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Nishith Prakash
University of Connecticut, IZA, HiCN and CReAM

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ABSTRACT

The Impact of Employment Quotas on the Economic Lives of Disadvantaged Minorities in India*

India has the world's biggest and arguably most aggressive employment-based affirmative action policy for minorities. This paper exploits the institutional features of a federally mandated employment quota policy to examine its causal impact on the economic lives of the two distinct minority groups (Scheduled Castes and Scheduled Tribes). My main finding is that a 1-percentage point increase in the employment quota for Scheduled Castes increases the likelihood of obtaining a salaried job by 0.6-percentage points for male Scheduled Caste members residing in the rural sector. The employment quota policy has no impact for Scheduled Tribes. Contrary to popular notion, I do not find evidence of "elite-capture" among the Scheduled Castes – the impact is concentrated among members who have completed less than secondary education. Consistent with the employment results, I find that the policy improved the well-being of Scheduled Castes members in rural areas who have completed less than secondary education. Finally, the impact of the employment quota policy varies by state characteristics.

Corresponding author:
Nishith Prakash
365 Fairfield Way, Oak Hall, Room 331
Department of Economics
University of Connecticut
Storrs, CT 06269-1063
USA
E-mail: nishith.prakash@uconn.edu

1   Introduction

Most countries face the challenge of widening economic inequality, especially as they are confronted with uplifting historically disadvantaged groups in order to create a more inclusive and prosperous society. One of the most commonly used tools is the employment of affirmative action policies with the intention of compensating for the damages caused by past discrimination and exclusion based on race, caste, ethnicity, or gender. These policies either take the form of a mandated quota system in which a certain number or share of jobs/seats are set aside for disadvantaged minorities in a public or private sector enterprise, in the political sphere, or at educational institutions (e.g., in India, Malaysia, and Sri Lanka), or preferential treatment in which members of historically disadvantaged groups receive more favorable consideration for college admission or employment, although no specific slots in the institution are actually set aside for them (e.g., in the United States and United Kingdom). In any of these cases, the long-term objective is to address various inequalities in society such that the disadvantaged groups will eventually no longer need affirmative action (Fryer & Loury, 2005; Sowell, 2005).

Affirmative action policies remain controversial, as they impose trade-offs between equity and efficiency.[1] On the one hand, these policies compensate for and help disadvantaged groups offset the accumulated disenfranchisements resulting from past deprivation of advantages and opportunities, but they also exclude members of non-disadvantaged groups from opportunities based on merit.[2] In addition, the rationale behind these policies is further undermined when the benefits accrue disproportionately to the educated elites within the disadvantaged groups. India has employed affirmative action policies longer than any other nation, beginning in the British era and mandated in its Constitution upon its independence. Despite being in place for over 70 years, I am not aware of any study that has examined whether these policies help the intended beneficiaries.

In this paper, I examine the impact of the employment-based affirmative action policy on the economic lives of the disadvantaged minorities in India. Estimating the impact of such policies has

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[1]Fryer & Loury (2005) provide an excellent discussion of the trade-offs inherent in affirmative action policies. Fryer, Loury, and Yuret (2007) study the welfare economics of affirmative action policies, including those that subsidize the skills development of disadvantaged groups.

[2]Arcidiacono et al. (2014, 2011) study the impact of affirmative action policies on college fit and mismatch, and find that laws banning the use of racial preferences in California public colleges lead to better match quality and higher graduation rates, thus highlighting the large costs associated with affirmative action policies.

proven to be difficult due to lack of exogenous variation in the policy variable, i.e., the employment quota. For example, states that have a higher employment quota for minorities are likely more favorable to minorities in other ways too, which confounds the interpretation of the estimated coefficient for the employment quota variable. In addition, there is no time variation in implementation of the policy, as it was implemented across India simultaneously. However, certain features of the employment quota policy allow the identification of its causal impact on outcomes of the interest-labor market and household consumption expenditure (a measure of well-being).

In particular, the Indian Constitution stipulates that in each state the employment quotas for scheduled castes (SCs) and scheduled tribes (STs)– the two principal historically disadvantaged groups in India – be equal to their share of the total population in the most recently tabulated population census. This policy rule generates plausibly exogenous variation in the employment quota, permitting the identification of the causal impact of employment quota on outcome variables.[3] The variation used is not based on all fluctuations in minority population share; this would be erroneous, because it would be expected that the minority population share would affect outcomes through channels in addition to the employment quota. Instead, this identification strategy takes advantage of the fact that there is a time lag in the quota of jobs set aside for minorities with respect to both the current population share and the population share in the most recent census (see Appendix Figure A.1 as an example).[4] In addition, the policy implementation is subject to the constraint that the number of vacancies is an integer value. Thus, due to rounding off to an integer, generally, the share of employment quota for SCs and STs and their population share are not an exact match. These jumps and administrative lags generated by the policy rule afford the present study to separately identify the effect of employment quota for minorities from the effect of contemporaneous changes in their population.

I implement this identification strategy using data from multiple rounds of the National Sample Survey (NSS) and answer the following questions for urban and rural India separately. First, I examine the impact of the employment quota policy on the likelihood of getting a salaried job for

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[3]My identification strategy is similar to that of Pande (2003) and Chin and Prakash (2011), but addresses the employment quota policy rather than political reservation for minorities.

[4]There are two sources of the lag: (1) the current population varies continuously but employment quotas are based on the census, which is taken only decennially, and (2) there is an administrative lag between when the census is taken and when the employment quotas are adjusted to reflect the new census data.

individuals belonging to SCs and STs.[5] In India, a large proportion of salaried jobs are in the public sector; these jobs are considered to be on average better than alternative employment opportunities for minorities as they provide a higher salary and a degree of security, prestige, and authority not obtainable elsewhere.[6] Second, I examine whether effects vary by educational attainment. Finally, I examine the effect of the employment quota on the household monthly per capita expenditure (MPCE), which can be viewed as a summary measure of living standards, capturing any changes in employment status or changes in wages conditional on employment status.

I find several important results. My primary findings suggest that the employment quota policy only benefitted the SCs and not the STs. In particular, for male SC members in rural sector, the policy increased the likelihood of finding a salaried job by 0.6-percentage points. When I estimate the impact by state characteristics, I find the impact of the employment quota to be more pronounced for the SCs in BIMAROU states (Bihar, Madhya Pradesh, Orissa, Uttar Pradesh, and Rajasthan) for both gender and sector. These states are widely considered to be lagging in terms of economic development and have a low share of private-sector jobs. However, the results for STs are mixed. I do not find an impact of the policy on male ST members in the overall sample, but the impact is positive and statistically significant for male ST members in rural areas in the BIMAROU states, and urban areas in non-BIMAROU states. Interestingly, I find a negative and statistically significant impact on the likelihood of finding a salaried job for female ST members.

Contrary to the popular notion, I find this impact to be concentrated among SC members who have completed less than a secondary education. It is important to highlight that employment quotas are not determined by levels of education. Therefore, these findings are particularly surprising and important; it is widely believed that it is the "educated elite" among the SCs who benefit the most from the employment quota policy. However, I find that the impact of the policy is not statistically significant for highly-educated SC members, possibly suggesting that high-ability SC members who can potentially qualify for the best public sector jobs have other attractive options,

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[5]Ideally, the outcome of interest should be the likelihood of finding a job in the public sector, however, the National Sample Survey did not distinguish between a public and private sector job until 1999-2000. Despite this shortcoming, it is reasonable to look at salaried jobs as an outcome because, according to the National Sample Survey 1999-00 round, approximately 34% of salaried jobs are in the public sector.

[6]Public sector workers enjoy a positive wage premium across the entire wage distribution in both urban and rural areas in India (Azam & Prakash, 2015).

such as higher education or working in the private sector. Finally, I corroborate the employment results by looking at the impact of the policy on a measure of well-being as proxied by MPCE. It is reassuring to find a positive and statistically significant impact on the less-educated SC members in rural areas. This is consistent with my employment results as it is the less-educated SC members residing in rural areas who experienced an increased likelihood of a salaried job.

An evaluation of the employment quota policy in India should be of interest for a number of reasons. First, I am not aware of previous studies that rigorously quantify the effects of this policy on the intended beneficiaries, although this is the largest mandated employment quota policy in the world and has existed for over 70 years. Second, this paper adds to the existing literature on the effects of affirmative action. Affirmative action policies are the subject of heated debates in many countries, and before adopting or continuing them, it is important to understand whether they benefit the intended beneficiaries. Some affirmative action policies may have different effects than others, and this case of setting aside jobs for minorities in India should be an interesting counterpoint for policies based on preferential treatment without mandates. The results of this paper can be a useful policy tool for the Government of India since, as the policy is applied uniformly across states in India, I am able to make a precise determination of how the employment quota policy affects the economic lives of the SCs and STs. Evaluating the effectiveness of the policy is particularly important as the Government of India is contemplating extending this policy to private sector jobs and to new caste groups.

Extensive literature exists on affirmative action, and this paper contributes to that research estimating the effects of employment-related affirmative action policies on the outcomes of targeted groups (see Fryer et al., 2005; Holzer & Neumark, 2000 for in-depth discussion of the debate). The majority of these studies have examined the experience within the United States (e.g., Freeman, 1973; Ashenfelter & Heckman, 1976; Brown, 1984; Leonard, 1990; Donohue & Heckman, 1991; Myers, 2007).[7] One set of studies has focused on the U.S. federal contractor program–under this program, targeted groups (including African-Americans and women) are given preferential

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[7]Peck (2017) examines the impact of quota-based labor regulations on firms in the context of Saudi Arabia's Nitaqat program, which imposed quotas for Saudi hiring at private firms and finds that the program increased native employment at a substantial cost to firms, as demonstrated by increasing exit rates and decreasing total employment at surviving firms.

treatment when bidding for business from the federal government (e.g., Leonard, 1984b). Leonard (1984b) finds that affirmative action has not only increased minority employment among contractors, it has also increased the demand for minorities in skilled jobs in the contractor sector. The consensus in the literature is that the federal contractor program has had somewhat modest effects on economic outcomes for African-Americans (Smith & Welch, 1989; Leonard, 1990).

The second set of studies on the effect of employment-related affirmative action policies has focused on court-ordered affirmative action (e.g., Beller, 1978), but as noted by Donohue and Heckman (1991), no consensus has emerged from the evidence, and the interpretation is difficult due to endogeneity problems. Leonard (1984a) uses industry-level data on class action employment discrimination litigation, African-American employment, and productivity, and estimates that court-ordered affirmative action has a small impact on productivity. McCrary (2007) estimates the effect of court-ordered racial hiring quotas on municipal police departments in the Unites States. He finds a 14-percentage point gain in the proportion of African-Americans among newly hired officers. In another study, Myers (2007) examines the effect of terminating state affirmative action programs in California (California Proposition 209) and finds that employment among women and minorities dropped sharply, suggesting that either affirmative action programs in California had been inefficient or that they failed to create lasting change in prejudicial attitudes. Similarly, Long (2004) finds that after the affirmative action was eliminated in California and Texas, the gap between the number of SAT score reports sent to in-state public colleges by non-minority and minority students significantly widened. On the contrary, Card and Krueger (2005) do not find a change in the SAT-sending behavior of highly qualified African-American or Hispanic students in either state. Hinrichs (2012) and Howell (2010) find that the ban on affirmative action decreased underrepresented minority enrollment at selective colleges, and shifted underrepresented minority students from more selective campuses to less selective ones at the University of California.

More narrowly, this paper contributes to the literature on the impact of affirmative action policies in India. This is the first study to quantify the effects of the employment quota policy on the economic lives of disadvantaged minorities in India.[8] The majority of the papers on affirmative

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[8]A qualitative discussion of the job reservation policy in India is offered by Galanter (1984). Deshpande and Ramachandran (2015) estimate the impact of the employment quota policy for the OBC (this is a collective term used by the Government of India to classify castes that are socially and educationally disadvantaged, excluding the

action in India have focused on the educational quotas for the SCs, STs, and the Other Backward Classes (OBCs).[9] Bertrand et al.(2010) estimate the impact of the OBC quota in engineering colleges and find that lower caste group applicants benefit from attending these college (which they would not have been able to attend without the quota). However, the benefit is greater for the marginal admitted applicant from a high caste group than it is for the marginal admitted applicant from a low caste group, which means that reserving college seats for lower caste group members leads to an inefficient allocation of educational slots (Bertrand et al., 2010). Similarly, a recent study by Bagde et al. (2016) estimates how the education quota policy has impacted disadvantaged caste members and women at 200 engineering colleges, and find that the policy increases college attendance for the targeted students, particularly at relatively higher-quality institutions.

Finally, although this study focuses on the employment-based affirmative action policy in India, it also contributes to the number of recent papers that have examined the effects of the political reservation policy in India.[10] In India, a certain number of seats in federal, state, and local legislative bodies are set aside for minorities and women. Pande (2003) finds that changing the political representation for the STs and SCs does impact policy choices, which is consistent with the fact that policy preferences differ across social groups, and that politicians act upon their preferences. Duflo and Chattopadhyay (2004) find that increasing female political representation changes the policy choices as well; local governments where a woman is assigned leader tend to invest more in public goods that women consider important. Also, very few studies have attempted to estimate the net effect of affirmative action, with the exception of Chin and Prakash (2011), who find that political reservation for minorities has reduced overall poverty in India. Thus, mandated political quotas appear to have a beneficial effect for the group for whom slots are set aside. It is of interest to determine if mandated employment quotas, too, benefit their intended beneficiaries.

The remainder of this paper proceeds as follows. In Section 2, I provide background on disadvantaged minorities and the employment quota policy in India followed by data description in

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SCs and STs.) in India and find that the policy increased the percentage of the OBCs obtaining public sector jobs and finishing secondary education by 2.6 and 4 percentage points, respectively.

[9]Weisskopf (2004) studies the impact of affirmative action policies at all levels of higher education for SC and ST students and finds that the policies have the effect of redistributing these students upward in the university quality hierarchy and attracts to universities those would not have otherwise pursued higher education.

[10]Duflo (2005) offers a review of the political reservation policies in India.

Section 3. Section 4 discusses the empirical strategy, and Section 5 presents the main results. Section 6 reports some robustness checks and I conclude the paper in Section 7.

2 Background

2.1 The Scheduled Castes and Scheduled Tribes in India

India is the world's most socially fragmented society, with the two principal historically disadvantaged minority groups, the SCs and STs, together accounting for 25.2% of the total population, according to the 2011 census. The Constitutional (Scheduled Castes/Scheduled Tribles) Order of 1950 list the castes and the races designated SCs and STs respectively and provide the legal definition for these two social groups.[11] The definitions of SC and ST have remained stable over the time period considered in this paper.[12,13] The SCs, who make up 16.4% of the total population, are comprised of groups isolated and disadvantaged by their "untouchability" status.[14] The word "untouchable" refers to their low status in the traditional Hindu caste hierarchy which exposed them to invidious treatment, severe disabilities, and deprivation of economic, social, cultural, and political opportunities (Galanter, 1984). The STs, who make up 7.9% of the total population, are distinguished by "tribal characteristics" and by their spatial and cultural isolation from the rest of the population.

In addition to the aforementioned characteristics, the identity of the SCs and STs is historically

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[11]Selection criteria for Scheduled Castes: 1. Cannot be served by clean Brahmans; 2. Cannot be served by barbers, water-carriers, tailors, etc who serve the caste Hindu; 3. Pollutes a high-caste Hindu by contact or by proximity; 4. Is one from whose hands a caste Hindu cannot take water; 5. Is debarred from using public amenities, such as roads, ferries, wells or schools; 6. Is debarred from the use of Temples (place of worship); 7. Will not be treated as an equal by high-caste men of the same educational qualification in ordinary social intercourse; 8. Is merely depressed on account of its own ignorance, illiteracy or poverty and, but for that, would be subject to no social disability; 9. Is depressed on account of the occupation followed and whether, but for that, occupation it would be subject to no social disability.
Selection criteria for Scheduled Tribes: 1. Tribal origin; 2. Primitive way of life and habitation in remote and less accessible areas; 3. General backwardness in all respects.

[12]According to Clause 2 of Articles 341 and 342 of the Indian Constitution, amendments to the lists of SC and ST can be made only through Acts of Parliament. In the 40 years after the adoption of the Constitution, such amendments were carried out only twice: first, in 1956 at the time of reorganization of the states. Second, the Scheduled Caste and Scheduled Tribe Orders Act of 1976 was responsible for making the definitions of SC and ST uniform within a state. No new castes or tribes were added.

[13]Individuals claiming to be SC or ST are required to produce a Caste or Tribe certificate (a government issued document). In last 50 years, very few cases have been reported where a non-SC/ST has claimed to be SC/ST, a crime which would have legal implications.

[14]In the British era, these were called the depressed classes, and colloquially they have also been called the untouchables and backward classes though these terms are out of favor.

determined. An individual is born as a member of an SC or ST, and cannot change their caste during their lifetime. The only way to assimilate is through inter-caste marriage, in which case the children will acquire the father's caste identity. In practice, inter-caste marriage is extremely rare for both STs and SCs. Also, interstate migration among SCs and STs is very low. Economic and social advancement of any group in a society requires an inclusive development, but the SCs and STs have been excluded from every possible ritual practice and institutional rights have been withheld, hence leaving them far behind non-minorities. This has led to their poor socioeconomic status than that of non-minorities. The poverty rate among disadvantaged minorities is about twice as high than the rest of the population. For instance, according to the estimates based on data from the 61st round of the National Sample Survey, a nationally representative sample of households in India, in 2004-05, 46% for STs were living below the official Indian poverty line, 37% for SCs; in contrast, it was 23% among non-SC/STs. Furthermore, only 52.4% of STs and 58.2% of SC children (age 6-14) can read and write, as compared to 72.0% of non-minorities.

The large disparities in well-being between these historically disadvantaged minority groups and the non-minorities have been the impetus for many government policies aimed at helping the SCs and STs, including the employment quota policy.

2.2   History of Employment Quota Policy in India

"Nothing in this article shall prevent the State from making any provision for the reservation of appointments or posts in favor of any backward class of citizens which in the opinion of the State, is not adequately represented in the services under the State."

Article 16(4), Constitution of India.

India's policy of affirmative action in government jobs, political representation, and scholarships dates back to the colonial era, being established under British rule (Kumar, 1992). This policy was carried forward and mandated by the Constitution when India attained independence in 1947.[15] Specifically, Articles 16(4), 320(4), and 335 of the Indian Constitution provide safeguards for SCs

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[15]The central government has provided reservations in government employment for SCs since 1943, and for ST since 1950. All states except Orissa, Madhya Pradesh, and Jammu and Kashmir had reservations in effect by 1951 (Galanter, 1984).

and STs in services and posts under the state, with a view to ensuring their adequate representation in public sector jobs. The percentage of employment quota or reservation in services/posts under the state government varies from one state to another and is fixed on the percentage of SC and ST population in the respective state.[16],[17] This policy in favor of the lowest socio-economic groups is unique in the world, both in the range of benefits involved and in the size of the groups eligible for the benefits.[18]

The employment quota policy in India is handled by the National Scheduled Caste and Scheduled Tribe Commission.[19] This Commission coordinates between the state and federal government. After the fresh population estimates arrive from the census, the Commission revises the percentage of the employment quota (percent of jobs reserved) for SCs and sends the recommendation to the President of India. Then the Ministry of Social Justice and Empowerment places the recommendation before both houses of the Parliament, which give final approval. Once this exhaustive set of administrative steps are completed, the employment quota is revised to reflect the new census population estimates.[20]

Two additional comments are worth making about the employment quota policy in India. First,

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[16]Similar policy rule is applied to admissions in educational institutions. For instance, in colleges controlled by state governments, the percentage of seats reserved for SCs/STs depends on the approximate percentages of these groups in each state (Bertrand et al., 2010).

[17]Annual Scheduled Caste and Scheduled Tribe Commissioners Report. Also reported in Bill No. XLII of 2000 called The Scheduled Castes and Scheduled Tribes Bill, as introduced in the Rajya Sabha. For e.g., suppose the proportion of SCs in a state is 26.93% and STs is 6.39%. The percentage of employment quota for SCs and STs for this state is fixed at 27% and 6% respectively.

[18]The benefits include age concessions-i.e., relaxation of maximum age for entry into the service; fee concessions-i.e., waiver or reduction of examination fees; reduction of the minimum qualifying marks on examination and waiver of a passing mark on *viva voce* examinations; specific safeguards against retrenchment; authorization for Public Service Commissions and for appointing authorities to relax minimum standards; freedom for SC and ST jobholders to register for better jobs while working for the government; travel allowance (to reach interview centers); pre-examination training for high-echelon posts, etc. (Galanter, 1984).

[19]Under Article 338 of the Indian Constitution, the President of India appoints a special officer known as the Commissioner for SC and ST to investigate all matters relating to the safeguards provided for these groups under the various provisions of the Constitution. In 1978, through a resolution, the federal Home Ministry set up a National Commission for Scheduled Castes and Scheduled Tribes, with the special officer for SC and ST as the Member Secretary. In 1990, through the sixty-fifth amendment to the Constitution (Article 338), the special officer was replaced by a National Commission for SC and ST with the powers of a civil court to summon persons, files, etc. for securing evidence on oath. The new National Commission on SC and ST has a vigorous statutory mandate and the powers of a civil court.

[20]The actual lag between the change in the percentage of employment quota and census count could be anywhere between 2-5 years. The lag depends on when job vacancies in the public sector enterprise come up in its respective state for different classes of jobs. The policy rule is then implemented and will be immediately reflected in the likelihood of employment for SCs and STs. After interviewing with the official at the National SC and ST Commission and the Ministry of Social Justice and Empowerment, it is unlikely for State governments to manipulate the rule and respond to the quota before its actual implementation.

it is implemented on a flow basis. That is, the percentage of employment quota is applied only to new vacancies. For example, if in a particular state, 15% of jobs are reserved for SCs, then 15% of new vacancies in government jobs, when they are released in different departments (e.g., bureaucrats, judges, clerks, etc.), will be set aside for SCs; only members of the SC would be eligible for these reserved jobs, although these reserved jobs may go unfilled in the absence of qualified candidates.

Continuing the example, no non-minorities holding public sector jobs are removed and replaced with members of SCs in order to ensure 15% of public sector jobs are occupied by SC members. Second, the policy provides mandated employment quotas wherein the quotas are not the upper limits of the extent of minority employment in the public sector; indeed, minorities are free to compete for unreserved jobs, which are open to all.[21]

Therefore, this process generates an exogenous lag with respect to changes in the population share in the last preceding census, thus allowing thus study to identify the impact of this policy on outcomes of interest.

3 Data

The primary source of data for this study is the National Sample Survey (NSS), which is nationally representative and is one of the largest household surveys in India, carried out every 4-5 years, with a sample size of around 120,000 households and over half a million individuals. I use data from the Employment and Unemployment rounds of this survey from 1983-84, 1987-88, 1993-94, and 1999-00. The data includes individuals' employment status, household socio-economic characteristics along with a roster of all members of the household, their educational attainment, current schooling status, and demographic characteristics. The key outcomes of interest for this study are the probability of obtaining a salaried job (proxy for a public sector job) and log of household monthly per capita consumption expenditure (proxy for living standard).[22] For labor market outcomes and a measure

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[21]The following rules apply, according to the safeguards provided by the Constitution of India, for the employment quota policy for SCs and STs. First, a post reserved for SCs and the STs under subsection (1) of Section 3 shall be filled in such a manner as may be prescribed with reserved candidates only and shall not be filled by a general category candidate, even in the absence of reserved category candidates being not selected/not available. Second, the unfilled reserved posts or class of posts/vacancies shall not be de-reserved and shall be carried forward, regardless of why they were unfilled.

[22]Although we would have preferred to look at the probability of public sector employment, unfortunately, this variable was available only in the 1999 round of the NSS and not in previous rounds. Using the 1999 round of

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of living standard, I use the households of individuals who are currently aged 18-45, living in one of the 16 major Indian states, and not currently attending school.[23] These states contained 95% of the Indian population during the period of study.[24]

The Scheduled Caste and Scheduled Tribe Annual Commissioner's Report provides the policy variables (i.e., the percentage of employment quota) for each state and year-the percentage of public sector jobs reserved for SCs and STs (see Table 1). These are the key variables that allows this study to estimate the impact of employment quota on outcomes of interest.

The remaining data sources are as follows. The Census of India, Registrar General provides the data on SC and ST census population shares and current population shares. Intercensal estimates of the population for SCs and STs are obtained via liner interpolation, as in Pande (2003).[25] For the preferred specification, I further control for state income in the previous year, population density in the preceding census, and the rural share of the population. I obtain the state income measure from the Planning Commission, Government of India and compute it as the log of per capita net state domestic product.[26] Population density is computed as the total state population according to the final preceding census divided by the total land area of the state. Finally, the rural population share comes from Ozler et al. (1996) and is computed from the National Sample Survey. For robustness, I further control for two additional variables: the share of seats reserved for SCs and STs in state assemblies, the election year, and the quadratic population controls. Data on minority political reservations comes from the Election Commission of India reports on state elections.[27] Second, a

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NSS, approximately 35% of the individuals employed in salaried jobs belong to the public sector. The public sector employed around 18.07 million in India in 2004 (Ministry of Labor and Employment). In India, government jobs form the largest formal sector of employment, accounting for over 66% of all jobs. Despite the shortcomings of the NSS data, it is better than other sources of data and allows this study to assess whether the labo market outcomes of SCs and STs improved as a result of employment quotas. This is possible because the policy rule is implemented and reflected immediately in the employment status of SCs and STs.

[23]Household monthly per capita consumption expenditure is expressed in real terms and deflated using the state poverty line, with 1983 as the base year.

[24]These states are Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal.

[25]Specifically, for a given population variable (e.g., SC population and ST population), I calculate the constant annual growth rate needed for the observed initial census value to reach the observed terminal census value. Since I am projecting SC, and ST separately, I am allowing differential population growth rates across social groups. This interpolation method does not model the underlying sources of population changes, and assumes smoothness in the evolution of the population.

[26]I downloaded the data on income and deflators, which were used in Besley and Burgess (2000), from the EOPP website.

[27]The Election Commission is an independent agency set up in the Indian Constitution to conduct elections and is the authoritative source of election data. These reports contain constituency-level data for each state election,

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dummy variable for election years takes on the value one when there is a state election in year t. This information comes from the Election Commission's reports on state elections.

I report the descriptive statistics by social groups (STs, SCs), gender, and sector of residence in Appendix Table A.1–A.2.

4   Empirical Framework

In theory, employment quotas for minorities could increase, decrease, or have no impact on labor market outcomes. Employment quotas have a direct positive impact for minorities (SCs and STs) in an increase in employment in public sector jobs. In addition, some minorities who do not secure a reserved job may nonetheless experience benefits, e.g., through increased investment in human capital because they have a greater likelihood of securing employment in the public sector.[28] It is also possible that such policies may have a negative impact; for example, employment quotas for minorities reduce the competition for public sector jobs, which may reduce the incentive for investments in human capital.[29] It is also possible that private sector employers assume that minorities who do not take public sector jobs are lower applicants, thus reducing their likelihood of being employed (Coate & Loury, 1993).[30] In addition, a negative impact may result from both minorities and non-minorities decreasing their efforts at gaining employment–the former because working to the fullest capacity is unnecessary and the latter because working to the fullest capacity can prove to be futile, or it might result in a negative impact. Lastly, if members of minority groups are less educated and employment quotas do not sufficiently lower their educational requirements, then employment quota policies will have no impact on labor market outcomes. *Thus, the empirical question is do employment quotas for minorities improve their economic lives?*

I am interested in estimating the impact of employment quotas on the economic lives of minorities (SCs and STs). The main outcomes of interest are the likelihood of securing a salaried job and a measure of living standards, proxied by monthly per capita expenditure. The relationship

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including information about which seats are reserved for SCs and STs.

[28]Khanna (2020) investigated the impacts of affirmative action policies on schooling incentives in India and finds that these policies incentivize students to attain about 1.4 more years of education for the average student, and 3 more years of education for a student on the margin.

[29]Members of these minority groups might have less incentive to invest in additional human capital as the entitlements available through affirmative action act as substitutes for human capital.

[30]The effect of quotas on employer attitude could be either positive or negative (Coate & Loury, 1993).

between employment quotas for minorities and outcomes of interest could be approximated as:

$$y_{i,g,s,t} = \alpha_s + \beta_t + \gamma Employment\ Quota_{st} + \pi_1 X_{i,g,s,t} + e_{i,g,s,t} \tag{1}$$

where $y_{i,g,s,t}$ is the outcomes of interest for individual i belonging to social group (SC and ST) g residing in state s observed at time t. The variable $Employment\ Quota_{st}$ is the percentage of public sector jobs reserved for individual i's social group g in state s at time t.[31] α_s is the state fixed effects, and control for any time-invariant state characteristics. β_t is the time fixed effects, and control for any macroeconomic shocks or national policies that affect everyone uniformly. The variable $X_{i,g,s,t}$ is a set of individual-level controls (i.e., age, age square, marital status, educational attainment, and religion). Finally $e_{i,g,s,t}$ is the error term.

The coefficient of primary interest in Equation 1 is γ, the effect of employment quota (or share of jobs reserved) on the labor market outcome. Given the presence of state and time fixed effects in the specification, γ is identified using within-state variation in employment quota over time where time effects have been partialled out. γ would not be consistently estimated by the ordinary least squares (OLS) if there were an omitted variable not included in this empirical specification but correlated with $Employment\ Quota_{st}$. Clearly, there will be concerns about omitted variable bias in states that choose their own share of employment quota. States with the greater share of employment quota for minorities will likely systematically differ in ways that affect the outcome variables. State fixed effects mitigate this concern somewhat; however, there might be time-varying state characteristics that matter, such as changing attitudes about minorities or other changes.

In the case of India, all the variation in the employment quota for SCs and STs within a state is attributable only to changes in census population estimates. This is attractive for the purpose of identifying γ because a state's preferences regarding minorities–a key potential omitted variable–does not matter for $Employment\ Quota_{st}$. Despite the lack of impact of states' preferences, estimating Equation 1 using Indian data may lead to a biased estimate of γ for the following reason. Minority population share from the census surely determines the share of employment quota, but the minority population share may also affect labor market outcomes in other ways.

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[31] Each empirical specification will be estimated separately for SCs and STs. When the SC sample is used, $Employment\ Quota_{st}$ is the percentage of jobs reserved for SCs and analogously when the ST sample is used.

For example, minority population shares may affect the probability that any one minority member secures a good job or may be used to determine other welfare policies directed at minorities. In order to guard against this source of omitted bias, I expand the set of control variables to include minority population share both from the last preceding census and the current year. First, I add $Census\ Pop_{st}$, which is individual i's social group's share of the population in the most recent census in state s at time t.[32] I am able to control for the SC and ST census population shares, as their share of employment quota is not revised immediately after a new census is taken. Instead, as explained in subsection 2.2, there are several administrative steps that must be taken before the share of employment quota is revised to reflect the new SC and ST census population shares. In addition, it could take several years before a state implements the new quota; for example, states that have openings in public sector jobs soon after the SC-ST Commission finishes the tabulation would implement the new quota earlier than those that do not have openings.[33] This generates a plausibly exogenous time lag between when a census is taken and when the share of employment quota is revised, enabling this study to control for $Census\ Pop_{st}$ without losing all the variation in $Employment\ Quota_{st}$. In addition, the policy is implemented subject to the constraint that the number of employment openings is an integer value. Thus, due to rounding off to an integer, generally, the SC and the ST share of employment quota and their population share measured in the last preceding census do not match exactly. Second, I also add $Current\ Pop_{st}$, which is individual i's social group's share of the population in the current year. I am able to control for the SC and ST current population shares because the share of employment quota for SCs and STs is driven by their census population count and not their current population count.

Given the preceding discussion on likely sources of omitted variables bias, I modify Equation

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[32]When the SC sample is used, $Census\ Pop_{st}$ is the census population share for SCs and analogously when the ST sample is used.

[33]E.g., suppose the state of Bihar revised the employment quota in 1982 based on the 1981 census. However, this would not take effect until there were new openings in any public sector. If the Bihar Public Service Commission advertised job openings for state level bureaucrats in 1985, the revised employment quota would be implemented for the jobs advertised in 1985. Thus, there is a lag of 3 years.

(1) as follows:

$$y_{i,g,s,t} = \alpha_s + \beta_t + \gamma\, Employment\ Quota_{st} + \delta_1 Census\ Pop_{st} + \delta_2 Current\ Pop_{st} + \pi_1 X_{i,g,s,t} + \pi_2 Z_{st} + e_{i,g,s,t}$$

$$(2)$$

where $Census\ Pop_{st}$ is population share of SCs and STs in state s in the last preceding census and $Current\ Pop_{st}$ is the population share of SCs and STs in state s at time t. In the preferred specification, I also control for some additional control variables; Z_{st} (specifically, population density in last preceding census, rural population share, and per capita state income last year).

I estimate Equation (2) separately by gender and sector of residence. There are more public sector jobs in rural areas than urban areas. Thus, SCs and STs living in rural areas may be more likely to benefit from an employment quota. Alternatively, the policy could benefit the minorities residing in urban areas if there is greater match between the type of jobs available and the supply of eligible minority applicants. Moreover, in India men and women differ in many characteristics (e.g., employment rate, educational attainment, social status) and it is quite possible that the labor market outcomes due to employment quota also differ according to gender.

5 Main Results

5.1 Impact of Employment Quota Policy on Labor Market Outcomes

I estimate the impact of an employment quota for SCs on labor market outcome by gender and sector and present the results in Table 2.[34] Panel A presents the results for all of India. I find that an increase in employment quota for SCs has a significant positive impact on the likelihood of a male SC in the rural sector getting a salaried job (column 1). In particular, a 1-percentage point increase in the SC employment quota increases the probability of being in a salaried job by 0.6 percentage points.[35] However, I do not find this impact for male SC members in urban sectors or for female SC members.

In Panel B, I present the impact of the employment quota policy of the "BIMAROU" states of

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[34]Standard errors are clustered at the state level. Although the policy variables are at the state-time level, it is desirable to cluster by state because serial correlation may be present (Bertrand et al., 2004). I also report Wild bootstrap p-value for Table 2, which presents the main results.

[35]I estimate Equation (2) and present the coefficients in Appendix Table A.3 (SC males) and A.4 (SC females), where I add controls sequentially.

Bihar, Madhya Pradesh, Rajasthan, Orissa, and Uttar Pradesh (The acronym BIMAROU is formed using the first letters of the states and means "sick" in Hindi). These states are widely considered to be lagging behind in terms of economic development, with a low share of private sector jobs and a high share of rural SC population.[36] Therefore, the probability of finding a salaried job is likely to vary by these state characteristics. Overall, I find that an increase in the SC employment quota increases the probability of being employed in a salaried job, but the point estimates are now positive and statistically significant for both genders and sectors in the BIMAROU states (Panel B).

There are more public sector jobs in rural areas than in urban areas, especially clerical and menial jobs. Thus, SC members living in rural areas may be more likely to find a reserved job that matches their skill. Also, in India, men and women have many different characteristics, including labor force participation rate, educational attainment, and social status, which means it is quite possible that the responsiveness of labor market outcomes to employment quota also differs by gender.[37] Even in the United States, there is evidence that employment-related affirmative action may impact genders differently.[38]

In Panel C, I estimate the impact for non-BIMAROU states and find that an increase in SC employment quota has a negative and statistically significant impact on the likelihood of finding a salaried job for men in the urban sector. A salaried job is a lucrative prize, but it is not easy for minorities to secure one. Increases in employment quota for SC members increase the likelihood of obtaining that prize, which may encourage male SC members in urban sectors to spend more time preparing or searching for better jobs in the administrative public sector. In contrast, I find that an increase in the SC employment quota has a large positive and statistically significant impact on the probability of being employed in a salaried job for women SC members in the urban sector. One possible explanation for this is that women have less mobility than men: typically, a woman's

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[36]For e.g., in this data only 9% of individuals report to be working as regular/salaried employee in BIMAROU states as compared to 15% in non-BIMAROU states.

[37]According to the latest estimates from the International Labour Organization (2020), female labor force participation in India is one of the lowest in the world (21% in 2019).

[38]For example, a number of studies including Ashenfelter and Heckman (1976) and Smith and Welch (1984) compare the shares of employment or employment growth accounted for by different demographic groups between establishments that practice affirmative action and those who do not. All studies find a positive impact on African-American men's share of total employment, while there is no such consensus for African-American women.

residence is either decided by her husband (if married) or her parents (if single). In addition, household responsibilities and societal norms constrain women from traveling long distances for work, while men can relocate or commute for a lucrative job. In urban areas, the density of employers in the private and public sector are higher and travel costs are lower; therefore women are more likely to find a job that matches their educational qualifications. However, in rural areas, such a match is less possible.

A similar analysis for STs suggests that the employment quota policy did not have an impact on male ST members in the overall sample (Panel A of Appendix Table A.5). One plausible reason for this impact is because ST men might be switching from one salaried job to another. The measure Pr(Salaried Job) constitutes an entire distribution of jobs (i.e. menial to high administrative jobs in both public and private sector), thus it is likely that ST women are withdrawing from low ranked jobs in the private sector to prepare for public sector jobs. Analysis by state characteristics suggests the policy has a positive and statistically significant impact for male ST members in rural areas in the BIMAROU states (Panel B of Appendix Table A.5), and in urban areas in non-BIMAROU states (Panel C of Appendix Table A.5). This is likely driven by better matching of skills to job requirements. Interestingly, I find a negative and statistically significant impact for women ST members on the likelihood of finding a salaried job.[39]

Overall, I find that the employment quota benefitted SC men in the rural sector, increasing their likelihood of finding a salaried job. This impact was found to be greater in the BIMAROU states. It is reassuring to find the impact in the rural sector and in BIMAROU states, since a large share of public sector jobs, especially in the lower ranks (for e.g. menial jobs) are located in rural India where the majority of the SCs reside. However, these estimates are likely to be lower bound as the measure of employment is a blunt measure including a wide spectrum of both public and private sector jobs, whereas the employment quota applies to only public sector jobs.[40] Furthermore, in estimating the impact of the employment quota policy, it is worth noting that quotas are applicable only to the current appointments (i.e. the measure of employment is a flow measure).

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[39]Appendix Table A.5 estimates the impact of the employment quota policy for STs in all of India (in Panel A), in BIMAROU states (Panel B), and in non-BIMAROU states (in Panel C). Appendix Table A.6 (ST men) and A.7 (ST women) report the coefficients where I add controls sequentially.

[40]According to Aggarwal and Ashraf (1976), every eighth SC household in Haryana had one member benefitting from the SC employment quota policy.

5.2 Impact of Employment Quota by Levels of Education

Table 3 presents the results where the effect of the minority employment quota on the labor market outcome varies by education. I estimate Equation (2) with a minor modification, and interact the *Employment Quota* variable with a high, medium, and low education dummy (low education dummy is the omitted category).[41]

There are two motivations behind this exercise. First, these three educational categories roughly mirror the minimum educational cut-offs for the four categories of public sector jobs in India. The four categories of jobs are Class I (Higher Administrative), Class II (Lower Administrative), Class III (Clerical), and Class IV (Menial). Each category has a minimum educational qualification: for example, the minimum educational requirement for a Class I and Class II job is a college degree, for a Class III job it is secondary and high secondary schooling, for a class IV job it is below secondary. Therefore, the three education dummies roughly capture the minimum educational requirement for the four categories of public sector jobs.[42] Second, there is an important policy debate among politicians and policy makers in India on the beneficiaries of the employment quota policy. It has been asserted that this policy benefitted primarily the *"creamy layer or the elite"*–minorities who would be doing well without affirmative action policies–rather than the most economically disadvantaged minorities. In the United States too, there is speculation that affirmative action in admission to educational institutions primarily helps the most wealthiest members of minority groups, who presumably would have done well without affirmative action. Therefore, it is of interest to test whether the impact of employment quota varies by some measure of an individual's level of education. One such measure available in the National Sample Survey is educational attainment.

Table 3 reports the results by sector and gender for SCs (Appendix Table A.8 reports the same for STs). Estimates from column (1) of Table 3 suggest that a 1-percentage point increase in the SC employment quota increases the likelihood that a less-educated SC member in a rural sector will secure a salaried job by 0.7 percentage points. Contrary to the notion that it was the *"creamy*

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[41]High education dummy takes the value 1 if an individual has completed a college degree and above, 0 otherwise; medium education dummy takes the value 1 if an individual has completed secondary and high secondary schooling, 0 otherwise; and low education dummy takes the value 1 if an individual has completed below secondary schooling, 0 otherwise.

[42]Unfortunately, no household data set provides information on the four classes of jobs in India.

layer or the educated elite" alone who capture benefits of this policy, I find that it benefitted the least-educated SC members-those who have completed below secondary schooling.[43] Perhaps not much should be made of the insignificance of the results for the highly educated SC members. These SC members who could potentially qualify for the best public sector jobs also have other attractive options such as further studies or private sector jobs.[44] This result is consistent with Galanter (1984) who finds that representation of SCs and STs in central government services during the period 1953-1975 was U-shaped in distribution, i.e., they had strong representation in Class I and Class IV jobs, and weak representation in Class II and III jobs. Lastly, the impact on the rural sector is reassuring, as a large share of Class IV jobs are located in rural areas and attract candidates more locally.

I present the results for STs by sector and gender in Appendix Table A.8. Consistent with Appendix Table A.5, I do not find a differential impact of the employment quota on the likelihood of securing a salaried job by sector and gender. This is not entirely surprising, as it is common for a very large number of reserved public sector jobs to go unfilled due to a lack of qualified candidates, among STs in particular (e.g., the majority of public sector jobs have a minimum educational qualification). In addition, it is also argued that the appointing authorities are often indifferent or hostile and do not widely publicize openings in the public sector, thus leading to under-utilization of the employment quota policy. It would not be unfair to state that implementation of the employment quota policy is almost invariably a matter of very low priority for administrators.[45] Another argument put forth by Galanter (1984) is that SC and ST candidates are unfairly eliminated at the later stages of the selection process, particularly where there is room for personal evaluation in the form of an interview or personality test. Therefore, it is not surprising to find the impact of the employment quota policy to be limited.

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[43] According to the Annual Scheduled Caste and Scheduled Tribe Commissioners Report (1974-75), there was a substantial rise in the number of SCs in Class IV (menial) jobs in central government services. The absolute number went up from 161,958 in 1953 to 230,864 in 1975.

[44] Another potential explanation is that these individuals withdraw themselves from the labor market to prepare for the civil service exams required for those jobs. That is, the long run prize of the best public service jobs is inducing short-term unemployment. Obviously, most members of these minority groups cannot afford to do this, but it must be said that SC members with high and medium levels of education are rare (according to Appendix Table 1, they make up less than 7% of all SCs in the sample).

[45] For example, the Administrative Reforms Commission does not discuss the employment quota anywhere in its 1969 Report on Personnel Administration.

5.3 Impact of Employment Quota on Living Standards

In this sub-section, I estimate the effect of employment quotas on the household monthly per capita expenditure (MPCE). MPCE can be viewed as a summary measure of living standards, capturing any changes in employment status or changes in wages, conditional on the employment status. A key advantage of using the MPCE is that it is available for all households, so all employment categories can be included in the analysis. I perform the analysis by education and sector of residence, where the unit of observation is a state-time cell. Table 4 reports the estimates for SCs (Appendix Table A.9 reports the same for STs).

I find the impact of the employment quota on SC MPCE to vary by level of education and sector of residence, depending on the position of the household on the MPCE distribution (i.e. 10th, 25th, median, 75th, 90th, and average percentile). In particular, among the less-educated SC members in rural areas, I find the employment quotas have a positive and statistically significant impact on the average, 90th, median, and below MPCE. For the highly-educated SC members in rural areas, I find the positive impact only in the 10th percentile of MPCE. These results are consistent with the employment results of this study (Table 3), as it was the less-educated SC members residing in rural areas who experienced the increased likelihood of having a salaried job (see Table 3). Consistent with employment results for the STs, I do not find any effect of the employment quota on ST MPCE (see Appendix Table A.9), either for the full sample or after dividing the sample by levels of education and sector of residence.

6 Robustness

Falsification Exercise (A): I use SC individuals aged 60 and above to estimate the impact of the employment quota policy on their employment outcomes as a falsification exercise. This is akin to a control experiment, as individuals retire from the public sector at this age in India. Although the outcome measure of this study is only a proxy for public sector jobs, the age cut-off I use is still valid, as the majority of the Indian population are not actively looking for employment at this age. Ex-ante, the impact of the employment quota on the two minority groups aged 60 and above should be statistically insignificant if it is believed that the effects are solely driven by the policy change.

I estimate Equation (2) for the two minority groups aged 60 and above and present the results in Table 5. I do not find any impact of the employment quota policy for SCs. However, I find the impact of the policy to be negative and statistically significant for male SC members in the urban sector. This possibly suggests that the estimated impact in Table 2 is lower bound.

Control for Minority Political Reservation and Election Year Dummy (B): Pande (2003) shows that minority political reservation leads to an increase in targeted benefits for SCs and STs. The effects were stronger for STs. To be certain that the results I present are driven solely by the employment quota, I control for SC political reservation in Equation 2. In addition, like Pande (2003), I also control for election year dummy to check whether the discontinuities in political reservation are affected by the election year.

After controlling for political reservation (columns 1 and 5) and election year dummy (columns 2 and 6) the estimated effects of the employment quota for SCs by sector is presented in Table 6 (for male SC members) and Table 7 (for female SC members). Similar to Table 2, the results are presented for all India in Panel A, for BIMAROU states in Panel B, and for non-BIMAROU states in Panel C. Overall, I find the results to be robust to the inclusion of SC political quota, and election year dummy.

Quadratic Control for Minority Population Share (C): In order to control for the non-linear effect of the SC population share on employment outcomes, I add the square of the SC population share in the last preceding census in Equation (2). Adding this ensures that identification is solely coming from the discontinuities. It is important to add the square of the SC population share in the last preceding census because the variation in employment quota used for the identification strategy is similar to a regression-discontinuity-type approach; i.e., the SC employment quota variable is a discontinuous function of their population share in the state.

Results are presented in columns 3 and 7 of Table 6 (male SC members) and Table 7 (SC members). Once again, the estimated impact of the SC employment quota remains robust to the inclusion of these additional controls.

A+B+C: SC political reservation, election year dummy, and the square of SC population share in the last preceding census are controlled for together in columns 4 and 8 of Table 6 (male SC members) and Table 7 (female SC members). It is reassuring to find that the main results reported in Table 2 remain robust.

Reverse Causality: A remaining concern despite the exogenous variation in the employment quota is the possibility that employment trends for SCs/STs drive their population growth, which directly impacts the employment quota. I use data from Pande (2003) to estimate how lags in the employment quota variable (SCs and STs combined) impact census population (SCs and STs combined). In particular, in Table 8 I use data from 1950–1992 to report how 10 years and 15 years lag in the employment quota variable impacts the population growth of SCs and STs. It is reassuring to find that the lags in the employment quota do not drive population growth in the state.

7 Conclusion

In this paper, I study the impact of employment-based affirmative action policies on the economic lives of disadvantaged minorities in India. The efficacy of affirmative action policies has been fiercely debated around the world. Despite having been in place since India's independence, the impact of the employment quota policies for SCs and STs has not been studied.

I study how India's employment quota policy for SCs and STs on two important outcomes: the likelihood of finding a salaried job, and monthly per capita consumption expenditure (a proxy for well-being). I find that the policy improved the likelihood of finding a salaried job for male SC members in rural India. Most importantly, I do not find any impact of the policy on STs. Heterogeneity analysis by state characteristics suggests that the impact of the employment quota was more pronounced for the SCs in the BIMAROU states (Bihar, Madhya Pradesh, Orissa, Uttar Pradesh, and Rajasthan) - for both gender and sector.

An argument made by scholars including Galanter (1984) is that the benefits of these policies are disproportionately concentrated among the socio-economic elite of the disadvantaged minorities. Using education as an indicator, I find that it was in fact the less-educated SC members in the rural sector who benefitted from the policy. These employment benefits are also evident in the monthly per-capita consumption expenditure outcome.

Overall, the shorter-term results of this paper suggest that for employment quotas to have a beneficial effect, it is important to match the location and skill requirement of the reserved jobs to attributes of the targeted population. In the longer-term, perhaps, there should be changes in investments in capital and mobility in response to the job opportunities created by the employment

quotas. Along these lines, it would be interesting to estimate the effect of employment quotas on minorities' mobility; in India, there is very little geographic mobility especially across states, but the employment quotas might impact rural-urban migration. Another interesting potential direction for future research is the effect of employment quotas on human capital investments. Employment quotas increase the expected benefits from human capital investments (because there is a better chance of securing a good job). It would be interesting to explore whether adults invest more in higher education and useful work experience.

Finally, to better target the impact of affirmative action policies, rigorous evaluation should become an essential component for policymakers. This is especially true in the face of trade-offs related to such policies and the social implications of their expansion. Further, in order to bring real change to any society, affirmative action policies should be just one part of a broader policy stance, as it has become increasingly obvious that some constraints faced by disadvantaged groups are outside the scope of affirmative action policies. Therefore, policymakers in India and other parts of the world could incorporate complementary policies that relax these existing constraints and therefore enable disadvantaged groups to be represented without affirmative action. Further, as this is a dynamic process, continuous evaluation of targeted goals and useful policy responses is critical. Creating public discourse around the current constraints faced by disadvantaged groups, identifying new constraints that develop over time, and discussion of the channels through which policy can identify and target these constraints are essential to this process in India and around the world.

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Table 1: Variation in SC and ST Employment Quota

	SC Employment Quota				ST Employment Quota			
	1983	**1988**	**1994**	**1999**	**1983**	**1988**	**1994**	**1999**
All India	14.9	14.97	15.06	15.25	7.46	7.63	8.38	8.38
Andhra Pradesh	14	15	15	15	4	6	6	6
Assam	7	7	6	6	10	10	11	11
Bihar	14	14	15	15	9	9	9	9
Gujarat	7	7	7	7	10	10	14	14
Haryana	20	20	20	19	5	5	5	5
Jammu & Kashmir	8	8	8	8	5	5	5	5
Karnataka	15	15	15	15	3	3	3	3
Kerala	8	8	8	8	3	2	2	2
Madhya Pradesh	15.5	15.5	14	14	19	19	23	23
Maharashtra	13	13	13	13	7	7	7	7
Odisha	15	15	15	15	23	23	23	23
Punjab	25	25	27	27	5	5	5	5
Rajasthan	16	16	17	17	12	12	12	12
Tamil Nadu	18	18	18	19	0	0	0	1
Uttar Pradesh	18	18	18	21	2	2	2	1
West Bengal	25	25	25	25	10	10	10	10

NOTES: These figures are from the Scheduled Caste and Scheduled Tribe Annual Commissioner's Report.

Table 2: Impact of Employment Quota on SC Labor Market Outcomes

Dependent Variable:	Salaried Employed			
	Male		Female	
	Rural	Urban	Rural	Urban
	(1)	(2)	(3)	(4)
Panel A: All India				
SC Employment Quota	0.006*	-0.001	-0.000	0.023
	(0.003)	(0.007)	(0.003)	(0.018)
Wild bootstrap p-value	[0.109]	[0.928]	[0.919]	[0.344]
Number of observations	60,019	23,412	26,501	6,658
R-Squared	0.076	0.112	0.173	0.150
Panel B: BIMAROU States				
SC Employment Quota	0.016***	0.013***	0.002***	0.048***
	(0.000)	(0.001)	(0.000)	(0.003)
Wild bootstrap p-value	[0.000]	[0.000]	[0.000]	[0.000]
Number of observations	28,139	8,236	11,447	1,993
R-Squared	0.073	0.086	0.283	0.251
Panel C: Non-BIMAROU States				
SC Employment Quota	-0.014	-0.068**	0.069	0.157**
	(0.011)	(0.021)	(0.044)	(0.059)
Wild bootstrap p-value	[0.435]	[0.038]	[0.232]	[0.000]
Number of observations	31,880	15,176	15,054	4,665
R-Squared	0.070	0.128	0.157	0.118
Population Controls	Yes	Yes	Yes	Yes
Education Controls	Yes	Yes	Yes	Yes
State Level Controls	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes
State and Year Fixed Effects	Yes	Yes	Yes	Yes

NOTES: This table reports the coefficients corresponding to specification (2) estimated by gender and sector for SCs aged 18-45 living in the 16 major Indian states. The dependent variable is likelihood of finding a salaried job. Population controls include: SC census population, SC current population; Education controls include: dummy for high (college degree and above), medium (completed secondary and high secondary schooling), and low (below secondary) education; State level controls include: population density, rural population share, and state income last year; and Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table 3: Impact of SC Employment Quota on SC Labor Market Outcomes by Education Level

Dependent Variable:	Salaried Employed			
	Male		Female	
	Rural	Urban	Rural	Urban
	(1)	(2)	(3)	(4)
SC Employment Quota*High Education	-0.006	-0.005	-0.017**	-0.026
	(0.006)	(0.009)	(0.008)	(0.015)
SC Employment Quota*Medium Education	-0.004	-0.003	0.022	-0.001
	(0.003)	(0.005)	(0.014)	(0.016)
SC Employment Quota	0.007**	0.000	-0.000	0.023
	(0.003)	(0.008)	(0.003)	(0.018)
High Education Dummy	0.422***	0.387*	0.856***	0.829***
	(0.106)	(0.198)	(0.153)	(0.240)
Medium Education Dummy	0.189***	0.268**	0.016	0.350
	(0.053)	(0.106)	(0.225)	(0.272)
Constant	0.013	6.127**	0.512	2.412
	(1.059)	(2.515)	(0.969)	(2.268)
Number of observations	60,019	23,412	26,501	6,658
R-Squared	0.077	0.112	0.183	0.154
Population Controls	Yes	Yes	Yes	Yes
State Level Controls	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes
State and Year Fixed Effects	Yes	Yes	Yes	Yes

NOTES: This table reports the coefficients corresponding to specification (2) interacted with levels of education dummies (high education dummy is completed college degree and above; medium education dummy is completed secondary and high secondary schooling; and low education dummy (the omitted category) is completed below secondary schooling) estimated by sector of residence and gender for SC individuals aged 18-45 living in the 16 major Indian states. Each column is a separate regression. The dependent variable is likelihood of finding a salaried job. Population controls include: SC census population, SC current population; State level controls include: population density, rural population share, and state income last year; and Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table 4: Impact of SC Employment Quota on SC Well Being

Dependent Variable:	Log(Total HH Expenditure Last Month)					
	Rural			Urban		
	Coefficient for SC Employment Quota					
	Low Education	Medium Education	High Education	Low Education	Medium Education	High Education
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Average)	0.034*	0.027	0.095	0.011	-0.039	0.350
	(0.017)	(0.050)	(0.113)	(0.017)	(0.052)	(0.563)
Log(90th Percentile)	0.034*	0.044	-0.014	-0.035	-0.029	0.312
	(0.019)	(0.062)	(0.088)	(0.034)	(0.072)	(0.566)
Log(75th Percentile)	0.024	0.058	-0.036	-0.010	-0.011	0.409
	(0.015)	(0.049)	(0.123)	(0.021)	(0.061)	(0.484)
Log(Median)	0.025*	0.054	0.146	0.017	-0.001	0.381
	(0.015)	(0.045)	(0.172)	(0.016)	(0.043)	(0.600)
Log(25th Percentile)	0.039**	0.029	0.157	0.020	-0.039	0.243
	(0.015)	(0.057)	(0.114)	(0.019)	(0.037)	(0.598)
Log(10th Percentile)	0.046***	0.034	0.192*	0.021	-0.111	0.291
	(0.016)	(0.070)	(0.096)	(0.023)	(0.163)	(0.575)
State Level Controls	Yes	Yes	Yes	Yes	Yes	Yes
State and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

NOTES: The dependent variable is Log(Total Household Expenditure Last Month) at the state-year level by sector of residence and levels of education living in the 16 major Indian states. Each row-column reports the coefficient for SC Employment Quota from a separate regression. State level controls include: SC census and current population, population density, rural population share, and state income last year. High Educated implies an individual who has completed college degree and above; medium education implies an individual who has completed secondary and high secondary schooling; and low education implies someone who has completed below secondary schooling. Robust standard errors are reported in brackets. *** 1%, ** 5%, * 10%.

Table 5: Placebo (Age 60 and above)–Impact of Employment Quota on Labor Market Outcomes

Dependent Variable:	Salaried Employed			
	Male		Female	
	Rural	Urban	Rural	Urban
	(1)	(2)	(3)	(4)
SC Employment Quota	0.008	-0.036***	-0.011	-0.058
	(0.005)	(0.012)	(0.007)	(0.035)
Number of observations	3,895	745	960	232
R-Squared	0.046	0.166	0.072	0.465
Population Controls	Yes	Yes	Yes	Yes
Education Controls	Yes	Yes	Yes	Yes
State Level Controls	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes
State and Year Fixed Effects	Yes	Yes	Yes	Yes

NOTES: This table reports the coefficients corresponding to specification (2) estimated by gender and sector of residence for SC individuals aged 60 and above living in the 16 major Indian states. Each column is a separate regression. The dependent variable is likelihood of finding a salaried job. Population controls include: SC census population, SC current population; State level controls include: population density, rural population share, and state income last year; Education controls include: dummy for high (college degree and above), medium (completed secondary and high secondary schooling), and low (below secondary) education; State level controls include: population density, rural population share, and state income last year; and Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table 6: Robustness–Impact of Employment Quota on Male SC Labor Market Outcomes

Dependent Variable:	Salaried Employed							
	Male							
	Rural				Urban			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: All India								
SC Employment Quota	0.006*	0.008**	0.006*	0.008**	0.006*	0.008**	-0.001	0.005
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.007)	(0.010)
Number of observations	60,019	60,019	60,019	60,019	60,019	60,019	23,412	23,412
R-Squared	0.076	0.076	0.076	0.076	0.076	0.076	0.112	0.112
Panel B: BIMAROU States								
SC Employment Quota	0.016***	0.016***	0.016***	0.016***	0.016***	0.016***	0.013***	0.013***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)
Number of observations	28,139	28,139	28,139	28,139	28,139	28,139	8,236	8,236
R-Squared	0.073	0.073	0.073	0.073	0.073	0.073	0.086	0.086
Panel C: Non-BIMAROU States								
SC Employment Quota	-0.014	-0.015	-0.014	-0.014	-0.014	-0.015	-0.069***	-0.084**
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.021)	(0.033)
Number of observations	31,880	31,880	31,880	31,880	31,880	31,880	15,176	15,176
R-Squared	0.070	0.070	0.070	0.070	0.070	0.070	0.128	0.128
Population Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SC Political Quota (A)	Yes	No	No	No	Yes	No	No	No
Election Year Dummy (B)	No	Yes	No	No	No	Yes	No	No
Quadractic Population Controls (C)	No	No	Yes	No	No	No	Yes	No
A + B + C	No	No	No	Yes	No	No	No	Yes

NOTES: This table reports the coefficients corresponding to specification (2) estimated by gender and sector for SCs aged 18-45 living in the 16 major Indian states. The dependent variable is likelihood of finding a salaried job. Population controls include: SC census population, SC current population; Education controls include: dummy for high (college degree and above), medium (completed secondary and high secondary schooling), and low (below secondary) education; State level controls include: population density, rural population share, and state income last year; and Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table 7: Robustness–Impact of Employment Quota on Female SC Labor Market Outcomes

Dependent Variable:				Salaried Employed				
				Female				
		Rural				Urban		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: All India								
SC Employment Quota	-0.000	0.000	-0.000	0.000	0.023	0.033**	0.023	0.033**
	(0.003)	(0.005)	(0.003)	(0.005)	(0.018)	(0.014)	(0.018)	(0.014)
Number of observations	26,501	26,501	26,501	26,501	6,658	6,658	6,658	6,658
R-Squared	0.173	0.173	0.173	0.173	0.150	0.151	0.150	0.151
Panel B: BIMAROU States								
SC Employment Quota	0.002***	0.002***	0.002***	0.002***	0.048***	0.048***	0.049***	0.049***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.003)	(0.003)	(0.004)	(0.004)
Number of observations	11,447	11,447	11,447	11,447	1,993	1,993	1,993	1,993
R-Squared	0.283	0.283	0.283	0.283	0.251	0.251	0.251	0.251
Panel C: Non-BIMAROU States								
SC Employment Quota	0.069	0.069	0.071	0.072	0.157**	0.111*	0.159**	0.114*
	(0.044)	(0.053)	(0.046)	(0.055)	(0.059)	(0.058)	(0.060)	(0.061)
Number of observations	15,054	15,054	15,054	15,054	4,665	4,665	4,665	4,665
R-Squared	0.157	0.157	0.158	0.158	0.118	0.120	0.118	0.120
Population Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SC Political Quota (A)	Yes	No	No	No	Yes	No	No	No
Election Year Dummy (B)	No	Yes	No	No	No	Yes	No	No
Quadractic Population Controls (C)	No	No	Yes	No	No	No	Yes	No
A + B + C	No	No	No	Yes	No	No	No	Yes

NOTES: This table reports the coefficients corresponding to specification (2) estimated by gender and sector for SCs aged 18-45 living in the 16 major Indian states. The dependent variable is likelihood of finding a salaried job. Population controls include: SC census population, SC current population; Education controls include: dummy for high (college degree and above), medium (completed secondary and high secondary schooling), and low (below secondary) education; State level controls include: population density, rural population share, and state income last year; and Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table 8: Robustness–Testing for Reverse Causality

Dependent Variable:	(SC+ST) Census Population
	Panel A: 10 Year Lag
Lag (SC + ST) Employment Quota)	0.029
	(0.018)
Observations	526
R-squared	0.970
	Panel B: 15 Year Lag
Lag (SC + ST) Employment Quota)	0.021
	(0.015)
Observations	446
R-squared	0.985

NOTES: This regression uses data from Pande (2003) for the years 1950–1992. The specification includes: population density in the last census, rural population share, log of state income per-capita, state fixed effects, and year fixed effects. Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Online Appendix Figures

Figure A.1: Identification Strategy
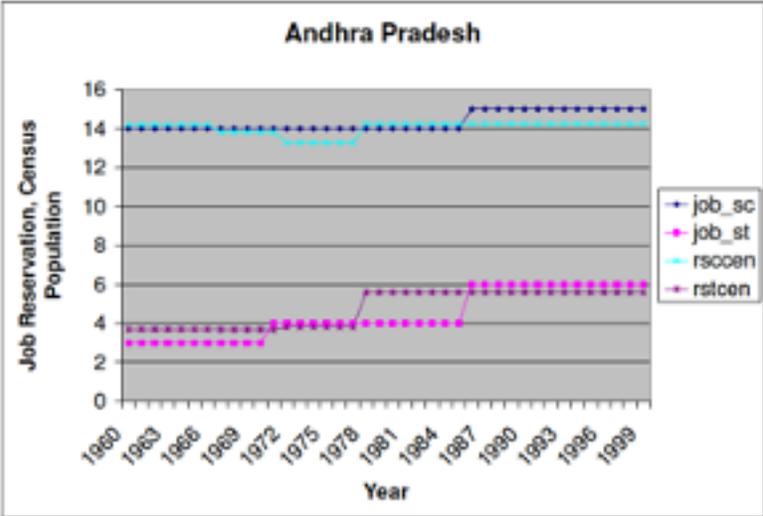
NOTES: This figure uses data from the Indian state of Andhra Pradesh to show the jumps and lags in the SC and ST employment quota as a function of SC and ST census population share.

Online Appendix Tables

Table A.1: Descriptive Statistics in Estimation Sample

| | Scheduled Castes | | | | Scheduled Tribes | | | |
| | Male | | Female | | Male | | Female | |
Dependent Variable:	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Salaried	0.09	0.36	0.04	0.27	0.08	0.41	0.03	0.26
	(0.29)	(0.48)	(0.20)	(0.45)	(0.27)	(0.49)	(0.16)	(0.44)
No. of observations	60,645	23,704	26,606	6,702	34,952	5,948	21,157	1,904
Control Variables:								
Age	30.52	30.65	30.94	31.88	30.72	30.80	30.05	31.07
	(8.04)	(8.00)	(7.96)	(7.99)	(7.92)	(7.80)	(7.97)	(8.03)
Married Dummy	0.79	0.75	0.86	0.73	0.80	0.75	0.87	0.76
	(0.40)	(0.43)	(0.34)	(0.44)	(0.39)	(0.43)	(0.33)	(0.43)
Hindu	0.94	0.93	0.96	0.94	0.93	0.88	0.95	0.90
	(0.25)	(0.26)	(0.19)	(0.23)	(0.24)	(0.32)	(0.21)	(0.29)
Muslim	0.01	0.02	0.00	0.00	0.00	0.04	0.00	0.02
	(0.08)	(0.12)	(0.06)	(0.01)	(0.01)	(0.19)	(0.06)	(0.13)
Christian	0.01	0.02	0.10	0.02	0.04	0.04	0.03	0.05
	(0.10)	(0.13)	(0.12)	(0.15)	(0.12)	(0.20)	(0.18)	(0.22)
Sikh	0.04	0.02	0.01	0.00	0.00	0.00	0.00	0.00
	(0.20)	(0.15)	(0.10)	(0.01)	(0.53)	(0.08)	(0.02)	(0.06)
Buddhist	0.00	0.01	0.00	0.15	0.00	0.00	0.00	0.00
	(0.07)	(0.11)	(0.09)	(0.12)	(0.02)	(0.04)	(0.03)	(0.45)
Jain	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.10)	(0.00)	(0.03)
High Educated Dummy	0.01	0.04	0.00	0.02	0.00	0.06	0.00	0.05
	(0.11)	(0.20)	(0.06)	(0.15)	(0.01)	(0.24)	(0.05)	(0.23)
Medium Educated Dummy	0.06	0.12	0.01	0.06	0.05	0.14	0.00	0.07
	(0.24)	(0.32)	(0.11)	(0.24)	(0.21)	(0.35)	(0.10)	(0.26)
Low Educated Dummy	0.92	0.84	0.98	0.91	0.94	0.78	0.99	0.87
	(0.26)	(0.36)	(0.13)	(0.28)	(0.23)	(0.40)	(0.10)	(0.33)
No. of observations	60,643	23,701	26,606	6,696	34,952	5,945	21,142	1,904

	Rural		Urban		Rural		Urban	
Log(Monthly per capita expenditure)	5.80		6.29		5.67		6.30	
	(1.13)		(1.18)		(1.14)		(1.24)	
No. of observations	86,827		30,224		55,881		7,810	

NOTES: Data consists of ST/ST individuals aged 18–45 not currently enrolled living in one of the 16 major Indian states (Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal) from the 1983-84, 1987-88, 1993-94, and 1999-00 Employment and Unemployment Rounds of the National Sample Survey. High education dummy is completed college degree and above; medium education dummy is completed secondary and high secondary schooling; and low education dummy is completed below secondary schooling. Household monthly per capita consumption expenditure is in real terms and deflated using state poverty line with 1983 as the base year.

Table A.2: Descriptive Statistics in Estimation Sample

Key Independent Variables:	
SC employment quota	15.44
	(5.03)
ST employment quota	8.03
	(6.42)
State Level Controls:	
SC census population share	15.66
	(5.35)
SC current population share	15.79
	(5.30)
St census population share	7.79
	(7.24)
ST current population share	7.81
	(7.24)
Population density (per square km)	331.47
	(181.01)
Rural population share (%)	74.45
	(8.35)
Log of state income per capita last year	7.19
	(0.35)
SC share reserved in state assembly	14.60
	(5.42)
ST share reserved in state assembly	7.45
	(7.48)
Election dummy	0.15
	(0.35)

NOTES: SC/ST Employment quota comes from the SC and ST Annual Commissioner's Report (Government of India). The Census of India provides the data on SC and ST census population shares and current population shares. Population density is computed as the total population in the state according to the last preceding census divided by total land area of the state., while the rural population share comes from Ozler et al. (1996) and is computed from the National Sample Survey. The state income measure comes from the Planning Commission, Government of India. Data on SC/ST political reservations and Election year dummy comes from the Election Commission of India reports on state elections.

Table A.3: Impact of SC Employment Quota on Male SC Labor Market Outcomes

Dependent Variable:					Male Salaried Employed							
				Rural						Urban		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
SC Employment Quota	-0.000	-0.009	-0.009	-0.009	-0.002	0.006*	-0.002	0.027	0.029	0.027	0.037	-0.001
	(0.003)	(0.011)	(0.010)	(0.009)	(0.005)	(0.003)	(0.003)	(0.019)	(0.022)	(0.022)	(0.022)	(0.007)
SC Census Population Share		0.041	0.049	0.044	-0.021	-0.012		-0.075	-0.041	-0.031	-0.056	0.012
		(0.060)	(0.053)	(0.048)	(0.043)	(0.020)		(0.115)	(0.127)	(0.124)	(0.091)	(0.042)
SC Current Population Share		-0.032	-0.041	-0.036	0.022	0.030		0.045	0.008	0.002	0.022	-0.014
		(0.054)	(0.048)	(0.043)	(0.041)	(0.037)		(0.099)	(0.117)	(0.113)	(0.077)	(0.075)
High Education Dummy				0.317***	0.316***	0.315***				0.295***	0.295***	0.296***
				(0.032)	(0.031)	(0.031)				(0.051)	(0.050)	(0.050)
Medium Education Dummy				0.129***	0.125***	0.122***				0.218***	0.213***	0.214***
				(0.020)	(0.020)	(0.020)				(0.032)	(0.032)	(0.033)
Population Density					-0.000	0.000					-0.000***	0.000
					(0.000)	(0.000)					(0.000)	(0.000)
Rural Population Share					-0.000	-0.008**					-0.001	-0.042***
					(0.001)	(0.003)					(0.004)	(0.009)
State Income Last Year					0.064*	-0.014					0.075	-0.380*
					(0.035)	(0.067)					(0.081)	(0.207)
Constant	0.079*	0.062	-0.133*	-0.079	-0.495	0.518	0.364***	0.393***	0.087	0.204	-0.304	6.257**
	(0.042)	(0.050)	(0.076)	(0.075)	(0.369)	(0.714)	(0.068)	(0.076)	(0.239)	(0.238)	(0.843)	(2.396)
Number of observations	60,645	60,021	60,021	60,019	60,019	60,019	23,704	23,415	23,415	23,412	23,412	23,412
R-Squared	0.000	0.001	0.009	0.061	0.068	0.076	0.000	0.004	0.041	0.088	0.098	0.112
Demographic Controls	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
State and Year Fixed Effects	No	No	No	No	No	Yes	No	No	No	No	No	Yes

NOTES: This table reports the coefficients corresponding to specification (2) estimated for SC males aged 18-45 living in the 16 major Indian states. Each column is a separate regression. The dependent variable is likelihood of finding a salaried job. Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table A.4: Impact of SC Employment Quota on Female SC Labor Market Outcomes

Dependent Variable:						Female Salaried Employed						
				Rural						Urban		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
SC Employment Quota	-0.001	-0.009	-0.008	-0.006	-0.009	-0.000	0.009*	0.020	0.020	0.024	0.027	0.023
	(0.003)	(0.010)	(0.009)	(0.008)	(0.007)	(0.003)	(0.005)	(0.032)	(0.029)	(0.025)	(0.016)	(0.018)
SC Census Population Share		0.052	0.053	0.040	0.029	-0.002		-0.005	0.016	0.004	-0.151	-0.051
		(0.040)	(0.040)	(0.036)	(0.051)	(0.020)		(0.194)	(0.185)	(0.153)	(0.102)	(0.077)
SC Current Population Share		-0.043	-0.046	-0.035	-0.023	0.016		-0.007	-0.029	-0.019	0.132	0.153
		(0.033)	(0.034)	(0.031)	(0.045)	(0.041)		(0.166)	(0.161)	(0.132)	(0.091)	(0.169)
High Education Dummy				0.556***	0.548***	0.544***				0.452***	0.444***	0.423***
				(0.083)	(0.083)	(0.082)				(0.066)	(0.068)	(0.071)
Medium Education Dummy				0.354***	0.347***	0.341***				0.366***	0.348***	0.336***
				(0.072)	(0.076)	(0.077)				(0.064)	(0.065)	(0.070)
Population Density					0.000***	-0.000					0.000	-0.000
					(0.000)	(0.000)					(0.000)	(0.001)
Rural Population Share					0.001	-0.005					-0.004	-0.020**
					(0.002)	(0.004)					(0.003)	(0.009)
State Income Last Year					0.049*	-0.054					0.135	-0.246
					(0.027)	(0.099)					(0.109)	(0.265)
Constant	0.050	0.034	0.056	-0.026	-0.472	0.625	0.129	0.138	-0.437	-0.470*	-1.206	0.044
	(0.044)	(0.036)	(0.066)	(0.069)	(0.330)	(0.964)	(0.083)	(0.109)	(0.275)	(0.263)	(0.972)	(3.759)
Number of observations	26,606	26,501	26,501	26,501	26,501	26,501	6,702	6,664	6,664	6,658	6,658	6,658
R-Squared	0.000	0.003	0.012	0.145	0.151	0.173	0.008	0.009	0.029	0.112	0.130	0.150
Demographic Controls	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
State and Year Fixed Effects	No	No	No	No	No	Yes	No	No	No	No	No	Yes

NOTES: This table reports the coefficients corresponding to specification (2) estimated for SC males aged 18-45 living in the 16 major Indian states. Each column is a separate regression. The dependent variable is likelihood of finding a salaried job. Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

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Table A.5: Impact of Employment Quota on ST Labor Market Outcomes

Dependent Variable:	Salaried Employed			
	Male		Female	
	Rural	Urban	Rural	Urban
	(1)	(2)	(3)	(4)
Panel A: All India				
ST Employment Quota	-0.008	0.052	-0.024*	-0.434***
	(0.016)	(0.094)	(0.013)	(0.105)
Wild bootstrap p-value	[0.682]	[0.708]	[0.172]	[0.000]
Number of observations	34,914	5,924	21,136	1,899
R-Squared	0.151	0.172	0.106	0.374
Panel B: BIMAROU States				
ST Employment Quota	0.046*	0.072	0.015	-0.181
	(0.019)	(0.043)	(0.009)	(0.152)
Wild bootstrap p-value	[0.500]	[0.375]	[0.063]	[0.500]
Number of observations	19,699	2,534	12,629	774
R-Squared	0.159	0.217	0.067	0.453
Panel C: Non-BIMAROU States				
ST Employment Quota	0.018	0.552**	-0.012	-0.291
	(0.027)	(0.239)	(0.030)	(0.203)
Wild bootstrap p-value	[0.502]	[0.150]	[0.893]	[0.428]
Number of observations	15,215	3,390	8,507	1,125
R-Squared	0.143	0.179	0.154	0.356
Population Controls	Yes	Yes	Yes	Yes
Education Controls	Yes	Yes	Yes	Yes
State Level Controls	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes
State and Year Fixed Effects	Yes	Yes	Yes	Yes

NOTES: This table reports the coefficients corresponding to specification (2) estimated by gender and sector for STs aged 18-45 living in the 16 major Indian states. The dependent variable is likelihood of finding a salaried job. Population controls include: ST census population, ST current population; Education controls include: dummy for high (college degree and above), medium (completed secondary and high secondary schooling), and low (below secondary) education; State level controls include: population density, rural population share, and state income last year; and Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table A.6: Impact of ST Employment Quota on Female ST Labor Market Outcomes

Dependent Variable:						Male Salaried Employed						
			Rural						Urban			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
ST Employment Quota	-0.002***	0.004	0.004	0.007	0.011	-0.008	0.001	-0.032**	-0.030**	-0.029**	0.009	0.052
	(0.001)	(0.007)	(0.006)	(0.007)	(0.007)	(0.016)	(0.003)	(0.012)	(0.011)	(0.012)	(0.014)	(0.094)
ST Census Population Share		0.003	0.001	-0.005	-0.003	0.019		0.073***	0.071***	0.064***	0.074***	-0.028
		(0.013)	(0.011)	(0.012)	(0.007)	(0.023)		(0.020)	(0.017)	(0.015)	(0.017)	(0.156)
ST Current Population Share		-0.009	-0.007	-0.003	-0.008	0.010		-0.041*	-0.041*	-0.034	-0.081**	-0.098
		(0.016)	(0.014)	(0.015)	(0.012)	(0.025)		(0.020)	(0.020)	(0.021)	(0.029)	(0.146)
High Education Dummy				0.491***	0.493***	0.498***				0.394***	0.397***	0.401***
				(0.064)	(0.064)	(0.064)				(0.041)	(0.040)	(0.039)
Medium Education Dummy				0.232***	0.231***	0.232***				0.253***	0.255***	0.255***
				(0.037)	(0.037)	(0.037)				(0.041)	(0.041)	(0.041)
Population Density					0.000	0.000					-0.000	-0.001
					(0.000)	(0.001)					(0.000)	(0.001)
Rural Population Share					-0.001	-0.005					-0.007**	-0.025
					(0.001)	(0.007)					(0.003)	(0.037)
State Income Last Year					0.036	0.010					-0.048	-0.193
					(0.028)	(0.058)					(0.079)	(0.468)
Constant	0.093***	0.096***	0.011	-0.003	-0.223	0.430	0.353***	0.353***	-0.388**	-0.255	0.692	5.056
	(0.014)	(0.018)	(0.066)	(0.058)	(0.296)	(0.807)	(0.058)	(0.030)	(0.167)	(0.173)	(0.857)	(4.109)
Number of observations	34,952	34,914	34,914	34,914	34,914	34,914	5,948	5,927	5,927	5,924	5,924	5,924
R-Squared	0.004	0.006	0.021	0.142	0.147	0.151	0.000	0.015	0.066	0.156	0.162	0.172
Demographic Controls	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
State and Year Fixed Effects	No	No	No	No	No	Yes	No	No	No	No	No	Yes

NOTES: This table reports the coefficients corresponding to specification (2) estimated for ST males aged 18-45 living in the 16 major Indian states. Each column is a separate regression. The dependent variable is likelihood of finding a salaried job. Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table A.7: Impact of ST Employment Quota on Female ST Labor Market Outcomes

Dependent Variable:						Female Salaried Employed						
			Rural						Urban			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
ST Employment Quota	0.000	0.015**	0.014*	0.016*	0.011	-0.024*	-0.003	-0.026	-0.032*	-0.028*	-0.030	-0.434***
	(0.001)	(0.007)	(0.007)	(0.008)	(0.011)	(0.013)	(0.003)	(0.015)	(0.017)	(0.014)	(0.029)	(0.105)
ST Census Population Share		0.004	0.003	-0.000	-0.012	0.051		0.113***	0.099**	0.074*	0.077**	0.727**
		(0.007)	(0.008)	(0.008)	(0.009)	(0.044)		(0.021)	(0.035)	(0.036)	(0.036)	(0.338)
ST Current Population Share		-0.019	-0.018	-0.015	0.003	0.045*		-0.093***	-0.072	-0.048	-0.051	0.577***
		(0.012)	(0.013)	(0.013)	(0.017)	(0.023)		(0.026)	(0.042)	(0.035)	(0.054)	(0.178)
High Education Dummy				0.479***	0.476***	0.499***				0.502***	0.502***	0.496***
				(0.135)	(0.135)	(0.140)				(0.107)	(0.102)	(0.109)
Medium Education Dummy				0.232***	0.227***	0.231***				0.612***	0.614***	0.609***
				(0.040)	(0.039)	(0.040)				(0.064)	(0.066)	(0.072)
Population Density					0.000	-0.000					-0.000	-0.008**
					(0.000)	(0.000)					(0.000)	(0.004)
Rural Population Share					-0.001	0.004					0.007	-0.088*
					(0.002)	(0.006)					(0.004)	(0.044)
State Income Last Year					0.000	-0.065					0.211*	-0.076
					(0.037)	(0.048)					(0.109)	(0.449)
Constant	0.026	0.037**	0.012	-0.004	0.024	-1.487	0.298***	0.327***	-0.147	-0.590**	-2.559*	9.660*
	(0.015)	(0.015)	(0.045)	(0.048)	(0.406)	(1.091)	(0.057)	(0.043)	(0.313)	(0.202)	(1.217)	(5.123)
Number of observations	21,157	21,151	21,151	21,136	21,136	21,136	1,904	1,899	1,899	1,899	1,899	1,899
R-Squared	0.000	0.017	0.027	0.086	0.093	0.106	0.003	0.027	0.094	0.335	0.340	0.374
Demographic Controls	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
State and Year Fixed Effects	No	No	No	No	No	Yes	No	No	No	No	No	Yes

NOTES: This table reports the coefficients corresponding to specification (2) estimated for ST females aged 18-45 living in the 16 major Indian states. Each column is a separate regression. The dependent variable is likelihood of finding a salaried job. Demographic controls include: age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table A.8: Impact of ST Employment Quota on ST Labor Market Outcomes by Education Level

Dependent Variable:	Salaried Employed			
	Male		Female	
	Rural	Urban	Rural	Urban
	(1)	(2)	(3)	(4)
ST Employment Quota*High Education	0.001	0.004	0.000	-0.001
	(0.007)	(0.004)	(0.022)	(0.011)
ST Employment Quota*Medium Education	0.006	0.003	-0.010	0.003
	(0.005)	(0.004)	(0.006)	(0.006)
ST Employment Quota	-0.009	0.048	-0.024*	-0.432***
	(0.016)	(0.094)	(0.013)	(0.103)
High Education Dummy	0.484***	0.353***	0.499	0.504**
	(0.127)	(0.086)	(0.290)	(0.176)
Medium Education Dummy	0.159**	0.218**	0.337***	0.572***
	(0.055)	(0.087)	(0.084)	(0.139)
Constant	0.037	3.316	-1.585	-9.885
	(0.764)	(4.250)	(1.102)	(8.290)
Number of observations	34,914	5,924	21,136	1,899
R-Squared	0.153	0.173	0.108	0.374
Population Controls	Yes	Yes	Yes	Yes
State Level Controls	Yes	Yes	Yes	Yes
Demographic Controls	Yes	Yes	Yes	Yes
State and Year Fixed Effects	Yes	Yes	Yes	Yes

NOTES: This table reports the coefficients corresponding to specification (2) interacted with levels of education dummies (high education dummy is completed college degree and above; medium education dummy is completed secondary and high secondary schooling; and low education dummy (the omitted category) is completed below secondary schooling) estimated by sector of residence and gender for ST individuals aged 18-45 living in the 16 major Indian states. Each column is a separate regression. The dependent variable is likelihood of finding a salaried job. Population controls include: ST census population, ST current population; State level controls include: population density, rural population share, and state income last year; and Demographic controls include, age, square of age, married dummy, and religion dummies (Hindu, Muslim, Christian, Sikh, Buddhist, and Jain). Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table A.9: Impact of ST Employment Quota on ST Well Being

Dependent Variable:	Log(Total HH Expenditure Last Month)					
	Rural			Urban		
	Coefficient for ST Employment Quota					
	Low Education	Medium Education	High Education	Low Education	Medium Education	High Education
	(1)	(2)	(3)	(4)	(5)	(6)
Log(Average)	-0.005	0.045	-0.242	-0.020	0.007	0.029
	(0.021)	(0.066)	(0.181)	(0.022)	(0.085)	(0.282)
Log(90th Percentile)	0.017	0.017	-0.311	0.033	-0.027	0.611
	(0.022)	(0.074)	(0.237)	(0.031)	(0.083)	(0.584)
Log(75th Percentile)	0.003	0.046	-0.389	0.016	-0.001	-0.514*
	(0.022)	(0.066)	(0.234)	(0.032)	(0.062)	(0.280)
Log(Median)	-0.010	0.056	-0.206	-0.024	0.035	-0.090
	(0.022)	(0.069)	(0.182)	(0.027)	(0.075)	(0.331)
Log(25th Percentile)	-0.011	0.066	-0.168	-0.033	-0.038	0.233
	(0.023)	(0.075)	(0.240)	(0.027)	(0.132)	(0.287)
Log(10th Percentile)	-0.037	0.131	-0.233	-0.102	0.201	0.135
	(0.058)	(0.090)	(0.254)	(0.072)	(0.362)	(0.174)
Other Controls	Yes	Yes	Yes	Yes	Yes	Yes
State and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

NOTES: The dependent variable is Log(Total Household Expenditure Last Month) at the state-year level by sector of residence and levels of education living in the 16 major Indian states. Each row-column reports the coefficient for ST Employment Quota from a separate regression. State level controls include: ST census population, ST current population, population density, rural population share, and state income last year. High Educated implies an individual who has completed college degree and above; medium education implies an individual who has completed secondary and high secondary schooling; and low education implies someone who has completed below secondary schooling. Robust standard errors are reported in brackets. *** 1%, ** 5%, * 10%.