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Caste connections and government transfers: The Mahadalits of Bihar

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Abstract

The category of Scheduled Castes, created for the purpose of affirmative action in India, is large, heterogeneous and unequal. In 2007, the state of Bihar classified the most disadvantaged among this group as ‘Mahadalits,’ to better target government transfers to them. A ‘Vikas Mitra’ (‘development friend’) was recruited from the most populous Mahadalit caste in each panchayat and had the task of connecting households to government officials administering social welfare programmes. We use household survey data from 48 panchayats across four districts of Bihar to ask whether households that belonged to the same caste as the Vikas Mitra had a significantly higher chance of getting programme benefits, as compared to Mahadalit households of other castes. We find this to be true for programmes with large one-time transfers such as the Indira Awas Yojana but not for more regular transfers, such as subsidized food grains. Our results suggest that *jati* identity remains salient within the Scheduled Castes of India.

Keywords: *affirmative action, caste, welfare programs, poverty targeting, networks*

JEL Codes: *H53, I38, J15, J71*

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1 Introduction

Who benefits from affirmative action? Questions such as this are crucial to ask in the context of a country like India, where targeted government action towards historically disadvantaged groups is a significant and often controversial aspect of public policy aimed at more inclusive growth.

The Census of 2001 found that the literacy rate among the Scheduled Castes of Bihar was only 28.5% as compared to 47% for the state's population as a whole. Further, educational outcomes within the group of Scheduled Castes have tended to diverge over the last half century, with the gains being concentrated among the castes that historically had the best outcomes (such as Dhobis and Pasis), while castes at the bottom (such as Musahars and Bhuiyas) have tended to stagnate. It is hard to believe that these trends would reverse themselves without specific policies targeted at the most disadvantaged castes.

Starting in 2007, the Government of Bihar notified a subset of the Scheduled Castes in the state as *Mahadalits*, the most oppressed. According to the 2001 census, the approximately 1.66 million Mahadalit households of the state constitute about 69% of its Scheduled Caste population. Acting on the recommendations of a Commission set up expressly for that purpose, the government began several initiatives targeted at these disadvantaged castes. These interventions covered many spheres of government policy, including land distribution, education, employment, as well as health and sanitation.

One such significant intervention was the appointment of 'Vikas Mitras' ('development friend') at the community level. Over 9,000 Vikas Mitras were recruited from the ranks of Mahadalits, and were tasked with aiding the implementation of other Mahadalit-specific initiatives, as well as improving citizens' access to pre-existing government programmes, especially those of a redistributive nature.

In this study, we conduct a primary survey in rural Bihar to understand whether the caste identity of disadvantaged households was salient in gaining access to government programmes. In particular, we ask whether households that belong to the same caste as the Vikas Mitra had better access to these programmes compared to those of other castes.

The Vikas Mitra is always recruited from the largest Mahadalit caste in a Panchayat. This rule permits us to construct a sampling strategy where we are able to isolate exogenous variation in Vikas Mitra caste by focusing on Panchayats with two relatively equally-sized communities of Mahadalits.

Our results suggest that belonging to the same caste as the Vikas Mitra more than doubled

the odds of an eligible household getting benefits under the government’s flagship housing programme, the Indira Awas Yojana. Moreover, conditional on being able to access the programme, households from the Vikas Mitra’s caste received significantly higher transfer amounts as compared to other households. However, we do not find similar results for several other government programmes that involve smaller, repeated transfers, such as the public distribution system for grain, social security pensions, school scholarships, etc.

Section 2 provides some historical background to the Mahadalit programmes. Section 3 discusses the roles of the Vikas Mitras and the rules used in their recruitment. Section 4 explains our methodology and section 5 outlines the survey design. Section 6 describes our specification for estimation. Section 7 reports our results and section 8 wraps up with some concluding thoughts.

2 Historical Background

Bihar has been no stranger to the idea of sub-categorising castes for targeted affirmative action. As part of the ‘Bihar formula’ implemented in November 1978 under the leadership of Karpoori Thakur, the Government of Bihar separated the list of Other Backward Classes (OBCs) into the Extremely Backward Classes (EBCs) and the Backward Classes (BCs), with their own reservation quotas of 12% and 8% respectively.¹ (Sinha, 2011, p. 146)

The idea of sub-categorising the scheduled castes for targeted affirmative action also has a history of several decades in other parts of India. Perhaps the first such instance comes from Punjab: in 1975, the Government of Punjab decided to set aside 50% of jobs reserved for Scheduled Castes, for Balmikis and Mazhabi Sikhs. (Rao, 2009, p. 290) In 1994, the Government of Haryana similarly introduced preferential reservations in recruitment to government jobs, setting aside 50% of the overall quota for a group comprising the Chamars, Rahgars and similar castes, and 50% for the rest. (ibid., p. 292) The Andhra Pradesh Scheduled

¹The origins of these lists go back at least as far as 1951, when the Government of Bihar had identified castes that were not part of the Scheduled Castes or Scheduled Tribes, and yet were economically and socially backward, and in need of affirmative action. Two lists were formed, which came to be known as ‘Annexure I’ and ‘Annexure II’, with the castes in the former being the more backward. Implementation of affirmative action targeted at these sub-categories however faced several hurdles, not least of which was the declaration in 1964 by the Patna High Court that the 1951 lists were unconstitutional as they were composed on the basis of caste rather than social and educational backwardness. The Government of Bihar responded by appointing the Mungeri Lal Commission in 1971, which submitted its final report in February 1976. The ‘Most Backward Classes’ and ‘Backward Castes’ lists in Annexure I and II (respectively) of the Commission’s report differed from the 1951 Annexures essentially in the addition of a few Christian groups. (Blair, 1980, pp. 64–65).

Castes (Rationalization of Reservation) Act of 2000, based upon the recommendations of the Raju Commission in 1997, sub-categorized the Scheduled Castes of Andhra Pradesh into four groups according to relative backwardness, and fixed separate quotas for each group in the reservations in government jobs and in educational institutions. This Act, however, was struck down in the Supreme Court of India in 2004, largely on the grounds that it was not within the legislative powers of the state government to create sub-classes within the Scheduled Castes. As a consequence, all three states – Haryana, Punjab and Andhra Pradesh, subsequently withdrew their orders related to sub-categorization. (Rao, 2009, p. 20)

Since at least the mid-1990s, civil society organisations in Bihar such as the Musahar Seva Sangh, the Akhil Bhartiya Musahar Bhuiya Sangh and the Mahadalit Vikas Manch² have been clamouring for affirmative action targeted at the more disadvantaged of the scheduled castes. The government of Bihar under the leadership of chief minister Nitish Kumar, responded by setting up the Bihar State Mahadalit Commission in September 2007. The Commission was tasked with drawing up the list of castes that should be included in the ‘Mahadalits,’ providing detailed reports on the reasons for their backwardness, and giving the government suggestions for the improvement of their educational and social status and for the provision of employment opportunities. (Bihar State Mahadalit Commission, 2007, p. 1)

The Commission relied on demographic data, as well as data on educational attainment and occupational status from Census 2001, on its own visits to various parts of Bihar, as well as on letters and representations made to it by various civil society organizations to formulate its recommendations. In its first interim report submitted in November 2007, the Commission recommended that 18 of the scheduled castes of Bihar should be considered extremely oppressed and designated as ‘Mahadalit’, thereby excluding four large castes, the Dusadhs, Chamars, Pasis and Dhobis. (ibid., p. x) As per Census 2001, these 18 castes comprised just under 37% of the scheduled caste population of Bihar. In its next interim report submitted in April 2008, the Commission recommended including the Pasis and Dhobis in the list of Mahadalits, and in November 2009, on the basis of the third recommendation of the Commission, the government of Bihar also designated the Chamars as Mahadalits.

Thus, at this time all Scheduled Castes (SC) except the Dusadhs (in other words, about 69% of the state’s SC population) are designated as Mahadalit.

The Mahadalit Commission also made recommendations for the upliftment of the castes it had designated as Mahadalits. These include eliminating lacunae in BPL lists; strength-

²Baban Rawat, who founded this organisation, is credited with having popularised the term ‘Mahadalit’ in Bihar. (Bihar State Mahadalit Commission, 2007, p. 13) He was later selected as a member of the Bihar State Mahadalit Commission upon its foundation in 2007.

ening, expanding and improving a variety of government programmes such as the Public Distribution System, the Indira Awas Yojana, the Mahatma Gandhi National Rural Employment Guarantee Act, ICDS programmes and the mid-day meal scheme; construction of both private and community toilets, provision of public infrastructure such as Primary Health Sub-Centres, hand pumps for drinking water, Anganwadis and schools in Mahadalit localities; reservations for Mahadalits in educational institutions at both school and college levels; vocational training; providing uniforms and cycles to students; provision of homestead land to Mahadalits; elimination of manual scavenging; as well as a host of other interventions. The recommendations also included the appointment of a local resident in each Mahadalit hamlet as a ‘Vikas Mitra,’ who would help link Mahadalit communities to existing government programmes.

3 The Vikas Mitra

As the Annual Report of the SC & ST Department (Government of Bihar, 2012, p. 22) points out, the Vikas Mitras were envisaged as a “change agent,” a “link in the chain that reached the benefits of government programmes to Mahadalit families.” (translation ours) Based on the recommendations of the Bihar State Mahadalit Commission, the task of appointing Vikas Mitras was taken up by the Bihar Mahadalit Vikas Mission in earnest in early 2010.³ In rural areas, a Vikas Mitra would be appointed for every Gram Panchayat,⁴ while in urban areas, a single Vikas Mitra would be appointed for a cluster of up to four wards, depending on the size of the constituent Mahadalit population. This led to the creation of a total of 9,875 posts all over the state, against which 9,530 Vikas Mitras were recruited in four rounds between 14 April 2010 and 01 February 2011. These Vikas Mitras are contracted for a period of 11 months at a time, but the contract is almost invariably renewed. The initial remuneration was Rs. 3,000 per month, but this stipend has been raised to Rs. 5,000 over time.

3.1 Selection Rules

The eligibility criteria for Vikas Mitra candidates were as follows:

- The Vikas Mitra was to be selected only from Mahadalit families, and must be a res-

³Letter Reference no. BMVM/05/08-66 dated 1 February 2010.

⁴However, Panchayats with less than 50 Mahadalit families would be clubbed with a neighbouring Panchayat for the purpose of Vikas Mitra appointment.

ident of the Panchayat (rural) or ward cluster (urban) to which he or she is appointed.

- The Vikas Mitra must belong to the Mahadalit caste that is numerically largest in that Panchayat or ward cluster.⁵
- 50% of Vikas Mitra posts were to be reserved for women.
- The age of applicants was restricted to be between 18 and 50 years.

These rules give us a large amount of variation in key socio-economic characteristics of Vikas Mitras appointed across the state. The following table provides the caste composition of the 8,805 Vikas Mitras recruited in the first three rounds of hiring:

Table 1: Caste Composition of Vikas Mitras

Caste	Fraction
Chamar (Mochi, Ravidas)	59.7%
Musahar	20.3%
Pasi (Chaudhary)	5.8%
Hari (Mehtar, Bhangi)	3.7%
Bhuiya	3.6%
Dhobi (Rajak)	3.3%
Rajwar	1.5%

50.54% of these Vikas Mitras were women.

The recruitment rules also specified educational qualifications for the Vikas Mitras; however, these had to be progressively lowered over the four rounds of recruitment. Recruitment was based on a merit list of eligible candidates, with those having secured higher levels of education, or the highest marks at the qualifying level of education, being given preference.⁶

⁵BDOs were permitted to use a variety of available data to determine which Mahadalit caste was numerically largest in the Panchayat, including the survey carried out earlier by the Revenue and Land Reform department of the Government of Bihar in order to identify landless Mahadalit families for land distribution under the Mahadalit Awas Bhoomi Yojana. If necessary, the BDO was expected to carry out a fresh survey of Mahadalit families to determine the largest caste at the Panchayat level. Once approved by the SDO, the list of Panchayats along with the name of the numerically largest caste were publicised at the subdivisional, block and Panchayat offices and opened for objections. After resolving these complaints, the posts were publicised and applications accepted over a period of ten days at the end of February 2010.

⁶In case different candidates had the same marks, older candidates were to be given preference.

The following table, based on information in Government of Bihar (2012, p. 22), details the minimum educational level specified for each round of recruitment, along with the fraction of Vikas Mitras hired at that level:

Table 2: Vikas Mitra Recruitment

Round	Qualification	Fraction
First	Class 10 (both genders)	67.4%
Second	Class 10 (men) Class 8 (women)	18.4%
Third & Fourth	Class 5 (men) Literate (women)	14.2%
Total		9,530

3.2 Roles and Responsibilities

The Vikas Mitra is appointed on contract by the BMVM, and as such can be used to assist in disseminating information on, implementing and monitoring of programmes run by either the Mission itself or by the SC & ST Welfare Department of the Government of Bihar. The Annual Report 2011-12 of the latter (*ibid.*, pp. 23–24), as well as Bihar Mahadalit Vikas Mission (2011, pp. 20–21) list responsibilities of the Vikas Mitra, including

- surveying SC & ST households in connection with a variety of programmes such as BPL lists, schools, Indira Awas Yojana, drinking water provision, social security, pensions, etc.
- ensuring all eligible families benefit from appropriate government programmes⁷
- assisting Mahadalit families in filling out application forms for government programmes and providing them information on the location of the relevant offices for submission

⁷These include a number of social welfare programmes such as social security pensions (centrally sponsored schemes such as the Indira Gandhi National Old Age Pension, Indira Gandhi National Widow Pension, Indira Gandhi National Disability Pension, as well as state schemes such as the Laxmi Bai Social Security Pension Scheme, the State Social Security Pension Scheme and the Bihar Disability Pension Scheme), death benefits (National Family Benefit Scheme), the Kabir Antyeshti Anudaan Yojana that provides a grant to help defray funeral costs, as well as programmes targeted at the welfare of the girl child, such as the Mukhyamantri Kanya Vivah Yojana and the Mukhyamantri Kanya Suraksha Yojana.

- surveying schools and ensuring distribution of money for school uniforms as per the Mukhyamantri Poshak Yojana, and encouraging families to buy uniforms with the money given
- ensuring names of Mahadalit families and others are added to voter lists, and encouraging people to exercise their right to vote
- connecting Mahadalit children to schools
- distribution of food coupons under the PDS
- linking Mahadalit families to the MGNREGA
- linking Mahadalit beneficiary families to the Block Development Office.

In practice, the duties expected of the Vikas Mitra vary across districts. The District Magistrate (DM), the SDO, the BDO and the BWO play a key role in assigning responsibilities to the Vikas Mitras and in monitoring their work through weekly meetings (with the BWO) and monthly meetings (with the SDO). In Nalanda district for example, Vikas Mitras have been assigned a list of 12 specific duties by the District Magistrate. On the other hand, Vikas Mitras in districts such as Saharsa and Gaya have been prescribed a format in which to enter their monthly reports, and this elicits their contributions in 30 distinct areas. In part because they function under the DM, SDO, BDO and BWO (rather than under officials appointed by the Bihar Mahadalit Vikas Mission), the Vikas Mitras' *de facto* duties extend to the entire Panchayat population and not just the Mahadalits.

3.3 Vikas Mitra: Summary

The Vikas Mitra is almost uniquely placed to be able to connect the ordinary villager to government programmes. Indeed, there are several other salaried government workers appointed at the Panchayat level, such as the Panchayat Sevak (for work related to development programmes), the Rajasva Karamchari (land and revenue department-related work), the Rozgar Sevak (for work related to the MGNREGA) and the Nyaya Mitra (for judicial matters). However, in all these cases, the posts are filled through open recruitment and are rarely if ever, occupied by a resident of the Panchayat.⁸ As a resident of the Panchayat, the Vikas Mitra is far more easily accessible to the ordinary villager, and arguably, especially so for the Mahadalit community to which she belongs.

⁸Perhaps the only comparable conception of a community-based government worker in India is that of the Accredited Social Health Activist (ASHA) worker under the National Rural Health Mission, who must also belong to the village she works in. However, the ASHA worker's ambit is restricted to the area of health, especially maternal and infant health.

A large part of the Vikas Mitra's responsibilities focus on spreading awareness about government programmes; in aiding potential beneficiaries with obtaining, filling and submitting application forms, photos, certificates, etc.; in assisting beneficiaries with opening bank accounts for government cash transfers; and as a local resident who can be held to account by the government, in verifying the identity of beneficiaries on various occasions (such as at banks where they may go to collect a cash transfer, or at a government-organised camp for the distribution of programme benefits).

4 Research Methodology

We conduct a primary survey to investigate whether households that belong to the same caste as the Vikas Mitra gain more from his presence in the Panchayat than others, in the sense of obtaining better access to government programmes.

Our work is related to a rich literature in economics that studies public good allocation by the state. Studies such as Besley et al. (2004) find that group identity as well as residential proximity matters for access to public goods. A related literature links ethnic heterogeneity to the provision of public goods – see for example, Alesina and La Ferrara (2005) and Alesina, Baqir et al. (1999).

It is well understood however, that access to public goods is also a function of political power. Studies such as Banerjee and Somanathan (2007) and Jaffrelot (2003) note that historically disadvantaged groups in India that have mobilised politically have been able to make more successful claims to the allocation of government resources.

It can be argued then, that the ease with which a household is able to access government programmes may be strongly influenced by the political salience of its caste. Since democratically elected Panchayati Raj officials (such as the Gram Pradhan) have a crucial role to play in providing access to government programmes, this political salience may in turn be related to the numerical strength of a caste in the Panchayat.

To identify the advantage that sharing the caste identity of the Vikas Mitra confers on a household, it is therefore important to disentangle the impact of the numerical strength of a caste in gaining access to government programmes.

Our identification strategy leverages the rule-based nature of the recruitment of the Vikas Mitra in a Panchayat. As discussed in section 3.1 above, the Vikas Mitra is always hired from the numerically dominant Mahadalit caste in the Panchayat. By focusing on Panchay-

ats where the gap in numerical size between the largest Mahadalit caste and next largest Mahadalit caste is small, we can hope to isolate a local ‘treatment effect’ of sharing the Vikas Mitra’s caste identity.

Let $Gap_{ij} = \frac{X_i - X_j}{X_i + X_j}$ represent the size gap between the two largest Mahadalit castes i and j in a Panchayat. For caste i , when Gap_{ij} crosses the threshold of 0, the probability of a Vikas Mitra being appointed in that Panchayat from caste i switches from 0 to 1. However, Gap_{ij} may be assumed to have a smooth relationship with the degree of political influence that caste i wields in the Panchayat, and this is what can assist us in identifying the treatment effect of belonging to the same caste as the Vikas Mitra.

5 Survey Design

Our field research entails a survey of 2,399 households spread over four districts of Bihar. We sample 48 households across two villages from each of 12 panchayats spread across three blocks of each district. Thus, our sample consists of a total of 48 panchayats across the four districts of Gaya, Gopalganj, Katihar and Nalanda. Table 3 enumerates the Panchayats in our sample.

Our sampling methodology is informed by the identification strategy outlined in section 4 above. In our choice of districts, blocks and Panchayats, we are guided by two (often competing) considerations. Firstly, as described above, we would like to work with Panchayats where the two largest Mahadalit castes are comparable in numerical strength. Second, we would like our sample to include Vikas Mitras of as many different major Mahadalit castes as possible, to allow us to control for fixed effects related to the socio-economic and political status of those castes.

The sections below describe our sampling methodology.

5.1 Sampling Districts

We know of no publicly available dataset that provides information on the population of individual Scheduled Castes at the Panchayat level. However, in preparation for the first round of appointments of Vikas Mitras in April 2010, the Bihar Mahadalit Vikas Mission collected information on the identity of the numerically largest Mahadalit caste of each Panchayat from all districts of Bihar. This information was submitted to the Mission in different formats by different District Magistrates. While all had the required information on

the identity of the largest caste in each Panchayat, some districts submitted a more detailed report that also contained information on the number of households of each Mahadalit caste in each Panchayat. In particular, this information is available for a substantial number of blocks in three districts – Gopalganj, Katihar and Nalanda.⁹ As the only district with substantial populations of Bhuiyas (one of the major Mahadalit castes), as well as being the district with the highest number and the highest population fraction of Scheduled Castes in the state, Gaya was a natural addition to these three districts for our area of study.

5.2 Sampling Blocks

In each of the four chosen districts, we restricted attention to the four castes which were most often represented among the Vikas Mitras of that district. We then used the standard measure of fractionalisation,

$$F = 1 - \sum_{i=1}^4 s_i^2$$

to sample the blocks that had Vikas Mitras of the largest variety of castes.¹⁰ The three blocks with the highest values of the fractionalisation index F were retained in our sample.

5.3 Sampling Panchayats

Our sample consists of 12 Panchayats from each district, sampled from the consolidated pool of all Panchayats in the three selected blocks of the district.

For each district, we stratified the consolidated pool of Panchayats in the selected blocks by the caste of Vikas Mitra. The 12 Panchayats were allocated to the four major Vikas Mitra castes of the district, in the proportion with which they occur in the selected blocks.¹¹

Having determined how many Panchayats of each Vikas Mitra caste to include in our sample, we now wished to pick the Panchayats that had two largest Mahadalit castes of most comparable size. In the three districts for which information on Panchayat-level populations of individual Mahadalit castes was available (i.e. Gopalganj, Katihar and Nalanda), we computed the variable Gap_{ij} defined in section 4 above, for the two largest Mahadalit castes i

⁹Panchayat-level populations of individual Mahadalit castes are available for 18 of 20 blocks in Nalanda, 14 of 16 blocks in Katihar, and 5 of 14 blocks in Gopalganj.

¹⁰In the formula, s_i is the fraction of Panchayats in the block with a Vikas Mitra of caste i .

¹¹This was subject to the proviso that at least one Panchayat be sampled from each of the four Vikas Mitra castes. This constraint was often binding, and accommodation was made for the least represented caste by reducing the sample size of Panchayats for the most frequently represented caste.

and j in each Panchayat. For each Vikas Mitra caste, the Panchayats with the lowest values of Gap_{ij} were selected.

In Gaya, for which such information was unavailable, this last step merely involved random sampling.

The complete list of Panchayats that form our sample is enumerated in Table 3 at the end.¹² The table also notes the value of Gap_{ij} for each Panchayat. For Gaya, the stated values have been computed on the basis of the Panchayat questionnaire administered during the course of our field work, while for the other districts it is based on information provided by the Bihar State Mahadalit Commission, which formed the basis of Vikas Mitra recruitment.

5.4 Sampling Villages

Two villages were selected from each Panchayat in our sample. The selection rule was as follows: We began by determining the two largest Mahadalit castes of the Panchayat; denote these as C_1 and C_2 in descending order of size. We then selected the village that had the largest population of the caste C_1 . If this was not the village to which the Vikas Mitra belonged, we selected our second village as that of the Vikas Mitra. If our first village itself had the residence of the Vikas Mitra, then we selected our second village as the one with the largest population of the caste C_2 . If this rule too yielded the first village, then we picked the village with the next highest population of Scheduled Castes.

5.5 Sampling Households

In each Panchayat, we picked a total of 48 households, typically 24 households per village. These households were stratified by caste. We picked six households each from the three largest Scheduled Castes present in the village.¹³ In addition, we picked six households belonging to the non-SC population of the village. Once again, these were stratified by community: two households each were picked from the three largest non-SC communities

¹²The list omits Panchayats that were originally selected but eventually discarded and replaced due to the Vikas Mitra's post lying vacant. There were four such cases; one each due to the death, expulsion and resignation of the Vikas Mitra in three Panchayats of Gaya district, and one in Katihar district where a Vikas Mitra had never been recruited in an initially selected Panchayat.

¹³In the event that six households each of three Scheduled Castes were not present in one village, then the total of 48 households in the Panchayat was made up by sampling extra households from the other village. In addition, some Panchayats consisted of only one revenue village, or had Scheduled Castes residing only in one village. In these cases, all 48 households were sampled from that village.

in the village.¹⁴ In two of our districts, Katihar and Gopalganj, Panchayats sometimes had significant populations of Sts, which are another historically disadvantaged section of the population. In order to explore programme impacts on these groups, when an ST figured among the largest three non-SC communities of a sample village, we picked six households from it.

6 Estimation

Our main estimation equation models the probability of programme access using a logit specification:

$$\Pr[access = 1]_{ivp} = F(\beta_0 + \beta_1 match_{ip} + \mathbf{X}_i \beta_2 + \mathbf{Caste}_i \beta_3 + \mathbf{Z}_v \beta_4 + \mathbf{VM}_p \beta_5 + \mathbf{GP}_p \beta_6) \quad (1)$$

In this equation $F(z) = e^z / (1 + e^z)$ (i.e. the logit link function). i denotes a household, v a village, and p a panchayat. $match_{ip} = 1$ when the household belongs to the same jati as the Vikas Mitra, and 0 otherwise. \mathbf{X}_i is a vector of household characteristics including the age and gender of the household head, whether the household has any adult who has matriculated, whether the household has anyone engaged in casual labour, several measures of wealth such as landlessness, the number of months in the past year the household reports being short of food, the monetary value of durable assets, the monetary value of livestock, whether BPL/AAY, an imputed BPL score¹⁵; whether any household member attended a Gram Sabha meeting in the past year, and whether the household counts any government officials or political representatives amongst its relatives or friends. In addition, we also control for whether the household received any land under the recently instituted Mahadalit Awas Bhoomi Yojana, that aims to provide 3 decimals (*circa* 1,300 sq. ft.) of homestead land to landless Mahadalit families across the state. \mathbf{Caste}_i is a vector of caste dummies. \mathbf{Z}_v is a vector of village characteristics as reported in the village directory of the Census of India 2011, including the village population, the population fraction of SCs in the village, facilities such as post office, credit societies, medical facilities, middle schools; distance to the nearest town; road quality, availability of electricity for domestic use, and the fractions of cultivable and irrigated areas in the village. \mathbf{VM}_p is a vector of Vikas Mitra characteristics;

¹⁴We define community as either individual castes within the Hindu population, individual Scheduled Castes, individual Scheduled Tribes (STs), or Muslims. We did not differentiate castes within Muslims. This was partly because in our pilot testing, Muslim households often did not report any caste. More importantly, Hindu Panchayat officials were typically unable to reliably provide information on the population numbers of individual Muslim castes, referring to them instead as one bloc.

¹⁵The BPL Census of 2002 tracked 13 indicators, each scored between 0-4 and aggregated, so that the overall BPL score varies between 0-52 (see, e.g. Saxena (2009, p. 15–17)). We are able to track 8 of these 13 indicators in our survey. After assigning scores between 0-4 for the individual indicators, we aggregate and rescale so that our measure also varies from 0 to 52.

\mathbf{GP}_p is a vector of Gram Pradhan characteristics. For both types of officials, these include their gender and age, whether they have matriculated, whether their gender matches that of the household head, and whether they reside in the same village as the household. In addition, we control for whether the Gram Pradhan belongs to a Mahadalit caste.

Table 4 reports summary statistics for household characteristics across the major communities in our survey. A total of 1,364 households in our sample of 2,399, i.e. 56.9% are Mahadalits. Of these, the Chamars and Musahars comprise the majority, accounting for 38.3% of the full sample. Apart from the Scheduled Castes, our sample also includes 151 ST and 530 non-SC/ST households. This last group in turn mostly consists of OBC Hindus, from which we sampled 373 households.

Among the Mahadalits, the Musahars¹⁶ in our sample do much worse on most indicators than the Chamars. They have very low education levels, are much likelier to be engaged in casual labour, are much likelier to be landless, have very few durable assets or livestock, have lower BPL scores, and have little social capital (as measured by contacts among political representatives and government officials). On average, both these Mahadalit communities fare worse than other SCs, and much worse compared to the non-SC/STs in our sample.

Table 5 briefly describes the distribution of our Vikas Mitras, according to their caste, gender and educational attainment. 38 of the 48 Vikas Mitras in our sample belong to either the Chamar or Musahar castes. Both genders are well-represented in our sample. The lower socio-economic status of the Musahars in Bihar relative to the Chamars and other Scheduled Castes is reflected in our sample of Vikas Mitras as well, with as many as four out of 18 Musahar Vikas Mitras not having completed matriculation, despite this being a requirement in the first round of Vikas Mitra recruitment.

7 Results

Our results focus mainly on households' access to the Indira Awas Yojana (IAY), the flagship housing programme of the government. In 2012-13, this programme envisaged cash transfers of about Rs. 45,000 to families lacking a permanent residential structure (Ministry of Rural Development, 2012, p. 7). Table 6 reports the results from our main logistic regression, which seeks to explain access to the IAY for eligible households¹⁷ in the 12 months preceding

¹⁶Henceforth, our discussion collectively refers to the Bhuiyas and Musahars as Musahars. This is because our field work suggested that these terms are used interchangeably in Bihar.

¹⁷Since the IAY is a one-time cash transfer, our eligibility condition excludes households that had received IAY benefits in the past.

the survey. The successive columns offer increasingly stringent estimation models, with the last being a conditional logistic model that allows us to control for panchayat-level fixed effects, and thus provides us with within-panchayat estimates of our coefficients of interest. In this, as in most succeeding tables, logit coefficients are reported as odds ratios. In the model with panchayat fixed effects, we find that households that belonged to the same caste as the Vikas Mitra had 2.14 times the odds of accessing IAY benefits, as households that belonged to other communities.

While the conditional logit model does not allow us to predict unconditional probabilities of access to the IAY,¹⁸ we note that in our sample, 28.9% of eligible households that belonged to the Vikas Mitra's caste received IAY funds in the year preceding the survey, while only 14.0% of other eligible households were similarly benefited.

As a robustness check, in Table 7 we repeat the same exercise as in the preceding table for a sub-sample of 24 panchayats with two more evenly-sized large Mahadalit communities, i.e. the 24 panchayats with the lowest values of Gap_{ij} . In this sub-sample, we should be better able to isolate the exogenous variation in Vikas Mitra caste identity from other influences (e.g. political salience) that relate to the numerical size of that caste's population in the Panchayat. We find the magnitude of our coefficient of interest grows larger, with the predicted odds of getting access to the IAY being 2.68 times higher among households belonging to the Vikas Mitra's caste, as compared to others.

Our results indicate that for households from the Vikas Mitra's caste, not only was the probability of getting access to Indira Awas funds much greater than other households, but the quantum of funds received by beneficiary households was significantly higher as well. Table 8 reports that on a sample average of over Rs. 30,000 received by beneficiary households in 2012-13, households belonging to the Vikas Mitra's caste received over Rs. 7,500 more than other households, which is nearly 25% more at the mean.

If we examine the period prior to the past year, we do not find that households belonging to the Vikas Mitra's caste did any better than other households. As we noted before, Vikas Mitras were appointed in four rounds spread over the year 2010-11, and only started to be assigned tasks during the latter part of 2011-12. In both the period 2010-12, as well as prior to the Vikas Mitra's appointment in 2010, we find no statistically significant difference in the odds of receiving Indira Awas Yojana benefits, nor in the amount received conditional on gaining access, between households that belonged to the Vikas Mitra's caste and others.

Tables 9 delves deeper to better understand the contours of the Vikas Mitra's assistance.

¹⁸Unlike in a linear model such as OLS, the group-specific intercept term is not estimated in a conditional logit model.

Households belonging to the Vikas Mitra’s caste were no likelier to try to access IAY in the year preceding the survey, but their odds of reporting having being helped by the Vikas Mitra were 1.63 times that of other households.

Finally, it is important to note that we do not find such effects in several other programmes we studied. As Table 10 reports, caste identity relative to the Vikas Mitra appears not to have been salient in the distribution of grains under the PDS, in access to old age pensions, or in the context of school transfers such as scholarships and school uniforms. On the other hand, in two of the districts in which we conducted our survey, Mahadalit households had been given radios to help improve their access to information about government programmes.¹⁹ We see strong effects of caste identity match in household access to radios under this programme. We conjecture that this may have been due to two features: (a) this was a newly launched programme, with a possibly greater role of information in gaining access to programme benefits; and (b) unlike all the other programmes in this study, this programme was conducted directly by the Bihar Mahadalit Vikas Mission, who relied heavily on the Vikas Mitras to reach beneficiary households.

8 Conclusions

Though India’s affirmative action programmes are some of the largest in the world, they can often appear to be somewhat blunt instruments for a delicate task. In particular, while the lived experience of caste usually revolves around individual *jati* identities, affirmative action in India has often been content to make *reservations* for large aggregates of historically disadvantaged groups identified by the Constitution, such as Scheduled Castes. Since affirmative action programmes at the level of government employment, political representation or higher education can hope to directly benefit at best a small fraction of the disadvantaged households of these communities, they must rely on a trickle-down of these benefits to the wider population. Absent such a trickle, affirmative action in this form has the potential to exacerbate pre-existing between-group inequalities in the population. But this trickle must work its way through and around social networks, in-group preferences, and the like. This is why it is crucial to understand the extent to which *jati* identity is salient, and the implications for public policy.

Our field work in Bihar, one of the poorest states in the country, takes a small step in this direction. We find that *jati* identity matters to a great extent in the allocation of benefits

¹⁹This was part of the Mukhyamantri Mahadalit Radio Yojana, which had only recently been launched when we conducted our survey in spring 2013. Radios had been distributed in our sample panchayats in the districts of Gaya and Nalanda, but not in Katihar or Gopalganj.

under one of the largest social welfare programmes run by the Indian state, the Indira Awas Yojana. We cannot say whether these effects arise due to in-group preferences of the Vikas Mitras we studied, or due to disciplining effects within the social networks at the local level. We also do not find these effects for several other programmes we studied, which usually involved smaller and repeated transfers. In that sense, our work answers a few, but poses many more questions. We hope to take these up in future work.

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Table 3: Sampled Panchayats

District	Block	Panchayat	Largest Mahadalit Caste	Second Largest Mahadalit Caste	Gap (%)
Gaya	Konch	Anti	Pasi	Chamar	14.75
		Aslampur	Chamar	Bhuiya	35.19
		Kabar	Chamar	Pasi	31.90
		Parsawan	Chamar	Bhuiya	57.43
		Simara	Chamar	Bhuiya	06.15
		Utren	Bhuiya	Chamar	47.87
	Mohra	Arai	Rajwar	Bhuiya	03.69
		Tetar	Bhuiya	Pasi	80.80
	Tekari	Khanetu	Bhuiya	Chamar	14.16
		Noni	Bhuiya	Chamar	22.14
		Pura	Bhuiya	Chamar	60.26
		Simuara	Bhuiya	Chamar	30.00
Gopalganj	Bhorey	Bagahwa Mishra	Chamar	Dhobi	42.48
		Chakarwa Khas	Chamar	Dhobi	31.47
		Gopalpur	Dhobi	Chamar	31.43
		Hardiya	Chamar	Musahar	21.84
		Kalyanpur	Chamar	Musahar	00.40
		Baikunthpur	Chamar	Musahar	54.63
	Kateya	Belahi Khas	Chamar	Musahar	32.01
		Karkataha	Chamar	Musahar	21.57
	Phulwaria	Bathua Bazar	Pasi	Chamar	08.72
		Churamanchak	Dhobi	Chamar	68.82
		Garesh Dumar	Chamar	Dhobi	59.76
		Koyladewa	Musahar	Chamar	04.52
Katihar	Hasanganj	Balua	Chamar	Hari	03.85
		Katihar	Bhawara	Turi	Musahar
	Pranpur	Dalan East	Musahar	Chamar	92.98
		Garbhaili	Musahar	Chamar	52.38
		Sirnia East	Turi	Musahar	16.28
		Dakshini Lalganj	Musahar	Chamar	50.68
		Dharhan	Hari	Chamar	74.10
		Gauripur	Musahar	Chamar	26.44
	Biharsharif	Kehunia	Musahar	Chamar	46.99
		Kewala	Musahar	Chamar	25.00
		Patharwar	Musahar	Hari	04.92
		Pranpur	Chamar	Musahar	01.62
Nalanda	Asthawan	Amawan	Pasi	Chamar	03.23
		Jiar	Musahar	Chamar	55.25
		Kaila	Pasi	Chamar	26.56
		Kathari	Chamar	Pasi	30.16
		Malti	Chamar	Pasi	06.28
		Ugawan	Chamar	Pasi	02.13
	Biharsharif	Sakraul	Musahar	Pasi	42.13
		Korai	Musahar	Chamar	50.88
		Mohammadpur	Chamar	Pasi	17.99
		Nakatpura	Chamar	Pasi	49.37
	Karaiparsurai	Makrouta	Pasi	Chamar	02.20
		Sandh	Bhuiya	Chamar	18.37

Table 4: Household sample characteristics

	Total	Chamars	Musahars	Others SC	ST	Non SC/ST
Head female	0.07	0.08	0.09	0.07	0.09	0.06
Head age (years)	46.99	46.08	44.41	45.54	47.19	51.88
Matric adult	0.31	0.30	0.05	0.30	0.33	0.50
Landless	0.15	0.10	0.44	0.13	0.13	0.05
Got Awas Bhoomi	0.03	0.01	0.11	0.02	0.00	0.00
Casual Labour	0.81	0.86	0.93	0.82	0.80	0.64
Food Shortage (months)	2.04	2.16	2.36	2.03	1.95	1.72
Durable Assets (Rs. '000)	12.24	8.16	3.15	9.61	14.87	26.08
Livestock (Rs. '000)	5.94	4.41	3.06	4.97	7.24	10.65
BPL/AAY	0.64	0.70	0.79	0.64	0.65	0.47
BPL Score (Imputed)	17.51	16.73	13.20	17.66	16.59	21.40
Have Contacts	0.15	0.15	0.07	0.18	0.15	0.18
Attend Gram Sabha	0.20	0.21	0.17	0.19	0.19	0.21
Pop fraction	0.09	0.07	0.09	0.07	0.13	0.13
<i>n</i>	2399	546	373	799	151	530

Table 5: Vikas Mitra sample characteristics

Caste	Gender		Education Levels				
	M	F	Primary	Middle	Class X	High Sch	Grad
Chamar	11	9	0	0	5	11	4
Musahar	8	10	1	3	9	4	1
Pasi	3	3	0	2	2	1	1
Others	4	0	0	0	0	3	1

Table 6: Logit odds ratios for access to Indira Awas Yojana

	Basic	+ HH chars	Full	Panchayat FE
VM Caste Match	2.491*** (0.000)	2.189*** (0.001)	2.617*** (0.001)	2.144** (0.014)
Head Female		0.635 (0.234)	0.462* (0.092)	0.577 (0.253)
Age of Head (years)		0.983*** (0.006)	0.983** (0.017)	0.978*** (0.005)
Matric adult		0.945 (0.801)	1.051 (0.840)	1.079 (0.773)
Landless		0.642* (0.078)	0.636 (0.111)	0.630 (0.146)
Got Awas Bhoomi		12.58*** (0.000)	6.101*** (0.000)	3.815** (0.018)
Casual Labour		2.260** (0.013)	2.507*** (0.008)	2.225** (0.030)
Food Shortage (months)		0.950 (0.521)	0.992 (0.930)	1.028 (0.768)
Durable Assets (Rs. '000)		0.992 (0.348)	0.990 (0.335)	0.991 (0.417)
Livestock (Rs. '000)		0.992 (0.486)	0.997 (0.792)	0.998 (0.866)
BPL / AAY		2.462*** (0.000)	3.380*** (0.000)	4.715*** (0.000)
BPL Score (Imputed)		0.960* (0.052)	0.968 (0.159)	0.952* (0.055)
Have Contacts		0.469** (0.016)	0.406*** (0.007)	0.449** (0.019)
Attend Gram Sabha		2.061*** (0.000)	1.919*** (0.004)	2.121*** (0.003)
Caste fraction in panchayat		0.00881*** (0.000)	0.0155*** (0.003)	0.0542* (0.056)
Caste FE		Yes	Yes	Yes
Village Characteristics			Yes	Yes
VM-HH Match Characteristics			Yes	Yes
GP-HH Match Characteristics			Yes	Yes
VM Characteristics			Yes	
GP Characteristics			Yes	
Observations	1362	1359	1283	1158

p -values in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

Notes:

1. Dependent variable indicates whether the household received any funds under the Indira Awas Yojana in the past 12 months.
2. The last model, with panchayat fixed effects, is estimated using a conditional logit specification.

Table 7: Robustness: Logit odds ratios for access to Indira Awas Yojana in 24 panchayats with more evenly sized Mahadalit communities

	Basic	+ HH chars	Full	Panchayat FE
VM Caste Match	1.882*** (0.004)	1.975** (0.030)	2.736** (0.014)	2.679** (0.024)
Head Female		0.400* (0.083)	0.361* (0.089)	0.446 (0.188)
Age of Head (years)		0.978** (0.011)	0.978** (0.044)	0.975** (0.027)
Matric adult		0.856 (0.619)	0.805 (0.548)	0.958 (0.910)
Landless		0.595 (0.145)	0.498 (0.123)	0.595 (0.261)
Got Awas Bhoomi		11.49*** (0.000)	5.470** (0.032)	4.641** (0.045)
Casual Labour		2.839** (0.044)	3.112** (0.039)	3.654** (0.024)
Food Shortage (months)		0.973 (0.783)	1.046 (0.699)	1.053 (0.669)
Durable Assets (Rs. '000)		0.992 (0.608)	0.987 (0.523)	0.986 (0.525)
Livestock (Rs. '000)		0.995 (0.727)	0.996 (0.821)	0.993 (0.669)
BPL / AAY		2.644*** (0.000)	4.494*** (0.000)	5.136*** (0.000)
BPL Score (Imputed)		0.950* (0.079)	0.960 (0.222)	0.957 (0.226)
Have Contacts		0.451* (0.063)	0.427* (0.066)	0.430* (0.073)
Attend Gram Sabha		1.495 (0.155)	1.819* (0.086)	2.109** (0.046)
Caste fraction in panchayat		0.0126*** (0.006)	0.0448 (0.150)	0.0338 (0.128)
Caste FE		Yes	Yes	Yes
Village Characteristics			Yes	Yes
VM-HH Match Characteristics			Yes	Yes
GP-HH Match Characteristics			Yes	Yes
VM Characteristics			Yes	
GP Characteristics			Yes	
Observations	676	675	638	638

p -values in parentheses; * $p < .10$, ** $p < .05$, *** $p < .01$.

Notes:

1. Dependent variable indicates whether the household received any funds under the Indira Awas Yojana in the past 12 months.
2. The last model, with panchayat fixed effects, is estimated using a conditional logit specification.

Table 8: Indira Awas Yojana: Benefit amounts and past outcomes

Period	<i>Access</i> ¹ (Odds Ratio)	<i>Amount</i> ² (Rs.)
Past Year (2012-13) (average amount received : Rs. 30,181.06)	2.144** (0.014)	7,532.2*** (0.007)
Between 2010 and 2012 (average amount received: Rs. 35,325.93)	1.228 (0.526)	-2,406.3 (0.426)
Since 2010 (average amount received: Rs. 33,438.01)	1.649** (0.041)	1,969.5 (0.162)
Before 2010 (average amount received : Rs. 23,147.30)	0.975 (0.866)	689.3 (0.257)

Coefficients on dummy variable for caste match between household and Vikas Mitra.

¹ Conditional logit regression for dummy variable of access, with panchayat fixed effects. Coefficients are odds ratios.

² OLS regression with robust standard errors for the total amount received, conditional on having accessed the programme; includes panchayat fixed effects.

Table 9: Coefficient on Vikas Mitra Caste Match for access to Indira Awas Yojana

	Tried	VM Helped	Got Benefits
VM Caste Match	1.179 (0.425)	1.627* (0.099)	2.144** (0.014)
Observations	1359	1173	1158

p-values in parentheses; * *p* < .10, ** *p* < .05, *** *p* < .01.

Conditional logit specification with panchayat fixed effects.

Coefficients are odds ratios.

Table 10: Other government programmes

	PDS	Old Age Pension	Scholarships	Uniforms	Radios
VM Caste Match	0.759 (0.263)	0.818 (0.433)	1.250 (0.257)	1.058 (0.776)	1.492* (0.098)
Observations	1260	848	1344	1344	582

p-values in parentheses; * *p* < .10, ** *p* < .05, *** *p* < .01.

Conditional logit specification with panchayat fixed effects.

Coefficients are odds ratios.

Figure 1: Vikas Mitra Assistance with Indira Awas Yojana

