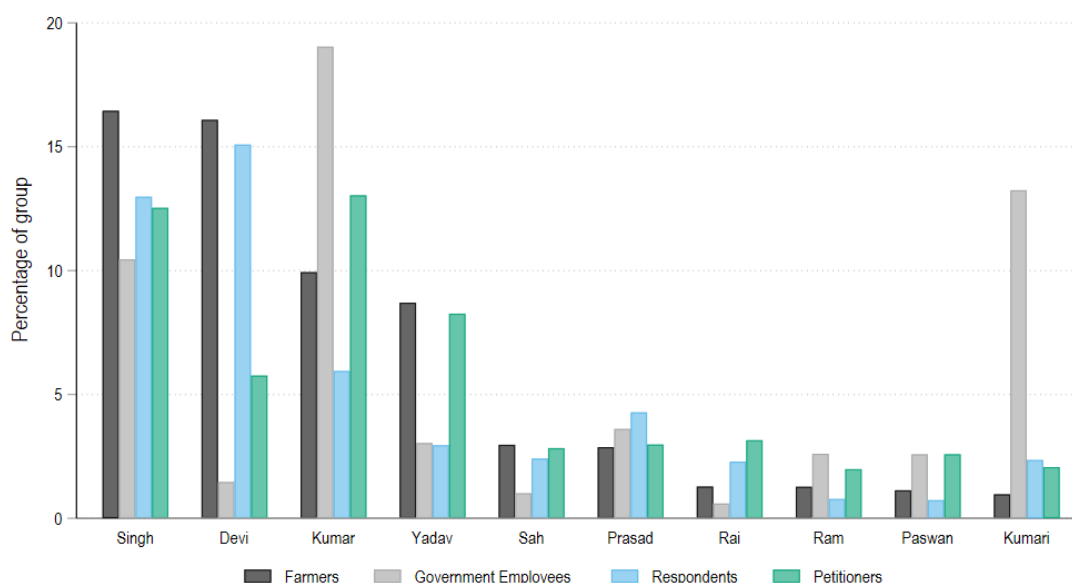
**Judges:** We constructed a database of all 83 judges who have served at the Patna High Court, including estimates of their years of service at the court, but also their age, recruitment source, date of appointment as an additional judge, date of appointment as a permanent judge, and retirement date from handbooks from 2014, 2017 and 2020.

Table 1 summarizes occupational choices across caste, religious, and gender identities in Bihar. We note that no professional group perfectly represents the state's population. Judges however, are particularly distinctive: mostly "Hindu Other" with no ST judges, few minorities, 6% women, and <10% Muslim. Women are underrepresented across all professions (10–26%). Government employees most closely reflect Bihar's population, likely due to affirmative action programs that have been described in the previous section.

For the sake of a historical comparison, 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. These sources offer insights into historical name prevalence in Bihar, an early British-administered region. We use this data solely for analyzing the frequency of specific surnames.

<sup>12</sup> The asset data is available at <http://bpsm.bihar.gov.in/assets/>. It can be accessed via the employee's department, district, or the public sector undertaking that they are a part of. We scraped these data in June 2020.

## 4 Names at the Patna High Court



**Figure 3.** Proportion of sample, by top-10 surnames.

North Indian naming conventions typically assign given and surnames at birth, with the latter indicating region, caste, and religion. As noted earlier in this paper, name changes that are made later in life typically focus on surnames (see footnote 2). We examine the frequency of surnames, and again use the terms “names” and “surnames” interchangeably as we examine these distributions.

Figure 3 compares the most commonly used names at the Patna High Court and other official settings. We note that the top 10 names (not including the judges data) are remarkably similar everywhere. Singh, Kumar, Kumari, Prasad, Yadav, Paswan, Ram, Jha Sinha, and Mishra occur the most frequently.<sup>13</sup> These specific names alone account for 58% of senior government employees, 59% of farmers, 40% of petitioners and 29% of respondents at the Patna High Court.

Figure 3 reveals a variation in dominant names across different contexts. Singh represents 10% of senior government employees, 14% of farmers, and 12% of High Court petitioners. Kumar comprises 19% of senior government employees but only 7% of farmers. Yadav, less common overall, accounts for 3% of government employees, 7% of farmers, 4% of High Court petitioners, and 0.2% of respondents. Historically, Yadav represented 11% (1931 Census), 14% (2011 Census), and 7% (SECC) of Bihar's population. No judges have this surname.

A closer examination of names reveals the complex interplay between caste identity and social status. In Bihar, ‘Kumar’ and ‘Devi’ are widely regarded as caste-neutral names that are generally adopted to conceal SC or OBC affiliation. ‘Singh’ is typically associated with several

<sup>13</sup> We omit judges from consideration here because the process of becoming a High Court Judge is strongly affected by decision-makers outside the state. According to Article 217 of the Constitution of India, judges are appointed by the President of India in consultation with the Chief Justice of a High Court in consultation with the Governor of the state. Nearly a third of the judges in our sample were invited from other states.



FCs as well as OBCs, but is rarely used by any SCs. These names are caste-neutral to the extent that they do not definitively indicate a specific caste group or position in the caste hierarchy. Yadav on the other hand, strongly indicates OBC status.

The high concentration and strong localization of names in Bihar presents a striking contrast with other historical settings. For instance, in 1541 London, only 7.85% of the population shared the top 10 most common surnames (Greif and Tabellini 2017). In China however, we see a much greater concentration of names and the persistence of clan-based networks at this time (Greif and Tabellini 2017; Fan et al. 2024). Though a high concentration of names has often been interpreted as evidence of limited in-migration and upward mobility, the high concentration of caste-neutral names may suggest a more complex social dynamic at play in Bihar (Clark and Cummins 2015; Clark 2014).

## 5 Analysis of Names for Markers of Social Identity

### 5.1 Algorithmic Inference of Names

To identify religion of all litigants, advocates, and judges in our sample, we first extract all surnames from Patna High Court cases related to the Muslim Women (Protection of Rights on Divorce) Act, 1986 and Hindu Marriage Act, 1955. Assuming that only those from these religious backgrounds file such cases, this is a comprehensive dataset of Hindu and Muslim names that are widely used in Bihar.

The names database functions as training data for a machine learning algorithm that predicts whether any name is Hindu, Muslim, or Other.<sup>14</sup> When the algorithm is given a name to analyze, it examines 1–4-character groups, noting distinctive features associated with names in the religious group. For example, for Muslim names (relative to Hindu names), it notes features such as the higher incidence of the alphabet's 'z' and 'q', or the higher frequency of the co-occurrence of "mm" or "ee". After this logistic regression models are used to make out-of-sample predictions of the caste and religious affiliation.<sup>15</sup>

Next, we refine this algorithm to predict caste affiliations. For this, we use SECC data. Since each household head in the SECC was asked to report their full name and their caste affiliation, we have a distribution of caste groups associated with names. We split the SECC randomly into training data (90%) and testing data (10%). We use the training data to make a list of predicted caste affiliations for the top-100 names and then use out-of-sample predictions on the testing data to determine the accuracy. 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.<sup>16</sup> The accuracy of our algorithm in the in-sample SECC data was 92% and the accuracy of our prediction on the testing group (also in the SECC data) was 87%.

<sup>14</sup> Unfortunately, the number of litigants who hail from Christian, Buddhist or other religious groups in our sample is too small to make appropriate matches. All those who are neither Hindu nor Muslim are included in the "Other" category.

<sup>15</sup> To make the final prediction out-of-sample, we used a variety of methods to evaluate various classifiers, including decision trees, random forests, logistic regression, linear SVM and character RNNs. We found that the simple linear SVM and logistic regression classifiers performed the best on the various metrics, producing an accuracy of around 91%.

<sup>16</sup> To get stability in our estimates across this heterogeneous sample, we use the trained algorithm to construct a prediction of caste for each name in the testing data. This process is repeated several times (N=10 for the purpose of this paper) and averaged for a prediction.

The final caste prediction is thus the outcome of a random variable whose distribution over the categories is given by the distribution of the surname over the social categories in the training data. The key assumption made here is that the statistical composition of the population is the same as that of the set of people appearing in the courts data.<sup>17</sup>

We note a stochastic component to this classifier. The same name could be predicted to be of a different category when the classifier is reapplied, however the probability of a specific category is dictated by the normalized name counts. The name Trivedi for example, has the normalized weights on [Other, SC, ST] given by [1,0,0], so it is always predicted to be of the 'Other' category. In contrast, the name Kumar has weights given by [0.88, 0.12, 0.01], so although there is a very high chance that the name is predicted as 'Other', there is also more than 12% chance that it is predicted as 'SC'.

To further validate the predictions of religion and caste that emerge from this method, we also conduct a small and informal survey of elderly residents of Patna. We interviewed a dozen elderly women in the city of Patna who had spent their entire lives in the state and had extensive knowledge of social structures in the state. The goal was to check what associations, if any, were made between specific surnames and markers of caste and religion. We presented survey respondents with a list of names, followed by a series of questions about the caste, or religious background associated with the name. We found that Muslim names were universally acknowledged as such, alongside upper-caste names like Bhumihar Brahmins (who have names such as Ojha, Pande or Upadhyaya). Names associated with dominant castes in Bihar's politics (such as Yadav) are also immediately understood to be from the OBC category. Nearly all respondents said that within the Hindu community, certain names were completely caste-neutral and no clear inference could be made about a person's caste from these names.

## 5.2 Caste-Neutral Names: Broad Patterns of Use

We identify 16 caste-neutral names through algorithmic assignment and qualitative research: Kumar, Kumari, Prasad, Singh, Sinha, Mandal, Mishra, Baitha, Bharthi, Das, Dev, Devi, Safi, Ram, Rai, and the many variants of the name Chaudhary (this includes Chowdhry, Chowdhury, Choudhary, Chaudhry, Chowdhry, Chodhry, etc.). As noted earlier, some of these names, such as Prasad, Mandal and Ram, are widely regarded as low-caste names that have been increasingly adopted to conceal severe historical marginalization in Bihar. In our analysis we will thus group SC and neutral names as "low-status" and also examine them separately.

Table 2 shows 49% of petitioners and 56% of respondents use caste-neutral names, while 12% and 10% use SC-sounding names respectively. Similar trends exist for advocates. Figure 4 illustrates these trends over time, with caste-neutral names consistently remaining quite high (approximately 50%). Judges show slight fluctuations, ranging from 50% to 43% between 2009 and 2019. Appendix Table A1 presents similar statistics for the merged data sample.)

<sup>17</sup> To reduce the generalization error, we trained multiple classifiers, including a logistic regression model and a random forest classifier, to make predictions of caste for every name in our sample. We then implemented a voting procedure on the outcomes of these models to generate a final prediction of the three aspects of social identity for each name. This gives us a prediction of caste for each stakeholder in the legal data.

**Table 2.** Summary Statistics – Raw Data

<i>Case Data</i>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
Civil Case	1,071,068	0.34	0.47	0.0	1.0
Petitioner is Muslim	1,032,838	0.12	0.32	0.0	1.0
Respondent is Muslim	64,449	0.11	0.31	0.0	1.0
Petitioner's Advocate is Muslim	1,068,991	0.05	0.22	0.0	1.0
Respondent's Advocate is Muslim	959,450	0.12	0.32	0.0	1.0
Petitioner is SC	1,001,830	0.12	0.32	0.0	1.0
Respondent is SC	58,849	0.10	0.30	0.0	1.0
Petitioner's Advocate is SC	1,040,380	0.06	0.24	0.0	1.0
Respondent's Advocate is SC	841,301	0.07	0.25	0.0	1.0
Petitioner has Caste-neutral Name	1,001,846	0.50	0.50	0.0	1.0
Respondent has Caste-Neutral Name	58,851	0.57	0.50	0.0	1.0
Petitioner's Advocate has Caste-Neutral Name	1,040,380	0.63	0.48	0.0	1.0
Respondent's Advocate has Caste-Neutral Name	841,304	0.59	0.49	0.0	1.0
<i>Judge Data</i>					
Judge has Caste-Neutral Name	83	0.53	0.50	0.0	1.0
Judge is SC	83	0.02	0.14	0.0	1.0
Judge is Muslim	83	0.06	0.24	0.0	1.0
Judge is a Woman	83	0.10	0.30	0.0	1.0
Year of birth	79	1956.13	5.56	1947.0	1969.0
Year when became permanent	30	2009.00	7.38	1991.0	2019.0
Was Chief Justice	83	0.13	0.34	0.0	1.0
Promoted to Supreme Court?	83	0.08	0.28	0.0	1.0



**Figure 4.** Trends of Petitioners, Respondents and Judges by Gender and Caste. The lower panels for petitioners and respondents are at the case level and include only cases where the petitioner and respondent are identified as individuals, respectively. The judge panel includes each judge with at least one case in the Patna HC in a given year exactly once.

In Figure 5 we explore the spatial distribution of the use of caste-neutral names by petitioners (panel A), petitioner advocates (panel B) and judges (panel C). Note that there is considerable variation by district, among all three sets of stakeholders. The prevalence appears to be lowest in the northern and eastern regions of the state. These are mostly rural areas where governance is weaker, lawlessness is greater and strife along the lines of caste and religion have been common in Bihar's recent history (Chakrabarti 2013; Kumar 2018).

Conversely, the practice of using caste-neutral names seems to be most favored in Patna, the largest city in Bihar, which also has the highest proportion of civil cases (Figure 5). In Panels (D)–(F) of Figure 5 we explore the overlaps of these three categories. Specifically, we note that the likelihood of seeing caste-neutral petitioners, advocates and judges, in any combination, matched on a single case is the highest in the southern and relatively urbanized districts around Patna. These include Nalanda, Gaya, Sheikhpura, Newada, Aurangabad, and Bhojpur.

The prevalence of caste-neutral names in urban areas likely reflects a complex interplay of factors. While it may partially stem from increased social mobility and education levels, as well as efforts to mitigate overt caste-based discrimination in professional settings (Srinivas 1957), it would be an oversimplification to view this trend as a straightforward erosion of caste identity. Rather, previous scholarship emphasizes the adaptability of the caste system – it often reconfigures itself within urban contexts and modern labor markets, taking on new forms and expressions (Bayly 2001; Deshpande 2011; Jodhka 2017; Munshi 2019).

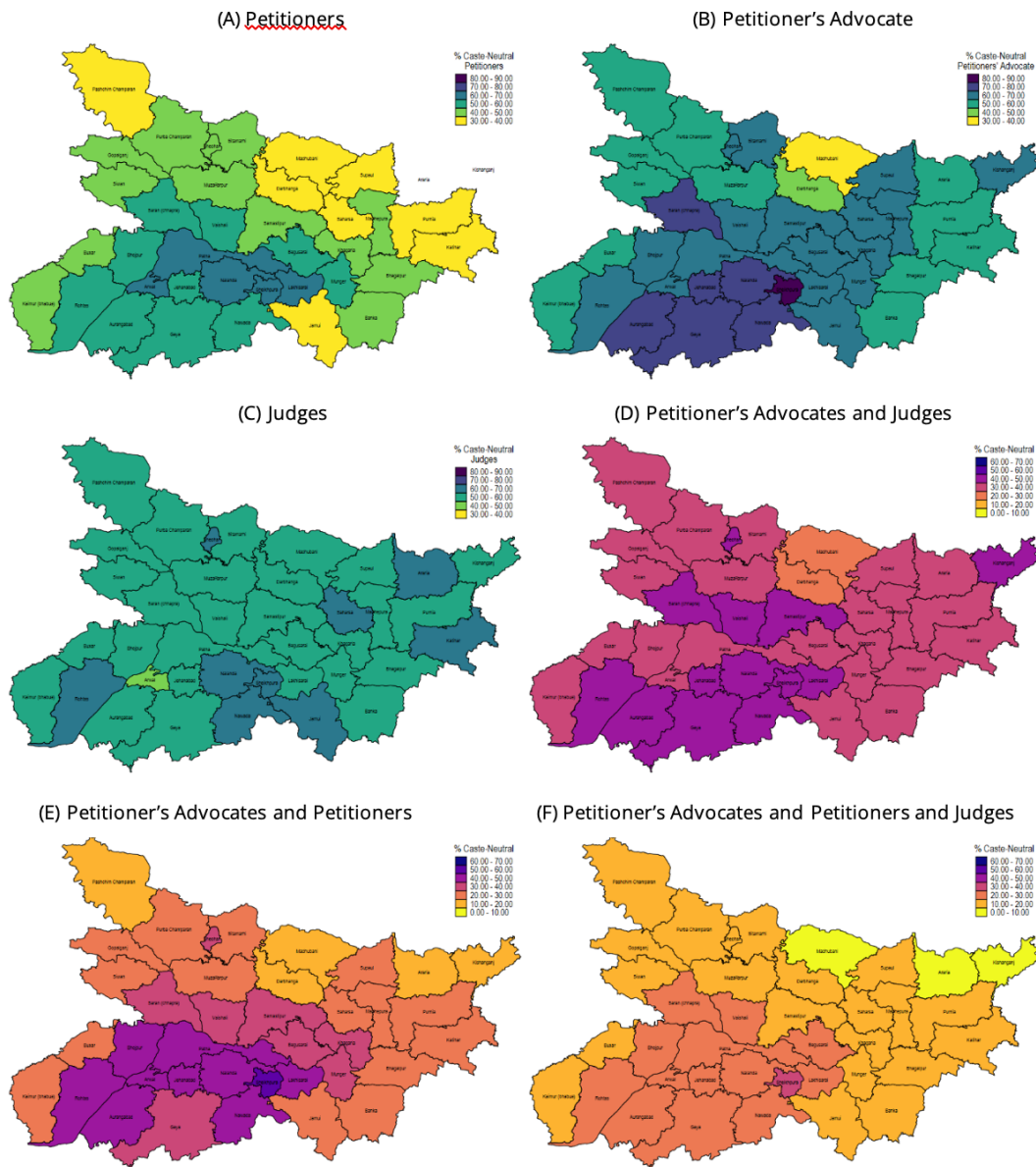
This rise of caste-neutral names is however, a recent phenomenon. We illustrate this by exploring incidence of caste-neutral names in the records of the British Indian army in the year 1912 (as seen on the website Ancestry.com). Of the more than 100,000 names, we find almost no records of any individuals with caste-neutral names such as Sinha and Kumar (N=65). Though we find many instances of the name Singh (N=8,562), the percentage of the population with this name is still lower than any estimate in our contemporary data. While this could be the result of colonial policies that sought to achieve communal balance in the administration through caste- and religion-based recruitment (Bayly 2001; Dirks 1989), the near-complete absence of many names that are among the most common ones today is quite striking. This suggests that the prevalence of caste-neutral names in Bihar may indeed be a relatively recent development, potentially reflecting changing social dynamics and identity formation in the post-colonial era.

## 6 Matching on the Basis of Social Identity

To comprehend the potential for social identity-based matching or selection among petitioners, respondents, their advocates, and judges, it is crucial to examine the procedural dynamics within the court system. The judicial process unfolds through several distinct stages. Initially, a petitioner initiates legal action against a respondent, with both parties securing representation by advocates. The petitioner's lawyer then files the case, after which the Chief Justice assigns a judge to preside over the matter. As the case progresses, additional arguing lawyers may be engaged based on their courtroom expertise and track record with specific judges (Galanter and Robinson 2017). This sequence of events provides multiple junctures where social identity could potentially influence decisions and interactions, from the initial selection of legal representation to the assignment of judges and the engagement of additional counsel.

One of the most important decisions a petitioner makes is their choice of advocate or lawyer. The judicial system allows petitioners and respondents to choose their lawyers. Judges however, are assigned through the "roster system" by the Chief Justice, aiming for

objective case allocation. Roster changes typically result in judge reassignment, except for cases in final argument stages. Courts actively prevent judges from handling cases involving familial or social connections, with conflict of interest lists updated regularly. Previous work has demonstrated that judge assignment at the high courts is random (Chandra, Kalantri, and Hubbard 2023; Ash et al. 2022).



**Figure 5.** Spatial distribution of the use of caste-neutral names for cases filed at the Patna HC from 2008 to 2019. Districts with the fewest observations are dropped and marked in red. Note also the different scale between Panels A to C (10–80%) and Panels D to F (0–50%).

With this background, we first examine matching between judges and petitioners. Given the stringent rules of the roster system, our first hypothesis, which we will call Hypothesis (A), is that the identity of the petitioner should not be associated with the identities of the judges assigned to a case. Specifically, we consider the following model:

$$LitigantIdentity_{cydt} = \beta_0 + \beta_1 MatchedJudge_{cydt} + \theta X_c + \alpha_y + \nu_d + \phi_t + \epsilon_{cydt} \quad (1)$$

Here  $LitigantIdentity_{cydt}$  denotes the social status of either petitioners or respondents of case  $c$  of type  $t$  in year  $y$  and district  $d$ .  $MatchedJudge_{cydt}$  denotes the identity of the judge selected by the litigant.  $\phi_t$ ,  $\alpha_y$  and  $\nu_d$  correspond to case-type, year, and district fixed-effects respectively.

Next, we turn to the case of matching between advocates and judges. Court rules allow petitioners to switch advocates during a case. If a judge has a strong relationship with a lawyer, a petitioner can recruit that lawyer. Assuming similar group identities facilitate communication, we may see judge-lawyer matching (excluding the judge's official list of excluded people). However, our data only shows filing advocates. As these are chosen before judge assignment, random assignment leads to Hypothesis (B): Identity of petitioner advocates filing the case in the high court should not be associated with the identities of the judges assigned to the case.

Specifically, we use the following model:

$$AdvocateIdentity_{cydt} = \beta_0 + \beta_1 MatchedJudge_{cydt} + \theta X_c + \alpha_y + \nu_d + \phi_t + \epsilon_{cydt} \quad (2)$$

Here  $AdvocateIdentity_{cydt}$  denotes the social status of either petitioner's or respondent's advocates of case  $c$  of type  $t$  in year  $y$  and district  $d$ .  $MatchedJudge_{cydt}$  denotes the identity of the judge selected by the litigant.  $\phi_t$ ,  $\alpha_y$ , and  $\nu_d$  are as in Equation (1).

Finally, we examine the matching between litigants and the lawyers who represent them. Here, official rules provide a great deal of choice. In cases like bail applications, petitioners can file in lower and high courts, and transfer dismissed cases. Given court complexity, backlogs, and hierarchy, using an advocate from one's community is advantageous. Lawyers in close contact ensure timely file transfers. This leads us to Hypothesis (C): Identity of the advocates representing petitioners should show strong association with the identities of the petitioners. To test this, we use the following model:

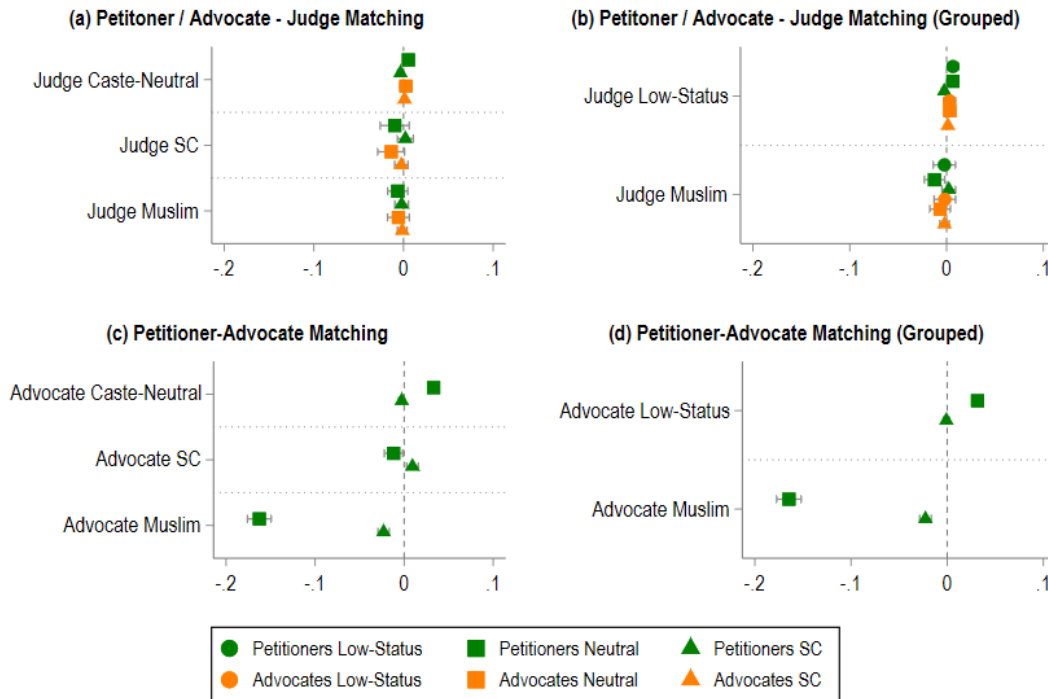
$$LitigantIdentity_{cydt} = \beta_0 + \beta_1 AdvocateIdentity_{cydt} + \theta X_c + \alpha_y + \nu_d + \phi_t + \epsilon_{cydt} \quad (3)$$

Here  $LitigantIdentity_{cydt}$  denotes the social status of either petitioners or respondents of case  $c$  of type  $t$  in year  $y$  and district  $d$ .  $AdvocateIdentity_{cydt}$  denotes the social status of their advocates respectively.  $\phi_t$ ,  $\alpha_y$  and  $\nu_d$  are defined as in Equation (1).

Our analysis unfolds in two stages. First, we categorize both SC and caste-neutral names as "low-status", examining the full sample of Hindu litigants. We then compare caste-neutral names directly to SC names within a restricted sample of petitioners or respondents using only these name types. Throughout, we focus solely on first orders of each case. To assess litigant-judge matching, we employ OLS regression with controls for judge characteristics, clustering standard errors at the district-year level and incorporating year, district, and case type fixed-effects. This analysis excludes Muslim litigants, concentrating exclusively on Hindu social identities. We explore religious matching separately in other research.

Results for all three hypotheses are presented in Figure 6. These visuals present just the relevant coefficients from the regressions. The green markers in the top-left and top-right panels of Figure 6 test for matching between petitioners and judges based on their identities (Hypothesis A). We find a significant coefficient for SC petitioners matching with caste-neutral judges ( $b=-0.003$ ,  $se=0.002$ ). When grouping together caste-neutral and SC together into the single "low-status" group for petitioners or judges, we additionally find significant coefficients for caste-neutral petitioners matching with low-status judges ( $b=0.007$ ,  $se=0.002$ ) and

Muslim judges ( $b=-0.012$ ,  $se=0.005$ ), and low-status petitioners matching with low-status judges ( $b=0.007$ ,  $se=0.003$ ). Though the confidence intervals for these regressions do not include 0 we believe this effect size is just too small to be of practical significance. Petitioners and judges do not appear to match on the basis of this broader form of identity.

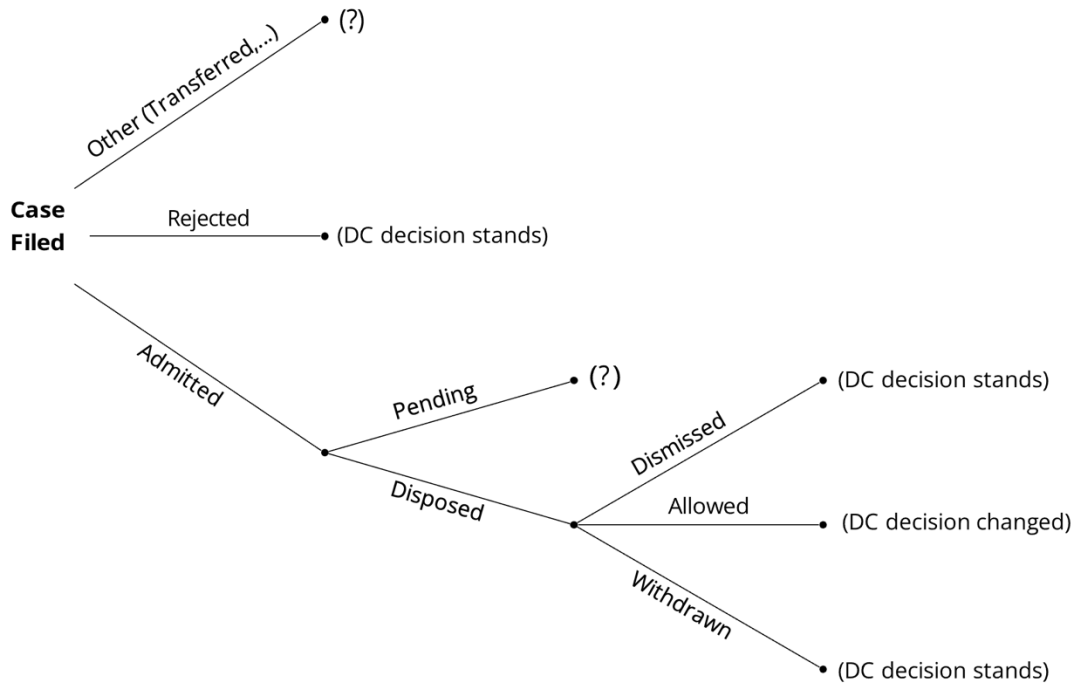


**Figure 6.** Tests of Matching (Hypotheses A, B and C) for Caste-neutral and SC petitioners/advocates. Hypothesis (A): Petitioners matching with judges; Hypothesis B: Petitioners advocates matching with judges, and Hypothesis C: petitioners matching with advocates; Sample includes only judges from the first observable order in the regression. Panel (a) and (b) present results from regressing petitioner’s and their advocate’s identities on the identity of the first judge assigned to the case. Panel (c) and (d) present results from regressing petitioner’s identities on their advocate’s identities. “Low-Status” groups caste-neutral and SC names together. All regressions control for the age of the judge, if the judge pursued their career in the supreme court, the number of years the judge has a permanent position in the high court, the district, the filing year, and for the case type. Regressions are estimated separately across petitioner’s (all panel) and advocate’s (panel a and b) identities. Standard errors are clustered at district and year level. Confidence intervals correspond to 5% statistical significance.

When testing Hypothesis B, we repeat this analysis for advocates and judges. The orange markers in the top-left and top-right panels of Figure 6 present the coefficients and 95% confidence-intervals of these regressions. Here we do not find any coefficient which is significant at the 5% level. The key finding here is that caste-neutral or SC advocates are not more likely to match with judges from their own social group in our simple specification.

This result is broadly consistent with recent literature that has argued that judge assignment at the Indian courts appears to be as-good-as-random. Chandra, Kalantry, and Hubbard (2023) use more than a decade of data on cases at the Supreme Court to demonstrate that the Supreme Court randomly assigns cases to small benches. While these authors did not study the High Courts, the unified structure of the Indian justice system requires the protocols that are followed at High Courts to be aligned with the apex court. Ash et al. (2022) use a database of 5.5 million criminal cases in the entire Indian justice system to test for religious and gender bias in case assignment as well as case outcomes and report “tight zero effects of in-group bias”.

This may result from strong judicial impartiality norms or the robustness of the case assignment roster system (Gadbois 2011; 2018). However, we caution that our analysis only considers filing lawyers; petitioners may later appoint lawyers known for rapport with specific judges after case assignment.



**Figure 7.** Decision Tree for Cases

Results to test hypothesis (C) are presented in the bottom panels of Figure 6. In the bottom-right panel we observe that caste-neutral petitioners are 3% more likely to choose a low-status advocate and 16% less likely to choose a Muslim advocate compared with higher caste. SC petitioners however, are not more likely to choose a low-status advocate over a high-status advocate and are only 2% less likely to choose a Muslim advocate.

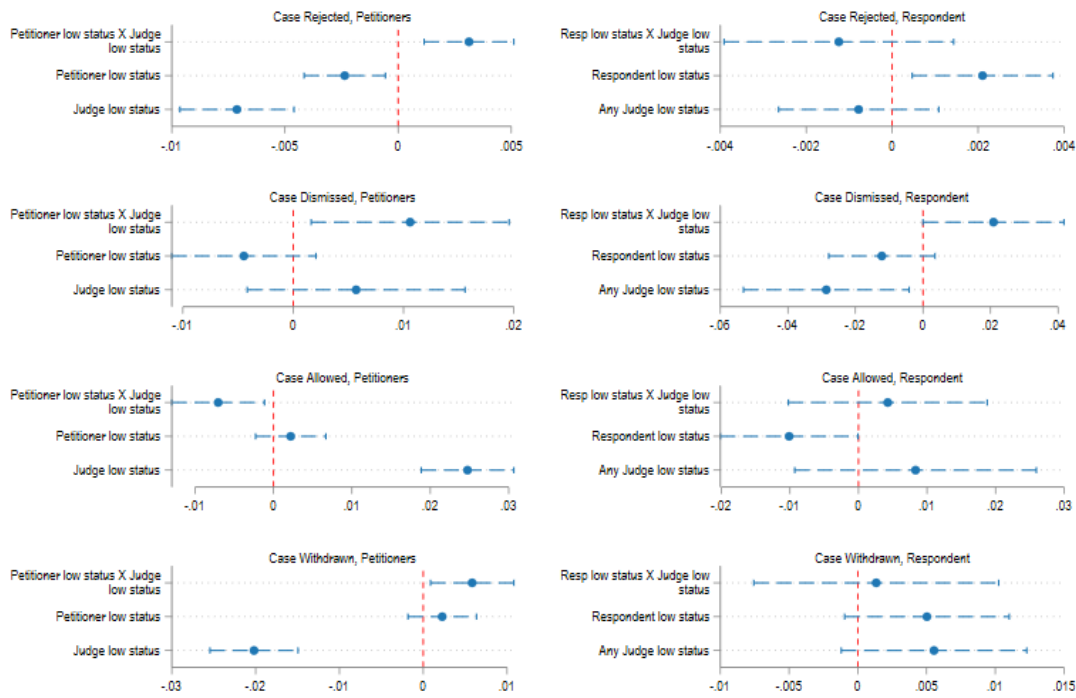
The left-bottom panel of Figure 6 uncovers these results a bit further. Especially, it shows that the 3% higher likelihood of caste-neutral petitioners choosing lower status advocates really stems from these petitioners choosing caste-neutral advocates and not SC advocates. We interpret this as caste-neutral petitioners having a distinct identity in the judicial system, even compared to SC petitioners.

In summary, we see that petitioners who use caste-neutral names appear to be more likely to show in-group matching than their counterparts with SC names. We infer from this that even though both neutral names and SC names may be regarded as low-status names in Bihar, they contain different markers of social identity at the courts. Caste-neutral petitioners are the most likely to match with advocates that also have caste-neutral names.



## 7 Outcomes of Justice: Regression Analysis

Next we examine the outcomes of the justice system. Here we rely on official court terminology.<sup>18</sup> Cases are initially “Admitted” or “Rejected”. Admitted cases proceed to the High Court and are “Disposed” upon decision. Disposals can be “Allowed”, “Dismissed”, or “Withdrawn”.<sup>19</sup> Figure 7 illustrates these stages and potential outcomes.



**Figure 8.** Case outcomes: Matching between low-status litigants (petitioners and respondents) and judges on the basis of identity. Low-status includes both SC and caste-neutral litigants. Regressions are based on the first observed order for a specific court case. Definition of judge identity is based on any judge on the bench with that identity. All regressions control for district, year and the type of case fixed-effects. Standard errors are clustered at district and year level. Confidence intervals correspond to 5% statistical significance.

To analyze the impact of social identity on case outcomes, we consider the following model:

$$y_{c_{ydt}} = \beta_0 + \beta_1 [PetitionerIdentity]_i + \beta_2 [AdvocateIdentity]_j + \beta_3 [Petitioner \times Advocate_{(i,j)}] + \delta X_c + \alpha_y + \nu_d + \phi_t + \epsilon_{c_{ydt}} \tag{4}$$

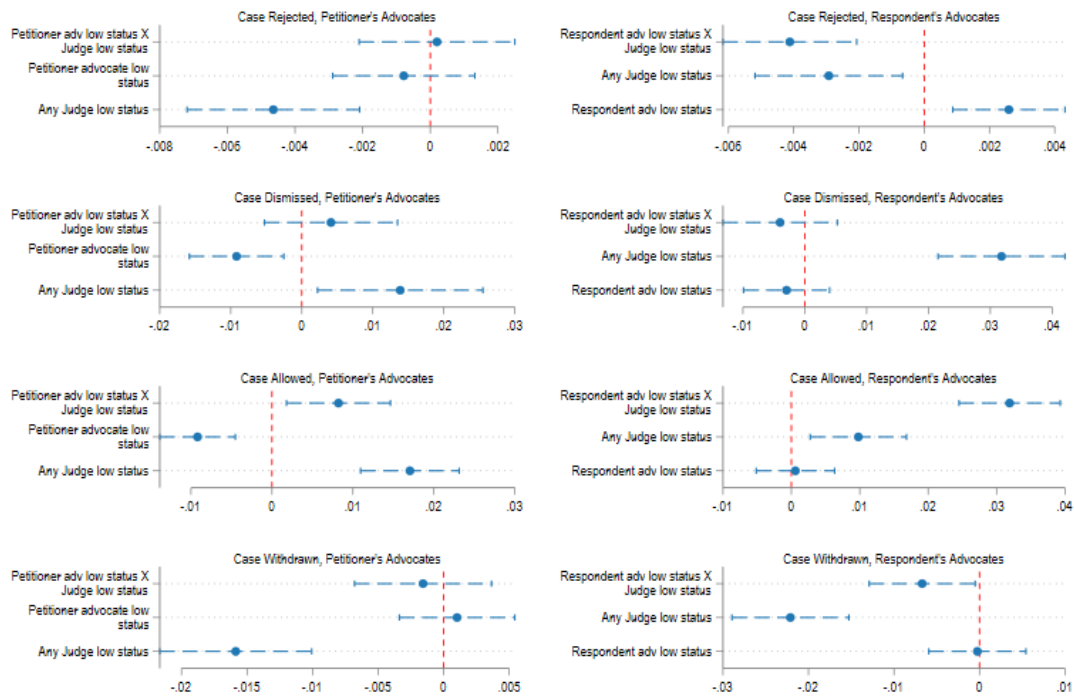
<sup>18</sup> These terms are used in the eCourts system by e-filing administrators ([https://ecourts.gov.in/ecourts\\_home/static/manuals/efiling-User-manual.pdf](https://ecourts.gov.in/ecourts_home/static/manuals/efiling-User-manual.pdf))

<sup>19</sup> A petitioner can withdraw a case at any stage, including pre-admission. Note that rejections occur on technical grounds without considering case merits, while dismissals follow a hearing and are based on the case's substantive merits.

Here  $y_{c y d t}$  denotes the outcome of case  $c$  of type  $t$  in year  $y$  and district  $d$ . We focus here on the outcome of the case (rejected, dismissed, withdrawn and resolved). In additional results (included in the Appendix), we also examine the status of the case (whether or not it has been decided) and the time taken to a decision (in months).

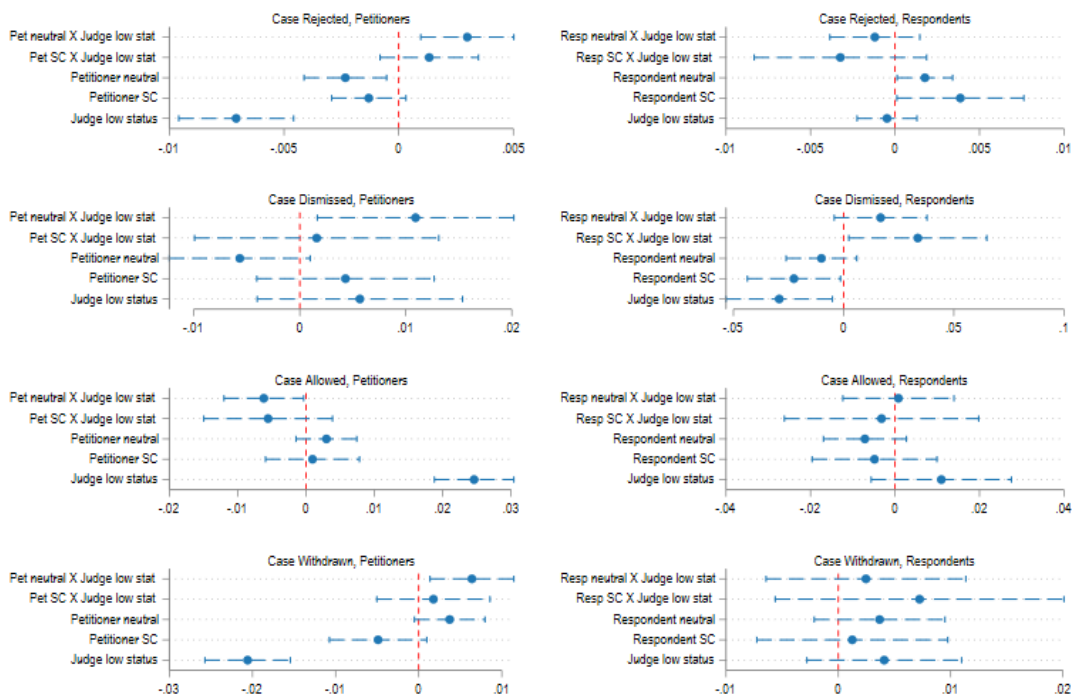
The sub-scripts  $i$  and  $j$  denote the types of social identity on the basis of names. We consider three types of groups: All low-status litigants (which includes those with caste-neutral or SC names) and caste-neutral and SC names separately. Once again, we include year, district, and case type fixed effects. Standard errors are clustered at a district-year level. We restrict our sample only to first orders of any case.

In line with our approach in the prior findings, we exclude Muslims from the litigant sample, focusing exclusively on Hindus. Our analysis begins by exploring in-group matching effects among petitioners and respondents to their respective advocates, with SC and caste-neutral names grouped together in a single category "low-status". Subsequently, we separate out the caste-neutral and SC names to examine how these differ from each other.



**Figure 9.** Case outcomes: Matching between low-status advocates (petitioners and respondents) and judges on the basis of identity. Low-status includes both SC and caste-neutral litigants. Regressions are based on the first observed order for a specific court case. Definition of judge identity is based on any judge on the bench with that identity. All regressions control for district, year and the type of case fixed-effects. Standard errors are clustered at district and year level. Confidence intervals correspond to 5% statistical significance.

We begin by examining the impact of low-status petitioner-advocate matches on case outcomes among Hindu litigants, with our findings presented in Figure 8 (Petitioners and Respondents matching with judges), Figure 9 (Advocates matching with judges) and Figure 12 (Petitioners and Respondents matching with Advocates). We present only the most important coefficients in these figures. Full results, with detailed tests of joint significance of the coefficients, are presented in the Appendix (see Appendix Table A2 to Appendix Table A13).



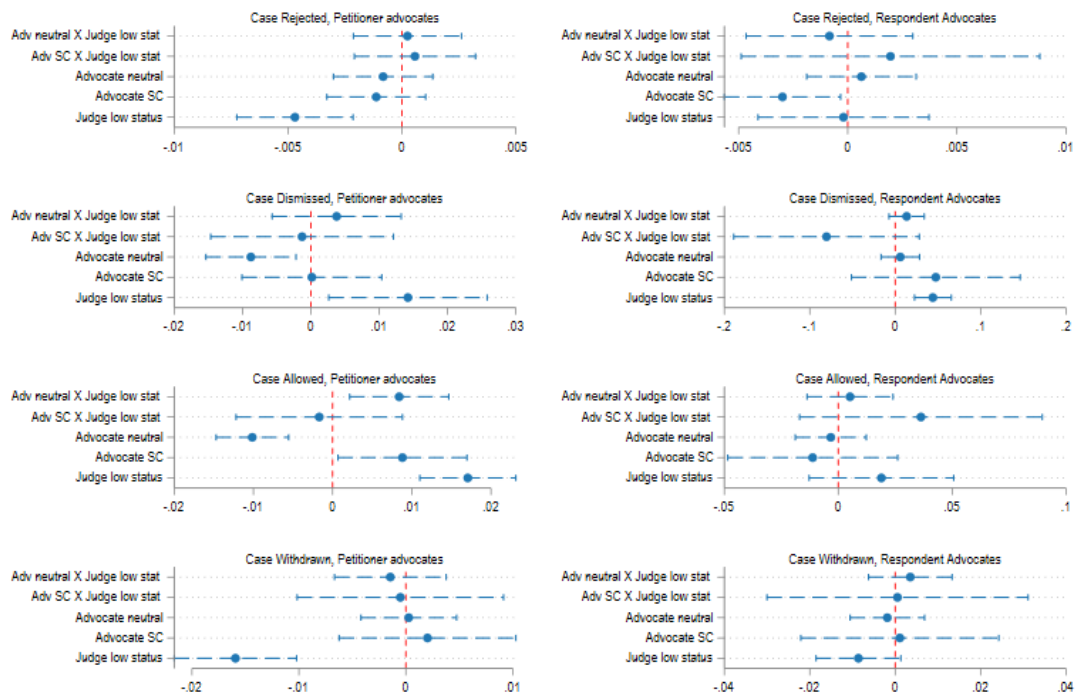
**Figure 10.** Case outcomes: Matching between caste-neutral litigants (petitioners and respondents) and judges on the basis of identity. Regressions are based on the first observed order for a specific court case. Definition of judge identity is based on any judge on the bench with that identity. All regressions control for district, year and the type of case fixed-effects. Standard errors are clustered at district and year level. Confidence intervals correspond to 5% statistical significance.

### 7.1 Matching between Litigants and Judges

We first examine matching between litigants and judges. Figure 8 reveals subtle but statistically significant effects when petitioners with low-status names are matched with judges of similar status. In these cases, petitioners face a 0.3 percentage point (pp) higher likelihood of rejection, a 1.1 pp increase in dismissal rates, a 0.7 pp decrease in successful cases (categorized as “Allowed”), and a 0.6 pp greater chance of withdrawal. While these effect sizes are small, they all achieve statistical significance at either the 5% or 1% level (Appendix Table A2). Notably, all of these outcomes are disadvantageous to the petitioners, consistently reducing their chances of a favorable result.<sup>20</sup>

Regarding respondents, our analysis reveals only one statistically significant outcome: a 2.1 pp increase in case dismissals (Appendix Table A4). Given that respondents generally gain from having cases dismissed, this is a notable result.

<sup>20</sup> In the appendix we also note that these outcomes are also attained with greater efficiency – cases brought by low-status petitioners in our sample have a higher likelihood of being decided, and a faster processing speed than their higher status counterparts (Appendix Table A2) and this effect is amplified when the petitioner is paired with a low-status judge.



**Figure 11.** Case outcomes: Matching between caste-neutral advocates (petitioners and respondents) and judges on the basis of identity. Regressions are based on the first observed order for a specific court case. Definition of judge identity is based on any judge on the bench with that identity. All regressions control for district, year and the type of case fixed-effects. Standard errors are clustered at district and year level. Confidence intervals correspond to 5% statistical significance.

Next, we disaggregate the “low-status” variable for petitioners, separately analyzing caste-neutral and Scheduled Caste (SC) petitioners to evaluate their outcomes when paired with low-status judges. Figure 10 illustrates these effects, with comprehensive results presented in Appendix Table A3. The coefficients for “Petitioner neutral x Judge low-status” consistently show statistical significance and maintain similar magnitudes as observed in Figure 8. Similar effects are seen for case processing (Appendix Table A3). In contrast, the coefficients for “Petitioner SC x Judge low-status” are smaller and lack statistical significance. This pattern suggests that the previously observed disadvantages are primarily concentrated among caste-neutral petitioners rather than SC petitioners.

The random assignment of cases to judges underscores our findings’ significance: judge social identity influences case outcomes despite unbiased case allocation. Moreover, caste-neutral petitioners appear consistently disadvantaged when facing low-status judges.

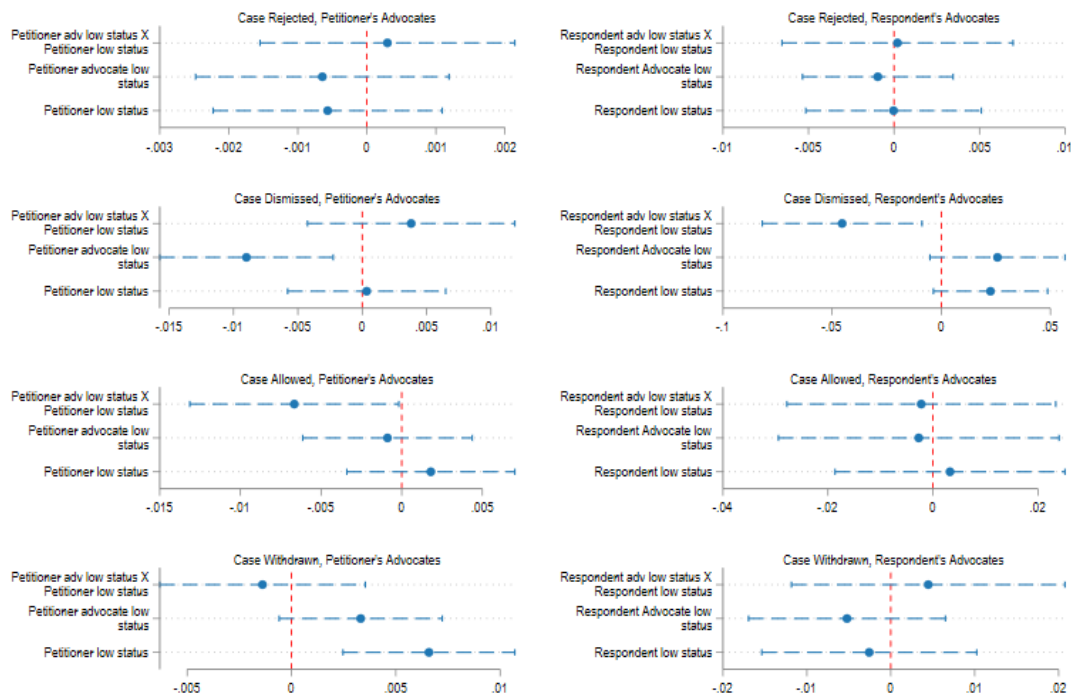
## 7.2 Matching between Advocates and Judges

Next we examine matching between advocates and judges. Figure 9 and Appendix Table A6 reveal subtle but statistically significant effects when petitioner’s advocates with low-status names are matched with judges of similar status. Here we see only one statistically significant effect: advocates with low-status names who match with similarly low-status judges are 0.8 pp more likely to have a successful case and this effect is statistically significant at the 5% level ( $b=0.008$ ,  $se=0.003$ ).

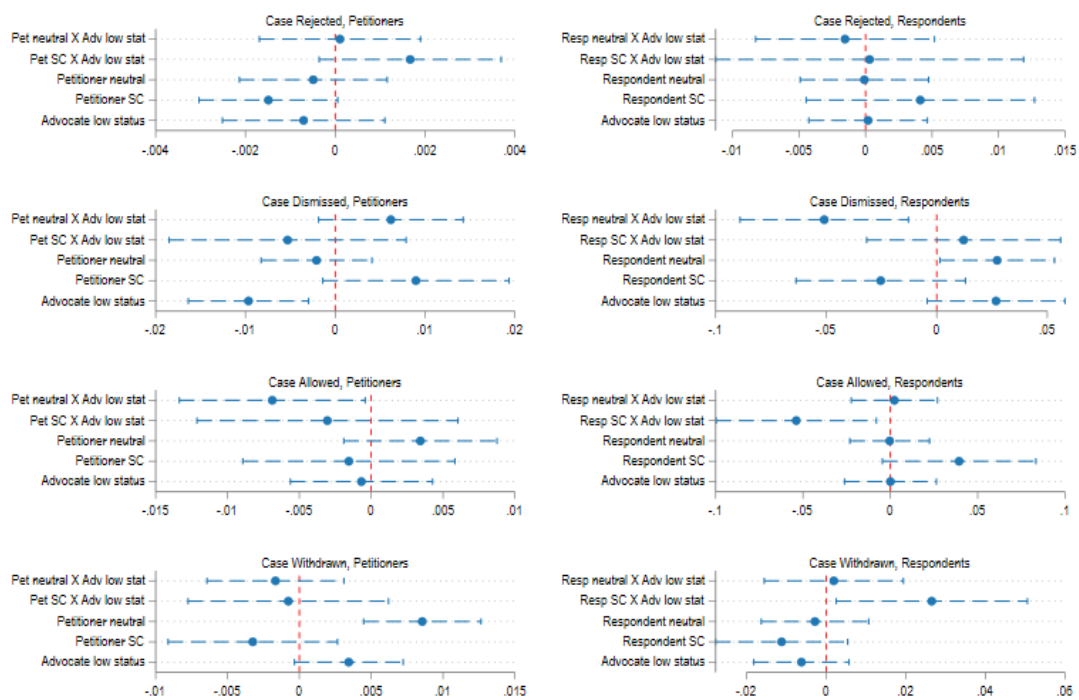
Examining respondents reveals a different pattern of disadvantages (Figure 9 and Appendix Table A8). Cases involving these respondents show a 0.4 pp decrease in rejection likelihood, a 3.2 pp increase in allowance probability, and a 0.7 pp decrease in withdrawal rates. Each of these outcomes is significant at least at the 5% level and represents a disadvantage for the respondents involved.

As before, we disaggregate the “low-status” variable for petitioner advocates and examine the outcomes of pairings with low-status judges. Figure 11 illustrates these effects, with comprehensive results presented in Appendix Table A7. The coefficients for “Adv neutral x Judge low-status” and “Petitioner SC x Judge low-status” consistently show statistical insignificance, with only one exception: advocates with caste-neutral names are more 0.8 pp more likely to see their case allowed. As before, the observed advantages of the advocates are concentrated among caste-neutral advocates rather than SC advocates. For respondents, we observe no statistically significant coefficients for these interaction terms.

A notable finding emerges regarding advocates representing petitioners: regardless of their caste classification (low-status, caste-neutral, or Scheduled Caste), they do not appear to face systematic or widespread discrimination based solely on their names. This contrasts with the experiences of petitioners themselves. This phenomenon may be driven by the close working relationships between lawyers and judges – frequent interactions and the shared identity of working in the legal profession may supersede caste-based biases (Bursztyrn and Yang 2022). We emphasize however, that we are simply restricting our attention to filing lawyers.



**Figure 12.** Case outcomes: Matching between low-status litigants (petitioners and respondents) and advocates on the basis of identity. Low-status includes both SC and caste-neutral litigants. Regressions are based on the first observed order for a specific court case. All regressions control for district, year and the type of case fixed-effects. Standard errors are clustered at district and year level. Confidence intervals correspond to 5% statistical significance.



**Figure 13.** Case outcomes: Matching between caste-neutral litigants (petitioners and respondents) and advocates on the basis of identity. Regressions are based on the first observed order for a specific court case. All regressions control for district, year and the type of case fixed-effects. Standard errors are clustered at district and year level. Confidence intervals correspond to 5% statistical significance.

### 7.3 Matching between Litigants and Advocates

Finally, we examine the consequences of matching between litigants and advocates. Figure 12 (Appendix Table A10 to Appendix Table A13) present results. Here we see that for petitioners, low-status petitioners with a low-status advocate are 0.7 pp less likely to have their case allowed (and therefore successful) and this coefficient is significant at the 5% level. Low-status respondents with a low-status advocate are 4.5 pp more likely to have their case dismissed. None of the other coefficients are statistically significant. Each of these is a disadvantage.

Disaggregation of the low-status variable here again illustrates that these two disadvantages are coming from the caste-neutral group (Figure 13). We note however, one additional result from this analysis. The coefficient for “Respondent SC x Advocate Low Status” is negative and significant at the 5% level ( $b=-0.054$ ,  $se=0.023$ ) for the “Allowed” outcome, suggesting that SC respondents who match with low-status advocates are less likely to see a successful case outcome, presumably a desired outcome for the respondent. We do not see this advantage for caste-neutral respondents.

This analysis reveals that status-matching between litigants and advocates generally results in disadvantages for low-status parties, particularly among caste-neutral groups. However, a notable exception emerges for SC respondents paired with low-status advocates, who experience a decreased likelihood of facing successful cases against them.

To sum up the results on case outcomes, our analysis reveals subtle but statistically significant disadvantages for low-status petitioners and respondents when matched with low-status judges or advocates, with effects primarily concentrated among caste-neutral parties. Interestingly, SC respondents paired with low-status advocates experience a potentially

advantageous outcome, showing a decreased likelihood of facing successful cases against them.

## 8 Discussion

Our findings highlight some complex dynamics related to identity and representation in Bihar's judicial system. Our approach however, has some important limitations. One significant caveat is that we do not observe the socioeconomic status or class of the litigants in our data. Names, while informative, are an imperfect proxy for social identity and may not fully capture the complex interplay of caste, class, and other socioeconomic factors that influence judicial outcomes. Additionally, our analysis does not delve into the content of the cases themselves. This is an important area of future work.

Another caveat of our analysis is that the observed disparities may not solely indicate bias within the high court, but also a cascade of other biases in the legal processes. Instead, they could reflect disparities in the types of cases initially filed in district courts, differential treatment of groups at the lower court level, and subsequent variations in which cases each group chooses to appeal to the high court.

With these limitations in mind, we can however, cautiously interpret our results. The first key result is that caste-neutral litigants select in-community lawyers, though this doesn't consistently improve outcomes of their cases. Litigants appear to face a quality-identity trade-off in advocate selection, i.e. they choose lawyers from their own community even though those lawyers are less likely to produce stronger outcomes.

Several factors might explain this preference for in-community advocates. Identity networks can facilitate easier and more cost-effective access to institutions (Akerlof and Kranton 2002; Jackson, Rodriguez-Barraquer, and Tan 2012). For marginalized individuals, who often experience significant social distance from bureaucratic institutions, navigating India's complex legal system can be particularly challenging and costly (Krishnan et al. 2014). Evidence from the United States indicates that in-group lawyers may inspire greater trust among clients (Ryo 2018; Young and Hassan 2020). Furthermore, disadvantaged defendants might resist court-appointed lawyers due to trust issues (Clair 2021). These findings suggest that the preference for in-community advocates may be driven by factors beyond mere legal efficacy, including accessibility, cultural familiarity, and trust.

A second key result of this paper is that we see neither litigants nor advocates matching with judges on the basis of names. This corroborates some recent work on random judge assignments in Indian courts (Chandra, Kalantry, and Hubbard 2023; Ash et al. 2022). We do however find that even random matching yields modest but nevertheless significant impacts on judicial outcomes. This is a novel result. It likely stems from our narrower focus on a single state and our focus on caste-neutral names within the state. Unlike the studies that examine the whole country, our algorithm is finely tuned to this specific social context, enabling us to capture subtle identity effects that broader studies may overlook.

A final key result of our paper is that litigants with caste-neutral names appear to be disadvantaged in all their matches, regardless of whether the matching is coincidental or deliberate. One interpretation of this is that a caste-neutral name may inadvertently mask systemic disadvantages faced by a petitioner, potentially absolving judges and other legal stakeholders from the responsibility of providing necessary accommodations or considerations for their unique vulnerabilities. This oversight can lead to a cascading effect of compounded inequalities throughout the legal process. It is also noteworthy that we do not see such disadvantages for advocates with caste-neutral names – again, high levels of contact between

lawyers and judges may erode stereotyping, misperceptions or bias in this population (Bursztyn and Yang 2022).

It is perhaps paradoxical that a practice adopted to reduce caste salience in Bihar's formal institutions has potentially established a new category within the same system. From the perspective of social movement studies, this finding is perhaps not unexpected: social movements are known to disrupt existing social orders (in this case, caste networks) but inadvertently create new social categories that perform similar roles (Amenta et al. 2010). This phenomenon also serves as a reminder of the caste system's fluidity and its persistence even in ostensibly neutral institutions such as the judiciary (Srinivas 1957; Deshpande 2011; Jodhka 2017; Munshi 2019).

Overall, our research contributes to the expanding body of literature on India's judicial system, challenging the prevailing perception of its courts as isolated entities detached from societal dynamics (Sen 2017; Rudolph and Rudolph 2001). While it has been previously noted that judges and advocates often hail from privileged segments of society (Gadbois 2011; Galanter and Robinson 2017) and that the court has improved geographical representation (Chandrachud 2020), there are many more questions about the dynamics of social identity in shaping outcomes of India's justice system.

## 9 Conclusion

This study analyzes over one million cases at the Patna High Court over a decade to provide novel insights into the complex interplay between social identity and judicial processes. We find a high concentration of last names. We use a machine-learning algorithm to decode names for markers of caste identity. We find that nearly half of petitioners and respondents use caste-neutral names.

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 minimal evidence of identity-based matching between judges and litigants or their advocates. However, we observe significant matching between litigants and their chosen advocates, particularly among those with caste-neutral names. This suggests that while the judicial system may strive for impartiality in case assignments, litigants often seek representation from advocates with similar social backgrounds.

Finally, we study the impact of matching on outcomes. Here we find that the use of caste-neutral names by petitioners, while potentially aimed at mitigating discrimination, is associated with some significant disadvantages in case outcomes. This paradox suggests that attempts to conceal caste identity through name changes may inadvertently create new categories of disadvantage within the legal system.

This research serves as a poignant reminder that courts function as integral components of the broader societal fabric. Rather than viewing the legal system in isolation, it is more aptly perceived as a dynamic, nonlinear superposition of intricate social networks consisting of people with complex identities. Delving deeper into the complexity of these relationships in the legal system is a promising avenue for future research.



## Acknowledgments and Disclosure

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