



Economics Working Paper Series

2020/021

**Social Identity, Behavior, and Personality: Evidence
from India**

Utteeyo Dasgupta, Subha Mani, Smriti Sharma, Saurabh Singhal

The Department of Economics
Lancaster University Management School
Lancaster LA1 4YX
UK

© Authors

All rights reserved. Short sections of text, not to exceed
two paragraphs, may be quoted without explicit permission,
provided that full acknowledgement is given.

LUMS home page: <http://www.lancaster.ac.uk/lums/>

Social Identity, Behavior, and Personality: Evidence from India

UTTEEYO DASGUPTA¹, SUBHA MANI², SMRITI SHARMA³, SAURABH SINGHAL⁴

Abstract: Hierarchies in social identities have been found to be integrally related to divergences in economic status. In India, caste is one such significant social identity where continued discriminatory practices towards the lower castes have resulted in poor outcomes for them. While there is considerable work on such divergence on many economic outcomes along caste lines, there is no work on behavioral preferences and personality traits that can also be adversely affected by such identity hierarchies, and that are important determinants of educational attainments and labor market performances. We combine rich data from incentivized tasks and surveys conducted among a large sample of university students in a Seemingly Unrelated Regression framework and find that the historically marginalized Scheduled Castes and Scheduled Tribes (SCSTs) and Other Backward Classes (OBCs) fare worse than the upper castes along several dimensions of economic behavior such as competitiveness and confidence and personality traits such as grit, locus of control, and conscientiousness. Further, we find that parental investments only have limited compensatory effects on these gaps. This suggests a need for redesigning the structure of affirmative action policies in India as well as targeting interventions with an aim to improving soft skills among the disadvantaged.

JEL classification: I23, C9, C18, J24, O15

Keywords: Behavioral Preferences, Personality, Caste, Experiments, India

We thank Catherine Bros, Ashwini Deshpande, Naveen Sunder and participants at the UNU-WIDER Workshop on ‘Discrimination and Affirmative Action: What have we learnt so far?’ and ASREC Europe Meeting 2016 for comments. We acknowledge support from UNU-WIDER and IGC-India Central grant 1-R002456. These institutions had no involvement in the study design, data collection, analysis or interpretation. Neha Agarwal, Riju Bafna, Piyush Bhadani, Japneet Kaur and Anshul Yadav provided excellent research assistance. We are grateful to the staff at the various colleges in the University of Delhi for lending their support in conducting the study. The usual disclaimer applies.

¹ Wagner College, NY; Center for International Policy Studies, Fordham University, NY, USA; IZA, Bonn, Germany. utteeyodasgupta@gmail.com

² Department of Economics and Center for International Policy Studies, Fordham University, NY, USA; Population Studies Center, University of Pennsylvania, PA, USA; IZA, Bonn, Germany, smani@fordham.edu

³ Newcastle University Business School, United Kingdom smriti.sharma@newcastle.ac.uk

⁴ Lancaster University Management School, United Kingdom; IZA, Bonn, Germany, s.singhal1@lancaster.ac.uk

1. Introduction

Hierarchies in social identities are often found to be highly correlated with corresponding inter-group differences in economic and social outcomes. On average, historically marginalized and discriminated groups, perform worse on typical indicators of achievement and well-being compared to individuals from high-ranking social groups. This divergence prevails across different constructs of social identities such as race, ethnicity, religion, gender and caste (Akerlof and Kranton, 2010). The work on internalization of social stereotypes suggests that this is a rather complicated problem. Especially when there is a yawning social divide along racial, ethnic, religious or gender lines, adherence to choices that confirm identity stereotypes can influence and restrict choices of minority groups detrimentally, fostering dominated and sub-optimal outcomes (Akerlof and Kranton, 2010; Coate and Loury, 1993). Consequently, there is a vicious circle between hierarchical social structures accompanied by legacies of discrimination and stigma and poor self-valuations due to internalization of negative stereotypes resulting in a perpetuation of adverse outcomes (Tajfel and Turner, 1986; Major and O'Brien, 2005).

This paper contributes broadly to the literature on discrimination and social identity by documenting gaps in behavioral traits and personality among historically well-defined social groups, drawing evidence from a developing country. More specifically, we examine caste gaps on a range of experimentally elicited behavioral preferences (such as competitiveness, confidence, risk preferences, and egalitarianism), and socioemotional traits (including Big Five traits, locus of control, and grit), among a large sample of university students in India. These dimensions become especially important in light of current work on the determinants of labor market performances. Recent research shows that labor market outcomes are not just explained by variations in cognitive skills but also influenced by socioemotional traits (e.g., Almlund et al., 2011; Deming, 2017; Roy et al., 2018). Unfortunately, internalization of negative self-images has the potential to detrimentally influence exactly such characteristics.

The Indian caste system provides a particularly relevant context for studying the issue, as it is a deeply entrenched and enduring cultural institution.¹ Caste is intricately linked to one's economic and social outcomes in India. The lower castes – former untouchables (Scheduled Castes, SCs hereafter) – and indigenous tribes (Scheduled Tribes, STs hereafter) have fared worse than the upper castes in terms of educational and occupational attainment (Munshi and Rosenzweig, 2006), wages and consumption (Kijima, 2006; Hnatkovska et al., 2012), and business ownership (Deshpande and Sharma, 2013 and 2016). Although affirmative action instituted for SCs and STs in 1950 in the form of reservations in national and state legislatures, local governments, institutions of higher education and government jobs has had positive impacts in poverty reduction, educational attainment and public goods provision (e.g., Pande, 2003; Chin and Prakash, 2011; Cassan, 2019), significant gaps still remain between SCSTs and non-SCSTs, and they continue to be subjected to violence by upper castes (Sharma, 2015).

Further, the stigma associated with being low caste means that individuals are not viewed based on their own merits, but rather through the lens of their collective stigmatized caste identity (Shah et al., 2006). Therefore, it is plausible that social exclusion and repeated exposure to such discrimination and differential treatment may affect one's beliefs, perceptions and aspirations.² However, there is no evidence on how these caste groups differ

¹ The caste system is an arrangement of the Hindu population into several thousand groups called 'jatis' (castes). These groups have emerged from the ancient 'varna' system according to which society was divided into initially four, later five, hereditary, endogamous, mutually exclusive and occupation-specific groups. At the top of the varna system were the 'Brahmins' (priests and teachers) and the 'Kshatriyas' (warriors and royalty), followed by 'Vaishyas' (merchants and moneylenders) and finally the 'Shudras' (engaged in lowliest jobs). Over time, the Shudras split into two tiers, with those engaged in the most menial jobs being called the 'Ati-Shudras'. The Ati-Shudras (Dalits) were considered untouchable and any contact with them was considered polluting. Additionally, there are the indigenous tribes (or the Adivasis) who due to geographical isolation, primitive agricultural practices and distinct social customs face large-scale exclusion from mainstream society. In 1950, the Indian Constitution extended affirmative action to Dalits and Adivasis (officially termed as Scheduled Castes and Scheduled Tribes respectively). In addition, there is a third category known as the 'Other Backward Classes' (OBCs). While OBCs are not historically stigmatized like the SCs and STs, they are described as a socially and educationally backward group. Reservations have been extended to OBCs since the early 1990s and remain an intensely debated issue. Deshpande (2011) provides an overview of the caste system in India.

² Indeed, recent theoretical work by Genicot and Ray (2017) and Dalton et al. (2016) shows that aspirations affect effort and the incentives to invest, and these are determined both by personal and societal factors.

along important dimensions of behavioral preferences and socioemotional traits where the latter capture perceptions related to ‘self’ and ‘identity’ more broadly.

We use a Seemingly Unrelated Regression framework to examine caste gaps on a range of experimentally elicited behavioral preferences (competitiveness, confidence, risk preferences, and egalitarianism), and personality traits (Big Five traits, locus of control, and grit) among college students in a large Indian university.³ In addition, we evaluate the role of family investments as one of the possible avenues of mitigating some of the elicited differences. We present findings from a unique dataset of approximately 2,000 college students. These data collect novel information on a variety of behavioral and personality traits that are rarely found in large-scale datasets in developing countries and are non-existent especially along the caste dimension.

Our results are striking and reveal the depth of cumulative effects of years of discrimination along caste lines in India. We find that in almost all reported measures of socioemotional and behavioral preferences, there exists a considerable gap between the discriminated SCST, OBCs and the upper castes. Subjects belonging to the lower caste groups not only express lower willingness to compete and less confidence, they also exhibit lower scores on grittiness, locus of control, and Big Five measures of conscientiousness, extraversion, agreeableness, and openness to experience. However, they exhibit more egalitarian choices in areas of social preferences. These results are robust to corrections for multiple hypotheses testing and checks for the presence of unobservables in explaining our effects. Our finding that low caste students evaluate themselves lower on personality traits can/may have important implications for their academic achievement and labor market success.

Our research findings add to the important literature on social identity and preferences. For example, Benjamin et al. (2010) find that making Asian-American and native black subjects’ ethnicity salient causes them to become more patient. Hoff and Pandey (2006) find that revealing subjects’ caste affiliation in Indian villages adversely affects performance on a

³ The Seemingly Unrelated Regression (SUR) framework allows for subject choices to be correlated across the different decision domains that we investigate.

cognitive task and reduces willingness to compete among low castes in the presence of upper caste members. Bros (2014), using the World Values Survey, finds that even after controlling for income, education, and occupation, SC and ST respondents are more likely to believe that they belong to lower social ranks as compared to their upper caste counterparts. Deshpande and Newman (2007) find low caste university students to have lower occupational and wage expectations than their upper caste counterparts. In a within-village analysis, Spears (2016) finds that SCSTs and OBCs report lower life satisfaction compared to the upper castes, and the difference cannot be fully explained by caste differences in wealth and education. Our results using the lens of endogenized caste identity add an important avenue for explaining the continued differences in welfare outcomes along caste lines.

Importantly, from a policy point of view, our findings speak to the literature on early-life circumstances in developing one's personality and preferences (e.g., Fletcher and Wolfe, 2016; Falk et al., 2019). Children from minority groups are deprived not just because of their poorer socioeconomic status but also because they tend to grow up in environments that are mostly characterized by low parental human capital and lack of social support. Our student sample provides heterogeneity in terms of family background thereby allowing us to explore whether better socioeconomic status alleviates some of the disadvantages of belonging to lower castes. Our results inform that higher socioeconomic status and attendance at a private high school do have some compensatory effects for low castes but only on a small subset of the personality traits. This suggests that parental investments are not sufficient, and there is an urgent need for redesigning the current structure of affirmative action policies. There needs to be a focus on more interventions targeted at an early age to mitigate the long-term consequences of being born into a lower caste family that are observed in our results.

This paper is organized as follows: Section 2 elaborates on the study context and the data, and Section 3 lays out the estimation framework. Summary statistics, regression results, robustness are presented, and the role of socioeconomic status is examined in Section 4. Concluding remarks follow in Section 5.

2. Context and Data

2.1 Context

We conducted our study with undergraduate students enrolled in University of Delhi (DU). DU is one of India's top public universities that offer three-year undergraduate education to approximately 160,000 full-time students. DU consists of 79 colleges, each offering degrees in multiple disciplines such as science, commerce, arts, and humanities. College admissions for most disciplines in DU are based on cutoffs such that applicants whose high school exit exam scores exceed the cutoff are eligible to take admission in the college-discipline.

In line with the Indian affirmative action policy of reservations ('quotas') in higher education institutions, DU reserves 15 percent and 7.5 percent of seats for applicants belonging to the SC and ST categories respectively, and the admission cutoffs are lower for these groups by 5-15 percent. Further, 27 percent of seats are also reserved for Other Backward Classes (OBCs) and the cutoffs can be up to 10 percent lower than those for non-reserved applicants. However, only students with household income below a certain threshold ('non-creamy layer') among OBCs are eligible to take admission through the affirmative action policy.⁴

Recent empirical evaluations find that affirmative action has increased the representation of the targeted groups in higher education and had downstream positive impacts on their educational attainment (e.g., Cassan, 2019; Desai and Kulkarni, 2008). However, several accounts reveal that higher education institutions are exclusionary in nature and students from reserved groups experience discrimination at the hands of their upper caste peers and teachers based on their caste and stigmatizing attitudes remain prevalent (Ovichegan, 2014; Deshpande, 2019). Therefore, the university environment reinforces the underlying causes of marginalization. Further, reports show that elite universities like DU are not immune to these concerns.⁵

⁴ Applicants must provide validated caste certificates to be eligible to apply through these reserved categories.

⁵ <https://thewire.in/caste/india-universities-caste-discrimination> (accessed 28 June 2020)

2.2 Data

In 2014, we conducted a series of incentivized experiments among a large sample of approximately 2,000 college students enrolled in undergraduate programs across fifteen colleges in DU.⁶ This was followed by a short socioeconomic survey that captures student's demographic characteristics and socioemotional traits.

Subjects' preferences for competitiveness and confidence were elicited using a competition task adapted from Niederle and Vesterlund (2007). Subjects participated in a real-effort task that involved adding up four two-digit numbers where they were asked to predict their performances after a practice round, and choose between a piece-rate and tournament compensation scheme. The piece-rate scheme paid INR 10 for every correct answer; the tournament scheme paid double that amount for every correct answer if the subject outperformed a randomly selected student of DU who had solved the questions earlier.⁷ We define *competitiveness* as a dummy variable that takes a value 1 if the subject chose the tournament compensation scheme and 0 if the subject chose the piece-rate compensation scheme. We define *confidence* as a dummy variable that takes a value 1 if the subject believed that her performance in the actual task would exceed those of others in the university, 0 otherwise.

Distributional preferences were measured using the Bartling et al. (2009) framework that asks subjects to state their preferences over a series of four binary distributional choices that would affect their and an anonymous participant's earnings. In all four choices, option A is an equal distribution and option B is an unequal distribution. We define *egalitarianism* as a dummy variable that takes a value 1 if the subject chooses the equal division (option A) in each row, 0 otherwise.

Lastly, we used the investment task of Gneezy and Potters (1997) to elicit risk attitudes. Subjects had to invest a portion of their endowment of INR 150 in a risky lottery (with equal

⁶ The experiment instructions and the survey instruments are available from the authors upon request. Details related to sampling are available in Dasgupta et al. (2017).

⁷ We implemented a pilot version of this game where forty students from DU had participated, and their performance is used for comparison in the tournament wage scheme.

chance of win or loss) and set aside the remainder. If the investment was successful (based on a roll of a dice) subjects received triple the invested amount in addition to any amount they set aside. If they lost the lottery, they only received the amount that was set aside. We define *risk preference* as the proportion allocated to the risky lottery in the investment task with higher invested amounts indicating lower risk aversion.

Following the completion of the incentivized experiments, as part of the socioeconomic survey, we administered standard inventories to measure socioemotional traits such as Big Five personality traits, locus of control, and grit. The Big Five personality traits were measured using the 10-item inventory of Gosling et al. (2003) where each item has a score between 1 (disagree strongly) and 7 (agree strongly). The Big Five traits are defined as follows: *Openness to experience* is the tendency to be open to new aesthetic, cultural, or intellectual experiences; *Conscientiousness* refers to a tendency to be organized, responsible, and hardworking; *Extraversion* relates to an outward orientation rather than being reserved; *Agreeableness* is related to the tendency to act in a cooperative and unselfish manner; and *Emotional Stability* (opposite of *Neuroticism*) is predictability and consistency in emotional reactions with absence of rapid mood changes. Additionally, we implemented the 8-item Grit scale of Duckworth and Quinn (2009) where a higher score on the *Grit* scale implies greater ability to pursue long-term goals with sustained effort. Finally, *Locus of control* was measured using 13 items from Rotter (1966). Subjects with a high score exhibit an internal locus of control indicating that they believe that events in life are more under their control as compared to those with an external locus of control who believe that their outcomes are determined by luck and other factors. We standardize all personality traits using the sample mean and standard deviation and use *z*-score constructs of these variables in the regression analyses. As part of the survey, we also collected details on characteristics such as caste, religion, type of high school attended, and family socioeconomic status.

The outcomes we measure capture notions of one's preferences and beliefs and have meaningful implications for performance in education and labor market domains. For instance, competitiveness can explain gender gaps in academic track choice, job entry decisions, and wages (Buser et al., 2014; Flory et al., 2015). Risk preferences have implications for skill accumulation and selection into entrepreneurship (Dasgupta et al.,

2015). Those with an internal locus of control perceive the subjective returns to effort and investment to be higher, and this explains the positive relationship between locus of control and investments in education, job search, and health behaviors as well as entrepreneurial performance (Cobb-Clark, 2015; Sharma and Tarp, 2018).

Overall, we conducted 60 sessions with over 2,000 subjects, resulting in approximately 35 subjects per session. No feedback was provided between or after the experimental tasks. Each session lasted about 75 minutes. All subjects received a show-up fee of INR 150. The average additional payment was INR 230.⁸ All subjects participated only once in the study. To minimize wealth effects, additional payments were based on a randomly selected incentivized task.

3. Estimation Strategy

As each subject makes choices in the three incentivized tasks and also scores him/herself on eight personality traits as described in Section 2.2, we estimate these equations using a Seemingly Unrelated Regression (SUR) framework that allows for these choices to be correlated. We report the correlation between the error terms obtained from estimating each of the behavioral preferences and personality traits separately using OLS (see Tables A1 and A2 in the online Appendix). We can reject the null that the outcomes are independent for the vector of elicited behavioral preferences and personality traits ($p\text{-value} < 0.01$). This supports our choice of estimating the following SUR model that allows the errors to be correlated across equations, thereby improving the precision of the estimates, and also reducing Type II error, i.e., the risk of attaining low statistical power.

We estimate the following:

$$Y_{ij} = \beta_0 + \beta_1 SCST_i + \beta_2 OBC_i + \sum_{k=3}^N \beta_k X_{ik} + \vartheta_s + \varepsilon_{ij}$$

where Y_{ij} is the dependent variable (behavioral preferences and personality traits) observed for individual i and outcome j , $SCST$ is a dummy that takes a value 1 if the subject belongs to

⁸ At the time of conducting the study, the exchange rate was USD 1= INR 60.

the Scheduled Caste or Scheduled Tribe group, 0 otherwise. *OBC* is a dummy that takes a value 1 if the subject belongs to the Other Backward Classes, 0 otherwise. X is a vector of family background characteristics and demographic characteristics that are included in all specifications, such as *age* (in years), *male* (takes a value 1 if male, 0 if female), *Hindu* (takes value 1 if belonging to Hindu religion, 0 otherwise), *private school* (takes a value 1 if the individual was enrolled in a private high school, 0 otherwise), *high socioeconomic status* (takes a value 1 if both parents have at least a college degree or if monthly family income exceeds INR 50,000, and 0 otherwise), and standardized Raven’s test score as a measure of ‘fluid intelligence’. We also include session fixed effects (ϑ_s), which among other things, control for differences in caste and gender composition across sessions. ε_{ij} is the iid error term.

4. Results

4.1 Summary Statistics

Table 1 presents the mean and standard deviation for our outcome and control variables, for the pooled sample and also by caste. Panel A summarizes the behavioral preferences. In our sample, 31 percent of the subjects chose the competitive remuneration by deciding to enter the tournament, and we observe no caste differences in willingness to compete. About a third of our sample is confident, in that they expect themselves to perform better than other students in the university. OBCs are significantly more confident than the upper castes and SCSTs. Subjects on average invest about 47 percent of their endowment in the risky asset; upper castes invest the smallest proportion of their endowment in the risky asset. Subjects’ preferences for equality also differ significantly by caste: lowest among upper caste (13 percent) and almost similar among SCSTs (18 percent) and OBCs (19 percent).

[Table 1 here]

As seen in Panel B, in general, we observe some caste differences in all personality traits except emotional stability. Upper caste subjects score themselves higher on scales of extraversion, agreeableness, openness to experience, and grit relative to OBCs and SCSTs. Both upper caste and OBC students score similarly on conscientiousness, but higher than SCSTs.

Background characteristics of our sample are reported in Panel C. As expected, and in line with the literature, upper caste subjects are significantly more likely than OBCs and SCSTs to have attended a private high school, and to belong to high SES families. We also find that the OBCs perform significantly better than SCST on indicators of family SES and private school attendance. This is in line with existing evidence that finds that the socioeconomic characteristics of OBCs lie somewhere in between those of upper castes and SCSTs (Deshpande and Ramachandran, 2019). We find a significant upper caste advantage in cognitive ability as measured by the Raven's test.

4.2 Regression Results

We first present caste gaps in behavioral preferences, namely, competitiveness, confidence, risk preferences, and egalitarianism in Table 2 using the SUR framework proposed in the Section 3. Our main coefficients of interest in these regressions are the caste dummies: SCST and OBC, with upper caste serving as the reference group. SCSTs and OBCs are 8.7 percentage points and 7.9 percentage points less likely respectively to compete than the upper castes. The SCSTs are also 7.2 percentage points less likely to be confident. However, we do not find a significant difference between the confidence levels of the OBCs and upper castes. Risk preferences of SCSTs and OBCs do not differ significantly from those of upper castes. While SCSTs are significantly less confident than OBCs, there are no OBC-SCST differences in terms of competitiveness or risk preferences (see bottom panel of Table 2). Our findings on competition are in line with Hoff and Pandey (2006) who find that revealing subjects' caste affiliation in Indian villages reduces willingness to compete among low castes in the presence of upper caste members.

Interestingly, SCSTs and OBCs are 5-7 percentage points more likely to prefer an equitable distribution compared to the upper castes, with no caste difference in choices between SCSTs and OBCs. This is in line with the Alesina and Giuliano (2011) who find blacks to be more supportive of redistributive policies as compared to whites in USA. There are two possible explanations for our finding. First, SCSTs and OBCs in our sample, and in general, belong to

the lower socioeconomic strata of society, which could lead them to have stronger preferences for income redistribution. Second, since the low caste groups have been beneficiaries of various welfare and affirmative action policies of the government, they may be more inclined to favor an equitable distribution. In fact, in our sample, most of the SCST and OBC subjects in the sample have availed the affirmative action policy to gain admission into the university.

[Table 2 here]

The coefficient estimates on the other covariates are in the expected directions. For example, females in our sample are less likely to compete, less confident, and more risk averse; and subjects with higher cognitive ability (as measured by Raven's test score) are less risk averse.

Next, in Table 3, we examine caste gaps in personality traits. Except for emotional stability for which there are no caste differences, we find SCSTs score themselves lower on all other traits such as agreeableness, openness to experience, conscientiousness, extraversion, locus of control as well as grit. While the OBCs are also report lower grit, more introversion, and less openness to experience, they do not differ from the upper castes on other reported measures such as locus of control, agreeableness, conscientiousness, and emotional stability. Further, we find the OBC-SCST difference to be significant only for conscientiousness and locus of control and weakly significant for agreeableness. Given the importance of traits such as conscientiousness and locus of control in explaining labor market performance (Almlund et al., 2011), the wage and occupational disadvantage faced by SCSTs could be magnified due to a lower ratings/scores on such traits. For example, Borghans et al. (2014) argue that a stagnation of the black-white wage gap in the US may have been due to the increasing relevance of 'people skills' where minority groups may be at a disadvantage when interacting with the majority because of prejudice or barriers to interpersonal communication because of racial or cultural differences.

[Table 3 here]

In terms of other covariates, we find females to be more agreeable, more extrovert, and less emotionally stable, as also shown in the existing literature (Costa et al., 2001). Females in

our sample are also grittier and more conscientious. This is also reflected in other dimensions such as a significant gender difference in class attendance rates in our sample where we find that the proportion of female students attending classes regularly is 73 percent as compared to 64 percent among males (two-sided t-test, p -value < 0.001).

4.3 The Role of Socioeconomic Status

Our results thus far indicate that SCSTs and OBCs are at a disadvantage when it comes to behavioral preferences and ratings on personality traits, and they continue to suffer from historical and cultural discrimination. At the same time, there is evidence of significant catch-up experienced by SCSTs over the last few decades in terms of occupation, wages, consumption, and education in India (Hnatkowska et al., 2012). An immediate question of policy interest then is the scope of improved parental socioeconomic status (SES) in mitigating some of the observed behavioral caste gaps in our sample. For example, Falk et al. (2019) find that children from richer families and with highly educated parents are significantly more patient, less risk-seeking, and have higher IQ. Using a US panel data of school-age children, Fletcher and Wolfe (2016) find family income to be an important determinant of non-cognitive skills with the disadvantages associated with low income increasing over time. Therefore, exploring whether the caste effects vary by one's SES constitutes a natural corollary to the above discussion.

To examine this, in Tables 4 and 5, we estimate the SUR models for behavior and personality respectively, wherein the SCST and OBC variables are now interacted with a dummy for high SES. As seen in Table 1, while 82 percent of upper castes as classified as high SES, the corresponding numbers for OBCs and SCSTs are 42 percent and 37 percent respectively. Due to small overlap between low caste and high SES we do not find much role for SES except we find that among behavioral preferences, high SES OBCs are less egalitarian than OBCs from lower socioeconomic backgrounds. And among the personality traits, we find that OBCs from high SES backgrounds have a more internal locus of control as compared to OBCs from less well-off families. This partial compensating effect is particularly interesting

in light of the finding that locus of control is a robust determinant of life outcomes (Cobb-Clark, 2015). Further, high SES SCSTs are less extroverted than low SES SCSTs.

[Tables 4 and 5 here]

Next, in Tables 6 and 7, we examine if one's attendance in a private high school prior to joining university helps alleviate some of the observed caste gaps in behavior and personality. Private schools are typically characterized by higher teacher-student ratios, lower teacher absenteeism, and generally better infrastructure as compared to public schools in India. Muralidharan and Sundaraman (2015) find that private schools lead to better learning outcomes with more efficient time use and at a lower average cost per student as compared to public schools in a large Indian state. Therefore, relative to public schools, private schools may also shape behavioral attitudes and personality traits of students differently, thereby bridging some of the pre-existing caste gaps documented earlier.

[Tables 6 and 7 here]

For behavioral preferences, we do not find the caste effects to differ by the type of high school attended. However, attending a private school has compensatory effects on some personality traits. Although in the overall sample we do not find any caste differences in terms of emotional stability, SCSTs who attended private school are more emotionally stable than those who did not. SCSTs that attended private school are relatively more agreeable than those that did not. Similarly, OBCs that attended private school are more conscientious and express greater openness to experiences compared to OBCs that went to a public school. These results suggest that access to better environments in private schools could potentially foster a healthier development of some personality traits among low caste groups.

We also examine whether these caste-based differences in traits and behavior differ by gender, and do not find the caste effects to vary by gender (see Tables A3 and A4 in the online Appendix).

4.4 Robustness Checks

In this sub-section we show that our primary results reported in Section 4.2 are robust to several checks. First, SUR models require information on all outcome variables and explanatory variables to be jointly not missing, thereby creating some extra missing observations. Therefore, we also estimate OLS/linear probability model regressions and find that the OLS estimates reported in online Appendix Tables A5 and A6 with more observations are quite similar to the corresponding SUR results (reported in Tables 2 and 3), ruling out any concerns related to missing data.⁹

Second, in the event of multiple null hypotheses being tested, the probability of a false rejection (i.e., Type I error) could be higher than desired. To minimize this error, it is important to consider the multiplicity of null hypotheses being tested. We use the method outlined in Anderson (2008) to correct the standard errors for multiple hypotheses. As these corrections can only account for binary treatment indicators, we construct a binary variable *low caste* that takes the value 1 if the subject belongs to SCST or OBC category, and 0 if upper caste. In Tables A7 and A8 of the online Appendix we present OLS estimates for behavioral preferences and personality traits regressed on *low caste* and other controls respectively, along with unadjusted outcome-specific p-values and sharpened q-values derived using the multiple hypotheses correction.¹⁰ Our results are robust to this correction with a minor loss in the level of significance.

Finally, we also check for the possibility that selection on unobservables may be biasing our coefficient estimates on the *low caste* variable. Using the test of Oster (2019), in the lower panels of Tables A7 and A8 of the online Appendix, we report the ratio of selection on unobservables to selection on observables (δ) required to eliminate the caste effect, i.e., to attribute the entire caste effect to selection bias, and the bias-adjusted treatment effect (β^*).

⁹ Less than 1 percent of choices are missing for the behavioral preferences, except egalitarianism for which 1.5 percent of the observations are missing. Less than 5 percent of the Big Five traits and grit are missing. About 7 percent of the data on locus of control is missing. And 1-2 percent of the data on all other covariates is missing.

¹⁰ The coefficient on the *low caste* variable is significant in all regressions where SCST and OBC variables were also independently significant.

We report these for the outcomes where the coefficient on caste is significant.¹¹ The absolute value of δ exceeds the prescribed cutoff value of 1 implying that selection on unobservables would have to exceed the selection on observables, which is unlikely. Further, assuming that unobservables matter as much as observables, the bias-adjusted treatment effects are similar to the coefficients in the controlled regressions. These statistics rule out the concern that unobservables may be driving our results.

5. Discussion and Conclusion

In this paper, we examine caste-based differences in behavioral preferences and personality traits. We find that SCSTs and OBCs fare worse compared to the upper castes along critical dimensions of behavior and personality that are associated with improvements in educational attainment, labor market performance, and life outcomes in general. Further, as our heterogeneity analyses show, a higher socioeconomic status or attendance in a private high school does not mitigate most of these behavioral caste gaps. This supports conclusions in other studies that a very large improvement in wealth status is needed to possibly overcome some of the negative self-perceptions that lower caste members harbor (Bros, 2014). While our sample is limited to students of one university, our findings are noteworthy in that we observe large caste-based differences even among students from largely urban backgrounds at an elite university. Moreover, this is consistent with overall patterns documented by the existing literature – that draws upon samples of varying representativeness from around the world – wherein minority groups tend to express lower subjective well-being due to their identity.

Given that racial gaps in cognitive and socioemotional skills emerge even before children reach school-going age and tend to persist thereafter, there is a compelling case for targeting early childhood interventions to supplement the familial resources for children from disadvantaged backgrounds. Cunha and Heckman (2007) suggest a similar approach when they discuss that the highest returns to low-ability disadvantaged groups accrue from early childhood programs as compared to those only in late adolescence. They further stress the

¹¹ For this test, we set maximum R-squared (R_{\max}) at 1.3 times the R-squared from the regressions using controls.

importance of following up on early childhood investments with complementary investments in later ages to reap the benefits of the former (dynamic complementarity). This suggests a critical need for rethinking the juncture where intervention is needed. Currently, the earliest that members of low caste can avail the benefits of affirmative action is at time of entry into higher education or employment in the public sector, by which time these preferences and traits are potentially less malleable. Consequently, our results indicate the urgent need to invest in programs that directly target the development of soft skills among disadvantaged individuals during their childhood and adolescence.

Further, while affirmative action policies have been beneficial for targeted populations in many ways, such policies may also have unintended perverse consequences by generating stereotypes about incompetence about beneficiaries and reinforcing negative self-image (Bros, 2014; Deshpande, 2019; Leslie et al., 2014). Our work suggests that effects of affirmative action policies on socioemotional outcomes requires further research.

At a broader level, there is also a case for using evidence from social psychology to foster greater inter-caste contact that can help reduce biases and negative stereotypes, which have repercussions on self-confidence and self-esteem among low castes (e.g., Lowe 2019). More concerted multi-pronged policy efforts towards making public spaces inclusive and facilitating interaction on equitable terms would be a start in this direction.

References

- Akerlof, G.A., and Kranton, R.E. (2010). *Identity Economics: How our identities shape our work, wages, and well-being*. Princeton University Press: Princeton, NJ.
- Alesina, A., and Giuliano, P. (2011). Preferences for redistribution. In J. Benhabib, A. Bisin, and M. O. Jackson (Eds.) *Handbook of Social Economics*, Vol. 1, 93-131.
- Almlund, M., Duckworth, A.L., Heckman, J.J. and Kautz, T. (2011). Personality psychology and economics, in E.A. Hanushek, S. Machin and L. Woessmann, (eds.), *Handbook of the Economics of Education*, Vol. 4, 1-181, Amsterdam: North-Holland.
- Anderson, M.L. (2008). Multiple inference and gender differences in the effects of early intervention: A reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects. *Journal of the American Statistical Association*, 103(484), 1481-1495.
- Bartling, B., Fehr, E., Maréchal, M.A., and Schunk, D. (2009). Egalitarianism and competitiveness. *American Economic Review: Papers & Proceedings*, 99(2), 93-98.
- Benjamin, D.J., Choi, J.J., and Strickland, A.J. (2010). Social identity and preferences. *American Economic Review*, 100, 1913-1928.
- Borghans, L., ter Weel, B., and Weinberg, B.A. (2014). People skills and the labor-market outcomes of underrepresented groups. *Industrial and Labor Relations Review*, 67(2), 287-334.
- Bros, C. (2014). The burden of caste on social identity in India. *Journal of Development Studies*, 50(10), 1411-1429.
- Buser, T., Niederle, M., and Oosterbeek, H. (2014). Gender, competitiveness and career choices. *Quarterly Journal of Economics*, 129(3), 1409-1447.
- Cassan, G. (2019). Affirmative action, education and gender: Evidence from India. *Journal of Development Economics*, 136, 51-70.
- Coate, S., and Loury, G. C. (1993). Will affirmative action eliminate negative stereotypes? *American Economic Review*, 83(5), 1220-1240.
- Cobb-Clark, D. (2015). Locus of control and the labor market. *IZA Journal of Labor Economics*, 4(3).
- Costa, P.T., Terracciano, A., and McCrae, R.R. (2001). Gender differences in personality traits across cultures: robust and surprising findings. *Journal of Personality and Social Psychology*, 81(2), 322-331.
- Chin, A., and Prakash, N. (2011). The redistributive effects of political reservations for minorities: Evidence from India. *Journal of Development Economics*, 96(2), 265-277.
- Cunha, F., and Heckman, J.J. (2007). The technology of skill formation. *American Economic Review Papers and Proceedings*, 97(2), 31-47.
- Dalton, P., Ghosal, S., and Mani, A. (2016). Poverty and aspirations failure. *Economic Journal*, 126, 165-188.

- Dasgupta, U., Gangadharan, L., Maitra, P., Mani, S., and Subramanian, S. (2015). Choosing to be trained: Do behavioral traits matter? *Journal of Economic Behavior and Organization*, 110, 145-159.
- Dasgupta, U., Mani, S., Sharma, S., and Singhal S. (2017). Cognitive, socioemotional and behavioral returns to college quality. IZA DP No. 10701.
- Deming, D.J. (2017). The growing importance of social skills in the labor market. *Quarterly Journal of Economics*, 1593-1640.
- Desai, S., and Kulkarni, V. (2008). Changing educational inequalities in India in the context of affirmative action. *Demography*, 45(2), 245-270.
- Deshpande, A. (2011). *The Grammar of Caste*. Oxford University Press.
- Deshpande, A. (2019). Double jeopardy? Stigma of identity and affirmative action. *Review of Black Political Economy*, 46(1), 38-64.
- Deshpande, A., and Newman, K. (2007). Where the path leads: The role of caste in post-university employment expectations. *Economic and Political Weekly*, 42 (41), 4133-40.
- Deshpande, A. and Ramachandran, R. (2019). Traditional hierarchies and affirmative action in a globalizing economy: Evidence from India. *World Development*, 118, 63-78.
- Deshpande, A., and Sharma, S. (2013). Entrepreneurship or survival? Caste and gender of small business in India. *Economic and Political Weekly*, XLVIII (28), 38-49.
- Deshpande, A., and Sharma, S. (2016). Disadvantage and discrimination in self-employment: Caste gaps in earnings in Indian small businesses. *Small Business Economics*, 46(2), 325-346.
- Duckworth, A.L, and Quinn, P.D. (2009). Development and validation of the Short Grit Scale (Grit-S). *Journal of Personality Assessment*, 91, 166-174.
- Falk, A., Kosse, F., Pinger, P., Schildberg-Hörisch, H., and Deckers, T. (2019). Socioeconomic status and inequalities in children's IQ and economic preferences. *Journal of Political Economy*, forthcoming.
- Fletcher, J.M., and Wolfe, B. (2016). The importance of family income in the formation and evolution of non-cognitive skills in adulthood. *Economics of Education Review*, 54, 143-154.
- Flory, J. A., Leibbrandt, A., and List, J. A. (2015). Do competitive work places deter female workers? A large-scale natural field experiment on job entry decisions. *Review of Economic Studies*, 82(1), 122-155.
- Genicot, G., and Ray, D. (2017). Aspirations and inequality. *Econometrica*, 85(2), 489-519.
- Gneezy, U., and Potters, J. (1997). An experiment on risk taking and evaluation periods. *Quarterly Journal of Economics*, 112(2), 631-645.
- Gosling, S.D., Rentfrow, P.J., and Swann Jr., W.B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37, 504-528.

- Hnatkovska, V., Lahiri, A., and Paul, S. (2012). Castes and labor mobility. *American Economic Journal: Applied Economics*, 4(2), 274-307.
- Hoff, K., and Pandey, P. (2006). Discrimination, social identity and durable inequalities. *American Economic Review: Papers & Proceedings*, 96(2), 206-211.
- Kijima, Y. (2006). Caste and tribe inequality: Evidence from India, 1983-1999. *Economic Development and Cultural Change*, 54(2), 369-404.
- Leslie, L.M., Mayer, D.M., and Kravitz, D.A. (2014). The stigma of affirmative action: A stereotyping-based theory and meta-analytic test of the consequences for performance. *Academy of Management Journal*, 57(4), 964-989.
- Lowe, M. (2019). Types of contact: A field experiment on collaborative and adversarial caste integration. Working Paper.
- Major, B., and O'Brien, L.T. (2005). The social psychology of stigma. *Annual Review of Psychology*, 56, 393-421.
- Munshi, K., and Rosenzweig, M. (2006). Traditional institutions meet the modern world: Caste, gender, and schooling choice in a globalizing economy. *American Economic Review*, 96(4), 1225-52.
- Muralidharan, K., and Sundaraman, V. (2015). The aggregate effect of school choice: Evidence from a two-stage experiment in India. *Quarterly Journal of Economics*, 130(3), 1011-1066.
- Niederle, M., and Vesterlund, L. (2007). Do women shy away from competition? Do men compete too much? *Quarterly Journal of Economics*, 122(3), 1067-1101.
- Oster, E. (2019). Unobservable selection and coefficient stability: Theory and evidence. *Journal of Business & Economic Statistics*, 37(2), 187-204.
- Ovichagan, S. (2014). Social exclusion, social inclusion and 'passing': The experiences of Dalit students at one elite Indian university. *International Journal of Inclusive Education*, 18(4), 359-378.
- Pande, R. (2003). Can mandated political representation provide disadvantaged minorities policy influence? Theory and evidence from India. *American Economic Review*, 93(4), 1132-1151.
- Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80(1), 1-28.
- Roy, S., Morton, M., and Bhattacharya, S. (2018). Hidden human capital: Self-efficacy, aspirations and achievements of adolescent and young women in India. *World Development*, 111, 161-180.
- Shah, G., Mandar, H., Thorat, S., Deshpande, S., and Baviskar, A. (2006). *Untouchability in rural India*. Sage Publications: New Delhi
- Sharma, S. (2015). Caste-based crimes and economic status: Evidence from India. *Journal of*

Comparative Economics, 43(1), 204-226.

Sharma, S., and Tarp, F. (2018). Does managerial personality matter? Evidence from firms in Vietnam. *Journal of Economic Behavior & Organization*, 150, 432-445.

Spears, D. (2016). Caste and life satisfaction in rural north India. *Economic and Political Weekly*, LI (4), 12-14.

Tajfel, H., and Turner, J.C. (1986). The social identity theory of intergroup behavior. *Psychology of Intergroup Relations*, 5, 7-24.

Table 1: Summary Statistics by Caste

Variables	Pooled (1)	Upper Caste (2)	OBC (3)	SCST (4)	P-value UC vs. OBC t-test (5)	P-value UC vs. SCST t-test (6)	P-value OBC vs. SCST t-test (7)
Panel A: Behavioral preferences							
Competitiveness	0.31 (0.46)	0.31 (0.46)	0.32 (0.46)	0.31 (0.46)	0.91	0.98	0.95
Confidence	0.32 (0.46)	0.31 (0.46)	0.38 (0.48)	0.28 (0.45)	0.01	0.29	0.01
Risk preference	46.71 (18.85)	46.14 (18.37)	48.12 (20.15)	47.97 (19.56)	0.08	0.13	0.93
Egalitarianism	0.15 (0.36)	0.13 (0.34)	0.19 (0.39)	0.18 (0.39)	0.01	0.03	0.84
Panel B: Personality traits							
Extraversion	4.62 (1.41)	4.76 (1.43)	4.28 (1.25)	4.25 (1.34)	0.00	0.00	0.77
Agreeableness	5.13 (1.18)	5.19 (1.15)	5.07 (1.22)	4.83 (1.23)	0.08	0.00	0.02
Conscientiousness	5.27 (1.27)	5.29 (1.27)	5.31 (1.29)	5.11 (1.26)	0.83	0.03	0.06
Emotional Stability	4.56 (1.35)	4.52 (1.38)	4.65 (1.26)	4.62 (1.26)	0.14	0.3	0.76
Openness to experience	5.33 (1.15)	5.43 (1.13)	5.14 (1.20)	5.04 (1.15)	0.00	0.00	0.29
Locus of Control	7.29 (2.02)	7.27 (2.11)	7.51 (1.76)	7.19 (1.79)	0.07	0.60	0.04
Grit	3.35 (0.57)	3.39 (0.57)	3.28 (0.55)	3.21 (0.50)	0.00	0.00	0.14
Panel C: Control variables							
Female	0.49 (0.50)	0.58 (0.49)	0.28 (0.45)	0.24 (0.43)	0.00	0.00	0.27
Age	19.75 (0.96)	19.72 (0.86)	19.78 (1.17)	19.83 (1.12)	0.35	0.07	0.57
Hindu	0.91 (0.28)	0.92 (0.27)	0.87 (0.33)	0.91 (0.27)	0.006	0.88	0.07
Private school	0.70 (0.46)	0.82 (0.38)	0.52 (0.50)	0.31 (0.46)	0.00	0.00	0.00
High socioeconomic status	0.71 (0.45)	0.82 (0.38)	0.46 (0.5)	0.37 (0.48)	0.00	0.00	0.02
Raven's test score	6.45 (2.28)	6.81 (2.13)	5.77 (2.37)	5.45 (2.45)	0.00	0.00	0.1
Sample size	2045	1433	325	287			

Notes: Standard deviation in parentheses. In Columns 5, 6, and 7, we report the p-value from a two-sided t-test comparing upper castes (UCs) to OBCs, upper castes to SCSTs, and OBCs to SCSTs respectively. In Panel B, the maximum possible score for the Big Five traits, locus of control, and grit is 7, 13, and 8 respectively. In Panel C, the maximum score for Raven's test is 10. High socioeconomic status takes a value 1 if both parents have at least a college degree or if monthly family income exceeds INR 50,000, and 0 otherwise. Hindu takes value 1 if belonging to Hindu religion, 0 otherwise. Private school takes a value 1 if the individual was enrolled in a private high school, 0 otherwise.

Table 2: SUR Estimates: Behavioral Preferences

	(1) Competitiveness	(2) Confidence	(3) Risk Preference	(4) Egalitarianism
SCST	-0.087** (0.036)	-0.072* (0.037)	0.367 (1.482)	0.065** (0.029)
OBC	-0.079** (0.032)	0.029 (0.033)	0.136 (1.329)	0.055** (0.026)
Female	-0.171*** (0.022)	-0.099*** (0.023)	-6.285*** (0.904)	0.006 (0.017)
Age	-0.002 (0.012)	0.004 (0.013)	0.210 (0.507)	-0.010 (0.010)
Hindu	-0.055 (0.036)	0.008 (0.037)	-1.341 (1.473)	-0.027 (0.028)
Private School	-0.053** (0.026)	-0.026 (0.027)	1.240 (1.082)	0.062*** (0.021)
High socioeconomic status	0.029 (0.026)	-0.007 (0.027)	0.248 (1.081)	-0.030 (0.021)
Raven's test score	0.010 (0.011)	0.009 (0.011)	1.217*** (0.448)	-0.006 (0.009)
Constant	0.660** (0.264)	0.378 (0.272)	49.619*** (10.878)	0.279 (0.209)
<i>H</i> ₀ : SCST = OBC	0.04	6.32	0.02	0.11
(p-value)	(0.84)	(0.01)	(0.88)	(0.74)
Observations	1,918	1,918	1,918	1,918
R-squared	0.106	0.063	0.080	0.058

Notes: All regressions include session fixed effects. Robust standard errors in parentheses. See notes of Table 1 for definitions of right-hand side variables. ***p<0.01, ** p<0.05, * p<0.10.

Table 3: SUR Estimates: Personality Traits

	(1) Agreeableness	(2) Extraversion	(3) Conscientiousness	(4) Emotional Stability	(5) Openness to Experience	(6) Locus of Control	(7) Grit
SCST	-0.202** (0.088)	-0.228*** (0.087)	-0.250*** (0.088)	-0.049 (0.089)	-0.254*** (0.086)	-0.211** (0.088)	-0.279*** (0.088)
OBC	-0.040 (0.078)	-0.264*** (0.077)	0.039 (0.078)	0.010 (0.079)	-0.192** (0.076)	-0.018 (0.078)	-0.158** (0.078)
Female	0.260*** (0.052)	0.089* (0.052)	0.128** (0.053)	-0.210*** (0.053)	0.042 (0.051)	-0.074 (0.052)	0.184*** (0.052)
Age	-0.016 (0.029)	-0.019 (0.029)	0.017 (0.029)	-0.010 (0.029)	0.016 (0.028)	0.037 (0.029)	-0.011 (0.029)
Hindu	-0.175** (0.086)	0.035 (0.085)	-0.042 (0.087)	-0.237*** (0.087)	-0.072 (0.084)	-0.024 (0.087)	-0.120 (0.086)
Private School	-0.070 (0.064)	0.128** (0.063)	-0.069 (0.065)	-0.047 (0.065)	0.041 (0.063)	-0.107* (0.064)	-0.086 (0.064)
High socioeconomic status	0.042 (0.064)	-0.021 (0.063)	-0.129** (0.065)	-0.005 (0.065)	0.051 (0.063)	-0.089 (0.064)	-0.012 (0.064)
Raven's test score	0.023 (0.026)	0.083*** (0.026)	-0.021 (0.026)	0.031 (0.026)	0.103*** (0.026)	0.033 (0.026)	0.021 (0.026)
Constant	0.427 (0.624)	0.311 (0.618)	0.143 (0.629)	0.662 (0.631)	-0.032 (0.613)	-0.179 (0.628)	0.677 (0.627)
<i>H₀: SCST = OBC</i>	2.9	0.15	9.12	0.38	0.45	4.08	1.61
(p-value)	(0.09)	(0.7)	(0.002)	(0.54)	(0.5)	(0.04)	(0.2)
Observations	1,651	1,651	1,651	1,651	1,651	1,651	1,651
R-squared	0.067	0.081	0.059	0.053	0.073	0.065	0.078

Notes: All regressions include session fixed effects. Robust standard errors in parentheses. See notes of Table 1 for definitions of right-hand side variables. ***p<0.01, ** p<0.05, * p<0.10.

Table 4: SUR Estimates: Differences in Behavioral Preferences by Socioeconomic Status

	(1) Competitiveness	(2) Confidence	(3) Risk Preference	(4) Egalitarianism
SCST	-0.075 (0.049)	-0.072 (0.050)	0.388 (2.007)	0.091** (0.039)
OBC	-0.055 (0.048)	0.059 (0.049)	0.223 (1.966)	0.102*** (0.038)
High SES	0.042 (0.034)	0.004 (0.035)	0.285 (1.383)	-0.004 (0.027)
High SES x SCST	-0.018 (0.068)	0.013 (0.069)	-0.010 (2.779)	-0.038 (0.053)
High SES x OBC	-0.042 (0.062)	-0.058 (0.063)	-0.159 (2.541)	-0.082* (0.049)
Constant	0.655** (0.266)	0.388 (0.273)	49.627*** (10.947)	0.269 (0.210)
Observations	1,918	1,918	1,918	1,918
R-squared	0.107	0.064	0.080	0.059

Notes: Robust standard errors in parentheses. Other controls include age, gender, religion, private school, Raven's test score, and session fixed effects. *** p<0.01, ** p<0.05, * p<0.10.

Table 5: SUR Estimates: Differences in Personality Traits by Socioeconomic Status

	(1) Agreeableness	(2) Extraversion	(3) Conscientiousness	(4) Emotional Stability	(5) Openness to Experience	(6) Locus of Control	(7) Grit
SCST	-0.227* (0.119)	-0.064 (0.117)	-0.230* (0.119)	-0.177 (0.120)	-0.209* (0.116)	-0.335*** (0.119)	-0.260** (0.119)
OBC	-0.087 (0.116)	-0.130 (0.115)	-0.015 (0.117)	-0.132 (0.117)	-0.183 (0.114)	-0.205* (0.116)	-0.115 (0.116)
High SES	0.018 (0.080)	0.078 (0.079)	-0.141* (0.081)	-0.095 (0.081)	0.069 (0.079)	-0.192** (0.081)	0.009 (0.081)
High SES x SCST	0.036 (0.167)	-0.320* (0.165)	-0.071 (0.168)	0.233 (0.168)	-0.101 (0.164)	0.204 (0.167)	-0.026 (0.168)
High SES x OBC	0.080 (0.149)	-0.199 (0.147)	0.108 (0.150)	0.226 (0.150)	-0.002 (0.146)	0.311** (0.149)	-0.074 (0.149)
Constant	0.437 (0.629)	0.178 (0.622)	0.099 (0.633)	0.751 (0.635)	-0.080 (0.617)	-0.113 (0.631)	0.672 (0.632)
Observations	1,651	1,651	1,651	1,651	1,651	1,651	1,651
R-squared	0.067	0.084	0.060	0.055	0.073	0.067	0.079

Notes: Robust standard errors in parentheses. Other controls include age, gender, religion, private school, Raven's test score, and session fixed effects. *** p<0.01, ** p<0.05, * p<0.10.

Table 6: SUR Estimates: Differences in Behavioral Preferences by Private School Enrollment

	(1) Competitiveness	(2) Confidence	(3) Risk Preference	(4) Egalitarianism
SCST	-0.126*** (0.047)	-0.085* (0.048)	0.093 (1.939)	0.039 (0.037)
OBC	-0.067 (0.049)	-0.008 (0.051)	-1.935 (2.037)	0.042 (0.039)
Private School	-0.064* (0.033)	-0.042 (0.034)	0.510 (1.361)	0.047* (0.026)
Private school x SCST	0.102 (0.068)	0.015 (0.070)	-0.285 (2.809)	0.060 (0.054)
Private school x OBC	-0.027 (0.061)	0.060 (0.063)	3.464 (2.509)	0.017 (0.048)
Constant	0.666** (0.264)	0.387 (0.272)	50.060*** (10.883)	0.287 (0.209)
Observations	1,918	1,918	1,918	1,918
R-squared	0.108	0.064	0.081	0.058

Notes: Robust standard errors in parentheses. Other controls include age, gender, religion, high socioeconomic status, Raven's test score, and session fixed effects. *** p<0.01, ** p<0.05, * p<0.10.

Table 7: SUR Estimates: Differences in Personality Traits by Private School Enrollment

	(1) Agreeableness	(2) Extraversion	(3) Conscientiousness	(4) Emotional Stability	(5) Openness to Experience	(6) Locus of Control	(7) Grit
SCST	-0.361*** (0.116)	-0.233** (0.115)	-0.326*** (0.117)	-0.253** (0.117)	-0.338*** (0.114)	-0.334*** (0.116)	-0.262** (0.116)
OBC	-0.148 (0.118)	-0.192 (0.117)	-0.126 (0.118)	-0.128 (0.119)	-0.382*** (0.115)	-0.159 (0.118)	-0.162 (0.118)
Private School	-0.159** (0.079)	0.149* (0.079)	-0.148* (0.080)	-0.161** (0.080)	-0.048 (0.078)	-0.194** (0.080)	-0.081 (0.080)
Private school x SCST	0.339** (0.167)	0.047 (0.165)	0.110 (0.168)	0.434*** (0.168)	0.116 (0.164)	0.235 (0.168)	-0.044 (0.168)
Private school x OBC	0.153 (0.147)	-0.129 (0.146)	0.273* (0.148)	0.198 (0.148)	0.315** (0.144)	0.220 (0.148)	0.011 (0.148)
Constant	0.485 (0.624)	0.289 (0.619)	0.205 (0.629)	0.737 (0.630)	0.039 (0.613)	-0.117 (0.628)	0.676 (0.628)
Observations	1,651	1,651	1,651	1,651	1,651	1,651	1,651
R-squared	0.070	0.082	0.061	0.057	0.075	0.066	0.078

Notes: Robust standard errors in parentheses. Other controls include age, gender, religion, high socioeconomic status, Raven's test score, and session fixed effects. *** p<0.01, ** p<0.05, * p<0.10.

Online Appendix (not for publication)

Social Identity, Behavior, and Personality: Evidence from India

Utteyo Dasgupta, Subha Mani, Smriti Sharma and Saurabh Singhal

Table A1: Correlation Matrix of Residuals for Behavioral Preferences

	Competitiveness	Confidence	Risk Preference	Egalitarianism
Competitiveness	1.00			
Confidence	0.0945	1.00		
Risk Preference	0.0714	0.0534	1.00	
Egalitarianism	-0.0782	-0.0423	-0.0659	1.00
Breusch-Pagan test of independence: chi 2 (p-value)	55.874 (0.000)			

Table A2: Correlation Matrix of Residuals for Personality Traits

	Agreea bleness	Extra- version	Conscien tiousness	Emotional Stability	Openness to Experience	Locus of Control	Grit
Agreeableness	1.00						
Extraversion	-0.086	1.00					
Conscientiousness	0.155	-0.069	1.00				
Emotional stability	0.196	-0.002	0.130	1.00			
Openness to experience	0.088	0.239	0.103	0.033	1.00		
Locus of Control	0.071	0.037	0.049	0.079	0.091	1.00	
Grit	0.118	0.078	0.278	0.17	0.156	0.136	1.00
Breusch-Pagan test of independence: chi2 (p-value)				595.9 (0.00)			

Table A3: SUR Estimates: Differences in Behavioral Preferences by Gender

	(1) Competitiveness	(2) Confidence	(3) Risk Preference	(4) Egalitarianism
SCST	-0.091** (0.042)	-0.088** (0.043)	0.312 (1.726)	0.086*** (0.033)
OBC	-0.087** (0.039)	-0.001 (0.040)	-0.447 (1.595)	0.065** (0.031)
Female	-0.176*** (0.025)	-0.114*** (0.026)	-6.508*** (1.032)	0.016 (0.020)
Female x SCST	0.011 (0.071)	0.038 (0.073)	-0.180 (2.912)	-0.067 (0.056)
Female x OBC	0.024 (0.063)	0.086 (0.065)	1.797 (2.613)	-0.023 (0.050)
Constant	0.654** (0.265)	0.355 (0.272)	49.167*** (10.897)	0.286 (0.210)
Observations	1,918	1,918	1,918	1,918
R-squared	0.106	0.064	0.080	0.058

Notes: Robust standard errors in parentheses. Other controls include age, religion, private school, high socioeconomic status, Raven's test score, and session fixed effects. *** p<0.01, ** p<0.05, * p<0.10

Table A4: SUR Estimates: Differences in Personality Traits by Gender

	(1) Agreeableness	(2) Extraversion	(3) Conscientiousness	(4) Emotional Stability	(5) Openness to Experience	(6) Locus of Control	(7) Grit
SCST	-0.263** (0.103)	-0.276*** (0.102)	-0.281*** (0.104)	-0.067 (0.104)	-0.308*** (0.101)	-0.273*** (0.104)	-0.258** (0.104)
OBC	-0.061 (0.094)	-0.288*** (0.093)	-0.024 (0.094)	-0.071 (0.094)	-0.223** (0.092)	-0.043 (0.094)	-0.102 (0.094)
Female	0.236*** (0.059)	0.068 (0.058)	0.098 (0.059)	-0.243*** (0.060)	0.017 (0.058)	-0.099* (0.059)	0.209*** (0.059)
Female x SCST	0.190 (0.170)	0.146 (0.168)	0.068 (0.171)	0.017 (0.172)	0.159 (0.167)	0.190 (0.171)	-0.039 (0.171)
Female x OBC	0.038 (0.153)	0.054 (0.151)	0.182 (0.154)	0.244 (0.154)	0.073 (0.150)	0.052 (0.154)	-0.163 (0.154)
Constant	0.411 (0.625)	0.292 (0.620)	0.091 (0.630)	0.594 (0.632)	-0.057 (0.614)	-0.199 (0.629)	0.724 (0.628)
Observations	1,651	1,651	1,651	1,651	1,651	1,651	1,651
R-squared	0.068	0.082	0.060	0.054	0.073	0.065	0.079

Notes: Robust standard errors in parentheses. Other controls include age, religion, private school, high socioeconomic status, Raven's test score, and session fixed effects. *** p<0.01, ** p<0.05, * p<0.10.

Table A5: OLS/LPM Estimates: Behavioral Preferences

	(1) Competitiveness	(2) Confidence	(3) Risk Preference	(4) Egalitarian
SCST	-0.088** (0.036)	-0.075** (0.036)	0.409 (1.444)	0.061** (0.029)
OBC	-0.069** (0.032)	0.044 (0.035)	0.151 (1.419)	0.054** (0.027)
Constant	0.651** (0.269)	0.286 (0.279)	47.438*** (12.268)	0.281 (0.201)
Observations	1,966	1,970	1,965	1,948
R-squared	0.105	0.061	0.077	0.058

Notes: Robust standard errors in parentheses. Other controls include age, gender, religion, private school, high socioeconomic status, Raven's test score, and session fixed effects. *** p<0.01, ** p<0.05, * p<0.10

Table A6: OLS Estimates: Personality Traits

	(1) Agreeableness	(2) Extraversion	(3) Conscientiousness	(4) Emotional Stability	(5) Openness to Experience	(6) Locus of Control	(7) Grit
SCST	-0.178** (0.085)	-0.242*** (0.078)	-0.175** (0.083)	0.005 (0.082)	-0.324*** (0.078)	-0.184** (0.077)	-0.256*** (0.075)
OBC	-0.020 (0.075)	-0.275*** (0.069)	0.004 (0.073)	0.028 (0.070)	-0.240*** (0.073)	0.002 (0.067)	-0.163** (0.072)
Constant	0.331 (0.631)	0.436 (0.571)	0.080 (0.576)	0.886 (0.622)	0.265 (0.576)	0.095 (0.577)	0.454 (0.600)
Observations	1,896	1,904	1,921	1,917	1,925	1,847	1,886
R-squared	0.067	0.067	0.048	0.045	0.064	0.060	0.069

Notes: Robust standard errors in parentheses. Other controls include age, gender, religion, private school, high socioeconomic status, Raven's test score, and session fixed effects. *** p<0.01, ** p<0.05, * p<0.10

Table A7: Multiple Hypothesis Testing: Behavioral Preferences

	(1) Competitiveness	(2) Confidence	(3) Risk Preference	(4) Egalitarian
Low caste	-0.077*** (0.006) [0.023]	-0.006 (0.838) [0.722]	0.258 (0.827) [0.722]	0.057** (0.011) [0.023]
Constant	0.652** (0.015)	0.289 (0.296)	47.434*** (0.000)	0.281 (0.163)
Observations	1,966	1,970	1,965	1,948
R-squared	0.105	0.057	0.077	0.058
δ	-2.75			8.012
β^*	-0.118			0.063

Notes: Low caste takes a value 1 if caste is SCST or OBC, 0 otherwise. The coefficients are marginal effects from OLS regressions. Other controls include age, gender, religion, private school, high socioeconomic status, Raven's test score, and session fixed effects. Unadjusted p-values are presented in parentheses. *** p<0.01, ** p<0.05, * p<0.10. Multiple hypothesis corrected sharpened q-values in square brackets. The lower panel reports δ and β^* based on the test prescribed by Oster (2016), with maximum R-squared set at 1.3 times the R-squared from the regressions using controls.

Table A8: Multiple Hypothesis Testing: Personality Traits

	(1) Agreeableness	(2) Extraversion	(3) Conscientiousness	(4) Emotional Stability	(5) Openness to Experience	(6) Locus of Control	(7) Grit
Low caste	-0.085 (0.197) [0.204]	-0.261*** (0.000) [0.001]	-0.070 (0.272) [0.222]	0.018 (0.771) [0.42]	-0.275*** (0.000) [0.001]	-0.075 (0.211) [0.204]	-0.203*** (0.001) [0.002]
Constant	0.353 (0.580)	0.432 (0.450)	0.092 (0.874)	0.890 (0.153)	0.273 (0.637)	0.111 (0.846)	0.469 (0.434)
Observations	1,896	1,904	1,921	1,917	1,925	1,847	1,886
R-squared	0.065	0.066	0.046	0.045	0.064	0.057	0.069
δ		1.769			2.237		2.173
β^*		-0.174			-0.234		-0.152

Notes: Low caste takes a value 1 if caste is SCST or OBC, 0 otherwise. The coefficients are marginal effects from OLS regressions. Other controls include age, gender, religion, private school, high socioeconomic status, Raven's test score, and session fixed effects. Unadjusted p-values are presented in parentheses. *** p<0.01, ** p<0.05, * p<0.10. Multiple hypothesis corrected sharpened q-values in square brackets. The lower panel reports δ and β^* based on the test prescribed by Oster (2016), with maximum R-squared set at 1.3 times the R-squared from the regressions using controls.