Vulnerable groups and the covid-19: the Indian case

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The current unraveling COVID-19 pandemic poses severe challenges not only in the realm of health, but also for economic and social systems around the globe. It can exacerbate longstanding inequities between groups and leave marginalized groups in a vulnerable position; preliminary evidence from the UK and US suggest that racial and ethnic minorities are more likely to be affected negatively, both on the health, as well as the economic dimension.[1] In the context of India, we believe the pandemic particularly endangers individuals belonging to the traditionally socioeconomically disadvantaged groups. We focus on one such group called the Scheduled Castes (SC).[2] The SC are vulnerable for three main reasons. First, their low social status forces them to live in conditions that put them at high risk of acquiring COVID-19 and other diseases; second, their poor economic status makes them particularly vulnerable to the economic crisis induced by the pandemic; third, the atmosphere of uncertainty and fear stemming from COVID-19 may lead to

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[1]Blundell, R., M. C. Dias, R. Joyce, and X. Xu (2020). Active policy required to avoid COVID-19 crisis exacerbating existing inequalities. Working paper.

[2]The Scheduled Castes includes individuals who are from the formerly untouchable castes. They are among the most socioeconomically disadvantaged groups in the country, along with the tribal populations listed as Scheduled Tribes (ST). These groups receive preferential affirmative action, for the purpose of which these are listed in a government schedule. A group of intermediate to low-ranked castes and communities that also receive affirmative action, are called the "Other Backward Classes" (OBCs). All those not classified as SC, ST or OBC are the residual category, we refer to as "General".

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a surge in stigma and mistrust, aggravating existing discrimination against such groups.

We first present descriptive evidence highlighting the disadvantage faced by the SC in the above three realms - living conditions, economic status and prejudice - by comparing SC to 'the General Category'; the collection of groups that are top of the caste hierarchy (cf. footnote 1). For this purpose, we use data from the most recent round of the National Family Health Survey (NFHS-IV 2015-16) and the Indian Human Development Survey (IHDS-II 2011-12). Subsequently, we discuss how human capital provides an important coping mechanism and how caste-based discrimination may stymie its potential through initial disparities, and the further widening of these in face of the pandemic. We conclude by highlighting how our research aims at understanding the motives behind caste-based disparities and how this improved understanding can help guide policies to reduce group disparities.

Pre-existing inequalities

When it comes to reducing potential exposure to COVID-19 and limiting contagion, the World Health Organization has repeatedly stressed the importance of frequent hand washing and physical distancing. Yet, based on data on living conditions, both prescriptions might be particularly hard for the SC to implement. Indeed, as detailed in Figure 1, only 49 percent of scheduled caste individuals have access to any kind of toilet and 51 percent to a wash area with soap and water (compared to 80 percent and 74 percent for the general category). In addition, high crowding makes physical distancing hard to apply: with an average of 3.54 people sleeping per room, the SC households have little hope to prevent spreading the contagion to other household members, in case any one member is infected.

The pandemic also challenges the regular functioning of hospitals and health centers and their ability to provide routine therapies and services for other diseases, like for instance tuberculosis, which is among the main causes of death in India and disproportionately affects individuals with lower so-
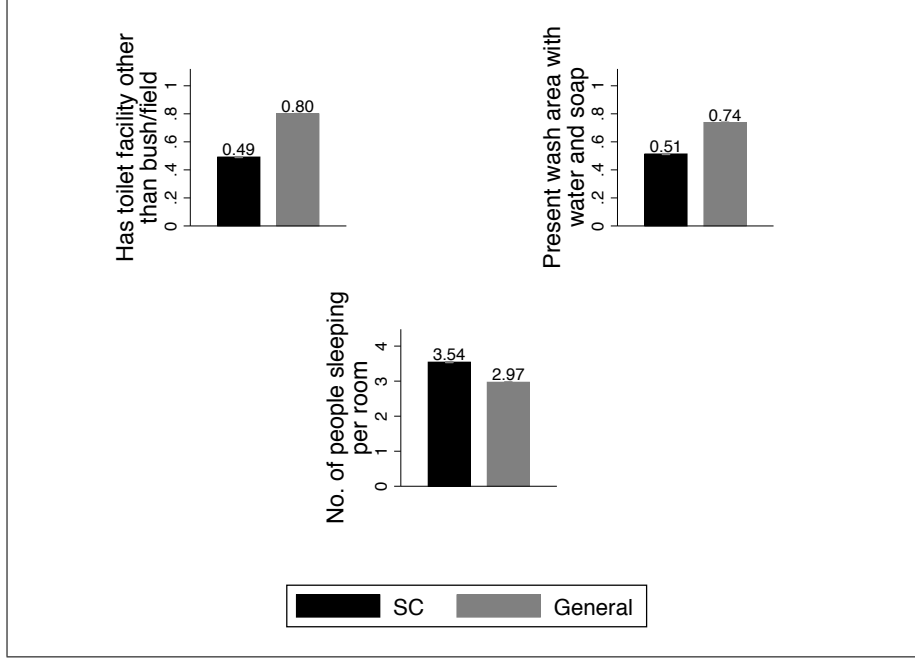
Figure 1: Living Conditions, by Caste

The data source is NFHS-IV and is based on the authors calculations.

cioeconomic status.[3] Based on data form the NFHS, the prevalence of tuberculosis among the SC is about 2 percent but 1 percent in the General Category. There are sharp disparities in health outcomes even among children; for instance, according to the latest round of NFHS-IV 43.5 percent of SC children suffer from chronic malnourishment as compared to 28 percent of children from the General Category.[4] The primary service delivery mechanism to tackle child malnutrition are the government-run *anganwadi* or kindergartens under the integrated child development services (ICDS) program. These provide essential food, health and nutrition services to pregnant and nursing mothers, as well as children, but have remain closed since the end

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[3]Mazumdar, S., S. Satyanarayana, and M. Pai (2019). Self-reported tuberculosis in India: Evidence from NFHS-4. *BMJ Global Health 4*, 1371.

[4]Deshpande, A. and R. Ramachandran (2020b). Which Indian children are short? The Indian enigma, social identity, and childhood malnutrition. Ashoka University Discussion Paper Series in Economics, No. 27, March.

of March threatening the nutritional and health status of millions of women and children, and in particular vulnerable groups which are especially dependent on these services.[5]

In addition, the measures imposed to maintain physical distancing jeopardize economic and social life. We believe that the pre-existing inequities in income and savings across caste groups will affect households' ability to cope with such negative shocks.[6] For example, Figure 2 shows that, on average, the SC have lower per capita income (about 44 percent lower), as well as lower consumption expenditures.
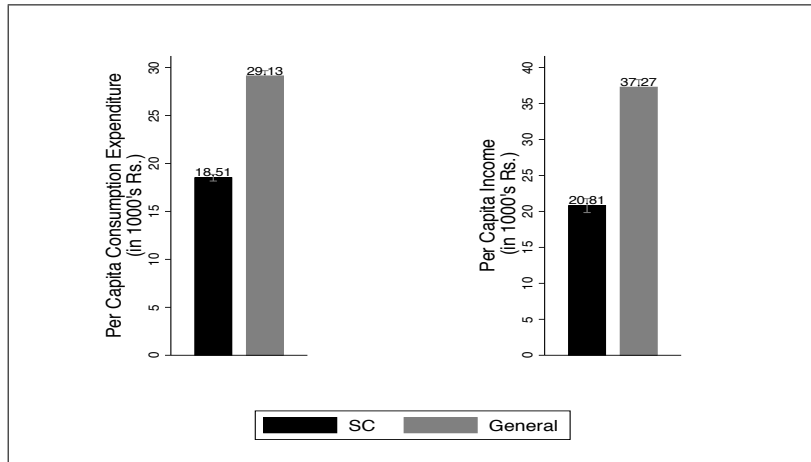

Figure 2: Economic Status, by Caste

The data source is IHDS-II and is based on the authors calculations.

Disruptions to income flows could be alleviated by savings, yet survey data from the NFHS-IV in Figure 3 shows that the SC are twice more unlikely to belong to the top two quintiles of wealth (measured through an assets index),[7] own agricultural land or have bank savings (for instance, only 49

[5]https://scroll.in/article/972732/hunger-and-malnutrition-loom-large-over-india-as-anganwadis-stay-shut-amid-coronavirus-pandemic

[6]Similar patterns have already been noted for the UK. For instance, see Phe (2020). Beyond the data: Understanding the impact of COVID-19 on BAME communities. Working Paper and Platt, L. and R. Warwick (2020). Are some ethnic groups more vulnerable to COVID-19 than others? The Institute for Fiscal Studies.

[7]Assets ownership is proxied by the wealth index constructed by the DHS. It is cal-

percent of the SC have bank savings, as compared to 62 percent of the general category).
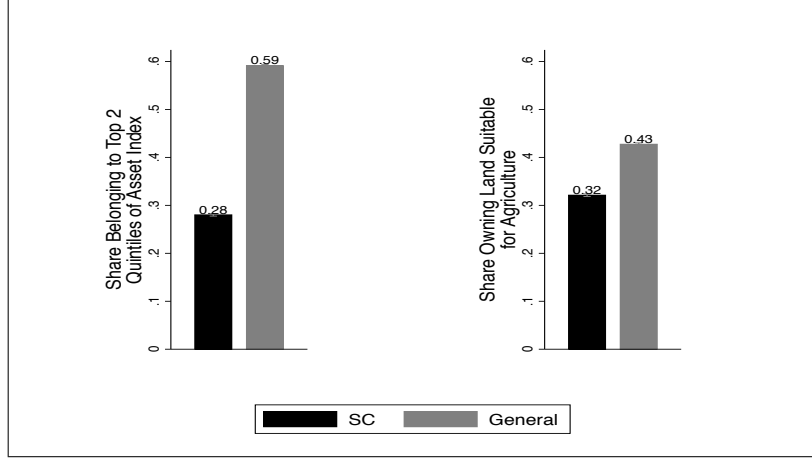

Figure 3: Assets Index Quintile and Land Ownership, by Caste

The data source is NFHS-IV and is based on the authors calculations.

Coping with the Covid-19 Crisis

Besides differential susceptibility of exposure and potential losses from Covid-19, there are stark differences also with respect to the capacity of the groups to cope in the aftermath. The key components of survival are access to food, income, and education. This is especially critical for the groups that were already underprivileged before and whose status was expected to deteriorate further due to the pandemic. We discuss these below.

Food and Income.– In a situation such as COVID-19, government support can be useful to buffer the effects of the shock. In developed countries, this

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culated using easy-to-collect data on a household's ownership of selected assets, such as livestock, television, washing machine, radio, refrigerator, computer and bicycles; materials used for housing construction; types of water access and sanitation facilities; and ownership and characteristics of land and dwelling.

support typically comes in the form of food banks and unemployment benefits. In the context of a developing country like India, two policies seem promising. First, the Public Distribution Scheme (PDS) offers households below the poverty line (BPL) access to basic food at subsidized prices. Since for individuals to be productive they need nutrition, this could serve as a lifeline. Data suggests that the share of BPL households is 21 percent among the SC, but 11 percent among the general category. Their corresponding shares as beneficiaries of the PDS scheme are 85 and 83 percent respectively. These shares are comparable and reflect that a large percentage of the BPL households have access to basic nutrition. Under a new scheme called "Atma Nirbhar Bharat", migrant workers have access to PDS at the place of residence and their family members at the place of origin; this policy may help fill the delivery gap even further.

There have been severe employment losses due to the COVID-19 and these have been highly unequal and concentrated among the less educated, those with alternative work arrangements and where only a small share of tasks can be done from home.[8] Evidence from India again show similar patterns; individuals from the SC group have lower levels of education, and are much more likely to be working as daily wage or casual laborers, as compared to those belonging to the general category (41 vs. 9 percent). Consequently, the first estimates on the extent of job losses suggest the SC are much more likely to lose their job - 21 vs. 7 percentage points - as compared to individuals belonging to the general category; moreover, the analysis shows that lower levels of human capital and higher likelihood of holding daily wage jobs explain the differential effects of the lockdown on caste groups.[9] The loss of jobs for the SC individuals might severely further affect their ability to cope with the current pandemic.

Another scheme that offers some hope is the National Rural Employment Generation Scheme (NREGA). It offers poor households access to income by creating demand for labour. Data shows that 50 percent of BPL households from the scheduled castes have job cards from the NREGA, as opposed to 30

[8]Adams-Prassl, A., T. Boneva, M. Golin, and C. Rauh (2020). Inequality in the impact of the coronavirus shock: Evidence from real time surveys. *Journal of Public Economics 189 (Covid SI)*.

[9]Deshpande, A. and R. Ramachandran (2020a). Social identity, employment and the COVID-19 crisis: Evidence from India. Working Paper.

percent of the general category BPL households. These numbers are broadly in line with the share of BPL households across the caste groups.

Overall, these patterns suggest that groups worst affected by the crisis though might face larger employment losses have greater access to the two government schemes in areas related to food and income, potentially improving their resilience. However, this is subject to some important caveats. To begin with, the above numbers reflect the share of people having benefits but not the quality of these benefits. It is well known that the PDS scheme has leakages and sometimes the quality of the food being provided is not that good.[10,11]

The new "Atma Nirbhar" policy, in principle, was intended to address the concerns that the migrant workers affected by the lockdown would not be able to access basic food stocks. However, data from the grounds suggest a large gap between stated objective and service delivery; for instance, the scheme was supposed to benefit 800 million non-ration card holders. However, as a report from July indicates, free food grains had been distributed to only around a quarter of the targeted beneficiaries, and in fact, eleven states[12] have not even distributed 1 percent of the foodgrains they have received under this new scheme.[13]

Regarding employment possibilities, caste based discrimination was a major factor driving disadvantaged castes and tribes in 2011 to migrate to other areas.[14] However, as lower caste migrant workers make journeys back to their home states, initial media reports suggest that not only are the small gains that lower caste individuals eked out in cities fast dissipating but that they are facing renewed caste based barriers in accessing work and rural job programs such as NREGA promoted by the government to battle the Corona

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[10]Dreze, J. and R. Khera (2015). Understanding leakages in the public distribution system. *Economic and Political Weekly 50*(7), 39–42.

[11]Also see, https://www.thehindu.com/news/cities/puducherry/substandard-supply-of-wheat-in-pds/article7759284.ece

[12]Namely: Andhra Pradesh, Goa, Gujarat, Jharkhand, Ladakh, Maharashtra, Meghalaya, Odisha, Sikkim, Tamil Nadu, Telangana and Tripura.

[13]https://www.financialexpress.com/economy/modis-free-ration-scheme-fails-to-take-off-11-states-didnt-distribute-even-1-foodgrains/2010848/

[14]https://indiamigrationnow.org

virus.[15]

Finally, there is evidence of institutionalized discrimination from public sector employees towards scheduled caste households; for instance, data from IHDS-II shows that 23 percent of elected officials, 36 percent of government officials and 28 percent of village officials self-report practicing untouchability. The harboring of such prejudices is likely to negatively affect public service delivery.[16] To summarize, even under normal circumstances these caveats could limit the scope of the interventions. In times of crisis induced by COVID-19, this could worsen even more.

Education.– COVID-19 has brought disruption to education, as schools have closed. According to estimates from a study in the US, by the time schools resume students in lower grades may fall a full year behind.[17] These setbacks are more pronounced for the historically disadvantaged Black populations in the US. There are already glaring pre-existing differences that are not in the favor of scheduled caste children, as they lag behind children from the general category in both reading and math; for instance, the India Human Development Survey data shows that whereas 45 and 38 percent of 8-11 years old SC children can read a paragraph or story and do division and subtraction, respectively, the corresponding figures for the general category are 62 and 57 percent (Figure 4). These differences are likely to amplify, in part because the strategies to combat disruption do not particularly favor the SC. The possibility of home schooling has a limited bite for these vulnerable groups. The data from IHDS-II shows that in 51 percent of SC households there is no female adult member with school education. In 27 percent of SC households, no adult male is educated. This stands in stark contrast to households from the general category, where the corresponding shares of households are 24 and 11 percent.

Many schools are now shifting to online classes. This may again worsen the gap, because the SC households are around three times less likely to

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[15]https://theprint.in/india/how-coronavirus-has-brought-caste-discrimination-back-for-indias-migrant-workers/486261/

[16]Giulietti, C., M. Tonin, and M. Vlassopoulos (2019). Racial discrimination in local public services: A field experiment in the United States. *Journal of the European Economic Association 17*(1), 165–204.

[17]https://www.brookings.edu/blog/brown-center-chalkboard/2020/05/27/the-impact-of-covid-19-on-student-achievement-and-what-it-may-mean-for-educators/
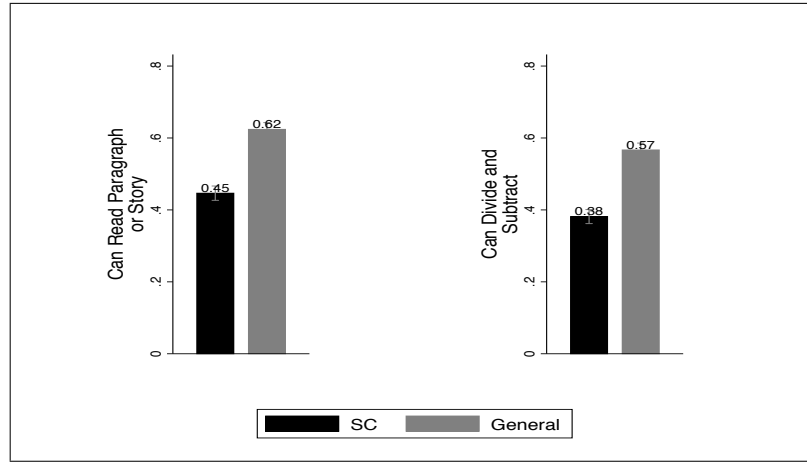
Figure 4: Learning Outcomes for 8-11 Year Olds, by Caste

The data source is IHDS-II and is based on the authors calculations.

have access to a computer or the Internet (See Figure 5). Moreover, their lower income and savings are going to deter them further from investing in the required technology. There has been so far no innovative strategies undertaken by the government to bridge the opening digital divide in the country. Learning from countries such as Sierra Leone, which developed tools to address the disruption caused by Ebola to educational systems, might provide some interesting avenues. The country implemented a plan to reach children using radio broadcasts, and coupled this with distribution of pens, pencils and books to students. Leveraging its high mobile phone penetration rate of over 80 percent, the country is also developing mobile phone-based educational interventions.[18,19] India needs to urgently consider such options if it is to prevent the widening of the educational gap. Not addressing this crucial issue, and the consequent inability of students to be able to participate due to lack of access to necessary infrastructure might also affect the mental health and well being of already stigmatized students.[20]

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[18]https://www.voanews.com/africa/sierra-leone-launches-radio-tv-programs-educate-kids-during-ebola-crisis.

[19]https://www.unicef.org/wca/stories/covid-19-sierra-leone-education

[20]https://www.ndtv.com/india-news/coronavirus-kerala-girl-cant-attend-online-classes-amid-lockdown-commits-suicide-2239318
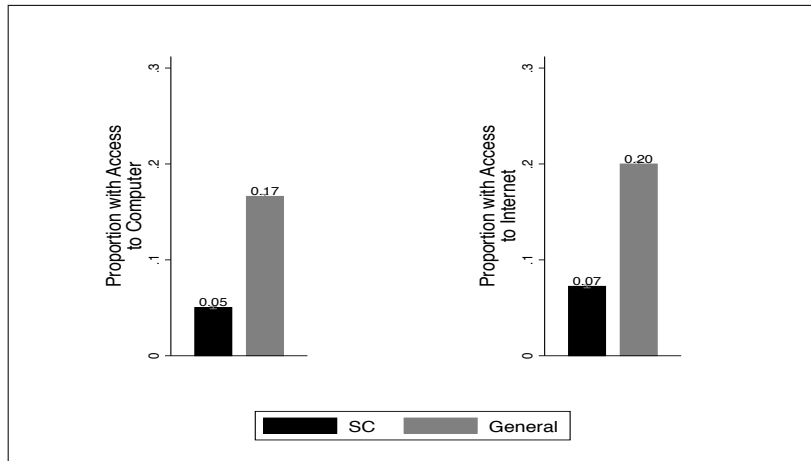
Figure 5: Access to Computer and Internet, by Caste

The data source is NFHS-IV and is based on the authors calculations.

Once schools resume classes, a way to offset these disparities could be through intensive coaching of disadvantaged students through direct intervention by local teachers or through programs like the *Balsakhi* (a child's friend) or accessing additional help on the private market.[21] However, surprisingly, 28 percent of teachers in the IHDS-II self-report practicing discrimination suggesting that such caste-based prejudices might affect service delivery. On the other hand, the lack of comparable material resources might inhibit the ability of the SC students to obtain private coaching; data from the IHDS-II shows that children belonging to the general category spend more than twice the amount than the SC children on private coaching.

Together, this means that in the post COVID-19 period the SC households not only are economically vulnerable but the disparities in access to education – a key factor in upward mobility – could push them into pernicious poverty for generations. Such disparities might reinforce discrimination against the subaltern caste groups even further.

In fact, there is evidence that in times of pandemics trust in the out-

[21]Banerjee, A., R. Banerji, J. Berry, E. Duflo, H. Kannan, S. Mukerji, M. Shotland, and M. Walton (2017). From proof of concept to scalable policies: Challenges and solutions, with an application. *Journal of Economic Perspectives 31*(4), 73–102.

group declines and may even lead to persecution. Historians, sociologists and economists have collected wide evidence on past epidemics. While some epidemics resulted in sharp social violence and scapegoating of entire minorities (for example the Black Death in Europe, resulting in the persecution of Jews, and the bubonic plague in India in the late XIX century, resulting in popular riots against british governors), in other instances violent attacks were less frequent and generally directed towards single individuals, rather than entire social groups.[22,23]

While there is currently no wide consensus, there is fear that the higher susceptibility of the SC population to COVID-19 infection and mortality could result in intensification of prejudice against such groups; for example, its higher infection and mortality rates could lead the SC population to be seen as vehicle of infection.[24,25]

Meanwhile, instances of increased discrimination and social unrest in the waking of COVID-19 emergency have been documented against individuals of African origin in Asia, individuals of Asian origin in the US and Europe, Muslims in India, Sri Lanka and Myanmar, migrants in India,[26] Bangladesh,[27] foreigners,[28] and against doctors and health workers in several countries.[29]

[22]Voigtländer, N. and H.-J. Voth (2012). Persecution perpetuated: The medieval origins of anti-semitic violence in Nazi Germany. *The Quarterly Journal of Economics 127*(3), 1339–1392.

[23]Cohn, S. K. (2012). Pandemics: waves of disease, waves of hate from the plague of Athens to AIDS. *Historical Research 85*(230), 535–555.

[24]https://thewire.in/caste/social-distancing-coronavirus-caste-ambedkar.

[25]https://thewire.in/south-asia/bangladesh-caste-discrimination-dalits-covid-19

[26]https://www.hindustantimes.com/india-news/ensuring-safety-of-migrants-key-policy-challenge-for-govt/story-iwlOd0NYApsALBMIANiy7N.html.

[27]Ahsan, R., K. Iqbal, M. Khan, A. M. Mobarak, and A. Shonchoy (2020). Using migration patterns to predict COVID-19 risk exposure in development countries

[28]Bartos, V., M. Bauer, J. Cahlíková, and J. Chytilová (2020). Covid-19 crisis fuels hostility against foreigners. Working Paper

[29]McKay, D., M. Heisler, R. Mishori, H. Catton, and O. Kloiber (2020). Attacks against health-care personnel must stop, especially as the world fights COVID-19. *The Lancet 395*(10239), 1743–1745

Augmenting Human Capital

The above patterns clearly call for intervention in creating equality with respect to access to education. A major impediment in achieving this is the discriminatory attitude of teachers towards children from the SC households.[30] Combating this requires a deeper understanding of the motives that make teachers engage in discrimination and tailoring the policy to the specific motives. Without this understanding the policies aimed towards mitigating discrimination may end up shooting in the dark and missing the target.

Our ongoing study on discrimination in the formation of human capital contributes precisely to this agenda. In the literature on the economics of discrimination individuals may discriminate either because they have a taste for discrimination for individuals from certain groups or because they believe that individuals from certain groups are less productive.[31] In our context this translates to teachers discriminating because of their dislike for students from the SC group (taste), or because they believe that the SC pupils are of less ability and hence it is inefficient to invest into their education (belief). Disentangling these motives is challenging because these are often intertwined in the survey data.Thus, we do not actually know the prevalence and the importance of these motives, that is, to what extent teachers possess these motives and their importance in affecting the learning outcomes and educational attainment of the SC children. We use experiments informed by behavioral economics to document the prevalence of such attitudes and behavior, as well as the underlying motives, among teachers and the local population.

We start by conducting two allocation games. In these games, there are no payoff consequences for the respondents themselves, as they are paid a fixed participation fee. However, their decisions determine earnings for two individuals to whom the respondents can allocate varying amounts. The first game involves a trade-off between maximizing the total value of output, henceforth called efficiency, and minimizing the extent of inequality. In this

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[30]Barbour, S., T. Palikovic, J. Shah, and S. Narula (2007). Hidden apartheid: Caste discrimination against India's "untouchables". Shadow report to the UN committee on the elimination of racial discrimination. *New York: The center for human rights and global justice and the New York. University school of law*

[31]Deshpande, A. (2011). *The grammar of caste: Economic discrimination in contemporary India*. Oxford University Press.

game, identities of the recipients are not revealed. It allows us to measure a respondent's propensity for maximizing efficiency at the cost of equality.

In the second game, we hold efficiency fixed and vary the allocations only by the extent of inequality. Our purpose is to study the extent of inequality that the respondents are willing to impose when identities are revealed. To dampen the salience of the caste identity, we conduct this experiment by in a random sequence introducing caste, gender, and class identities. This experiment thus allows us to gauge respondents' propensity for identity-based discrimination.

Finally, we conducted two additional experiments in which respondents indicate their willingness to engage in hypothetical tasks for a given price, such that the tasks are at conflict with norms prescribing inter-caste inter-actions. If the respondents agree to take part in the hypothetical task, then they earn the promised money but would have to forego the amount if they refuse to do so. Since the tasks are hypothetical, standard theories of utility maximization suggests that every respondent should accept. However, we find that over 30 percent of the respondents don't, suggesting an internalized response towards inter-caste interactions. This experiment gives us a simple yet powerful measure of taste-based discrimination in which the respondents are willing to forego money to avoid internal shame or guilt over not *actual* but over even a *hypothetical* transgression of norms.

After these experiments, we also elicit beliefs of the respondents over the economic status and academic performance of children among scheduled caste households relative to the general categories ones. The responses to these questions were incentivized, such that answers within a certain range of the correct response were financially rewarded.

Our findings, thus far, reveal that both taste and beliefs are important motives behind discrimination. In the next steps, we aim to link these measures of discrimination to student performance and elucidate their importance in affecting learning outcomes and progress through the educational system.

In a final step, we will launch informed policies through randomized control trials to see if they can mitigate the scope of discrimination and help

dampen the disparities in educational attainment between caste groups. Improving human capital outcomes of subaltern groups might provide a way not only to cope with the current crisis but improve resilience in the future and help in the creation of a more just and equitable society.