ABSTRACT

Title of Dissertation: EXPERIENCING CASTE: SOCIAL DISTANCE IS DISTINCT FROM ECONOMIC DISTANCE

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Caste has been a primary identity factor in the Indian subcontinent for thousands of years. It originated from a religious framework, coded by early law books, but as society shifted with different rulers, political systems, and policies, the influence of caste in maintaining the distances between groups has changed. As a society changes, the power structures between different groups within the society inevitably shift, impacting the experience, outcomes and behavior of dominant and oppressed groups in differing ways. To study the impact of societal change on caste groups, I argue that caste inequalities should be observed and operationalized in social terms separately from economic terms, though both social and economic lenses are important. Moreover, I also argue that it is important to examine the relationship between these two axes of stratification by locating them in local rather than national contexts.

Social caste distance is related to ritual beliefs and associated practices that maintain a social distance between different caste groups in a locality. Economic caste distance is related to the material wealth inequalities that exist between caste groups living in the same locality. This study serves to highlight that social and economic caste distance should not be considered one

and the same, though they may interact. Using the India Human Development Survey Wave 2 (2011-12), I structure my study at the local area level, generating district-level markers for both the social and economic distance between different caste groups to operationalize the caste context in which each family lives its life. I test how the social and economic distance may impact dalits (also called Scheduled Castes) and dominant castes differently by looking at three outcomes: Local conflict, women's labor force participation, and children's learning outcomes.

I find that social distance predicts conflict slightly better than economic distance, but places with both social distance and economic distance are even more likely to have conflict. For women's labor force participation, I find that there are significant differences between dalit women and dominant caste women's behavior. All women are less likely to work in areas with high social distance, but dalit women are likely to work more in areas with high economic inequality between caste groups despite social distance present in the area. Dominant caste women are not as likely to work, compared to all other caste groups, and economic inequality between castes benefits dominant caste households and decreases a dominant caste women's likelihood of working. I also find that the learning outcomes of children significantly differ among different caste groups. For both oppressed caste and dominant caste children, the variables that are significant when it comes to learning outcomes seem to be the socio-economic factors apart from the caste distance like household education, assets, and in the case of reading, the urban/rural status. There is no conclusive finding for all children taken together when it comes to the effect of economic or social distance between castes, BUT dalit children analyzed separately face a negative impact on both reading and math outcomes in areas where there is high economic distance between castes.

EXPERIENCING CASTE: SOCIAL DISTANCE IS DISTINCT FROM ECONOMIC DISTANCE

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Dedication

This dissertation is dedicated to my family.

My ancestors, who faced untouchability.
My grandparents, who benefitted from reserved seats to gain education and employment.
My parents, Kumar M. Natta and Madhu L. Natta, who immigrated to the US, and continued the Ambedkarite movement, and who taught me to strive and to give back.
My husband, Jean Christophe Rusatira, who taught me to be resilient, who inspires me every day, and whose love and support give me strength.
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Chapter 1: Introduction

1.1 Background

How is India's caste system changing and how does this status hierarchy impact the lives of individuals? As a society changes, the power structures between different groups within the society inevitably shift, Impacting the behavior of dominant and oppressed groups in differing ways. Change in society may come differently in different geographic locations, certainly differently in urban areas versus rural areas, and perhaps even differently in different parts of the country. One way to examine the impacts of local shifts in power structures can be by looking at the social and economic distance between caste groups in India and their relationship with individual well-being.

In this dissertation, I argue that caste inequalities can be observed and operationalized in multiple ways-- particularly in social and economic terms. The two measures of caste distance created in this study capture the debate about what caste is and how it is experienced at the local level. Some argue that caste is religious while others argue that the main thing to focus on is the economic disparities. This study puts those two theories in conversation and looks at how well the social distance vs the economic distance between caste groups may predict outcomes for individuals, and whether it affects members of dominant groups differently than those of the oppressed groups. This study operationalizes the concepts of social distance and economic distance between caste groups with two constructed variables using the India Human Development Survey (IHDS) data.

Another strength of this study is looking at the district level and creating localized variables for social and economic caste distance that account for urban-rural differences. Both social and economic distance variables are generated specific to a local area by creating a unique identifier for each rural or urban area within each district. This localization step is so crucial because of the vast geographic differences in socio-political history among regions in India that have resulted in different evolutions of caste distance in different areas. Therefore, geography is a reflection of the history of how caste evolved over time specific to the location and is ingrained in the two constructed caste measures.

Building on Ashutosh Varshney's work on ethnic conflict (Varshney 2003) and Christophe Jafferlot's work on voting behavior (Jaffrelot 2023), we can see where conflict is likely to arise and who is likely to experience that conflict using the social and economic distance as a framework to model the experience of caste at the local level. I also build on work by Aswini Deshpande and Uma Chakravarti to examine the differing behaviors of dalit women and dominant caste women and if the social or economic caste distance is predictive of women's work behavior (Aswini Deshpande 2021; Chakravarti 2018). Finally, I build on the work of Sonalde Desai, R. Govinda and others as I delve into the educational outcomes for children and use the social vs economic caste distance framework to see if it is predictive of children's learning (Tiwary, Kumar, and Mishra 2023; Govinda, National Institute of Educational Planning and Administration (India), and UNESCO, 2002; Govinda, Bandyopadhyay, and Consortium for Research on Educational Access 2011; Sonalde Desai et al. 2009; Sonalde Desai and Kulkarni 2008).

1.2 Caste in India: Social & Economic

The Indian caste system, which has been attributed as the source of social, economic, and political inequalities as well as related conflicts in present-day India, was first mentioned in a religious text, the Rig Veda, but was further codified in the Manu Smriti. The Rig Veda, dated between 1500 and 1200 BCE (Doniger 2024), divides humanity into four categories called varnas. The Purusha Suktam verse of the Rigveda is the first mention of the four categories in an ancient Sanskrit text and other parts of the Rig Veda use the term "varna". The Rig Veda may have categorized society into four groups allegorically, but the Manusmriti, dated to circa 100 CE (Britannica 2024), is a legal text which further elaborated on the varnas and describes what the duties or obligations of the four social classes are in a more literal sense (Sharma 1978). In the classical literature of India, the four varnas are generally described as brahmins (thinkers, literate, advisors, keepers of the temple, etc.), kshatriyas (Rulers, warriors, landowners), vaishyas (trading or business groups), and shudras (serving classes). The divisions established by this religious concept were likely more amorphous in practice and were further morphed with the changing regional and socio-political tensions within India over time. Therefore, the term "jati" may be a better description of caste as it operates on the ground today (Béteille 1996).

Some of the practices associated with keeping jatis separate, (such as endogamy, restriction of who can and cannot enter temples, restriction on who can share food or utensils, who can share a water source, who can be touched and who should not be touched), have remained as the cultural-behavioral practices that socially distance caste groups (Macdonell 1914). In the modern global economy, the historic caste divisions that established, or arguably were established by, which groups performed which occupation, and which groups could get educated, have also resulted in economic divides or economic distance between caste groups.

Brahmins (historically the only ones allowed to read and write) along with wealthy land-owning castes (rulers and lords in various capacities) termed “forward castes”, have dominated most regions of India economically and politically throughout history. In more recent times, the business-oriented castes have been steadily gaining economic and subsequent political power in different states of India as the power of monetary wealth overtook the power of religious beliefs in a global economy. Oppressed caste groups, seen as service castes, or untouchable outcastes that perform “polluted” jobs like leather work and manual scavenging who have historically faced social discrimination have also fallen behind economically and remain in relative poverty, especially in rural India. Adivasi, or native and indigenous groups who still subsisted in forests or small agriculture have fallen further behind educationally and economically.

Over the years, the economic differences between castes have come to the forefront as a clear and quantifiable way of understanding inequality. The Indian constitution attempts to account for the caste-based inequalities by reserving 22.5% of government-funded educational and civil service jobs to oppressed castes and tribes, commonly referred to as “scheduled tribes”(ST) and “scheduled castes”(SC) (Defined as per Article 366 (24) of Constitution of India and listed in a schedule in Article 341) (Indian Constitution 1970). These “reservation” policies have become a center for the debate around how caste matters to individuals’ outcomes. There have also been changes and additions to who can benefit from reservation policies and much of these changes to the reservation policy were prompted by political organizing and lobbying by certain caste groups as well as government research to see which groups needed reserved seats. Every addition to the reservation policy came with a strong backlash from dominant caste groups or castes omitted from reservations, that felt they and their children would be pushed out and sidelined from opportunities that they used to monopolize. This backlash sometimes took the

form of intensifying cultural caste discrimination practices or highlighting the few oppressed caste people who did gain economically as a ‘Creamy layer” undeserving of reservations. The term “Creamy layer” is used to refer to those dalit people who have become highly educated and upwardly mobile as compared to other dalit people. To opponents of the reservation system, the creamy layer symbolizes the perceived closing of the economic gap between castes, providing a justification for removing or reassessing reserved categories.

Much of the recent debate around the exclusion of the “creamy layer” of dalits from reservation categories, essentially subdividing the schedule of castes from the Indian constitution,(Dasgupta 2024) stems from viewing caste disparities primarily based on employment outcomes and associated economic outcomes for individuals. There are dominant castes supporting the subdivision as well as dalits who feel their caste has been left behind economically by other dalits. A few scholars note that there is discrimination of a social kind practiced within dalits, exemplified by studies in certain states (Bathran 2016) but the ultimate policy around excluding “creamy layer” dalits from reserved categories goes back to the perceived widening of economic distance between dalit castes. If the absolute economic gains of some dalit castes are compared to other dalit castes, it may seem like the reservation policies need reassessment due to a “creamy layer” of dalits emerging, but the important consideration being pushed to the background in this sub-classification argument is the relative economic distance between all dalits and all dominant castes. The fact that discussion around the need for subcategorization is overshadowing the larger economic distance that has existed and persists between dalits, and dominant caste groups should ring alarm bells. Further, this focus on employment and economic outcomes regarding reservation policies also indicates a possible

conflation of the concept of economic distance and social distance between castes when calling for policy changes to make things equitable for all castes.

This study argues that caste in today's world is experienced BOTH as a cultural "social distance" as well as an economic disparity and "economic distance" between different caste groups. Therefore, this study will examine caste as an economic distance and a social distance separately. Operationalizing social and economic distance between dalits and non-dalits (encompassing many so-called "forward castes "(FC) as well as middle castes called "other backward classes") is complex. While economic distance is somewhat easier to measure, how do we measure social distance?

Here, I rely on untouchability as an indicator for measuring social distance. Untouchability is a social institution, exhibited by a series of practices that enforces and legitimizes discrimination against people born into certain oppressed castes, termed "untouchable castes" (listed as Scheduled castes in the Indian constitution or referred to interchangeably as "dalits" or "oppressed castes" in this study). The discrimination is perpetuated and enforced by those castes seeing themselves as ritually purer than the untouchables. Many times, these "dominant castes" are the brahmins and FCs who are at the top of the ritual caste hierarchy, though their behavior is mirrored by other castes placing themselves on a spectrum of purity-pollution between FCs and SCs. In this study, I use the term "FC" interchangeably with "savarna" and "dominant caste". Untouchability practices include but are not limited to, avoiding the physical touch of a person of an oppressed caste, not allowing them into one's house or specifically the kitchen, not eating food prepared by an oppressed caste person, and not sharing plates, cups, or utensils. In my qualitative work, I saw other examples of untouchability practices such as dalit women being expected to sit on the floor in a dominant

caste household, dalit women having to stand up and cover their face with their sari if a dominant caste man could see them, and villagers asking for caste affiliation before allowing anyone to drink from a public water source to ensure no dalit people touched that water. These untouchability practices are exclusionary, humiliating, and exploitative, serving to reinforce a caste hierarchy with dalits at the bottom (Thorat et al. 2006). Social distance is measured by the prevalence of self-admitted untouchability practice by dominant caste households in a locality, where respondents essentially say "yes" when asked if they practice untouchability.

Economic distance is measured as a ratio of the average assets of dominant castes over dalit castes in a locality. Generally, dominant castes tend to be richer than dalit castes in any given village, with many dalits in India falling below the poverty line(Kumar et al. 2023; Ashwini Deshpande 2017). I construct a continuous variable that averages the assets of all dominant caste households in an area (unique district plus urban/rural identifier) and divides them by the average of all dalit caste household assets in that area to obtain a district-level ratio of assets. The larger the ratio, the more economically unequal a district is in terms of caste, and dalits are worse off.

The different socio-political contexts of different Indian regions add further complexity to understanding how caste is experienced and what caste disparities remain salient in India. The idea and experience of caste across India is very different based on geography. M.N. Srinivas argues that caste mainly exists and functions as a regional system'(Srinivas 1957). Sumit Guha goes further and argues that the system operated at a fairly granular level below the regional level; that it is subregional, effectively an area constituted by a few dozen villages, (Guha 2013) I treat districts (equivalent to counties in the United States) as the smallest geographical level.

1.3 Motivation for the Research

Pre-dissertation qualitative data, using 100+ semi-structured interviews of rural Indian women, showed that there are vast differences in the caste context (severity of untouchability practices and economic inequality) between north Indian and south Indian villages. Further, oppressed caste women, especially in north Indian villages, had very different ways of speaking about their work behavior, labor force participation, and hopes for their children's education as compared to dominant caste women. The current study was motivated by the unanswered questions around which geographic areas have higher caste inequality comparable across India, and how that caste context within a locality might be impacting oppressed caste people and dominant caste people differently.

Further, part of the debate on caste subclassification to exclude the "creamy layer" within dalits from reserved category seats is essentially a debate founded on the contested assumption that economic distance is decreasing between castes, leading to diminishing inequalities between dalits and dominant castes. However, whether diminishing economic inequalities leads to equality in other outcomes or generates resentment on the part of the formerly dominant groups remains an open question.

This study hopes to examine the impact of the economic distance between castes because understanding the economic distance is important to justify any claims of altering reservation policies. Further, the debate around sub-classifying the Scheduled caste group to exclude the "creamy layer" does not account for the ongoing social caste discrimination and oppression faced by all dalits. The social distance between castes is captured by the social distance measure in this study. Conflating the social and economic aspects of caste experience can have detrimental outcomes for overall equity in a population. Therefore, a further motivation for the

current study is to separate social distance from economic distance between castes and measure the influence of each on different outcomes.

In this dissertation, I focus on three outcomes, each examined in a different paper.

Paper 1 examines the outcome of conflict in a district and seeks to understand if the social distance or economic distance between castes correlates with conflict. I ask if different caste groups are experiencing different levels of conflict and if so, which groups and in which areas are experiencing higher conflict. I also see if the combination of social and economic distance in a district may predict conflict and if there may be an interaction effect of social and economic distance between caste groups.

Paper 2 examines women's behavior and uses a binary indicator for women working for a wage as the outcome variable. I want to understand if the labor force participation of a woman is differentiated by the woman's caste identity and her family's presence in a district with high social distance between castes versus high economic distance. I also look at how social and economic distance between castes may jointly determine a woman's labor force participation. Further, given the scholarship on different poverty rates within different caste groups, dalit women may have very different work behavior than dominant caste women in a district with the same social and economic caste distance. Therefore, I run separate models for dalit women and dominant caste women to capture differences in labor force participation based on caste identity, even if they reside in the same locality.

Paper 3 examines children's learning outcomes in math and reading. Previous scholarship has shown that there is a learning gap between dalit students and dominant caste students, so I seek to understand if social distance or economic distance between caste groups in a locality has an influence on children's learning outcomes. I first look at each caste distance

variable separately and see if children are impacted. I also seek to understand the joint effect of social and economic caste distance on all children's learning outcomes. Finally, I want to make space for understanding dalit children's outcomes separately from dominant caste children to see if there is a different correlation with social or economic caste distance.

In combination, these three papers all serve to examine individual outcomes influenced by caste in different ways at a granular geographic level. Further, it's important to show using these measures how the social distance between castes may have a different influence on an individual's experience than the economic distance between castes, although the joint effect of these distances may also be a telling influence of caste on various outcomes.

1.4 Contribution of the Current Study

One major contribution of this study is the relational aspects of the social and economic distance between castes. Past research has focused on the caste identities, examining differences between dalits and non-dalits in a pan-India level. But following the literature review in section 3.1, I argue that a variety of behaviors of both dalit and non-dalit households are shaped by the localized relationship between the two groups.

By examining social and economic distance separately and looking at the differential impact of each on dalits and non-dalits, this paper seeks to make sense of a society that has experienced economic growth, possibly reducing income inequalities, but where social tensions continue to simmer under the surface. I hope that by exploring these diverse trends, it will be possible to recommend more effective policy and NGO interventions specific to district-level conditions and caste norms.

Caste, as experienced by individuals, has been changing, both in terms of behavior like untouchability that indicates social status, as well as economic inequalities that correlate with

caste identities. Conceptualizing two distinct aspects of inequality – social and economic distance – is a central contribution of this dissertation. I argue that these are distinct but related domains and have different impacts on outcomes studied in this dissertation – local conflict, women's employment, and children's education. I structure my study at the local area level, generating district-level markers for both the social and economic distance between different caste groups to operationalize the caste context in which each family lives its life.

The India Human Development Survey (IHDS) conducted in 2011-12 allows for tracking untouchability prevalence, average assets owned by households of different caste groups across India, and various markers of lived experience such as women working for a wage, neighborhood conflict, and the educational outcomes of children. An extension of this study could also use the different waves of IHDS to track participants from 2005, 2012, and 2022(ongoing data collection) to examine the change in caste contexts at the district level and individual outcomes over time. However, for this dissertation, I rely on Wave 2 data from the 2011-12 survey since one of the key indicators I am interested in, untouchability, was not collected in Wave 1.

The present study uses multivariate regression analysis to examine in greater detail the separate contribution of social and economic factors of caste to the lived experiences of people in each local area. Further, this study could inform and build theory around the different ways in which dominant groups and marginalized groups in a society behave and are impacted by changing social structures. The social structure this study highlights is the caste structure and how dalits (oppressed castes) and dominant castes behave in different caste-related social and economic contexts. The theory built from this study could potentially be applied to any shifting

social structure including race in America, tribal divisions in sub-Saharan Africa, or ethnic divides in many other parts of the world.

Chapter 2: Local Caste Contexts

From October 2018 to July 2019, I spent time doing six focus group interviews and 103 individual interviews with rural and underprivileged women in India. Of the in-depth interviews, half of the respondents are dalit and the other half are dominant caste, specifically in rural and underprivileged parts of India. The themes that emerged from these interviews motivated the hypotheses that I seek to test using quantitative data in each paper. The following narrative highlighting two of the interviews I conducted serves to illustrate the contrasts that I observed.

2.1 A Tale of Two Families: Pre-dissertation Qualitative Work

In Pathapalli, a village about 30 km outside of Hyderabad, one street divided the area where former untouchable caste groups lived and the streets in which the dominant caste people lived. On the dalit side, 35-year-old Lavanya sat stitching and allowed me to interview her while her husband used a hose to clean their concrete front porch. Lavanya lived in a four-room house with her husband, mother-in-law, husband's brother and his wife and their child. Her son and daughter were studying at a boarding school.

Education for her children was important to Lavanya, as a way to climb out of caste discrimination, attain a stable income, and delay an early marriage. In her own life, the end of her education was tied to an early marriage. She had studied until the 9th grade, then failed the 10th grade exam, after which she enrolled in a boarding school for tailoring training and her family pushed her into marriage when she was 17 years old. Lavanya didn't know she was getting married until it got to the point of marriage, and she recalls crying, but the elders had talked and decided that she was to be married. Her husband was a relative, and he too, only got to study until the 2nd grade and then had to take care of his family, so they both prioritized a

good education for their children. Lavanya's daughter is 12 years old and studying in a selective local government school. She passed an entrance exam to gain admission and is now studying in 8th grade and staying at the hostel, where all her fees are paid by the government. Lavanya took pride in the fact that her daughter had been accepted into a selective school, and the school is associated with a level of prestige in the state and takes the children out of their village, insulating them from caste and other social issues, providing them with a quality education. (Hopefully ensuring a high educational outcome!) Lavanya seems to have great faith in government education, especially in these selective schools, and was very happy they did not have to pay any fees. She hopes her daughter can become a doctor. Like Lavanya, many women, especially dalit women, have high aspirations for their children, though it is yet to be seen if their environment allows for those aspirations to be achieved.

Many women in dominant caste households that I interviewed did not know about the family finances and were not allowed to work for a wage outside the home, though many, especially older women, also did not express a desire to work outside of the family care work. Unlike in dominant caste households with higher family income, Lavanya's family definitely needed the money, so working for her was not something to be allowed, but something absolutely necessary for survival. To make ends meet for the family, Lavanya earns some money from tailoring. She quoted the prices of the blouses that she stitches, Rs.50 without lining and Rs.100 with lining, and that she could stitch 5 blouses a day, but it is an income that is not ensured or regular each month. Lavanya's husband gets daily wage jobs with construction contractors and makes about Rs.10,000 per month (~$142 with a ~Rs.70 to $1 conversion rate in 2018). For a period of six months when her husband was sick, her income from tailoring was their sole source of income. The knowledge of the house finances and her equal, or sometimes

primary, role in breadwinning, automatically gave her some amount of equity in family decision-making and personal autonomy.

Regarding experiences colored by caste, almost all Indian villages are segregated by caste. This segregation sometimes serves to insulate dalit children from caste realities until they venture out of their village, especially if their parents do not explain the significance of caste identity. Generally, dalit parents do not tell their children about caste hoping to overcome caste status by gaining in other status markers like education and income. Dominant caste parents usually tell their children, teaching them to be proud of their caste identity and also teaching behaviors like who should or should not be invited into the household or who they can or cannot share food with. Due to the spatial segregation of castes in her parents' village, Lavanya does not recall experiencing social exclusions due to caste until she got married and moved from her larger home village to this smaller village with her in-laws. Here, she felt the social aspect of caste in the village temple, and some Reddy caste people (dominant caste) did not let her enter the temple. That was when she felt that "caste is real", and she felt sad when she saw her children go to the temple and as they climbed up near the deity for a festival, the Reddy caste people made them go back down and stay outside the temple.

This enforcement of the social behaviors associated with caste, essentially untouchability practices, is what I term the "social distance between caste groups." These behaviors exist across India but at different levels of severity and different frequencies. The social distance between castes is experienced through behaviors unrelated to purchasing power, so it is certainly distinct from the purely economic (wealth, income, assets) distance that also exists between caste groups. From Lavanya's narrative, it seems that the village she moved to after marriage had a higher

social distance between castes than the village of her birth, so her experience of untouchability really began in her marital village.

In contrast to Lavanya's childhood, Lavanya's 5th-grade daughter, growing up in her father's village, experienced the social caste distance much earlier in life. She complained that another girl "was saying to my friends that they should not eat my curry, because [they] are higher people". This is essentially untouchability practices exhibited by dominant caste girls against a dalit girl. Lavanya then discouraged caste-discriminatory speech and behavior from both girls and emphasized that they are children who are studying, and getting educated, and they should not be saying things like that. The way that Lavanya corrected the children's behavior is again indicative of her great faith in education as an equalizing force, that because these children are getting educated, they should be leaving caste differences behind. She herself had not been told about caste until she experienced exclusionary behavior, and she never told her daughter about their caste name or status until her daughter faced exclusionary behavior from others.

Just a 5-minute walk away, across the dividing street of the village, lived Sarita (43 yrs) and Ramya (45 yrs), two ladies of the "Reddy" caste, a dominant caste in the Telangana and Andhra area. They were related and consented to do a joint interview. In contrast to the dalit household, which was 4 rooms in one building, shared by 7-10 people, the size of the dominant caste property was larger and included multiple homes in the street. The economic distance between the dominant castes and dalits in the village was clearly evident in the difference in their property size. Unlike dalit families, dominant caste families tend to be land-owning. They are probably better off as evidenced by the women saying they would not work because their husband or other male relative supports them. In Ramya's case, because she was a widow with

bad eyesight, her brother supported her by giving her a share of the proceeds from the family farmland and Ramya helped take care of her brother's children in return.

Sarita had studied until 6th grade and Ramya until 7th. Similar to the dalit respondent Lavanya, Sarita had gotten married concurrently with the end of her education at the age of 14. Signifying an early, proud, and ongoing awareness of caste, she referred to her husband as "my Reddy ", as one man of their Reddy caste group. Sarita had a daughter who was married at the age of 22, a later age than many women in the area. Her daughter had wanted to keep working but her husband did not want her to, saying that all their material wants were fulfilled and pointing out that she was so busy taking care of his parents that she would not have time to work, so she didn't work.

The economic distance between caste groups became further clearer to me as I compared the narratives of dominant caste women and dalit women speaking about their reasons for working or not working outside the home. The women of the house not working outside the home for a wage is a mark of privilege and status. Many dominant caste women I spoke to did not work outside the home. Most dalit women worked and spoke about their work as a necessity. There was one dalit woman I interviewed whose family was better off and she seemed to be mirroring dominant caste women in enjoying her status as a woman who did not need to work, saying that her husband makes enough.

In addition to her daughter, Sarita also has a son and half-jokingly claimed she prefers daughters these days because people think about the girl's well-being but only ask about a boy's employment status before offering their daughters in marriage. Sarita was content that her daughter was married, but in order for her to help her son get married, he needed to be employed or own land and earn a living. Because Sarita's son was finding it difficult to find a job even

though he had a bachelor's degree, there was some resentment against the government for providing quotas in education and jobs to dalit castes, but not to dominant castes like their own. Sarita felt that her son's and other dominant caste children's efforts go wasted when their job applications are put below those of SCs, and the SC people get the jobs faster. She especially wanted the government to know that all Reddy people were not wealthy and that there should be some preferential treatment for the poor among the dominant castes (implying that she perceived her family to be poor among Reddies)

When it came to talking about the impact caste identity had in their daily lives, both Ramya and Sarita said that they learned about being Reddy from their parents around the age of 10 and that they did have some caste feelings. The women felt that dalit people who visit their home should sit on the ground and not as their equals on a bed or chair. Their elders, their in-laws, had taught them that this is how things are done and they themselves felt that is how respect is shown and that is how they claimed their status as dominant castes.

2.2 Qualitative Observations Motivating Quantitative Research

The clear differences that emerged when comparing the narratives of Lavanya and Sarita are what motivated the three quantitative studies in this dissertation.

First, it seems that caste socialization, the teaching of the behaviors that mark the social distance between castes, is experienced very differently by dalits and dominant caste people.

Dalit women tended to encounter caste exclusions in everyday life, and for some these encounters often came after marriage, though in the case of Lavanya's daughter, the caste exclusion came in her school. But for women who experience caste exclusion at the point of or after marriage, this may be due to spatial segregation of villages by caste: many dalit women

remained in dalit-only spaces until marriage when patrilocal relocation to the households of their husbands forced them into new social spaces. Lavanya is not told about caste until after her marriage and doesn't want to tell her children about their caste identity as dalits until the child faces discriminatory behavior in school. By contrast, dominant caste women were taught caste distinctions at home in almost all interviews I conducted. While dalits spoke of caste distinctions only when they encountered caste-based exclusions, dominant caste households experienced caste as a naturalized norm that guided everyday life. Sarita is very open about her caste identity and supports discriminatory behavior, and the enforcement of the social distance between castes, in order to claim the respect that she feels she is owed in the village. Further, Sarita showed annoyance and discontent at the government reservation policies and perceived those policies as helping dalits get jobs while her son could not. Though there was a clear economic distance between castes in her village with dominant castes having much more than dalits, the dominant caste households still held some anger related to reservation policies for dalits. I saw the potential for caste conflict in this kind of discontent among dominant caste circles as dalits gain access to higher education and employment. So, my first paper examines where neighborhood conflict happens and looks at social and economic caste distance as explanatory variables.

Second, I found that many of the dalit women I interviewed worked and earned money independent of their husbands. While it was a necessity for the family, working outside the home for a wage also empowered the women to learn about their family finances and participate in financial decisions.

Lavanya earns money by stitching because she needs to help with the household income, this allows her to know more of the family finances and have a say in how money is spent. But Lavanya works out of necessity too, because she is sometimes the primary breadwinner of the

family if her husband is sick. In contrast, many dominant caste women like Sarita and Ramya depend on their male relatives and the family's land to support the family and do not want to work. I saw a clear difference in women's work behavior along caste lines and in the case of Lavanya vs Sarita, the economic distance between caste groups is fairly predictive of the behavior of each woman. In my second paper, I wanted to further examine how social and economic distance among castes explains some of these difference in women working for a wage or not.

Third, I observed a distinct difference in how dalit women and dominant caste women spoke about their children's education, the significance it had, and the outcomes they hoped for their children through education.

Lavanya sent her daughter to a selective, government-funded school and took great pride in her daughter's education. She further sought to overcome any caste differences by educating her children, meaning that the children's educational outcomes are highly valued as a vehicle out of caste discrimination, a hope to narrow the social caste distance, in addition to ensuring future economic gain. Sarita does not view education as a vehicle to move away from caste, because she clearly encouraged caste practices and enforced the social distance between castes in her village. She seemed more resentful that the education her son has from his private school is not enough to get him a job. The ideal outcome for Satira's son seems to be defined more as acquiring a job and securing a marriage, with the backup option of earning from the family's land if a job is not found. The economic distance between castes was evident in the fact that the dalit family did not have the backup option of owning land and earning from the land, so education was highly valued for dalits, and perhaps that led to Lavanya's daughter having a successful learning outcome and being in a selective school. These differences in how women

talked about their children's education and the outcomes they hoped for related to education, motivated my third paper. I look at children's learning outcomes to see if the local social and economic caste distance influences the learning outcomes differently for dalit children vs dominant caste children.

It was clear to me that caste inequality exists both as social distance and as economic distance. Social distance can be evidenced by the reports of untouchability practices that dalit respondents reported and which many of the dominant caste respondents either did not notice or reported as behavior that was to be enforced. Social distance can also be evidenced by the clear segregation of living spaces in almost all of the villages I visited which has motivated me to use the prevalence of self-reported untouchability practice as an explanatory measure of social distance between castes in this dissertation. Further, I noticed significant economic differences between dalit families and dominant caste families as evidenced by the size of homes and the tendency of dominant caste families to be land-owning while dalit families tended to be landless laborers. That observation has motivated me to use a ratio of assets of dalit families to dominant caste families as a measure of the economic distance between castes in this dissertation.

2.3 Literature Review: The Concept of Caste Has Been Evolving

Caste practices and caste hierarchy are rooted in a long history of shifting political climates and power struggles that trickle down to social structures and everyday individual behaviors in the present day (Macdonell 1914; L. Dumont, Sainsbury, and Gulati 1980; Sonalde Desai and Dubey 2011; Pradhan, Kandapan, and Pradhan 2022; Ambedkar et al. 2014; Srinivas 1957; Jaffrelot 2023). While political scientists have paid considerable attention to this shifting balance of power between different caste groups in India, sociological literature on how these broader changes affect individuals has lagged behind. This dissertation seeks to fill this niche.

2.3.1 Religious Origin of Caste: Varna and Jati

The importance of caste in shaping social relations and inequalities has been recorded in a variety of historical accounts including reports by a Chinese traveler as early as the 7th century (Bagchi, Wang, and Sen 2011). The first mention of an already existing caste hierarchy in India comes from somewhere between 1200- 900 BC, in a hymn in the Rigveda, the earliest Sanskrit text. It speaks of the creation of the human world from a cosmic man whose different body parts yielded different caste groups. In this narrative, caste status is believed to originate from the Hindu system of *Varna*, which segregates people into a hierarchy of purity and pollution with brahmins (priestly castes, literate, thinkers) at the top coming from the head of the cosmic man, followed by kshatriya (Rulers or warrior castes) from the arms, vaishyas (trading or business castes) from the legs and shudras (laboring or serving castes) at the bottom coming from the feet. The Indian caste system, as it exists today, is very different in the field than the way it was originally written about in ancient Hindu texts. Some scholars doubt if the way the Rig Veda sets out the four categorizations of people, called “varnas” was ever the way caste operated in reality or if the varnas were ever intended to be a social hierarchy (Béteille 1996; Srinivas 1957). Like

many scholarly works, the books may have been an ideal structure that may never have been the reality, because as we see on the ground today and in the past 100 years, most caste groups do not fall neatly into those four varnas, except perhaps Brahmins, who seem to have retained the same caste name as the varna name (Macdonell 1914; Thorat et al. 2006; Srinivas 1957; Sonalde Desai and Dubey 2011).

The four varnas were also supposed to encompass all people and serve as more fluid categories referenced in certain stories and the way the varnas, at least the first three, are written about in the Vedas and the Smritis (Macdonell 1914; Béteille 1996). This means any individual could find a place in one of the varnas and of the higher three varnas, could shift to a different category, or have their children shift, based on their character or behavior. In the current reality, when looking at caste, people cannot shift to a different caste, and not all people are identified with a varna. One such group is important to note, as this study examines caste-based inequalities, and this is a set of castes that are seen as outcasts or untouchable castes, viewed as most polluted, with no corresponding body part of the cosmic man. Further, people coming from outside the Indian subcontinent also have no clear palace in the varnas. The word for "caste" differs across regions, and caste names vary across regions. Even though many scholars point to the pollution-purity line as what ritually creates and justifies the caste hierarchy, which may have been the case historically (L. Dumont, Sainsbury, and Gulati 1980; Searle-Chatterjee and Sharma 1994; Milner 1994), in the modern day we can see that the place in the status hierarchy changes across regions for a caste group with the same name. This variation means that the position of numerous castes and sub-castes cannot be uniformly classified along the pollution-purity lines, except perhaps the lowest ranking rung being "untouchables" which need to exist in order for there to be a group of "touchables" in contrast. Recent scholarship also points to social divides

within the untouchable caste groups where some socially distance themselves from others in specific states (Bathran 2016). Scholars also note that the shift in academia and in Indian politics of looking at caste from a lens of varnas to the lens of "jati" is a significant ideological shift with many real-world implications. The shift to "Jati" means that the ritual hierarchy of certain castes is not static as the modern world focuses on the importance of politics and economics over religious belief when charting hierarchy and caste interactions (Gupta 2004; Béteille 1996).

The term "jati" can have many meanings, and can be used in many Indian languages to refer to a caste group as well as a religious group like "Muslim-jati" and in some languages also refer to a species like "Puli-jati" in Telugu meaning "Tiger-species"(Krishan 1998). Jati does a better job of helping people self-identify with whatever they consider their "community", somewhat analogous to ethnicity, whether it is a caste name, a religion, or a linguistic region like "Telugu-jati". The list of jatis can also be expanded and is not supposed to be all-encompassing like the Varnas, which allows for a large degree of flux in the real world beyond the theory that early books like the Vedas and Smritis, set out. Jatis can vie for power in politics or become more educated and perhaps change their position in whichever perceived local hierarchy exists. Scholar André Béteille argues that the shift from using varna to jati indicates a change in perception and the meaning and legitimacy of caste, even as caste practices like endogamy and untouchability are still practiced. (Béteille 1996). The divisions established by the original religious varna concept, in practice, were morphed with the changing regional and socio-political tensions, leading to economic inequalities based on caste identity in addition to the continued practice of caste as a part of culture, enforcing the social distance between castes.

2.3.2 Pre-Independence Movements Against Caste Hierarchies

India's first prime minister, Nehru, noted that caste has "survived not only the powerful impact of Buddhism and many centuries of Afghan and Mughal rule and the spread of Islam but also the strenuous efforts of innumerable Hindu reformers who raised their voice against it (Nehru, 1990, p. 246); (Tashneem 2021). The origin story of caste, rooted in religious prescriptions, has often served to provide justification for the enduring hierarchical caste structures, in spite of thousands of years of power struggles between different groups in South Asia. These political and religious struggles include the rise of early Buddhism in 200-100 BC questioning caste structure, counterbalanced by a subsequent rise in Hindu ideology indicated by Manu's Dharmashastra somewhere in 200 BC-200AD setting down codes of behavior for different caste groups and further influencing caste hierarchy in later ages. (Omvedt 2003; Ketkar 1909; Britannica 2024)

Despite the endurance of caste stratification through the centuries, historical accounts also note the emergence of numerous movements against caste practices (Ambedkar et al. 2014; Burchett 2009; Heesterman 2004; BHAGAT 2006; Omvedt 1971; O'Hanlon 1985; Samel 1999; Jaffrelot 2005). The Veerashaivas in the 12th century and the Bhakti movement in the 15th century provide interesting accounts of resistance(Burchett 2009). Moreover, when political power passed out of the hands of the Hindu ruling class into the hands of non-Hindu Mughals in the16-18th Centuries (Heesterman 2004) and into the hands of the British in the 18th and 19th Centuries, political-economic considerations led to some destabilization of the hegemonic power of Hindu dominant castes (BHAGAT 2006). However, this destabilization was neither uniform nor continuous.

The geographic variation in caste-based inequalities in India was also shaped by regional political anti-caste movements which serve as further evidence of diverging caste contexts. One of the most noteworthy of these movements includes the ripple effects of social reformer Jyotirao Phule's 1873 book "Ghulamgiri" (meaning "slavery") which critiqued the collusion between the British administrators and brahmins and compared the caste system to American slavery(Phule 2015; Begari 2010). To broaden the scope of the changes in caste dynamics during the time period when Phule was alive, it's important to note that the start of the British East India Company government in 1818 meant the collapse of the previous Peshwa rule, meaning the end of state-supported Hindu values centering the caste divisions and hierarchy (O'Hanlon 1985). This also meant that education was more open to all, and British protestant missionaries started educational establishments of all kinds. These missionaries found a particularly fertile ground for conversion among oppressed caste people, arguing that the Hindu religion had deprived them of their real rights(Ashok and Boopalan 2015). Phule was of the Shudra caste group and the arguments of the missionaries, which did have an anti-caste spin to them, took hold among many shudras as well as untouchable castes in large parts of British-ruled India (O'Hanlon 1985; Omvedt 1971).

Further, as the British administration spread, opportunities for administrative and political power arose, so, many Indians were hired by the British. The qualifications to fill these positions were English fluency, educational qualification, as well as knowledge of both British and Indian administration. The required qualifications for the roles within the British administration as well as the roles in nascent Indian political organizations privileged the dominant castes, mainly brahmins (B. Das 2000; Chakravarti 1993). This appearance of brahmins in disproportionately high concentrations within the British administration is what Phule noted in his book, and many

oppressed caste leaders of the time feared that British rule, instead of breaking down caste inequalities, might actually work to strengthen them(Phule 2015; Omvedt 1971).

Phule and his fellow oppressed caste contemporaries pushed to reject the brahmin religious authority and the hierarchical values on which it was based as a precondition to any lasting change for oppressed caste people's conditions. Phule's initiative set off a broad and active movement of oppressed castes which impacted and increased political organization within the Bombay presidency (the British administrative categorization of large segments of western India) (O'Hanlon 1985), which may significantly differentiate the present-day caste inequalities observed in that region as compared to other regions.

By 1918, the Indian government fell into two categories, those regions governed by the British and the regions governed by ~600 Princely states, depending on the policies in each princely state or the British, there were different levels of caste-related policies (B. Das 2000). The British began to outlaw some practices of untouchability and reserve places in local government for previously excluded groups and some states, such as Mysore in South India and Baroda and Kolhapur in Western India which hoped to modernize, took interest in affirmative action policies for deprived sections of their society including untouchables(B. Das 2000).

The impacts of different policies in different states on caste contexts are yet to be empirically examined. Some of the well-intentioned policies may have only modified caste inequalities instead of decreasing them. For example, In the Princely state of Mysore, Tamil brahmins monopolized jobs and Kannadiga brahmins had a very small share in public service jobs. The Maharaja of Mysore, advised by his ministers, implemented reforms to give a larger share of jobs to the Kannada speaking brahmins, and to other caste groups like vokkalligas and

lingayats in addition to the untouchable castes and Muslims (Chalam 2007; B. Das 2000). This would have had a complex, hopefully positive, impact on existing caste inequalities of that state, which are in turn difficult to measure given the ways in which caste categorization might have been modified since. This complexity in the measurement of inequalities and implementation of policies differently in different areas further stresses the importance of empirically taking stock of present-day caste inequalities and how they relate to other aspects of society.

In Southern India, the area previously known by British rulers as the Madras Presidency, a political movement called the Dravidian movement was founded in 1916 and took hold primarily in the state of Tamilnadu in the 1930s and 1950s. The movement asserted that South Indians, speakers of Telugu, Tamil, Malayalam, and Kannada, were Dravidian and distinct from North Indians. The caste aspect was addressed by the movement by its claim that brahmins and other dominant castes of the time were originally North Indian or Aryan migrants to South India imposing their Sanskrit language and religion upon the Dravidian language speakers. The Dravidian movement was most popular in Tamilnadu and is credited with pushing out many of the most privileged Tamil brahmins from the state of Tamilnadu, forever altering the caste dynamics in that state(Irschick and University of California 1969). Since the 1969 election victory of Dravida Munnetra Kazhagam (DMK) under C.N. Annadurai, the Dravidian movement's ideology has become a permanent feature of the government of Tamil Nadu, pushing for affirmative action in education and jobs for non-brahmin caste groups. Many of the Tamil brahmins who claimed marginalization used their educational and economic privilege to move to other states of India, altering the power structures of caste for the places they settled. Many Tamil brahmins moved abroad to the US, UK, or Australia representing a disproportionately large percentage of South Asian diasporic populations and again influencing

economic inequality among caste groups in India due to the amount of money they earn abroad and remit to brahmin family networks in India as non-resident Indians (P Thiaga Rajan 2020). These different political, policy, migration, and economic patterns have influenced caste inequalities that have yet to be empirically measured in different geographic regions.

This historical backdrop serves to indicate two things, first that caste practices and beliefs existed in some form for thousands of years, and second that the social structure of caste in different parts of South Asia has been influenced by numerous historical, political, and religious movements, modifying the empirical manifestation of caste in diverse ways across different regions. With this historical backdrop, a survey of existing, empirical scholarship, founded on good data collection, is in order to set the stage for this dissertation's research.

2.3.3 Colonial & Post-Colonial Developments in Caste Stratification

The history of caste stratification and the British influence over caste stratification is important to understand why caste contexts, both social and economic, differ by geographic region in this research. While the Colonial British government enacted laws forcing the mingling of caste groups in schools and the outlawing of untouchability practices(Nolen 2020), it also solidified caste identities by recording and codifying caste into legal records (Dirks 2011).

It was in the age of British imperialism in India that caste conflict was recorded systematically and the severity of caste inequalities could be measured and quantified (BHAGAT 2006; Omvedt 2010). One such measure is quantifying untouchability as a key social behavior, similar to endogamy which can indicate the social distance between caste groups. Untouchability is exhibited by a series of practices that enforces and legitimizes discrimination against people born into particular castes or jatis termed "untouchable castes". Untouchability practices include but are not limited to, avoiding physical touch of a person of an oppressed caste, not allowing

them into one's house or specifically kitchen, not allowing them to enter a school or temple, not sharing a water source or plates, cups or utensils and many more similar practices that enforce a social distance between castes. The colonial British government enacted laws outlawing untouchability practices, essentially trying to lessen social distances, and forcing different caste groups to intermingle in schools (Nolen 2020) which had its own profound impact on the hierarchical aspect of caste. Since then, subsequent censuses and surveys have been recording caste inequalities and there has been an observed regional difference in the severity of both cultural caste practices and economic caste inequality that has been a marked shift away from the religious ideas that initiated the concept of caste.

Geographic variation in the manifestation of caste may be closely linked to the historical variation in the spread and structure of Colonial rule in India (BHAGAT 2006; Banerjee and Iyer 2005). While caste predates European entry into Indian socio-political life, British rule substantially reshaped caste manifestations and gave a documented structure to caste compared to previous relatively fluid caste relations (BHAGAT 2006). Based on the theory that an imagined community turns into a real and a political force when people self-identify on something like a census as part of that community (Anderson 1983) similarly a caste is a social construct that may have become a more real political identity when the British started collecting censuses. Some scholars (Dirks 2001; Samarendra 2011) have argued that the British rule over the Indian subcontinent is what created and codified some of the existing caste, ethnic, and linguistic divisions which have led to political and geographic divisions, by initiating the census to collect data. Some scholars further argue that this enumeration was an instrument of domination during British rule, to make the identities of caste and religion salient so the people were divided and the British could rule (Stewart 1951).

British officials attempted to understand the granularity of caste hierarchy, and their understanding is what is categorized in the early years of the census of India, and this enumeration significantly impacted the way caste identity had developed in contemporary times (Dirks 2001). This is not to say that the British created castes or the hierarchy, it existed long before the British, but colonial rule impacted the formation of a modern socio-political caste identity, particularly since in the early years of British occupation(Gupta 2004), brahmin clerks served as interpreters of India for foreigners, and through their privileged access to the new rulers, reshaped material hierarchy between brahmins and kshatriyas (Dirks 2001)

Initially, when the British started collecting census data in India, in order to know the composition of Indian society and better exert control, the social impact of the data collection was ignored(Cohn 1987; BHAGAT 2006). The previous fluidity of caste groups forming sub-castes or fusing into one caste somewhat halted and caste identities were tied to a specific time of data collection. Often this view of caste was from the perception of the British, informed by the brahmin elite who favored the varna system of categorization more than the complex reality of Jati, which is referenced more in Buddhist Pali literature (Macdonell 1914). Many South Asian people thought that the aim of the census was to determine the hierarchy of the castes, so some caste groups aspirationally misrepresented themselves as having higher status, others created caste organizations to lobby for a higher status, claiming descent from dominant castes, and some groups even asked for the name that they had been given to be changed to a different, more respectable name (Sheth 1999; Dirks 2001). Over the years of the colonial Census, some castes demanded special recognition, some gained social, economic, and political advantages while others did not. Most importantly, the colonial census generated a new consciousness of caste

groups and their social hierarchy, recorded empirical data related to caste, and pushed caste identity into the postcolonial politics of Independent India (BHAGAT 2006).

As British rule in India evolved over time, it varied substantially over space. Areas of India that were early strongholds of British rule, such as Bengal and North-central areas, were governed differently than areas that came under British rule later on. For instance, when the colonial land revenue institutions established by the British are analyzed(Dirks 2011), the areas in which proprietary land rights were given to landlords have lower agricultural investments and productivity compared to areas in which land rights were given to cultivators. Similarly, those areas given to landlords also have significantly lower investment in health and education, which indicates that caste inequalities may be shaped differently in different regions (Banerjee and Iyer 2005). Land distribution distinctions in historical institutions lead to different policy choices which would lead to further lingering geographic differences in manifestation of caste. It is important to note that caste was historically linked to occupation and when land ownership is given only to a few landlords, it relegates many others into land-less labor occupations, setting up a distinctly different caste inequality structure than in areas where land ownership is more evenly dispersed among caste groups. This legacy of colonial land tenure and its lasting impact suggests once again that caste inequality, this time in an economic context, might have been modified in diverging ways in different regions.

2.3.4 Ambedkar & Anti-caste Movements in Independent India

Dr. B. R. Ambedkar is one of the most significant figures shaping caste relations in pre- and post-Independence India. Ambedkar belonged to the untouchable caste group, but gained an education extending to a Law degree and Ph.D. from the UK and the US respectively, and returned to India to become a leader of the dalit movement, a political leader and the writer of

the Indian constitution. “dalit” is a term meaning “broken” or “oppressed” and it was coined to reject the infantilizing and patronizing term “harijan” coined by Gandhi to refer to Untouchable castes as “Children of god”. In 1927, Ambedkar led a public act of protest in Mahad, Maharashtra, gathering thousands of dalits to draw water from a public well to which they had previously been denied access. This act of self-determination set off a series of events that pushed all of India to question the oppression of dalits (Samel 1999). In 1932, Ambedkar demanded separate electorates for dalits so that they may elect dalit representatives without the need for dominant caste support(Ambedkar 1970). The British initially agreed, but Gandhi refused and began a fast on to death to oppose separate electorates, forcing Ambedkar and all dalits to lose the right to a separate electorate(Jaffrelot 2005; Ambedkar et al. 2014). In 1956, Ambedkar led a mass conversion of 500,000 dalits out of Hinduism and into Buddhism in order to escape the internalized beliefs of inferiority conditioned by the Hindu varna structure. Ambedkar’s movement had many events in Maharashtra, and central India, leaving a profound impact on dalit people and caste structure in those areas initially, with a later spread of his ideas and influence to other parts of India.

The dalit identity awakened by Ambedkar’s movements survived after Ambedkar’s time in spin-off movements that furthered Ambedkar’s ideology in different regions. Some of the most prominent spinoffs of Ambedkar’s movement are listed here.

In 1972, the “Dalit Panther” movement was founded in Bombay by a group of social activists and literary figures, founded in Buddhist and Marxist ideas, and modeled after the American Black Panther movement. It filled the vacuum left by the splintering of Ambedkar’s Republican Party of India. The movement led a change in Marathi literature and art and helped spread and solidify the use of the term “dalit” to refer to any oppressed caste person as well as

landless laborers, and oppressed women. The movement was disbanded in 1974 due to internal ideological conflicts and external pressure under police surveillance but its impact in the Bombay region is significant. The ideas behind the Dalit Panthers and their writings also spread to other parts of India and established dalit literature and politics, including the formation of the Bharatiya Dalit Panthers (BDP) which expanded to almost 20 of India's states and found an active home in Tamil Nadu and near the Nepal Border fighting against dalit oppression (S. M. Michael 2007; Pavāra and Sonawane 2017)

In 1984, the Bahujan Samaj Party (BSP) was founded by Kanshiram, a social reformer turned politician. BSP was founded on ideals heavily influenced by Ambedkar and focused on the political mobilization of "Bahujans", a term that literally means "the majority" and refers to all oppressed caste people including scheduled castes (SC), scheduled tribes (ST), anyone under the umbrella term of dalit as well as many castes categorized as Sudhra in the Varna system or other backward castes (OBC). This term "Bahujan "specifically highlights that the various minority groups, when aggregated, make up the majority of people in India in terms of numbers, and therefore they should be better represented in terms of political leadership. Kanshiram also founded other organizations like the DS-4 ("Dalit and Other Exploited Groups Struggle Committee") in order to consolidate the dalit vote, and BAMCEF (Backward and Minority Communities Employees Federation) for oppressed caste employee rights. Kanshiram named Mayawati, a dalit woman, as his successor and leader of BSP. Mayawati has been elected chief minister of Uttar Pradesh, India's most populous state, for four separate terms starting in 1995 and most recently ending in 2012. Kanshiram's movements, the BSP, and Mayawathi's leadership have had a significant amount of influence on caste dynamics, simultaneously

bringing hope to dalits and harsh criticism from many who see Mayawati's personal wealth gain as indicative of corruption. (Narayaṇa 2006; Naraayaṇa 2014)

A key part of Ambedkar's legacy is the Indian constitution and the concept of reserved seats in government jobs and educational institutions for underprivileged caste groups. Ambedkar's influence reached across India when he headed the newly Independent India's Constitutional Committee in 1950. The constitution, primarily written by Ambedkar, outlaws the practice of untouchability and discrimination based on caste, race, sex, religion, or place of birth. The constitution also reserves 22.5% of government-funded educational and civil service jobs to oppressed castes and tribes, commonly referred to as "scheduled castes" (SC) and "scheduled tribes" (ST) (Indian Constitution 1970). Reservations were initially introduced for a period of 10 years and only for SCs and STs, but some scholars have shown that Ambedkar supported extending this timeline (Bhaskar 2022), and they have been extended repeatedly with occasional changes to reflect the changing socio-political landscape. Over time, quotas, known as reservations, have become highly controversial.

One of the significant changes to reservations was the 1991 addition of other backward caste groups (OBCs) to be included in the category of the reservation which came after the recommendations of the Mandal Commission. OBC refers to caste groups who were not doing as well economically and socially as dominant castes but who also were not listed as SC or ST. In 2007, a reservation policy was implemented in the All-India Quota Seats in which 15% of seats were reserved for the SC category and 7.5% for the ST category. On 14 January 2019 when the 103rd Constitutional amendment was enforced; a 10% reservation was given to the Economically Weaker Section (EWS) in the general category under articles 15(6) and 16(6) of the Constitution of India which introduced reservations based on social class grouping within the

general category of castes seen as dominant rather than for certain caste groups (Supreme Court Observer 2023). Reservation for the EWS category was given over and above the existing 50% reservation for SC/ST/OBC categories. On July 29, 2021, the Government of India decided to provide 27% reservation for OBCs and 10% reservation for Economically Weaker Section in the All-India Quota Scheme for undergraduate and postgraduate medical/dental courses which will be applicable from the 2021-22 session onwards. All of these changes to the reservation policy were prompted by strong political organizing and lobbying by certain caste groups as well as government research to see which groups needed reserved seats.

Every addition to the reservation policy came with a strong backlash from dominant caste groups that felt that they and their children would be pushed out and sidelined from opportunities that they used to monopolize. This backlash sometimes took the form of intensifying cultural caste discrimination practices as well as highlighting the changing yet persisting economic inequality between caste groups.

The Indian constitution's banning of untouchability practices and caste-based discrimination speaks directly to addressing the cultural practice of caste, the "social distance" that this dissertation examines. The affirmative action policies of reserving seats in government jobs and educational institutions recognize the impacts of socially discriminatory behaviors on economic outcomes, and address the economic inequalities between castes, the "economic distance" that this dissertation also examines. Both measures are addressed in this dissertation to fill the need for an empirical, localized, gauge of the extent to which caste permeates individuals' experiences in contemporary times.

Chapter 3: Caste as Localized Social and Economic Distance

Caste inequalities come in different forms and have been evolving as chapter two illustrated. Operationalizing these social and economic 'distances' is a challenging task. In this dissertation, I construct two different local-level variables, one representing the social distance and the other representing the economic distance. Theoretically, I expect that both types of distances affect individuals' lives in unique and not wholly overlapping ways. I also expect both to vary across geographical regions and localities, given the numerous distinct social movements and government policies described in Chapter 2. Therefore, the social and economic distance measures are conceptualized at the sub-state level and account for rural and urban variation.

3.1 The Power of Localizing Caste Measures

Variability in caste inequality across different states and regions in India stems from the different socio-political history of each area, including land reform laws, influence of regional rulers, governing of different sultanates, and the British as well as later elected leaders. The British began to outlaw some practices of untouchability and reserve places in local government for previously excluded groups. Some states, such as Mysore in South India and Baroda and Kolhapur in Western India hoped to modernize and took interest in affirmative action policies for deprived sections of their society including untouchables. Thus, the history of caste and the British influence over caste is instrumental to understanding the disparity between cultural and economic caste contexts in different regions of India. National level studies indicate that caste disparities and inequalities are worse in north India, correlated with lower education and development measures (Chakrabarti, 2021). These additional levels of complexity in both

semantics and caste stratification enforcement further ensure that systemic caste stratification remains a fundamental part of Indian society and a central part of developing regional identity.

Caste also continues to play a large role in the experiences and outcomes of individuals, but it must be disaggregated to the jati level and the impact of urbanization should also be examined (Jaffrelot 2023). Jaffrelot claims that economics clearly played a large role in the 2019 elections with dalits voting along caste lines based on their experience of economic difficulties, and again in the 2024 elections, but with shifting voting patterns. Jaffrelot is informed by his observations, especially in the state of Uttar Pradesh, where dalits' voting behavior is influenced by that state's unique socio-political history. Other scholars, like Varshney observe ethnic conflict arising along religious and caste lines, noting that communal riot-related deaths occurred the most in Gujarat in North-western India, followed by Bihar in the North and Maharashtra in the central-western region (Varshney, 2002, pg 97). Yet other scholars speak of the shifting language used around caste in Bengal as an indicator of shifting frameworks in which caste is operating (Betelle,1996). Many studies related to the influence of caste tend to focus on a certain state, given that most states in India are drawn around linguistic divides which also coincide with state-specific caste names and hierarchies. This is important to understand the specific contexts of that state and highlights the importance of localization in doing informed research. Unfortunately, studies and expertise focusing on one Indian language-speaking group or one region, cannot easily be used to compare how caste impacts individuals across India. As the literature review in Chapter 2 shows, the historical evolution of caste inequalities has varied across different parts of India, making it important to study geographic variation.

Localization of a measure of caste is a powerful tool. It allows for all of the various regional diversity of caste to be included when looking at any given district. It allows me to generate a picture of caste in each locality that accounts for the social behavioral practices of caste in that district as well as the economic inequity of caste groups in that same district when understanding outcomes. It also allows for an interesting comparison of districts that may be similar in one form of caste distance, let's say economic distance, but different in the other aspect of caste distance to be compared. Further, the framing of this study argues that it's not really the caste composition of the state or district that matters but the way that caste groups relate to each other at the local level. These relationships are operationalized as social and economic distance, tied to the caste groups and to the locality where they reside.

The results of the study can be delved into by any interested parties to better understand their local caste landscape when creating local policy to counter inequities and reduce both economic and social distance between castes. Localization of these caste measures provides a framework for understanding issues at the local level and potentially creating more effective interventions for a wide range of social issues from education interventions to health care, gender issues, economic opportunities, reservation policies, or even interventions for violent conflict before it happens. These measures can further be used to study and better predict other trends such as voting behavior, consumer behavior, or public opinion based on the need of the hour.

3.2 Data: IHDS

In order to account for local context, I focus on a district (sub-state) level of measurement of both social and economic distance. Further, to echo Jafferlot's idea, it's also important to account for urban and rural differences in the experience of caste by separating out urban and rural areas when constructing my caste measures.

The best dataset to use for this level of granularity in examining caste is the India Human Development Survey (IHDS). IHDS is a unique panel study, with over 42,152 households in 1,420 villages and 1,042 urban neighborhoods across India. I will be using the 2nd wave of IHDS data collected in 2011-2012.

IHDS data has district markers, along with urban and rural categorization so I am able to localize any measures I create. Most importantly for my work, IHDS collects demographic data like caste identity and religious identity along with data on self-reported untouchability practice as well as the assets, income, and education of a household. For each household, there are variables of self-reported conflict and multiple questions related to conflict that can be aggregated to create the outcome variable for my first paper. IHDS also has a separate woman's questionnaire collecting information about each woman's employment, and various other individual-level factors. When the women's individual data is linked to household data in IHDS, I can use the direct measure of self-employed income for women and also the additional measures of household income that is not earned by the women (e.g., other members' salaries, remittances, rents, pensions) when running models for my second paper. IHDS also has a test administered by interviewers for children to provide a measure of who can read, write, and do math and at which level (reading numbers and letters vs doing multiplication or reading paragraphs) which is the outcome variable for my third paper. IHDS allows me to localize the social caste distance and economic caste distance variables to really understand their influence on individual experiences and it is a large enough data set to make these measures comparable across India.

In order to localize the two measures of caste, this study first creates a unique identifier for each district and further identifies urban and rural areas. These unique identifiers are used to

separate out households and examine each group of households associated with each identifier when calculating a measure of social distance and of economic distance between castes. The value of each measure is tied to the unique identifier of the district+urban/rural status, which I refer to in the rest of this study as the "locality"

The following sections outline the differences between the social distance and the economic distance and how this study operationalizes each measure.

3.3 Caste Experience as Social Distance

Social distance is informed by the backdrop of caste-related history, Ambedkar's legacy, and ongoing political and legislative battles around caste. Caste as a social distance and status inequality can be observed from the centuries of caste-based societal organization that has manifested in present-day India as inequality in access to land, business ownership, education, and occupation. We can also see social distance by observing behaviors such as untouchability, neighborhood segregation, and denial of equal rights to resources such as shared water sources and public places like temples (Thorat & Joshi, 2020). Caste as social distance can be conceptualized as inequality of opportunity based on social status derived from religious beliefs and the structural embodiment of those beliefs (Desai & Dubey, 2011).

Untouchability especially is a clear caste related behavior tied to concepts of who is "pure" and who is "polluted" from Hindu religious texts. Though it is illegal in India, untouchability is exhibited by a series of practices that enforces and legitimizes discrimination against people born into particular castes, or as not of the caste system termed "untouchable castes" (listed as scheduled castes in the Indian constitution or referred to interchangeably as "dalits" or "oppressed castes" in this study). Untouchability practices include but are not limited to, forcing a dalit to walk into a village only at night so that their shadow does not pollute

dominant caste people, avoiding the physical touch of a person of an oppressed caste, not allowing them into one's house or especially the kitchen, not eating food prepared by an oppressed caste person and not sharing plates, cups or utensils. Other untouchability practices include denying dalits entry into temples, the sacred and pure sites of Hinduism, due to the "pollution" associated with a dalit person's caste. The practice of endogamy, of marrying only within one's own caste, is related to untouchability but is not explicitly untouchability because marrying a "touchable" caste is still prohibited if they are not one's own caste. In a village that practices untouchability, if a wedding happens, dominant castes and dalits would not eat at the same table, and rarely at the same time so that the dalits do not pollute the food of the dominant caste attendees. Ambedkar's big march in 1927 to drink from a public water source was so momentous because it broke the rules of untouchability practices that prohibited dalits from drinking at that particular water source. One Ambedkar drank that water, by religious belief, he had polluted it, and it needed to be purified in order for the dominant castes to drink it again.

The concepts of "pure" and "pollution" also extend beyond the treatment of untouchables to the treatment of women during their menstruation or right after childbirth, which is a reason that many midwives and people who come to clean up after the birth of a child in any caste are people from untouchable castes. Further, the concept of "pure" and "pollution" associated with certain occupations is also tied to how certain castes that do those occupations are categorized as untouchables. These occupations include anything related to the removal of dead bodies, the butchering of cows, anything related to leather work, and anything related to cleaning up human feces or menial scavenging. This is why sanitary workers in India are all from untouchable castes, as are leather workers and many butchering-related workers. Different localities will have more and varying versions of untouchability practices from who can sit on a chair and who

cannot to who can enter a place of worship and who cannot. The examples given here are not exhaustive by any means. These rules of behavior around purity and pollution that are categorized as untouchability practices effectively create and enforce a social distance between dalit and most other castes in a locality

Given all of this ongoing discriminatory practice against dalits (and women) in India due to the concept of untouchability, the social distance between castes in a locality can be measured by looking at how many households in that locality practice untouchability. The IHDS Dataset has a question asking all non-dalit cates if they practice untouchability. This dissertation attempts to empirically study the social distance that is tied to caste by operationalizing the concept using the variables in the IHDS that record the self-reported practice of untouchability. It's important to note that the self-reported absence of untouchability in a district from IHDS data may not totally reflect people not being caste conscious, it may simply be the political correctness of respondents. But even perceiving political correctness in not responding affirmatively to untouchability questions is saying something about the people of that locality understanding that the practice of untouchability is problematic. In order to better understand individual's lives and district-level caste inequalities, the percentage of respondents in each district who openly self-report practicing untouchability is an indicator of the overall caste context of a district in terms of social distance.

3.3.1 Social Distance Variable Construction

Indicator for social distance – (variable name: UNTOUCHTOPCODE95) is a continuous variable created by using the IHDS variables TR4A and TR4B which measure the practice of untouchability. Variable TR4C also exists and asks only SC households about experiencing untouchability, but I decided not to include it because it would not be a one-to-one merge with

TR4A and TR4B and would be available only for a subset of people different from those answering TR4A.

The text of TR4A is: "In your household do some members practice untouchability?" with answer choices:

- "Yes"
- "No" → If a respondent says "No", then TR4B is asked.

The text of TR4B is: "Would there be a problem if someone who scheduled caste were to enter your kitchen or share utensils?" with answer choices:

- "Yes"
- "No"

TR4A and TR4B are first aggregated to give an indicator variable for each respondent if they do or do not practice untouchability, I calculate the untouchability score, or social distance, based on the percent of respondents in the locality (district+urban/rural designation) who practice untouchability (Responded "yes" to either of the two prompts above). The variable is continuous but skewed, so it was top-coded at the 95th percentile.

Table 3.1: Statewise Untouchability rates

State	Untouchability rate
Jammu & Kashmir	0.191
Himachal Pradesh	0.489
Uttaranchal	0.455
Punjab	0.231
Haryana	0.234
Delhi	0.163
Uttar Pradesh	0.439
Bihar	0.462
Jharkhand	0.173
Rajasthan	0.493
Chhattisgarh	0.475
Madhya Pradesh	0.506
Northeast	0.065
Assam	0.327
West Bengal	0.011
Orissa	0.434
Gujarat	0.309
Maharashtra	0.032
Andhra Pradesh	0.099
Karnataka	0.324
Kerala	0.014
Tamil Nadu	0.204
Total	0.270

The urban or rural status of the district is also taken into account by creating a unique ID that combines, StateID, DistrictID, and Urban/Rural status, and this unique identifier is used when generating the untouchability score. As a quick overview of regional variation in untouchability, Table 3.1 shows the percentage of respondents in each state that practice untouchability with more red cells indicating a higher percent of self-reported untouchability practice. In summary, there is a wide variability across states in the prevalence of the practice of untouchability, and the section of literature review briefly reviewing different socio-political history and social movements across regions serves to explain some of the state-wise variance in caste contexts.

Tables 3.2, 3.3, and 3.4 show descriptive tables of social distance with the control variables caste group, education of the household head, and the urban or rural status of the household. From Table 2a, we can see that a slightly higher percentage of OBCs reside in the areas with higher untouchability practices than in other areas, while a higher percentage of Christians, Muslims, and brahmins or forward castes are in districts that are in the lowest third of untouchability. Table 2b shows a higher percentage of people with no education residing in districts with more untouchability practice while people with a bachelor's degree are more likely to be living in areas with low untouchability. Table 2c makes it clear that less developed villages have higher untouchability.

Table 3.2: Tabulation of Social Distance Categories & Caste/Community Categories							
3 quantiles of Social Distance	FC+Brahmin	OBC	Dalit	Adivasi	Muslim	Christian	Total
1	3,302	3,698	3,018	1,302	2,112	676	14,108
	35.8%	25.9%	33.8%	35.7%	43.6%	56.2%	33.5%
2	3,084	5,134	2,974	931	1,582	329	14,034
	33.5%	35.9%	33.3%	25.5%	32.7%	27.3%	33.3%
3	2,826	5,454	2,949	1,411	1,149	198	13,987
	30.7%	38.2%	33.0%	38.7%	23.7%	16.5%	33.2%
Total	9,212	14,286	8,941	3,644	4,843	1,203	42,129
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 3.3: Tabulation of Social Distance Categories & Household Education							
3 quantiles of Social Distance	none	5th or less	6th-10th	11th-12th	Bachelors	Above Bac	Total
1	1,896	1,634	5,163	2,013	2,394	1,020	14,120
	26.5%	29.4%	33.5%	36.7%	42.5%	35.1%	33.5%
2	2,223	1,748	5,229	1,788	1,915	1,137	14,040
	31.0%	31.5%	34.0%	32.6%	34.0%	39.1%	33.3%
3	3,046	2,176	5,006	1,689	1,323	752	13,992
	42.5%	39.2%	32.5%	30.8%	23.5%	25.9%	33.2%
Total	7,165	5,558	15,398	5,490	5,632	2,909	42,152
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 3.4: Tabulation of Social Distance Categories & Urban/Rural Categories					
3 quantiles of Social Distance	Metro Urban	Other Urban	More Developed Village	Less Developed Village	Total
1	1,661	4,637	4,388	3,434	14,120
	54.0%	40.3%	34.0%	23.4%	33.5%
2	1,236	4,212	4,414	4,178	14,040
	40.2%	36.6%	34.2%	28.5%	33.3%
3	181	2,669	4,094	7,048	13992
	5.9%	23.2%	31.7%	48.1%	33.2%
Total	3,078	11,518	12,896	14,660	42,152
	100.0%	100.0%	100.0%	100.0%	100.0%

All of this sets the stage for why a district-wise analysis is needed to examine the caste context both in terms of social status and in terms of economic status when studying the impact of caste identity on various outcomes.

3.4 Caste Experience as Economic Distance

In the modern world where the global economy drives entire countries' plans for development, the economic outcome of an individual is key to that individual's purchasing power, the access to food and education that the individual's family may have, and the access to opportunities as well. Though social behaviors based on religious beliefs about purity and pollution used to define caste experiences in Indian history, today's world, more than ever brings the importance of the economic distance between castes to the forefront.

The economic distances between caste groups always existed, with brahmins being the literate group and ruling or land-owning castes setting the rules for everyone else to farm or earn a living on their lands. The economic distance in different parts of India varies by geographic region based on each area's history. With British rule, opportunities for administrative and political power arose within British employment, mainly filled by educated brahmins widening the economic gap between dominant castes and dalits. British rule also allowed some dalits access to schools and education which disrupted the caste structure in some areas and perhaps resulted in a narrowing of the economic gap between the descendants of educated dalits and the descendants of brahmins. Further, As mentioned in Chapter 2, the colonial land revenue institutions established by the British show that the areas in which proprietary land rights were given to landlords have lower agricultural investments and productivity compared to areas in which land rights were given to cultivators, meaning that the economic distance between

formerly landowning castes and formerly land tilling castes is different based on which British policies the region experienced. Similarly, those areas given to landlords also have significantly lower investment in health and education, which indicates that caste economic distance may be higher in such areas (Banerjee and Iyer 2005).

The caste structure and how it is salient and experienced is also being transformed as the economic structure of India is changed by government policies. The intersection of economics (i.e. class identity) and caste may also be experienced through caste divisions that align with class divisions and become salient in voting behavior. The resulting politicians serve their voter base of the caste and economic class, perhaps exacerbating the existing economic distance between castes, or perhaps diminishing it based on which political ideology they subscribe to. Recognizing the intersection of caste identity, the associated political alignment, and the resulting impact on the economic distance between castes highlights the need to examine the economic distance between caste groups in a localized way across India. For example, experiencing economic caste distance may differ in urban areas vs rural areas and definitely by caste identity.

Desai and Dubey (2011) focus on two sets of outcomes, the first set describes inequality of opportunity, often called "pre-market" inequality. Desai & Dubey measure inequality of opportunity as land ownership, education, household consumption, and social networks. The second set of outcomes describes the inequality of outcome, measured by Desai and Dubey as annual earnings, annual wage and salary, and children's ability to read. Elements in both sets of outcomes are related to the economic distance between castes, such as disparities in land ownership and household consumption in the pre-market inequalities as well as the annual

earnings, wage, and salary in the inequality of outcome. Results from the Desai and Dubey paper show statistically significant caste disparities in each marker of opportunity structure, with SCs and STs at the bottom, OBCs in the middle, and FCs at the top. Compared to the forward castes, dalits and adivasis are less likely to own land, have fewer years of education, have lower household size-adjusted household consumption expenditure, and have fewer important social connections.(Sonalde Desai and Dubey 2011)

Economic caste distance matters for many outcomes of different castes given that poverty is a major factor in women's economic activity in India and a predictor of social networks and children's educational outcomes. Much of the previous literature undeniably identifies SC and ST groups as having the highest values in the multidimensional status of poverty persisting into the current time. Not only is this economic gap between dominant castes and dalits wide, it seems to be growing wider. Aswini Deshpande in her 2017 edition of "The Grammar of Caste states that at the household level, the absolute economic distance between castes is increasing, but not all caste groups, specifically the distance between SCs/STs and Others (FC)/OBCs. If we know that the cultural norm in India is for women to drop out of the labor force if the family has enough income, then to understand which women are pushed to work for a wage despite social stigma, we can look at which groups have high rates of poverty and if they live in areas with a high economic distance between castes. If we also know that children from households with high incomes perform better in school because they can afford quality schooling, then the economic distance between castes again comes to the forefront when understanding caste inequality among children's learning outcomes.

Economic distances encompass the overall difference in assets or income between caste groups in a district and the individual differences between each person's economic situation in

the context of those overall caste group differences. It is linked to the social aspect of caste but distinct from social caste distance in that it is not about the daily humiliating and discriminatory behaviors. Economic distance between castes is a separate phenomenon that has been influenced by various policies and politics that can be different across each locality of India. Therefore, Economic distance is measured separately from social distance in this study but is localized by using the same district+urban/rural identifier used to localize the social distance measure.

3.4.1 Economic Distance Variable Construction

To measure caste as an economic inequality, the variable that I construct and use as an explanatory variable is CASTEASSETSRATIO. It is a continuous variable that averages the assets of all dominant caste households in a locality and divides them by the average of all dalit caste household assets in that area to obtain a district-level ratio of assets. The larger the ratio, the more economically unequal a district is in terms of caste, and dalits are worse off. The smaller a ratio is, the more economically equal a district is in terms of caste, hence the CASTEASSETSRATIO variable can be used as an approximate measure of caste as an economic inequality. Further, this variable can be used as an explanatory variable for why different caste groups experience different outcomes like neighborhood conflict.

Table 3.5: State-wise mean of Caste Assets Ratio

State	Ratio mean
Jammu & Kashmir	1.180
Himachal Pradesh	1.167
Uttaranchal	1.228
Punjab	1.188
Haryana	1.267
Delhi	1.052
Uttar Pradesh	1.419
Bihar	1.439
Jharkhand	1.159
Rajasthan	1.229
Chhattisgarh	1.291
Madhya Pradesh	1.328
Northeast	1.134
Assam	1.149
West Bengal	1.249
Orissa	1.387
Gujarat	1.103
Maharashtra	1.181
Andhra Pradesh	1.163
Karnataka	1.242
Kerala	1.158
Tamil Nadu	1.150
Total	1.251

The variable from IHDS that is averaged to construct the ratio is the ASSETS variable in the IHDS dataset which ranges from 0 to 33 by summing 33 dichotomous items measuring household possessions and housing quality. The assets included in this categorization are the following list of 33 assets:

- Any vehicle, bicycle
- Sewing machine
- Mixer/grinder
- Motor vehicle
- Any TV
- Color TV
- Air cooler/cond
- Clock/watch
- Electric fan
- Chair/table
- Cot
- Telephone
- Cell phone
- Refrigerator
- Pressure cooker
- Cable/Dish TV
- Car
- Air conditioner
- Washing machine
- Computer/Laptop
- Laptop
- Credit card
- Microwave Oven
- 2 clothes
- Footwear
- Piped indoor water
- Separate kitchen
- Flush toilet
- Electricity
- LPG
- Pucca wall
- Pucca roof
- Pucca floor

The more assets a household owns, the higher the ASSETS variable. Of the three main variables measuring a household's economic status (Consumption, Income, and Assets) the summary score (ASSETS) is the least volatile over time. The household assets measure indicates the economic status of the household over the last several years while the income measure generally shows the most year-to-year fluctuations in economic position. Because ASSETS is more stable over time, it tends to correlate with other household behaviors and outcomes.

As a quick overview of regional variation in the ratio of caste assets, Table 3.5 shows the state-wise caste assets ratios, or economic distances. The greener cells indicate more equity and red indicates less equity. The difference between an urban area like Delhi and the average in entire states is immediately clear in this table, highlighting the reason why the constructed variables disaggregate the assets ratio by area (district and urban/rural status).

Table 3.6: Tabulation of Economic Distance Categories & Caste/Community Categories							
3 quantiles of Economic Distance	**FC+Brahmin**	**OBC**	**Dalit**	**Adivasi**	**Muslim**	**Christian**	**Total**
1	3,206	4,738	2,592	1,192	1,369	348	13,445
	35.9%	34.5%	29.1%	39.4%	29.8%	30.6%	33.3%
2	2,965	4,579	3,271	694	1,398	589	13,496
	33.2%	33.3%	36.7%	22.9%	30.5%	51.8%	33.5%
3	2,756	4,428	3,048	1,141	1,821	201	13,395
	30.9%	32.2%	34.2%	37.7%	39.7%	17.7%	33.2%
Total	8,927	13,745	8,911	3,027	4,588	1,138	40,336
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 3.7: Tabulation of Economic Distance Categories & Household Education							
3 quantiles of Economic Distance	**none**	**5th or less**	**6th-10th**	**11th-12th**	**Bachelors**	**Above Bac**	**Total**
1	1,834	1,627	5,084	1,833	2,062	1,012	13,452
	26.3%	30.5%	34.4%	34.8%	38.9%	37.1%	33.3%
2	2,282	1,602	4,983	1,853	1,771	1,014	13,505
	32.8%	30.1%	33.8%	35.2%	33.4%	37.1%	33.5%
3	2,849	2,097	4,696	1,577	1,474	705	13,398
	40.9%	39.4%	31.8%	30.0%	27.8%	25.8%	33.2%
Total	6,965	5,326	14,763	5,263	5,307	2,731	40,355
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 3.8: Tabulation of Economic Distance Categories & Urban/Rural Categories					
3 quantiles of Economic Distance	**Metro Urban**	**Other Urban**	**More Developed Village**	**Less Developed Village**	**Total**
	2,009	3,650	3,813	3,980	13,452
1	65.7%	34.1%	30.5%	28.2%	33.3%
	974	4,012	4,607	3,912	13,505
2	31.9%	37.5%	36.9%	27.7%	33.5%
	73	3,036	4,078	6,211	13398
3	2.4%	28.4%	32.6%	44.0%	33.2%
	3,056	10,698	12,498	14,103	40,355
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Tables 3.6, 3.7, and 3.8 show descriptive tables of economic distance with the control variables caste group, education of the household head, and if the household is in urban or rural areas. From tables 3.6, 3.7, and 3.8 we can see that districts with a wider economic distance between castes have a higher percentage of people with low education and contain a higher percentage of less developed villages. But beyond those observations, the descriptive tables do not show a clear pattern at an all-India level, so disaggregation by other characteristics and statistical significance testing is needed.

3.5 How Correlated Are Social and Economic Distance?

The historical practices of caste that can be seen in the behaviors that uphold the social distance between castes may have an impact on the economic outcome of a family. For example, if the family in question was at the highest or lowest end of the purity/pollution scale such as a brahmin family or a dalit family. It can be argued that a brahmin family, who historically had access to education for generations or a kshatriya family who had access to vast amounts of land holdings would be economically better off than a dalit family who historically was denied the right to education and whose ancestors were forced to do the sewer work for scraps of food. This is supported by various studies finding that caste disparities exist in each marker of opportunity structure, where dalits, when compared to forward castes, are less likely to own land, have fewer years of education, have lower household size-adjusted household consumption expenditure, and have fewer important social connections (Sonalde Desai and Dubey 2011).

Though there is an economic impact of the history of social distance between castes, we also know that the reality of caste is very different from that Varna structure of brahmins at the top and dalits as outcastes. This reality of caste that is closer to the messy jati structure means that the economic distance between castes is further complicated by the different socio-political

histories specific to each region. The fact that over the course of history, different influences, like the Mughals or the British or different political parties, have allowed all groups to access education in areas they ruled means that the economic outcomes have changed for some oppressed caste groups based on who was ruling. Further, certain rulers and political parties pushed for land to be distributed in different ways meaning that the economic outcomes for oppressed groups and dominant groups may have drastically changed within a generation in certain parts of India. This historical backdrop prompted me to examine the social distance and economic distance between castes separately and construct separate variables to measure each.

Table 3.9: Comparison of State-wise Untouchability rates and Caste Assets Ratios

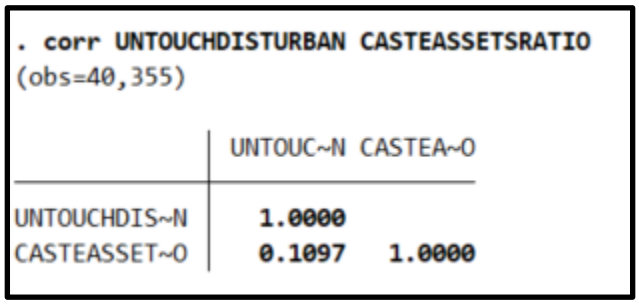
State	Untouchability rate	Caste Assets Ratio mean
Jammu & Kashmir	0.191	1.180
Himachal Pradesh	0.489	1.167
Uttaranchal	0.455	1.228
Punjab	0.231	1.188
Haryana	0.234	1.267
Delhi	0.163	1.052
Uttar Pradesh	0.439	1.419
Bihar	0.462	1.439
Jharkhand	0.173	1.159
Rajasthan	0.493	1.229
Chhattisgarh	0.475	1.291
Madhya Pradesh	0.506	1.328
Northeast	0.065	1.134
Assam	0.327	1.149
West Bengal	0.011	1.249
Orissa	0.434	1.387
Gujarat	0.309	1.103
Maharashtra	0.032	1.181
Andhra Pradesh	0.099	1.163
Karnataka	0.324	1.242
Kerala	0.014	1.158
Tamil Nadu	0.204	1.150
Total	0.270	1.251

To show that these measures are indeed different from each other, we can check how correlated the measure of social caste distance (untouchability) and economic caste distance(caste assets ratio) might be, I generated a state-wise average of both measures seen in table 3.9 (Same as data in table 3.1 and table 3.5). We can see that though there is some overlap with some states having both high social distance and high economic

distance, the two variables are far from correlated. Note the difference in sample size comes from religious minority and ST respondents being omitted when calculating economic distance.

I also run a correlation matrix (figure 3.1). The correlation coefficient can range from -1 to +1, with -1 indicating a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no correlation at all. The correlation matrix shows a value of 0.1097, further confirming that there is little correlation between these variables, meaning that the social and economic indicators of caste contexts should both be included when examining various individual or local-level outcomes.

Figure 3.1: Correlation Matrix of Social and Economic Caste Distance



```
. corr UNTOUCHDISTURBAN CASTEASSETSRATIO
(obs=40,355)

                | UNTOUC~N CASTEA~O
----------------+------------------
UNTOUCHDIS~N    |   1.0000
CASTEASSET~O    |   0.1097   1.0000
```

Chapter 4: Neighborhood Conflict

4.1 Motivation & Framing

4.1.1 Motivational Qualitative Observations

Observations from pre-dissertation field work showed that some villages had more conflict between caste groups than others. Oppressed caste people, mainly SC participants spoke of issues and conflicts more often and in more personal detail than FC, dominant caste groups in the fieldwork done, so there seemed to be a difference in conflict experience and in how that conflict was spoken about based on which caste group I spoke to. To further examine this phenomenon at a broader, all-India level, this chapter tries to identify where in India there is a higher level of conflict and which caste groups experience that conflict. Further, this study hopes to examine if social distance between castes and/or economic caste inequality in an area correlates with higher levels of caste conflict. Examining these correlations would better inform how policy can effectively reduce conflict and focus efforts on social change, economic inequity, or both. Because each state and district may have different levels and combinations of caste contexts, it's particularly powerful to look at conflict at the district level.

4.1.2 Literature Review

Examining community conflict in any neighborhood is key to understanding how government policy and social institutions can help maintain peace and strengthen community ties for the benefit of everyone. Samuel Huntington famously argued that conflict often accompanies social transformation (Huntington 1996). India has been going through some substantial social transformation in recent times (both positive and negative), evidenced by the 2024 elections

showing how voters shifted their allegiance based on different identities as they faced more economic strain. For example, dalits who did not vote along caste or economic lines in the large state of UP in the previous election changed their stance and voted more along economic and caste lines in the 2024 election(Mehrotra and Shih 2024). Understanding caste in the context of social transformation and conflict is not as simple as saying "caste influence is reducing" or "economic gaps are worsening". The story is more complex and indicative of an intersection of economic changes, coupled with existing social distinctions like caste and religious identities, which influence behavior, whether it is a local conflict or voter behavior. In a large pluralistic democracy like India, the diversity of religions and caste groups within the spectrum of socio-economic status creates a unique case study of community conflict across different divisions.

Trends in polarization

Many scholars over the years have argued that Colonial, British-initiated censuses started the polarization between caste groups by enumerating caste communities, some scholars going even as far as saying these censuses created caste as it exists today by solidifying previously fluid identities(Anderson 1983; B. Das 2000; Dirks 2001). India's last caste-focused census was conducted in 1931 by the U.K. government. It reported an overall estimate of 4147 castes and some castes demanded special recognition, some gained social, economic, and political advantages while others did not (Chandrashekhar 2024). Most importantly and relevant for this study, the colonial census generated a new consciousness of caste groups and pushed caste identity into the postcolonial politics of Independent India.(BHAGAT 2006). However, the concern that the caste census would create or exacerbate social divides prevented further documentation of caste in the census. Even following India's Independence in 1947, the argument that censuses created caste as it exists today led to the reluctance to collect caste data

in the Indian census, similar to the reluctance to collect racial data in other contexts. (Sonalde Desai 2010; Omvedt 2010).

More recently, there have been growing calls for detailed caste data in India so that affirmative action policies and political representation can be examined with numbers backing policies. India's main national opposition party, the Indian National congress has called for a national caste census but lacking federal support for a caste census from the ruling party, Indian states have started caste census efforts on their own. Bihar released findings in October 2023, from a yearlong survey that provided the first detailed numbers on caste groups in decades. Andhra Pradesh commenced its own caste census in January 2024 and Telangana in Feb 2024 passed a resolution to conduct a comprehensive survey to gather data on caste groups (Chandrashekhar 2024). Despite the current ruling party insisting that caste does not matter and that people should unify under an overarching religious identity, all of this effort from individual states in collecting caste data shows that there is a growing demand to recognize caste differences in economic groups and a growing understanding of caste implications for various outcomes including political mobilization. Dalit and OBC communities are mobilizing to show that caste does matter, and perhaps matters even more within a block of dalit caste based on who may be more affluent vs which dalit or OBC groups may be more disadvantaged (Jaffrelot 2023). Some groups hope that the data will support their argument to get more reserved seats in various sectors of education and employment. Dominant castes or "savarnas" are mobilizing to not recognize caste because if the data does show further inequalities along caste lines, savarnas will be forced to give up some of the general category seats in sectors of education and employment. The political mobilization around caste is evident in the recent Indian elections, where the ruling BJP party lost out on many dalit votes, especially the poorer dalit groups, and lost seats in the

populous Hindi-speaking state of UP. Many dalit voters in UP voted with Muslim voters, rejecting the Hindu nationalist ideology and noting that the BJP did not improve their access to education and that inflation was rising(Mehrotra and Shih 2024). These election results may also indicate that caste-based divisions are prevalent especially when economic divides exist, as indicated by voting patterns. If caste divisions have been prevalent and are resurfacing once again, there is reason to expect conflict in addition to the political mobilization associated with social change.

As discussed earlier in this dissertation, caste can be examined and experienced in different ways, and this paper seeks to understand how economic distance between caste groups and social distance between caste groups correlate with the outcome of conflict.

Conflict and Economics: Why understanding Economic Distance between Castes is important

In his book chapter "Do Indians vote their caste--or their jati, or Their Class, or…?" Christophe Jaffrelot claims that the 2014 national elections reflected an erosion of the influence of caste and highlighted the rising influence of class and economic factors. He acknowledges that caste continues to play a large role, but that it must be disaggregated to the jati level and that the impact of urbanization should also be examined (Jaffrelot 2023). Economics clearly played a large role in the 2019 elections and again in the 2024 elections, but voting patterns shifted. In 2024, especially in UP, dalits voted by caste lines once again, and with lower-class Muslims, and the argument was related to BJP being a pro-rich party that did not help poor and rural people (Jaffrelot 2023). This shift indicates that caste did not lose significance, but that the economic and social aspects of caste may be playing different roles in voting behavior. Caste, communal conflicts, and politics should not be treated or studied separately, and identities of caste and class

intersect to become salient in both politics and conflicts at particular times, depending on the institutional and economic support at that time(Wilkinson 2010; Brass 1994).

The caste structure and how it is experienced is being transformed as India becomes more global. But caste remains important, and we need good data to examine this complex structure that perpetuates inequality in different ways (Omvedt 2010; Sonalde Desai 2010). The intersection of economics (i.e. class identity) and caste may be experienced through economic inequality between castes, especially at the local district level in everyday interactions between caste groups. Though there is a social aspect to caste, the way economics seemed to make caste divisions salient in voting behavior highlights the need to examine the economic distance between caste groups. Experiencing economic caste distance may also differ in urban areas, rural areas, and perhaps in each district of each state, and Jaffrelot is right in saying that there is a need for disaggregation. He disaggregates caste groups into jatis which offers insights into certain states or subsections of states, but for my study, for which I hope to look across India and across states, I shift the focus to disaggregating by districts, taking the urban or rural status of the location into account. I construct a district-level measure of the economic aspect of caste, looking at the relative wealth of the dominant castes and SCs in a district. This ratio of assets serves to localize the influence of the economic disparity. Similar to voting behavior, economics plays a role in conflict at the local level, and I hope to examine conflict as an outcome.

Social Integration & Conflict: Why understanding Social Distance between Castes is important

In his well-known work “Ethnic Conflict and Civic Life”, Ashutosh Varshney focuses on the conflict between Hindu and Muslim communities, suggesting a correlation between the amount of associational and day-to-day interactions and the likelihood of violence (Varshney 2003). Other scholarship theorizes about the underlying reasons for communalism with reasons

ranging from foreign influences to local party politicians and electoral competition (Wilkinson 2006), or perhaps the growth of fundamentalism in India and an argument for an ingrained cultural class conflict between the elites and the poor (Kothari 1989). Scholarship, and government for that matter, has acknowledged in no uncertain terms that examining conflicts among communities is crucial to understanding society and attempting to promote peace and coexistence.

In this study, I contribute to this research by examining conflict in local communities and seeing if the social rift between castes, evidenced by the prevalence of untouchability practices is a predictor of conflict. I also draw on the religious polarization literature to understand correlations between caste and community conflict, incorporating the distinction between social and economic distance articulated in Chapter 3. Rarely has research critically examined local conflict with a caste-conscious lens, even though the issue of caste has proven itself to be a major divider along perceived ethnic lines based on descent. The majority of Indians refer to caste when they speak of "my community" and caste identity is associated with many individual outcomes in India, including educational outcomes (Subramanian, 2019), income, occupational outcomes, social mobility, access to healthcare and financial products, (Borooah, 2005; Dutta et al., 2020; Munshi, 2019). Even political divides are associated with caste (Jodhka, 2012; Rao, 2005) though political allegiance may shift between elections based on the intersection of economic changes, coupled with existing social distinctions like caste and religious identities.

My study, looking at conflict as an outcome, is timely in that conflict correlates with social changes, similar to political mobilization. To really hone in on social distance between castes as a factor that may be predictive of conflict, we can look to incidences of crime as well.

In 2016, the National Crime Records Bureau of India reported a surge in anti-dalit violence that was six to eight times more in 2016 than the reported anti-dalit violence in 2011. This could be due to more oppressed caste people reporting violence, or more incidents of violence happening due to oppressed caste people stepping out of their traditionally subservient roles and occupations and becoming upwardly mobile. At the same time, the Hindu right-wing BJP party coming to power between 1998 and 2004 and again from 2014 to the present might also empower dominant caste perpetrators to perpetuate more violence. One theory attempting to explain why violence against dalits is higher in some states suggests that it's not the absolute progress of dalits but the relative progress of dalits (Sadanandan 2018; Dutta et al. 2020) narrowing the social and/or economic distance to dominant castes that may lead to resentment and violence. Clearly, there is an argument to be made to examine if caste is experienced as a social gap and how the existence of this social gap could influence conflict. Is it a narrow social gap, or a wide social gap that predicts conflict? Or perhaps a wide economic gap coupled with a wide social gap that enables perpetrators to have unchecked power enabling violence. The social experience of caste may also differ based on where a person resides, and vary from village to village, so this study tests the hypotheses around narrowing or widening social distance by constructing a district-level measure of untouchability practices which serves to indicate the social aspect of caste practices. I look at the outcome of conflict first through an indicator of social distance between castes and then interact it with an indicator of economic distance between castes to see what is more predictive of conflict at the local district level.

Differences in Perspective

Any topic related to politics or caste has many sides and you will hear a different perspective based on who you talk to. When it comes to the experience of conflict at the local

level, it may also be the case that narratives differ based on who you talk to. Little has been studied on the differing impacts of the experience of caste at the local level and how it may differ for savarnas (dominant castes or FCs) vs dalits (oppressed castes or SCs) and even less has been studied on other outcomes, such as conflict, placed in the context of the different experiences of caste.

In my work, the social measure of caste distance is the practice of untouchability, and the economic measure of caste distance is the caste assets ratio. These two measures of caste distance are different aspects of the relationship between caste groups, and I expect that community conflict may be affected by both to varying degrees. On one hand, there is a probable relationship around more conflict being reported by all groups if there is a blatant admission of untouchability practices by dominant caste people because that might indicate more oppressive practices and higher social distance between castes. On the other hand, in the same districts where dominant castes report practicing untouchability, the reports of conflict may differ based on which caste group you speak with and that would indicate an interesting phenomenon where only certain groups experience conflict and which aspect of caste that conflict may or may not be correlated with.

There may be conflict where the social distance gap is narrow, meaning perhaps dalits change their social behaviors and dominant caste groups respond with violence, so we would see the conflict being reported by dalits, but it would be interesting to see if forward castes or OBCs report conflict and which groups do not experience conflict regardless of the social or economic caste distance. Towards this effort to understand different perspectives, in addition to the social and economic caste variables as independent variables, I start by seeing how caste identity correlates with the outcome variable. This way, we can better understand which caste groups

experience that conflict and then look further into where in India there is a higher level of caste conflict, and if it correlates with the social distance and/or economic distance between caste groups in that area.

4.2 Research Objectives

4.2.1 Research Questions

Q1. Are different caste groups experiencing different levels of conflict?

Q2. Is social distance associated with greater conflict?

Q3. Is economic distance associated with greater conflict?

Q4. How does social and economic distance jointly determine conflict?

4.2.2 Data

The data analyzed in this research paper comes from wave two of the India Human Development Survey(IHDS). The IHDS is particularly well suited for this study because it is a unique panel study, with over 42,152 households in 1,420 villages and 1,042 urban neighborhoods across India.

IHDS data has district markers, along with urban and rural categorization so I am able to localize any measures I create. Most importantly for my work, IHDS collects demographic data like caste identity and religious identity along with data on self-reported untouchability practice as well as the assets, income, and education of a household. For each household, there are indicators for self-reported conflict and multiple questions related to conflict that can be aggregated to create the outcome variable for my first paper. After omitting missing responses to

key variables needed for this analysis, I used 40,214 observations when running the final model of this paper.

4.2.3 Hypotheses

This study uses the IHDS data to test the following hypotheses associated with each research question. Hypothesis 1 reiterates if different castes are experiencing conflict at different rates, Hypothesis 2 evaluates caste as a social distance impacting conflict, Hypothesis 3 evaluates caste as an economic distance impacting conflict and Hypothesis 4 looks at caste as an interaction of social and economic distances.

Q1: Are different caste groups experiencing different levels of conflict?

Hypothesis 1: I expect dalit groups to experience more conflict and/or report more conflict given their position of lower power and resource constraints, making them vulnerable. I also expect higher conflict in rural areas where caste practices and inequalities are more prevalent than in urban areas where caste can be concealed to some extent.

Q2. Is social distance associated with greater conflict?

Hypothesis 2: The greater the social distance (more untouchability practice), the greater the conflict overall.

Q3. Is economic distance associated with greater conflict?

Hypothesis 3: I expect that conflict will be greater in areas where caste differences in economic achievements are relatively narrow (A caste assets ratio closer to 1).

Q4. How does social and economic distance jointly determine conflict?

Hypothesis 4: It seems likely that areas where social distance is high but economic distance is relatively narrow may be the ones where most conflict manifests itself. A narrow economic distance may indicate Dalits gaining in income or SES relative to dominant castes. If social

practices like untouchability are also reduced, I would not expect as much conflict as in areas where there is more untouchability practice, indicative of more rigid social distance among castes.

4.3 Methods

4.3.1 Dependent Variables

Outcome variable: CONFLICT

Conflict is an index with values 0-4 where a higher value indicates more conflict. This index of conflict was created by aggregating IHDS variables TR1 and TR3, both of which represent the amount of conflict or collaboration in a village. The formula to aggregate is:

CONFLIT = 6 - (TR1+TR3)

TR3 refers to conflict among communities/jatis in a village. The text of the question is: “In this village/urban neighborhood, how much conflict would you say there is among the communities/jatis that live here?” and the answer choices are:

- 1 “Lot of conflict”
- 2 “Some conflict”
- 3 “Not much conflict”

TR1 asked respondents how much conflict is in their village. The text of the question is: “In this village/urban neighborhood, do people generally get along with each other or is there some conflict or a lot of conflict?” and the answer choices are:

- 1 “Lot of conflict”,
- 2 “Some conflict”
- 3 “No conflict”

In the index of conflict, a respondent would be scored 4 if they report having a lot of conflict in their village, and if they report a lot of community/jati conflict in their village. A respondent would be scored 0 if they report no conflict in their village, and no community/jati conflict in their village.

4.3.2 Independent Variables

Explanatory variables: UNTOUCHTOPCODE95, CASTEASSETSRATIO, GROUPS

For a description of UNTOUCHTOPCODE95(Social Distance) and CASTEASSETSRATIO(Economic Distance), refer to sections 3.3 and 3.4. GROUPS is a categorical variable with seven categories representing the main caste/community divisions: Brahmins, Forward Castes(FC), OBCs, Dalits(SC), Adivasis(ST), Muslims and a single category for Christians, Sikhs and Jains. I combine Brahmins and FCs due to the small sample size and because they are both at the dominant end of the caste hierarchy. This variable allows us to see if a correlation exists between conflict and the caste or religious community of the respondent.

Control variables: I also control for several background factors that might determine the outcomes. These include:

- HHEDUC – Education of Household head,
- URBAN4_2011 – four categories indicating rural or urban status from 2011,
- INCOMEPC – Per Capita Income,
- NPERSONS – number of people in the household,
- ASSETS – household assets scale from 0 to 33,
- STATEID2 - a list of states with small territories consolidated into the states that they neighbor.

4.3.3 Descriptive Statistics

Table 4.1 below is a tabulation between CONFLICT and the caste/community variable GROUPS6. We can see that overall, 51% of people report low conflict, and the experience of conflict is more or less equally distributed among various castes and communities with Christians experiencing somewhat low conflict compared to others. However, descriptive statistics also show that the experience of conflict is not evenly distributed across India.

Table 4.1: Tabulation of Conflict & Caste/Community Categories

CONFLICT index	FC+Brahmin	OBC	Dalit	Adivasi	Muslim	Christian	Total
0	4,784	7,195	4,464	1,694	2,598	758	21,493
	52.0%	50.5%	50.1%	46.7%	53.8%	63.1%	51.2%
1	946	1,489	974	384	525	118	4,436
	10.3%	10.5%	10.9%	10.6%	10.9%	9.8%	10.6%
2	2,322	3,946	2,470	1,171	1,101	235	11,245
	25.2%	27.7%	27.7%	32.3%	22.8%	19.6%	26.8%
3	599	715	506	182	250	42	2,294
	6.5%	5.0%	5.7%	5.0%	5.2%	3.5%	5.5%
4	547	895	505	198	353	48	2,546
	5.9%	6.3%	5.7%	5.5%	7.3%	4.0%	6.1%
Total	**9,198**	**14,240**	**8,919**	**3,629**	**4,827**	**1,201**	**42,014**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.2 shows a tabulation between the conflict index and the untouchability score divided into quintiles. We see that people seem to be reporting lower levels of conflict in places with lower untouchability scores, denoted by the green and yellow highlights. There seem to be higher levels of conflict in places with mid-range or high untouchability categorization, denoted by the slightly darker orange and red highlighted boxes.

Table 4.2: Tabulation of Conflict & Social Distance Quintiles						
	Social Distance Quintiles					
CONFLICT index	1	2	3	4	5	Total
0	5,742	4,068	4,358	4,320	3,019	21,507
	67.8%	48.4%	51.7%	50.9%	36.6%	51.2%
1	792	772	797	1,036	1,039	4,436
	9.3%	9.2%	9.4%	12.2%	12.6%	10.6%
2	1,318	2,570	2,139	2,150	3,073	11,250
	15.6%	30.6%	25.4%	25.4%	37.2%	26.8%
3	315	412	449	451	668	2,295
	3.7%	4.9%	5.3%	5.3%	8.1%	5.5%
4	304	576	691	524	453	2,548
	3.6%	6.9%	8.2%	6.2%	5.5%	6.1%
Total	**8,471**	**8,398**	**8,434**	**8,481**	**8,252**	**42,036**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.3: Tabulation of Conflict & Economic Distance Quintiles						
	Economic Distance Quintiles					
CONFLICT index	1	2	3	4	5	Total
0	4,591	4,096	4,049	3,928	3,974	20,638
	55.9%	51.6%	50.5%	48.2%	50.0%	51.3%
1	747	833	939	811	878	4,208
	9.1%	10.5%	11.7%	10.0%	11.0%	10.5%
2	1,903	2,147	2,172	2,305	2,193	10,720
	23.2%	27.1%	27.1%	28.3%	27.6%	26.6%
3	478	474	428	430	416	2,226
	5.8%	6.0%	5.3%	5.3%	5.2%	5.5%
4	488	385	426	669	488	2,456
	5.9%	4.9%	5.3%	8.2%	6.1%	6.1%
Total	**8,207**	**7,935**	**8,014**	**8,143**	**7,949**	**40,248**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.3 shows a tabulation between the outcome variable Conflict and the explanatory variable Caste assets ratio, or economic distance, categorized into five groups. We can see that in places with a higher caste assets ratio, meaning dalits are worse off in those areas, there is a slightly higher prevalence of conflict.

4.3.4 Statistical Model

This study will use an Ordered logit (Ologit) to determine the correlation between conflict in an area and the severity of untouchability in an area, with the primary explanatory variables being caste group, and indicators for social and economic distance described above. This analysis will also control for other background factors like education, income, and state of residence. A logit model is used when there is a binary dependent variable, but because the dependent variable in this paper (CONFLICT) has 0-4 values, where a higher value indicates more conflict, an Ologit model was chosen. The resulting coefficients will be in log odds units and interpreted by estimating the predicted probabilities and marginal effects.

Following Torres-Reyna (2008) the Ologit model estimates a score "S" for each category of the outcome variable, as a linear function of the Xs, exemplified by the equation below:

$$S = \beta_1 X_1 + \beta_2 X_2 \ldots\ldots\ldots + \beta_k X_k$$

"X_1, X_2,…, X_k" are the independent variables that can be either continuous or categorical. They are listed earlier in this chapter including caste groups, social and economic distance variables, and the control variables. Categorical variables are represented using dummy variables for each category. The Ancillary parameters at the bottom of the model (/cut1, /cut2, etc.) define the changes among the categories. For this study, the equation for Model 2(for simplicity) would be

$$S = \beta_1 \text{Caste(FC)} + \beta_2 \text{Caste(OBC)} + \beta_3 \text{Caste(Dalit)} + \beta_4 \text{Caste(Adivasi)} + \beta_5 \text{Caste(Muslim)} + \beta_6 \text{Caste(Christian,Sikh,Jain)} + \beta_7 \text{UntouchTopCode95}$$

When replaced by the coefficients

S = 0.013*Caste(OBC) + 0.03*Caste(Dalit) + 0.23*Caste(Adivasi) - 0.02*Caste(Muslim) - 0.42*Caste(Christian,Sikh,Jain) + 1.423*UntouchTopCode95

The predicted probabilities are estimated as:

- P(y_ordinal= "0") = P(S+u <= _cut1) = P(S+u <= 0.4287928)
- P(y_ordinal= "1") = P(_cut1< S+u <= _cut2) = P(0.4287928 <S+u <= 0.843004)
- P(y_ordinal= "2") = P(_cut2< S+u <= _cut3) = P(0.843004 <S+u <= 2.425584)
- P(y_ordinal= "3") = P(_cut3< S+u <= _cut4) = P(2.425584 <S+u <= 3.140875)
- P(y_ordinal= "4") = P(_cut4< S+u) = P(3.140875 <S+u)

(Torres-Reyna 2008)

I estimate a first model using an Ologit with only the caste identity variable to see which caste groups are experiencing conflict. My second model uses an Ologit with only the social distance explanatory variable and a third model uses an Ologit with only the economic distance explanatory variable to compare which results in a better fitting model. The fourth model examines the multivariate relationship with both the economic and social distance variables, without interacting with them and includes all the controls. I run a fifth and final model using an Ologit with an interaction of social and economic distance explanatory variables, including all the control variables, to see how these two aspects of caste distance relate to each other. For models 4 and 5, I include the control variables such as unit-level crowding (NPERSON), Household education, etc. to better estimate the predicted probabilities. I base my results and discussion regarding the impacts of the intersection of economic and social caste contexts on conflict experience on that final model.

4.4 Results

The summary of each model's coefficients is in Table 4.4a with each model individually represented in Tables 4.4b-4.4f.

Table 4.4a: Paper1 - Conflict Outcome Results Table Consolidated					
Variables	Model 1 N=42,014	Model 2 N=42,014	Model 3 N=40,229	Model 4 N=40,214	Model 5 N=40,214
Outcome: Conflict	X	X	X	X	X
Explanatory Variables					
Caste Group					
OBC	0.08*	0.08	0.08*	-0.07	-0.08
Dalit	0.05	0.03	0.03	0.00	-0.01
Adivasi	0.26***	0.27***	0.27***	0.13	0.12
Muslim	-0.06	-0.07	-0.07	0.08	0.08
Christian, Sikh, Jain	-0.55***	-0.57***	-0.57***	0.00	0.01
Social Distance		1.42***		1.58***	0.10
Economic Distance			0.25***	0.1*	-0.31***
Social Distance # Economic Distance					1.16***
Control Variables				X	X

See Appendix for Tables 4.4b-4.4f showing Models 1-5 as full regression tables

From Model 1, we see that conflict outcomes are generally different for different caste groups, with OBC and Adivasi groups seeing more conflict than the baseline dominant caste groups (forward caste and brahmins). Interestingly, dalits (SCs) do not self-report conflict statistically significantly differently than dominant castes. Model 2 tests the correlation of social distance with conflict and tells us that the conflict outcome is statistically significantly correlated with the occurrence of untouchability practice indicating that wider social distance correlates with conflict. Model 3 looks individually at the economic distance and tells us that areas with high economic inequality between forward castes and dalits, where dalits are worse off, also statistically significantly correlate with conflict outcomes. Model 4 adds control variables and both the social and economic distance variables. The results show that controlling for economic distance increases the impact of social distance on the likelihood of experiencing conflict. Although both social and economic distance are significant, results suggest that untouchability

practice is more correlated than caste assets ratio with the conflict outcome indicating that areas with high social distance between castes are perhaps even more likely to have conflict than areas with high economic distance.

Model 5 includes control variables and an interaction term to see how social and economic distance jointly influence conflict. Holding all other variables at their mean value, dalit households and dominant caste households have a similar probability of being in a high conflict area, indicated by the lack of significance of the dalit coefficient in Model 4 and 5. Results highlight that the combination of economic inequality and social caste practices has an intersectional impact, being statistically significantly predictive of conflict outcomes. If taken individually, social distance predicts conflict slightly better than economic distance, but places with both social distance and economic distance are even more likely to self-report conflict and this intersection of distance between castes may be an even better predictor than just social or economic distance taken separately.

Figures 4.1 and 4.2 show predictive margins charting the conflict outcome values for model 5 of this study with the social distance variable and the economic distance variable. The predictive margins are consistent with an explanation of conflict at the local level stemming more from the social behaviors that make up social distance among communities. Economic disparities compound the influence of social distance but are not the same as social distance.

There is no particular caste group that reports conflict significantly more given that conflict may impact and be self-reported by people on both sides of the conflict, so the figures show predictive margins for all groups together. Having a higher household per capita income and higher assets seems to have a protective effect against experiences of conflict meaning that resource constraints may also predict a higher likelihood of conflict.

Figure 4.1: Predicted Values by Conflict Outcome Across Caste Social Distance

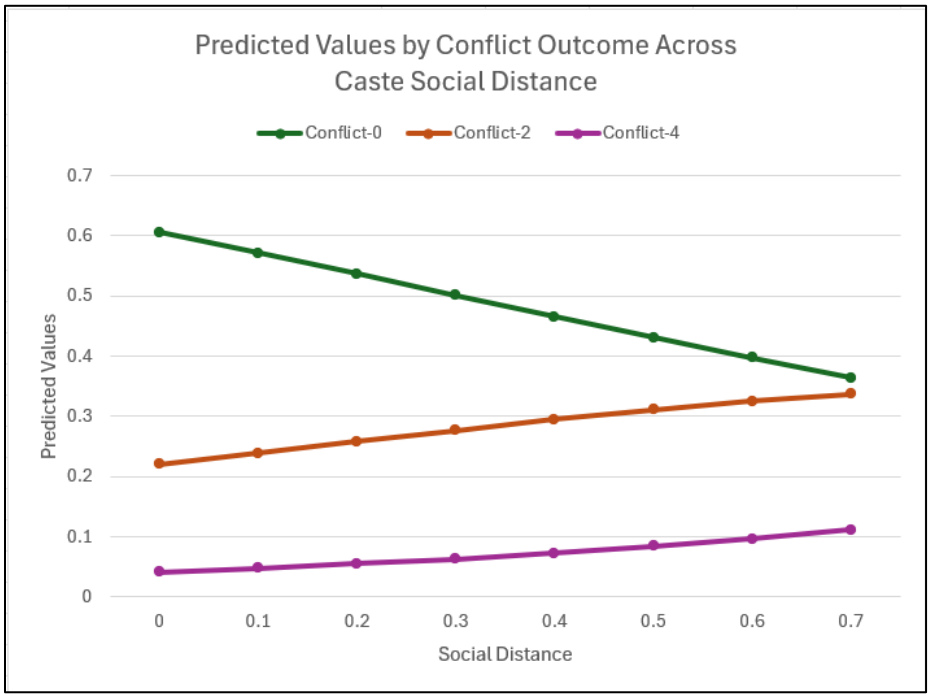
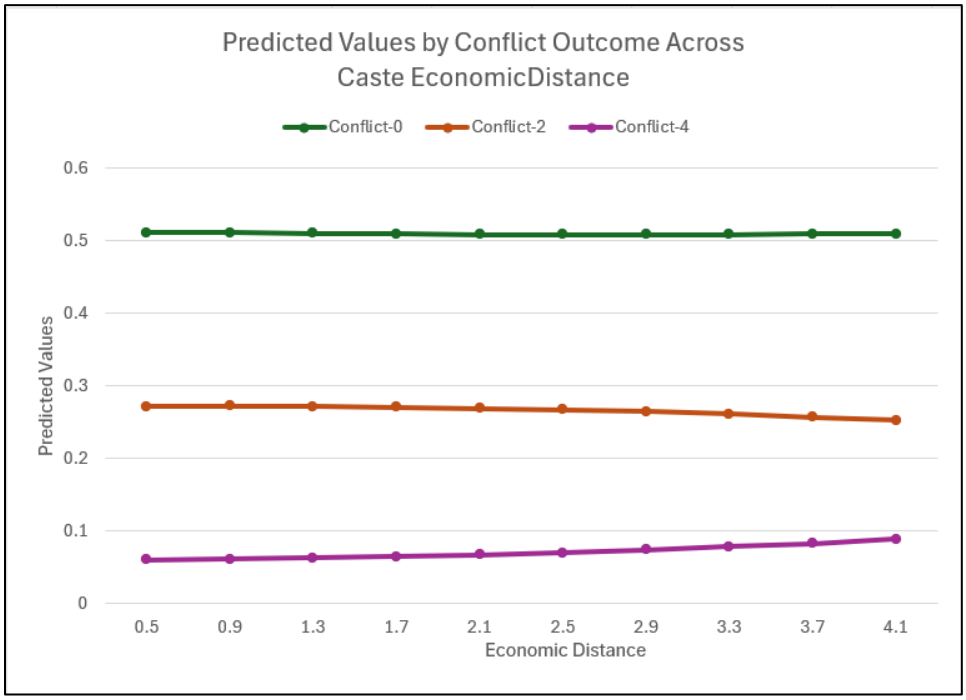


Figure 4.2: Predicted Values by Conflict Outcome Across Caste Economic Distance



4.5 Discussion

This study hoped to see how caste at the local level, experienced as a social distance and as an economic distance, influenced conflict and who is experiencing that conflict. The outcome of conflict may have different influences, but as previous scholarship states (Huntington, 1996; Varshney, 2003; Wilkinson, 2006; Jaffrelot, 2023), the distance between groups, how they collaborate how social ties are strong or weak is key to understanding when and where conflict will arise. The strength of variables localizing social and economic distance of caste is that these two measures help to see if the social behaviors that establish caste distance should be examined separately from the economic outcomes that signify inequality between castes. Further, the measures highlight and frame this work to focus not on the compositions and numbers of people in caste groups, but on how those caste groups relate to each other at the local level. The analysis takes advantage of the granularity of data that IHDS offers including the self-reported conflict variables as well as the self-reported untouchability and the difference in assets between caste groups in addition to various control variables. The results make it fairly clear that for conflict outcomes, both caste assets ratio and untouchability matter, and they matter more when they are interacted.

To answer my initial research questions, it seems that certain caste groups experience conflict more than others, however, caste identity impacts diminish once we take into account contextual dimensions of caste inequality. This suggests that caste differences in the experience of conflict do not vary in contexts where social and economic inequalities between caste groups are minimal. Different sides in a conflict will both report experiencing conflict so parsing out the other predictors of conflict becomes important. When examined with the framework of social caste practices and economic inequalities among caste groups at the district level, conflict

predictions become more stark based on the caste context of the locality rather than a general caste identity across all geographies. The results make it clear that the place of residence matters more than caste identity and all people in certain places experience more conflict while all people in other places experience less conflict based on other contextual factors.

Social distance is indeed associated with greater conflict. The practice of untouchability is an indicator of the maintenance of social distance and perhaps of other conservative norms that establish and reinforce beliefs around purity and pollution. The more reports of the practice of untouchability, the higher the odds of conflict in the locality. One theory that Varshney sets out in his book "Ethnic Conflict and Civic Life" is that religious riots are more likely in places where there are low ties between communities, and my findings support that theory when it comes to caste groups. When there is untouchability practice, establishing and enforcing social distance between caste groups, synonymous with low ties between caste groups, there is more likelihood of conflict.

Further, a higher economic distance correlates significantly with a higher likelihood of being in an area with conflict. While economic distance without social distance does predict some amount of conflict, it is not as clearly predictive of conflict as a district that also has higher values for social distance. When there is economic distance, meaning a district in which dalits are economically worse off than the brahmins and forward castes, it seems to heighten and reinforce the impact of social distance on conflict. This is a slightly different result than what some theories predict about the rounding of wagons that hypothesize areas with closing economic distance may be more prone to conflict given that dominant castes may feel threatened. My findings show that a wider economic distance in addition to social distance is predictive of conflict rather than a narrowing economic distance between castes.

The last model in this study is an interaction model and it indicates that when there is untouchability but dalits are able to gain economically, untouchability is less predictive of violence. This may be due to economic gains providing a way out of poverty for dalits and perhaps a protective effect from the caste discrimination of the social distance practices. This may also be due to violent enforcement of social distance by dominant castes being made more difficult if the oppressed group is gaining economically and can protect themselves using those economic gains. What this study shows is that when social distance is prevalent and some groups, most likely oppressed caste groups, are particularly poor with a high economic distance in the locality, there is more conflict. This conflict may be due to unrest from resource constraints or a lack of economic ability to resist socially distancing discriminatory practices. This theory of the protective effect of economic gains from the conflict outcome can be supported by the general understanding that there is less likelihood of conflict in resource-rich environments. When there are enough resources that all people have a comparable and sustainable standard of living, then conflict may not arise, even in the absence of strong social ties.

What is clear is that social ties are crucial in preventing conflict, despite low or high economic distance, highlighting the importance of reducing socially discriminatory behaviors like untouchability and the belief system around purity and pollution that upholds such practices. A person, dalit or otherwise, who may be in a district with a wide economic distance is less likely to experience conflict if there are fewer social distance practices. This study serves to reinforce that the social distance between castes is distinct from the economic distance in how it operates on an individual's life and that these distances should be dealt with in parallel but separately from one another.

Chapter 5: Gender Roles & Work Behavior

5.1 Motivation & Framing

5.1.1 Motivational Qualitative Observations

As a society changes to be more equitable and "modern" in terms of human rights and equity, we would expect the social and economic distances between caste groups to decrease and in the same vein of thought, we would expect women's labor force participation to increase and perhaps empower women. Unfortunately, due to restrictions imposed by social norms and external influences, an increase in women's labor force participation (LFP) is not clearly tied to society becoming more 'equitable' in other aspects of social change such as caste or economic status. Further, how different caste groups deal with a changing society and how the LFP of women in different groups changes is understudied.

In my qualitative work, there was a marked difference between north Indian villages and south Indian villages in how different caste groups interacted and the expectations placed on women in different locations. In north India, specifically in my field sites near Lucknow, a dalit woman had to stand up and cover her face with her sari if a dominant caste man walked by. Dominant caste women did not have that expectation, but dominant caste women also were not out and about as much as dalit women either. In South India, I saw no visible gendered behaviors like the covering of the face, but there were other observations, such as which women knew about family finances (dalit women). South Indian dominant caste women I spoke to generally stayed within the home, were cared for by their male relatives if their husband had passed, and further sought to assert their status over dalit women by enforcing untouchability behaviors within the home, such as expecting dalits to sit on the ground. These different norms for women

in different castes and regions indicate that female LFP may also have different trends based on which caste group or region we are looking at.

What sparked my interest in examining the social caste distance vs the economic caste distance regarding the outcome of women's work, is this observation of how social caste distance is asserted, placing dominant caste women in a seemingly privileged position, but the economic caste distance also served to keep dominant caste women at home and unaware of finances. In contrast, I saw social caste distance forcing dalit women to succumb to submissive behaviors but also saw the economic caste distance pushing dalit women to work outside the home. Initially, working outside the home seemed to be an inconvenience, and it indeed showed the lower socio-economic status of the family in India if a woman worked, BUT it also enabled dalit women to move about outside, earn an income, and have knowledge and agency in family finances. The act of working outside the home is important to examine because it gives a woman knowledge of the world outside the home, and that is an element of empowerment and gender equity. The act of a woman in India going out of the traditional housewife role and gaining access to an income independent of her husband is a significant change in the path to "modernization" and I would like to examine how conducive or not the local social and economic caste distance measures are to that work behavior.

5.1.2 Literature Review

Trends in Women working for a wage in India

There are gender gaps in labor force participation (LFP) around the world. India is no exception, but even in comparison to the rest of the world, India has a low female labor force participation (FLFP). The International Labor Organization (ILOSTAT) reported the FLFP in 2022 to be ~28% compared to the world's 47.8%. India also has a long history of literature

showing gender discrimination in India in the job market and wage gaps, but again, unlike many other countries, the FLFP in India has shown a decline, specifically in paid employment (ILOSTAT 2022) although recent years have seen some increase, particularly in work on family farms (Govt. of India PLFS report, 2022-23).

The FLFP trends seen may be due partly to measurement issues. For example, one issue is how women's work is counted, and how reproductive work and household work are usually not counted as labor force participation. Further, the work participation rates are sensitive to the survey design and how the question is worded. When respondents are asked about the primary and secondary activities of women, many women are categorized as "homemakers", even when these women actually participated in wage work and were included as workers when the question wording asked about who participated in wage work vs non-wage subsistence work and family business. This mismatch in categorization was particularly large for women who worked on family farms and livestock care, i.e. rural women who may not be highly educated. (Deshmukh et al. 2020).

There is a unique U-curve when looking at FLFP and education. This curve illustrates the phenomenon where women with little education work at higher rates in labor work, women with mid ranges of education (primary school to 12th grade) withdraw from the workforce, likely from not finding jobs suited to their qualifications or gender segregating in white-collar jobs, and women at the highest categories of education participate in the labor force at high rates. (Chatterjee and Vanneman 2022; Datta Gupta, Nandy, and Siddhanta 2020). One explanation for this might be that educated women tend to marry educated men with higher incomes, so the higher family income (that is not earned by the woman herself) would discourage women's participation in the labor market, especially when the cultural norm is for women to stay at home

as a mark of status(Brinton, Lee, and Parish 1995). We would expect more women to withdraw from the labor force if the social stigma in an area is high. Vanneman and Chatterjee (2022) found that the education and employment relationship for women remained U-shaped in districts with both low and high stigma (measured by women wearing a veil at higher or lower rates). This lack of significance of gender-related stigma in work outcomes leads me to speculate if the category of women needs to be disaggregated by caste to see if any discernible patterns emerge in FLFP differentiated by caste identity and if the term "stigma" should be expanded to look at caste stigma, or the social distance between castes in a particular area as an influencing factor on FLFP. Female labor force participation rates have been observed to have a "U-shaped" relationship with economic growth, where more women work at lower levels of economic growth, and then FLFP falls as the economy grows until women re-enter the workforce as educated workers (Goldin 1995). Based on India's economy at the moment, this implies that India is on the falling end of this U curve. This U-curve theory, relating Labor Force Participation and a country's economy, is heavily contested with many examples of countries not adhering to that shape. Aswini Deshpande (2021) aptly highlights that the major decline in women working has come from rural women and that what we measure as a decline (essentially a withdrawal from the labor force) is actually a result of less work available outside the home, especially for rural and less educated women (Aswini Deshpande 2021). Rural and less educated women tend to be dalit or adivasi women, prompting a further examination of how caste and gender intersect regarding labor force participation. Caste and gender in India have historically been the two major axes of stratification when studying access to education, healthcare, and jobs (M. B. Das and Desai 2006). Both gender and caste are influenced by the social behaviors and norms that stem from ritual ideology and the related but distinct economic outcomes for women

and oppressed caste groups. Desai and Das (2006) find that for women, low LFPR is due in large part to low opportunity, and increasing education actually lowers the likelihood of women in India participating in the labor force. Marriage also reduces a woman's likelihood of working, especially with a husband's income negatively affecting a married woman's labor force participation. For caste, there is a high likelihood of SC/STs of all genders being in casual labor (M. B. Das and Desai 2006).

All of these observations from previous findings regarding FLPF, education, economic opportunity, and caste prompt me to wonder how dalit women may be behaving differently than dominant caste women. Both social distance between castes and economic distance between castes could come into play when predicting the LFP of women in different caste groups.

Women's work & Social Barriers: Why understanding Social Distance between Castes is important

There can be a great many social barriers to women working, but it is important to identify intersecting identities that may give privilege or greater disadvantage to individuals. For women in India, caste, education, and urban/rural status especially can intersect with gender identity to privilege some women and disadvantage others. Given that recent studies show that the decline in female labor force participation is especially high for ST women as compared to other caste groups (Deshpande, 2021), it is important to examine how caste especially intersects with gender in producing the outcome of women's work behavior.

Historian Uma Chakravarti has made a very convincing argument for why the gender hierarchy is inextricably tied to the caste hierarchy in India (Chakravarti 1993). She writes that "women's sexual subordination was institutionalized in the Brahmanical law codes and enforced by the powers of the state' (p. 580)" and "The constraints on women's public visibility and

mobility have been the highest among upper castes." The social aspect of caste has had prescriptions for women's behavior in a whole host of areas of life such as marriage where the practice of marrying within one's own caste effectively controls women's sexuality by imposing the concept of "purity" on an endogamous marriage and "pollution" on an inter-caste marriage. Not only in marriage, but also in the division of labor there is a prescription that in agriculture, women should not plow, but could engage in water regulation, transplanting, and weeding (Deshpande 2021). Similarly, the mobility of women, especially upper caste women, is further restricted by the same concept of "purity" as staying inside the home and not being visible to outsiders. Previous literature and my own qualitative fieldwork confirm that conservative cultural norms, essentially Brahminical Hinduism and associated patriarchy, have stigmatized work outside the home as a mark of low status (Chakravarti 2018), especially for brahmin and forward caste women and especially in rural areas.

Unlike dominant caste women, SC and ST women have always worked outside the home at higher rates, likely in an effort to make ends meet rather than as a statement of feminist empowerment. Interestingly, recent studies note that the rural ST groups of women have seen the largest decrease in LFPR. (Deshpande 2021). For SC women, Deshpande has cited the dangers of sexual violence in addition to poverty and discrimination may be a cause of reducing LFPR. The danger of violence has always been a near and present threat for SC and ST women so Deshpande does acknowledge that the perception of violence has been found to influence women's behavior to some extent, in urban areas, and avoiding working in regions with greater violence or in college choice for young women (Borker 2021). Another theory explaining the shift in rural women reducing their labor force participation has been attributed to mimicking the behavior of dominant castes in a theory called "Sanskritization"(Srinivas 1957). Essentially, the

conservative cultural norms of showing status by restricting the movement and visibility of the women outside the home may have spread. Hence, the social practices of caste, an extension of the "purity' and "pollution" behavior may be adopted and influence the work behavior of women. This concept of purity also dictates the untouchability practices that segregate groups which I use as a measure of the social distance of caste at the local level in my work.

I argue that the influence of the social aspect of caste cannot be ignored, and further, that it has a different influence on dominant caste women than dalit women based on the intersecting identities of caste and gender. The social distance between caste groups, localized at the district level, could provide a powerful insight into how women are making decisions about labor force participation. This is why it is so important for my work to include the social distance measure as one of the core explanatory variables when looking at the work outcome for SC women and dominant caste women.

Economic need & Women's work: Why understanding Economic Distance between Castes is important

Although social stigma related to gender and caste may negatively impact an individual woman's decision to work outside the home, there is still a strong push factor that might force a woman to work for a wage despite "what the neighbors may think" and that factor is economic need.

Economic poverty is a major factor in women's economic activity in India, perhaps the main supply-side factor pushing women to work (Olsen and Mehta 2006). Other studies have found that as household per capita income increases, women stop participating in the labor force and FLFP rates decline. (Kapsos, Silberman, and Bourmpoula 2014). If we know that the cultural norm in India is for women to drop out of the labor force if the family has enough income, then

to understand which women are pushed to work for a wage despite social stigma, we can look at which groups have high rates of poverty.

Not surprisingly, SC and ST groups have the highest values in the multidimensional status of poverty persisting into the current time (Deshpande 2017; Pradhan, Kandapan, and Pradhan 2022). STs have a much higher rate of deprivation in all the indicators of multidimensional poverty (ex: education, safe drinking water, assets, housing, banking, indicators of standard of living) compared to other social groups, followed by SCs. Compared to SCs, many STs historically were more isolated from dominant castes in separate areas and more remote villages while SCs were largely in the outskirts of villages occupied by dominant caste groups. Early caste scholarship states that some SC castes were possibly tribes that were incorporated into the caste system earlier (MacDonell, 1914), indicating a closer proximity to FC communities historically. Therefore, it makes more sense for this study to examine the relationship between SCs and FCs as compared to STs and FCs in my caste distance variables, given that SCs have always been in more proximity to FCs. SCs also exist throughout India in larger numbers (The 2011 Indian census shows ~16.6% of the population being SC and only ~8.8%ST) making the sample size of SCs higher than that of STs for this analysis. Further, in this study, of the ~47K women identified from the IHDS data as between 20 and 50 years old, roughly 20.9% are SC while only 8.5% are ST, meaning that the sample size for STs subdivided by state and other factors would get very small and difficult to draw any significant findings from. SCs and OBCs are reported to show similar patterns in the types of deprivation but SCs are worse off than OBCs in each of the multidimensional poverty dimensions (such as standard of living, health, and education), meaning there are more SCs in poverty by number, by population share, and intensity of the poverty denoted by the multidimensional poverty index. (Pradhan,

Kandapan, and Pradhan 2022; Kumar et al. 2023). Further, not only is the economic gap between dominant castes and dalits wide, it seems to be growing wider. Aswini Deshpande in her 2017 edition of "The Grammar of Caste states that at the household level, she finds that the gap in average monthly per capita expenditure (often used as a proxy for income) has increased over time between caste groups. Essentially, the absolute economic distance between castes is increasing, primarily between SCs/STs and Others (FC)/OBCs. It seems the economic distance between the FCs and OBCs is actually decreasing (Ashwini Deshpande 2017). Due to some of the reasons outlined above, this study primarily focuses on SC women as compared to dominant caste women.

Given the widening economic distance between castes, the significantly higher rates of poverty recorded for SCs compared to FCs, and the observation that women from families in poverty are likely to work to make ends meet, I argue that in order to study the outcome of women's labor force participation, it's important to examine not only the social aspect of caste distance but also the economic distance between caste groups. This economic distance varies between urban and rural areas and among districts, so my localized measure of the economic distance among caste groups may shed light on some of the individual labor force participation choices of women. It's worth especially noting the difference in the behavior of dalit women versus dominant caste women given the higher poverty rates of SCs and the differing influence that social and economic distance have on these two groups.

5.2 Research Objectives

5.2.1 Research Questions

Q1. Is the likelihood of women working different between different caste groups?

Q2. Does social distance shape the impact of caste on women's work?

Q3. Does economic distance shape the impact of caste on women's work?

Q4. How does social and economic distance interact in shaping caste differences in women's work?

5.2.2 Data

The data analyzed in this research paper comes from wave two of the India Human Development Survey (IHDS), specifically a combination of household-level variables and individual-level variables for women between the ages of 20 and 50. The localized social and economic caste distance variables were generated for the household level data, then the variables associated with each respondent and the outcome variables for labor force participation were pulled from individual-level data and selected for gender and age. This resulted in 44,905 women between the ages of 20 and 50 years old being included in the final model of this paper.

The IHDS has an advantage over other surveys for analyzing women's employment in India because it allows me to have a more complete measure of women's labor force participation by encompassing the economic activity of the household and having a variable showing the income of the household that is not earned by the woman herself. Household economic activity such as own farm work, nonfarm businesses, and wage or salaried labor is all included and tied to which members participate in each activity. Finally, IHDS allows me to localize the social caste distance and economic caste distance variables to really understand their

influence on individual experiences and it is a large enough data set to make these measures comparable across India.

5.2.3 Hypotheses

This study uses the IHDS data to test the following hypotheses associated with each research question.

Q1: Is the likelihood of women working different between different caste groups?

Hypothesis 1: I expect the likelihood of dalit women working to be higher than dominant caste women because most rural farm labor and household help have historically been dalit people, both men and women, while dominant caste norms prescribe that dominant caste women stay out of public view and in the home.

Q2. Does social distance shape the impact of caste on women's work?

Hypothesis 2: When there is a large social distance between castes in an area, I would expect there to be more conservative social norms so I would expect dominant caste women to be working substantially less in these areas compared to dalit women. The social distance is usually enforced by dominant caste families in any area, so I especially expect dominant caste women to be less likely to work than dalit women in the same area. In areas with a smaller social distance, I expect all women to be working more and the caste difference to be less.

Q3. Does economic distance shape the impact of caste on women's work?

Hypothesis 3: In areas with high economic distance, I expect dalit families to be poorer, meaning dalit women are much more likely to work than dalit women in areas with low economic

distance. Conversely, in areas with a high economic distance, I expect dominant caste women to be less likely to work than in areas with low economic distance. I expect that in areas with a high economic distance, there will be a larger difference between dalit women and dominant caste women (given that dalit women will likely be in poverty and need to work) as compared to areas with a low economic distance.

Q4. How does social and economic distance interact in shaping caste differences in women's work?

Hypothesis 4: I expect that where social caste distance is high, all women will be less likely to work compared with places with low social distance, but when intersected with a high economic distance, I expect dalit women to be pushed to work in order to make ends meet while dominant caste women remain in the home following conservative social norms. When economic distance is low, I expect dalit women to withdraw from labor force participation at similar rates to dominant caste women of the area. When economic distance is high, regardless of low or high social distance, I expect dalit women to be highly likely to work, much more than dominant caste women, given that dalit families are more likely to be in poverty in places with a high economic distance.

5.3 Methods

5.3.1 Dependent Variables

The primary outcome variable is WAGELABOR, a binary variable indicating if a woman works for a wage, implying that this is work outside the home. Working for a wage is distinct from working on the family farm or being self-employed. Wage work implies that the woman receives an income from outside the home, which is stigmatized on one hand, but on the other

hand, it can be more easily quantified, and the woman may have more control over it, at least until she combines it with the household income. This distinction of "wage labor" is important to signify the woman's labor force participation beyond her care work in the family and work within family businesses that may go unrecognized. This "wage labor" also implies some level of financial empowerment of the individual woman separate from the household income of her family (through farms or self-employment).

The outcome variable is a combination of three different employment indicator variables that were constructed by the IHDS team as part of the data release: WKAGLAB, WKNONAG, and WKSALARY. They all represent if a woman works for a wage. WKAGLAB refers to farm wage labor. WKNONAG refers to non-agricultural wage labor and includes both NREGA[1] work and non-NREGA work. WKSALARY refers to having a salaried position.

All three variables are derived from the same question on the IHDS questionnaire (Question 7 - Wage and Salary Work). The text of the question is: " Now, besides work on the household farm or in any of the household's businesses, what work did [NAME] do last year for payment in cash or kind?" and following questions ask about how many days the work was done in the year, how many hours, frequency of payment, rate at which the person was paid, the nature of the work and so on. The answers to this series of wage and salary work related questions are then taken to construct the three constructed variables that I aggregate.

For each constructed variable, the categories are coded as:

- "none"
- "Missing hours"
- "<240 hours"

[1] NREGA is the National Rural Employment Guarantee Act (NREGA), also known as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). It is a social security and labor law in India that aims to improve the security of rural households by providing at least 100 days of paid work per year to adult members of rural households who are willing to do unskilled manual labor.

- "Parttime"
- "Full time year (250days/year or more AND 2000 hours"

I aggregate these three variables into a binary variable WAGELABOR by coding all "none" or "missing" values of all three employment indicators as "0", and all other values as "1". Therefore, any work, even <240 hours, is coded as "1" and counted as "working for a wage" because it implies some amount of participation in the labor force.

5.3.2 Independent Variables

Explanatory variables: UNTOUCHTOPCODE95, CASTEASSETSRATIO, GROUPS,

For a description of UNTOUCHTOPCODE95 (Social Distance) and CASTEASSETSRATIO (Economic Distance), refer to sections 3.2 and 3.3. GROUPS is a categorical variable with seven categories representing the main caste/community divisions: Brahmins, Forward Castes (FC), OBCs, Dalits (SC), Adivasis (ST), Muslims and a single category for Christians, Sikhs and Jains. I combine Brahmins and FCs due to the small sample size and because they are both at the dominant end of the caste hierarchy. This variable allows us to see if a correlation exists between conflict and the caste or religious community of the respondent.

Control variables: I also control for several background factors that might determine the outcomes. These include:

- HHEDUC – Education of Household head,
- URBAN4_2011 – four categories indicating rural or urban status from 2011,
- RSUNEARN – is an individual-level variable, that is the total household income minus the individual's own income. This is the conventional measure of the disincentive for labor force participation and is especially important for analyses of changing women's labor force participation
- NPERSONS – number of people in the household,
- ASSETS – household assets scale from 0 to 33,
- STATEID2 - a list of states with small territories consolidated into the states that they neighbor.

5.3.3 Descriptive Statistics

Table 5.1: Tabulation of Women's Waged Labor and Caste/Community Categories							
WageLabor	**FC+Brahmin**	**OBC**	**Dalit**	**Adivasi**	**Muslim**	**Christian**	**Total**
0	8,761	11,389	6,184	2,092	5,159	1,059	34,644
	84.5%	72.8%	62.9%	52.3%	86.1%	82.8%	73.5%
1	1,610	4,252	3,646	1,910	830	220	12,468
	15.5%	27.2%	37.1%	47.7%	13.9%	17.2%	26.5%
Total	10,371	15,641	9,830	4,002	5,989	1,279	47,112
	100%	100%	100%	100%	100%	100%	100%

Table 5.2: Tabulation of Women's Waged Labor & Social Distance Quintiles						
Waged Labor	**Social Distance Quintiles**					
	1	**2**	**3**	**4**	**5**	**Total**
0	7,136	6,924	7,136	6,874	6,591	34,661
	75.4%	73.7%	74.2%	73.3%	71.1%	73.5%
1	2,328	2,471	2,485	2,510	2,677	12,471
	24.6%	26.3%	25.8%	26.7%	28.9%	26.5%
Total	9,464	9,395	9,621	9,384	9,268	47,132
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 5.3: Tabulation of Women's Waged Labor & Economic Distance Quintiles						
Waged Labor	**Economic Distance Quintiles**					
	1	**2**	**3**	**4**	**5**	**Total**
0	6,624	6,755	6,544	6,574	6,620	33,117
	73.3%	75.2%	72.9%	72.4%	74.3%	73.6%
1	2,419	2,224	2,428	2,505	2,284	11,860
	26.7%	24.8%	27.1%	27.6%	25.7%	26.4%
Total	9,043	8,979	8,972	9,079	8,904	44,977
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 5.1 is a tabulation between women's waged labor and the caste/community variable GROUPS6. We can see that overall, a larger percentage of dominant caste women and Muslim women do not work while a larger percentage of ST women work. Of dalit women, 60.6% do not work, but compared to dominant caste women and OBC women, a larger percentage of dalit women work (39.4%). From Table 5.2 we see that in areas with higher untouchability practice, slightly more women work compared to women in areas with lower untouchability practice. From Table 5.3, we see that a slightly higher percentage of women work in areas with a caste assets ratio that is in the 4th quintile (indicating more inequality). In this paper, I plan to keep the economic distance variable as a continuous variable, and I hope using a logit in the main analysis would be more revealing of any statistically significant trends.

5.3.4 Statistical Model

This study uses a standard logistic regression model to determine the correlation between women working in an area and the primary explanatory variables being the indicators for social and economic distance described above and caste group. This analysis also controls for other background factors like education, income, and state of residence. A logit model is used because the dependent variable is binary and the model estimates the probability of the dependent variable to be 1, whether a woman will be part of the labor force or not. In this paper, I use a logit to determine the correlation between women working in an area and the social and/or economic distance between caste groups in that area. The resulting coefficients will be in log odds units, and I interpret them by estimating the predicted probabilities and marginal effects.

Following Torres-Reyna (2008) the logit model estimates the probability of the outcome being 1 following a cumulative standard logistic regression (F), exemplified by the following equation:

$$P(Y= 1| X_1, X_2,\ldots, X_k) = F (\beta_0 + \beta_1X_1 + \beta_2X_{2\ldots} + \beta_kX_k)$$

Which can also be represented by:

$$P(Y= 1| X_1, X_2,\ldots, X_k) = 1/(1+(1/e^{((\beta_0 + \beta_1X_1 + \beta_2X_{2\ldots} + \beta_kX_k)))}$$

"$X_1, X_2,\ldots, X_k$" are the independent variables that can be either continuous or categorical. They are listed earlier in this chapter including caste groups, social and economic distance variables, and the control variables. Categorical variables are represented using dummy variables for each category. For this study, the predicted probabilities for Model 2(for simplicity) would be:

$$P(Y= 1| X_1,X_2,\ldots,X_k) = 1/(1+(1/e^{((\beta_0 + \beta_1}\text{Caste(FC)} + \beta_2\text{Caste(OBC)} + \beta_3\text{Caste(Dalit)} + \beta_4\text{Caste(Adivasi)} + \beta_5\text{Caste(Muslim)} + \beta_6\text{Caste(Christian,Sikh,Jain)} + \beta_7 \text{UntouchTopCode95})))$$

When replaced by the coefficients:

$$P(Y= 1| X_1,X_2,\ldots,X_k) = 1/(1+(1/e^{((-1.672 + 0.742*}\text{Caste(OBC)} + 1.268*\text{Caste(Dalit)} + 1.522*\text{Caste(Adivasi)} + 0.004\text{Caste(Muslim)} + 0.43*\text{Caste(Christian,Sikh,Jain)} - 0.244*\text{UntouchTopCode95})))$$

(Torres-Reyna 2008)

I estimate a first model using a logit with only the caste identity variable to see how women's work behavior correlates to different caste groups. My second model uses a logit with only the social distance explanatory variable and a third model uses a logit with only the economic distance explanatory variable to compare which results in a better fitting model. Finally, I run a fourth model using a logit with both the social and economic distance explanatory variables to see how these two aspects of caste distance may correlate differently to women's work, including the control variables. I include all the control variables in the fourth model and further run this fourth model with a subset of only dalit women and separately, a

subset of only forward caste women to see any observed differences in work behavior and how the contextual caste indicators may be differently impacting different groups of women.

5.4 Results

The summary of each model's coefficients is in Table 5.4a with each model individually represented in tables 5.4b-5.4g.

Table 5.4a: Paper2 – Women's Waged Labor Outcome Results Table Consolidated						
Variables	**Model 1 N=47,112**	**Model 2 N=47,112**	**Model 3 N=44,926**	**Model 4 N=44,905**	**Model 4_SC N=9,773**	**Model 4_FC N=10,039**
Outcome: Wage Labor	X	X	X	X	X	X
Explanatory Variables						
Caste Group					Only SC	Only FC
OBC	0.73***	0.74***	0.75***	0.28***		
Dalit	1.27***	1.27***	1.30***	0.83***		
Adivasi	1.52***	1.52***	1.46***	0.72***		
Muslim	0.01	0	0.08	-0.06		
Christian, Sikh, Jain	0.45***	0.43***	0.50***	0.55***		
Social Distance		-0.24***		-0.53***	-0.94**	-0.28
Economic Distance			-0.01	0.04	0.35*	-0.34*
Control Variables				X	X	X

See Appendix for Tables 5.4b-5.4g showing Model 1- 4 and Model 4_SC and Model 4_FC

From the summary table 5.4a of regression coefficients, it's clear that SC & ST women are more likely to work for wages compared to all other women and especially compared to FC women. In Models 1, 2, and 3, I do not control for household income (separate from the women's own income) so some of the higher probability of working indicated by those models may be due to the lack of controls. We can also see areas that have greater untouchability have lower female employment. Greater untouchability is indicative of conservative norms, so factors

that drive the status performance of caste through untouchability may also reduce female employment rates. However, the addition of untouchability, or social caste distance in Model 2, does not change the caste coefficients much, indicating that conservative social attitudes affect both savarnas and dalits in reducing FLFP. Similarly, the addition of the Caste assets ratio, or economic caste distance in Model 3, also does not change the caste coefficients much and does not have a significant impact. In other words, the likelihood of women working is negatively correlated where there is untouchability practice, so social aspects of caste matter more than economic inequality when it comes to discouraging (or encouraging) women from working, and all women, regardless of caste identity, are less likely to work if untouchability practice is high in an area.

Model 4 adds the household-level control variables such as unearned income, household education, etc. which reduces the caste differences in FLFP, but they remain significant and fairly large. Model 4 also includes both social and economic caste distance variables, and the social distance variables is significant for all women. The economic distance variable is not significant in any of the models when looking at all women, even controlling for caste identity except when looking only at the subsets of SC and FC women separately. From Model 4, holding all other variables at their mean value, dalit women have 0.302 probably of being in wage labor while FC women have 0.159 probability of being in wage labor indicating a clear caste difference in which women are likely to work across the board.

When looking only at the subsets of SC and FC women separately, economic distance is positive for SC women in model 4_SC, meaning more women work when economic distance is high, while the coefficient if negative for FC women in model 4_FC, indicating that less women work when economic distance is high. This shows a clear difference in how the economic

distance impacts women of different caste groups. Model 4_SC suggests that for dalit women, economic inequality between castes in their locality matters and is positively correlated with working for a wage, pushing them into participating in the labor force, likely out of necessity. Conversely, the social distance negatively impacts dalit women working, likely to due to conservative norms and job discrimination in areas with high social distance.

Figure 5.1: Predicted Wage Labor across Caste Economic Distance

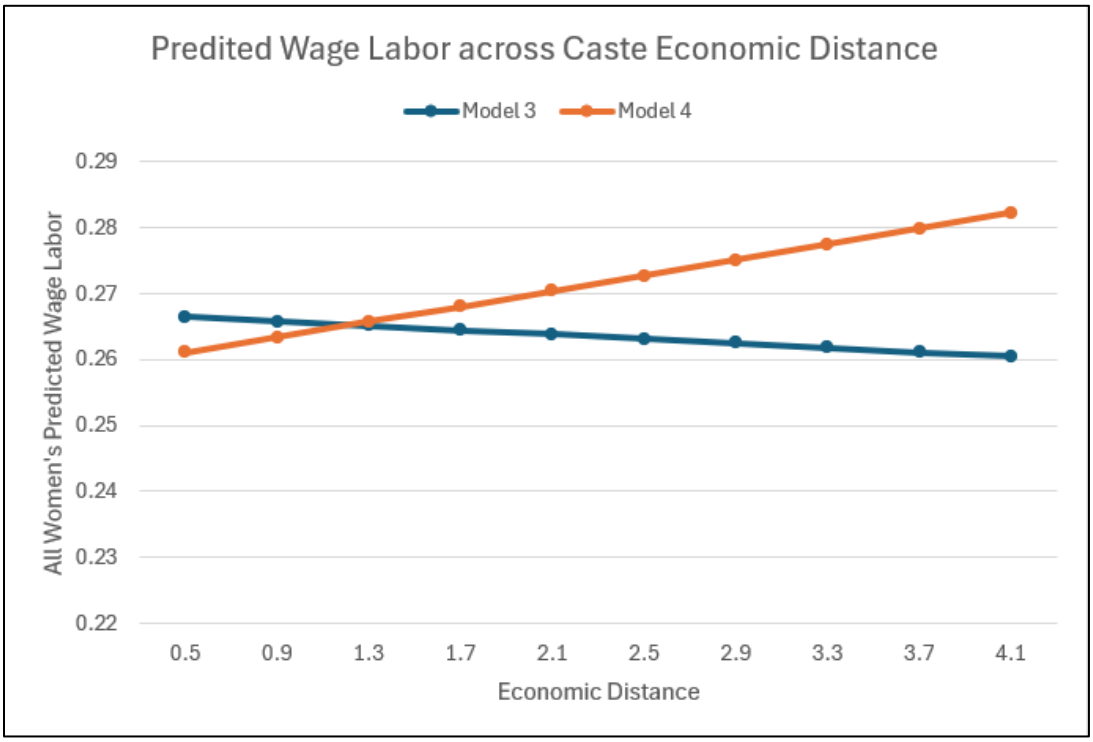
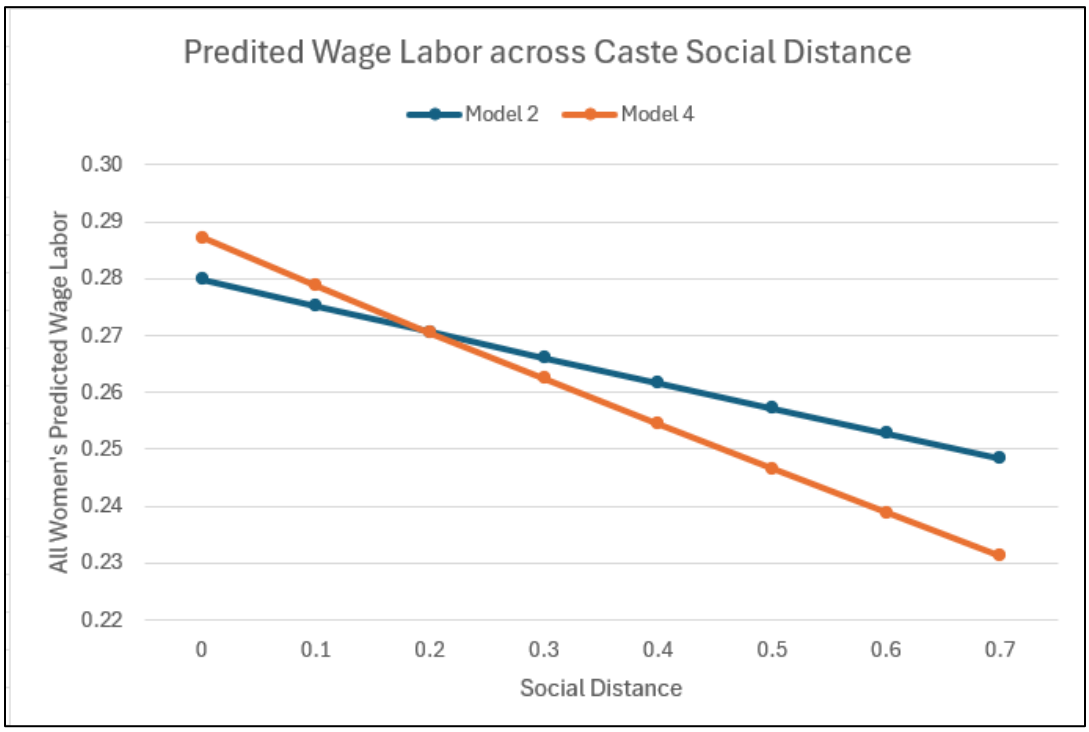


Figure 5.2: Predicted Wage Labor across Caste Social Distance



Comparing across models, Figure 5.1 depicts the predicted margins for Models 3 and 4, as the economic distance between castes increases. Model 3 does not have any control variables while Model 4 includes both social and economic distance variables and all control variables. Figure 5.1 is included here to visually reiterate that when not controlling for factors like household income and education, it may seem that all women are less likely to work in areas with high economic distance, but that is not really the case when control variables and the social distance variable are introduced. Many lower income, likely dalit, women are more likely to work in areas with high economic distance, but there are diverging trends for dalit women as compared to forward caste women, so Model 4 shows that there is a positive correlation between economic distance and women working for a wage. Figure 5.2 depicts the predicted margins for Models 2 and 4, as the social distance between castes increases. Model 2 does not have any of the control variables or the economic distance variable, while Models 4 has both social and economic distance and all control variables. Figure 5.2 is included here to visually show that even without controlling for anything, all women are less likely to work in areas with high social distance, but that the introduction of economic distance and the control variables further clarify that social distance is strongly negatively correlated with women working for a wage. For the two models, the confidence intervals (not depicted in the graph) at higher levels of economic distance overlap. This overlap indicated, among other things, that further disaggregation of the population may be needed, especially when it comes to which groups of women may be working in places with a high economic distance. The implication of this analysis in figures 5.1 and 5.2 is that it would be worthwhile to view predictive margins for SC women and FC women separately in Model 4.

From the results table 5.4a, we can see from the coefficients in Model 4 that regardless of social or economic distance in the district, SC women are more likely to work than FC women and that likelihood only increases for SC women if economic distance increases. If social distance increases, both SC women and FC women are less likely to work than their counterparts in districts with a narrower social distance. The behavior of SC and FC women differ in magnitude but not direction for social distance, which may not be the case for economic distance. Given that Model 4 and the significance of its coefficients are calculated using the data of women of all caste identities, it may be masking or mitigating the strength of the relationship of social or economic distance variables specific to one group compared to another.

The framing of this paper and previous scholarship points toward SC and ST women being more likely to be in poverty and poverty being a predictor of women working in India. Especially when it comes to the social and economic distance between caste groups, dominant caste women may benefit in localities with a high economic distance while SC women may be worse off and pushed to work in those same districts. Further, in areas with high social distance, FC women may succumb to the status-affirming norm of women staying in the home more often than their SC counterparts in the same locality. To better study the differing impacts of social and economic distance on SC women vs FC women, this study's analysis includes a further step of running Model 4 separately for SC and FC women instead of just controlling for caste identity. This results in the regression outputs included in Table 5.4a under the column headers Model 4_SC and Model 4_FC.

When Model 4 is run with only a sample of dalit women, the economic distance term becomes significant with a positive relationship to SC women working and significant with a negative relationship for FC women working. For Model 4 with only a sample of forward caste

women (including brahmin women), the social distance term is not significant, while for SC women, the social distance terms is definitely significant with a strong negative relationship. This implies that the impact of untouchability practice is not so important for the work behavior of dominant caste women, but it is significant for dalit women. Similarly, and perhaps even more clear is that the coefficient for economic distance for dalit women is positive and significant, meaning they work more in areas with high economic distance while for dominant caste women it is negative and significant. Dalit women, who are usually at the receiving end of caste discrimination and also at the poverty end of economic disparities are significantly more likely to work for a wage in districts with a wide economic distance, but, they may be forced to withdraw from the labor force in areas with a wider social distance between castes, indicative of more conservative social norms and likely discrimination faced by dalits.

Figures 5.3 and 5.4 depict the predictive margins of Model 4_SC and Model 4_FC for social distance and economic distance respectively. Note that the confidence intervals are not depicted, but for FC women, they are large at the higher end of social distance, reiterating that the model 4_FC social distance coefficients are not significant.

We can see that the likelihood of women working decreases for both SC and FC women in districts with higher social distance between castes, and the decrease is a little more pronounced for SC women. The real difference in behavior or differential influence of local caste is visible in Figure 5.4 showing economic distance. In areas where economic distance is higher, dalit women are far more likely to work while dominant caste women have a slight decrease in the likelihood of working. This reinforces the findings of other scholars in that poverty is a push factor for women to work, and those women are much more likely to be dalit as compared to FC women.

Figure 5.3: Predicted Wage Labor for SC and FC Women Across Social Distance

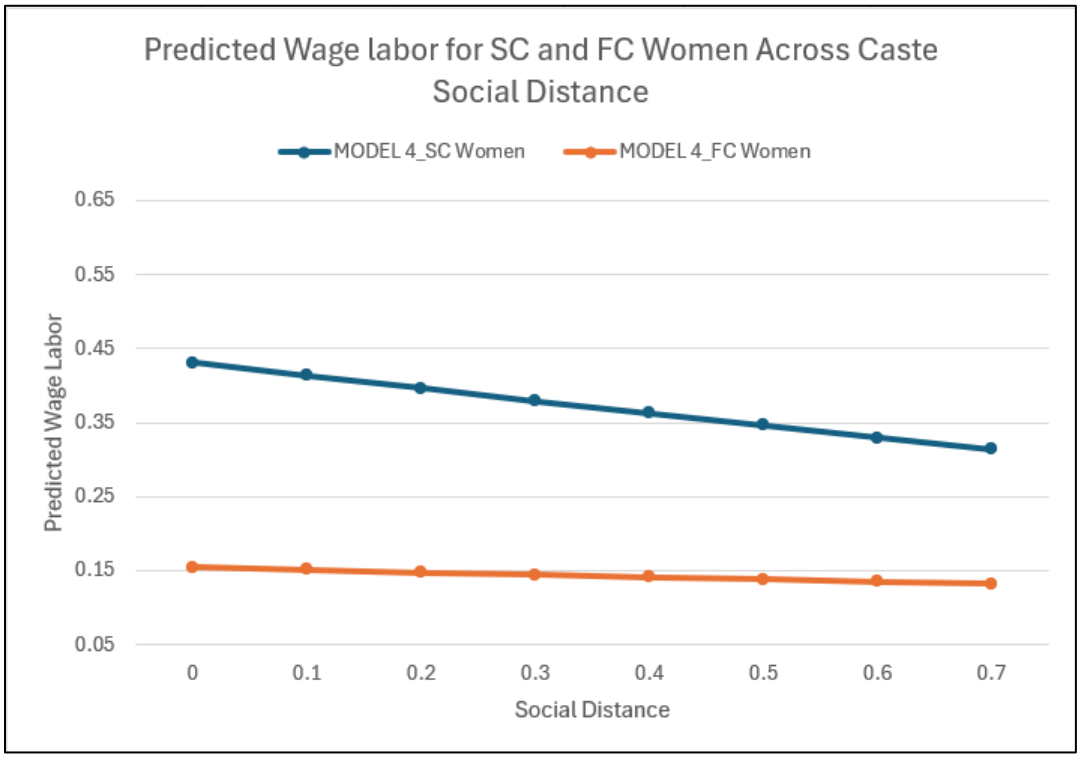
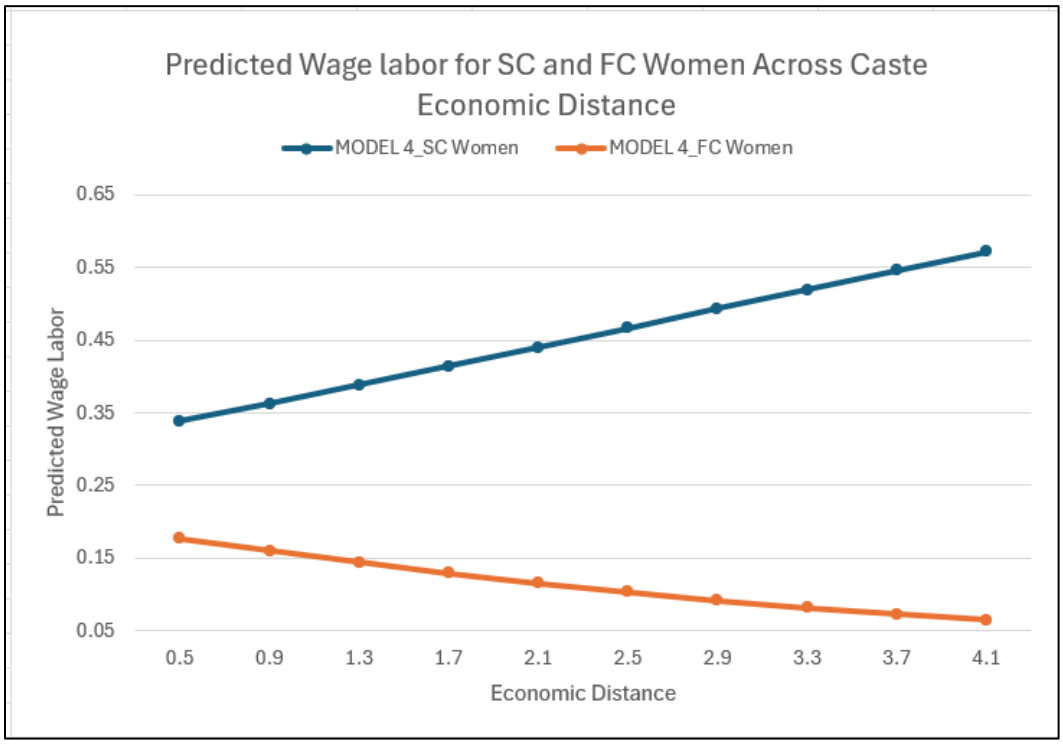


Figure 5.4: Predicted Wage Labor for SC and FC Women Across Economic Distance



5.5 Discussion

This chapter examined women's labor force participation (LFP) and the way in which women from different caste identities may be influenced differently by the social and economic distance between castes within their locality. It started by reviewing the literature on the unusual decline in women's LFP in India and some of the reasons this may be happening, including measurement error, relationship with education and availability of suitable jobs, as well as the finding that certain caste groups may be reducing their LFP in specific local contexts and driving the all-India numbers to reflect a declining LFP of women. To further the conversation around women's LFP in India, this study focused on the influence that contextual caste such as social caste practices and economic disparities may have on which women work. Localizing the contextual caste measures and disaggregating women by caste identity are powerful tools to paint a clearer picture of women's labor force participation in India.

The IHDS data is used for many reasons given its granularity of data allowing for localized measures. It is also the only national survey in India that has measures of income showing the amount that is earned by members other than the woman included in the study, and that "unearned" income is a unique control variable included in this study. The caste identity of women and how closely that aligns with economic status indicates which women are likely to work and where.

The results of this chapter make it fairly clear that for women's work outcomes, there are significant differences in women's behavior among caste groups. When looking across all castes, the presence of untouchability matters, reducing the likelihood of any women working. The economic inequality between castes also matters, though it seemed like it may not be significant for all women taken together, it proved to be quite significant in highlighting the differing impact

of caste context on women of different caste groups. Further, dalit women, like all women, are less likely to work in areas with high social distance, but unlike dominant caste women, when an area has high economic distance, dalit women are more likely to work, even if there is untouchability present in the area. Dominant caste women are not as likely to work generally and given that the coefficient for social distance in Model 4_FC is not significance, it seems the untouchability practices do not impact dominant caste women, while economic inequality between castes benefits dominant caste women allowing them to stay home more often while dalit women in the same areas are pushed to work.

To answer my initial research questions, the likelihood of women working is indeed different among different caste groups. The regressions for all the models show that there is a significant difference between how much dominant caste (FC and brahmin) women work and how much dalit women work. Compared to dominant caste women, all other groups except Muslim women are more likely to work. Dalit women are the most likely to work among the groups. This finding is consistent with previous scholarship noting that SC and ST women work more and that the LPR rates of ST women have been falling in certain areas.

Further, there is a relationship between contextual caste (social and economic distance) and the difference between the likelihood of dalit women working and dominant caste women working, but it is not straightforward. Generally looking at all caste groups, women are less likely to work if there is high social distance and this is true for dalit women as well as dominant caste women. But when looking at only dalit women, analysis shows that they are statistically significantly less likely to work in areas where untouchability is high while that statistical significance does not exist for dominant caste women. Analyzing SC women and FC women separately helped shed some light on the different patterns of work behavior. It seems that the

economic caste distance is the push factor for dalit women working while the social caste distance may be what hinders them in areas with high untouchability practices and stigma. Economic distance between castes is a clear predictor of the lower caste women working, likely due to the economic disparity in the area, while the dominant castes benefit from those same economic disparities. The economic disparities may further enable dominant caste women to conform to the social norm of high-status women staying within the home, in addition to the social status they enjoy in areas with high social distance. Much of this analysis supports and is supported by findings by Aswini Deshpande in her work "How Social Identity Affects Economic Opportunity for Women in India" when she states that dalit women are subject to "prejudice, deprivation, discrimination, and oppression, dalit women appear to bear the triple burden of caste oppression, patriarchy, and poverty, and are therefore the worst off"(Aswini Deshpande 2021).

This study serves to analyze women's work behavior but also reinforces that the social distance between castes is distinct from the economic distance in how it operates in an individual's life. These different aspects of how caste manifests should be dealt with separately when analyzing a whole host of local or individual-level outcomes.

Chapter 6: Children's Learning Outcomes

6.1 Motivation & Framing

6.1.1 Motivational Qualitative Observations

Pre-dissertation qualitative fieldwork showed that many dalit women expressed pro-school attitudes and high educational aspirations for their children, such as bachelor's and graduate degrees in order to find white-collar employment. It struck me as somewhat contradictory, that dalit women have such high hopes despite data showing a lower performance by dalit children in formal schooling (Sonalde Desai, Adams, and Dubey 2010). There are also reports of teachers discriminating against dalit students in certain areas (PROBE Team (India) and Delhi School of Economics 1999), and higher rates of household poverty than dominant castes that may prevent upward mobility opportunities (Pradhan, Pradhan, and Kandapan 2023; Kumar et al. 2023). If the social distance between castes exhibited by untouchability practices may be manifested in discrimination faced by dalit children, then local-level social distance may influence learning outcomes. Similarly, or in addition, if dalits are far worse off economically in their district, it may also impact a child's learning outcomes relative to better-off, dominant caste children in the same area. I want to further examine how both the social distance and the economic distance between castes interact with children's learning outcomes to see how the caste context may be influencing the youngest members of society and their futures.

6.1.2 Literature Review

Household education and the social networks of the household are significantly correlated to children's learning outcomes as evidenced by numerous studies around the world. In the United States, research has found that at the individual level, poor academic performance

and lack of teacher support and/or disliking school or teachers have contributed to lower achievement (Croninger and Lee 2001). This is echoed in India by findings showing that children from disadvantaged, oppressed caste or minority religious backgrounds are less likely to have high levels of reading and math skills (Sonalde Desai, Adams, and Dubey 2010; Sonalde Desai et al. 2009). The impact of those lower levels of reading and math skills carries over into poor overall school performance at higher grades, and some of this deficit may be due to discrimination and the treatment of dalit students by the school (PROBE Team (India) and Delhi School of Economics 1999; K. Hoff and Walsh 2018; K. Hoff, Kshetramade, and Fehr 2011).

Beyond the individual's household, research on industrial societies has looked at the role of community-level factors in helping or hurting children's learning outcomes. Studies in the US have found that the socioeconomic composition of the school and its location in inner cities predicts academic achievement of children regardless of race, social class, or prior academic achievement, but that high teacher expectations have a positive effect on learning outcomes (Rumberger and Palardy 2005). Essentially, children in schools with a positive environment learn better, across races, and a positive school environment, such as a private school in some contexts (Desai et al. 2009), may have an even greater positive impact on children from lower economic strata than on children from a higher SES. Given that the US literature suggests that educational attainment is influenced by both individual and environmental factors when looking at the intersection of race, ethnicity, and socioeconomic status (SES), I expect that in the Indian context, the intersection of caste identity, SES and the environmental factors of social and economic caste distance may also play a role in learning outcomes. How the social caste distance and economic caste distance may intersect to create a certain environment for learning is understudied and this study hopes to fill that gap.

Social Barriers to Learning: Why understanding Social Distance between Castes is important

We know racial stigma and bias in the US correlate to a black/white gap in school outcomes like grades and college graduation (Pearman 2022). Further, there is a general scholarly consensus that taking socioeconomic status into account, black students are still rated by their teachers as being poor students by measures like attentiveness, and classroom disruptions (Gregory, Skiba, and Noguera 2010). Interestingly, there are also studies showing that Black students report more pro-school attitudes despite their poorer performance in school than white students (Downey 2008). This scholarship on black students and school attitudes may apply when it comes to teacher discrimination and poor school outcomes for dalit students in India.

In my qualitative work in India, I saw that dalit women, like black children in the U.S, expressed high pro-school attitudes, though research has documented a large academic achievement gap between dalit and dominant caste children (Tiwary, Kumar, and Mishra 2023). Although the school enrollment gap between castes is decreasing at the elementary level, it persists at the college level (Sonalde Desai and Kulkarni 2008). Moreover, there remains a substantial gap in academic achievement measured by learning outcomes (Sonalde Desai et al. 2009). For example, in Karla Hoff's experimental work, it was shown that there are caste differences in performance, especially when caste is revealed in a mixed-caste group setting up dalit children for failure (K. Hoff and Pandey 2014). Studies show that dominant caste teachers show open social prejudice toward dalit children in school, through their disparaging attitude manifesting in various forms, such as telling dalit children that they are 'stupid,' making them feel inferior, using them for menial chores, and giving them liberal physical punishment (Deliège 1999). This difference may be higher in rural areas given that studies show dalit children being

forced to sit apart from non-dalits in one out of four primary schools in rural India and as many as 40% of schools openly practice untouchability by making dalit children sit in a separate row while eating (Thorat et al. 2006).

It is not a far leap to hypothesize that although dalit children, like black children in the US, may have pro-school attitudes, their academic achievement may be impacted by negative social experiences indicative of the caste-related behaviors that make up the social distance between castes. These negative experiences may take the form of social untouchability practices and prejudice from their teachers or the form of discrimination from dominant caste schoolmates or wider society that may impact dalit students in unforeseen ways. I hope to capture this aspect of social distance between castes by using my social distance measure as a core explanatory variable when looking at children's learning outcomes.

Economic status and Education: Why understanding Economic Distance between Castes is important

While there is substantial research on the impact of a household's absolute economic status on children's learning outcomes, little attention has been paid to relative economic status. Absolute economic status, intended to be a measure constant over time and place, is measured by things like earnings, income, wealth, or occupational prestige on an index. Relative economic standing, on the other hand, also known as socioeconomic status (SES), refers to a person or group's economic standing in relation to others. Relative economic standing is based on a person's income, education, and occupation in comparison to others in their area, society, or country.

The importance of the relative economic gap when it comes to learning outcomes becomes clear when we review studies on the impact of socioeconomic status on learning

outcomes. Socioeconomic status is a predictor of parental involvement in a child's education, a parent's attitudes toward education (H. Dumont et al. 2014; Kaur and Kaur 2020), and correlates to the social networks a family and its children have access to. Many scholars have demonstrated that children from higher SES backgrounds read better in that they have larger vocabularies and demonstrate more fluency in reading (E. Hoff 2003; Romeo et al. 2018; Romeo, Uchida, and Christodoulou 2022; Lee and Burkam 2002). Children from lower SES backgrounds, at least in US studies, exhibit slower growth in literacy and these oral language skills also predict reading outcomes in 3rd and 4th grades(Hecht et al. 2000; NICHD Early Child Care Research Network 2005). In the US, middle-class families, largely white families, left the inner cities and settled in the suburbs starting between the 1940s and 70s, leading to racial segregation along SES lines(Logan et al. 2023). This "white flight" also correlated with a decline in the quality of inner-city public schools due to a reduction in tax dollars for those schools. Many affluent families could afford private school, and many other middle-class families accessed better quality schooling in the suburbs (Hanselman and Fiel 2017). This led to the segmentation of high-SES families into private schools or suburban government schools leaving poor children to face poorly funded inner-city schools without the shield of middle-class parents fighting to improve educational systems. The absence of local wealth, parental activism, and high-performing peers may well have contributed to exacerbating educational inequalities.

Similarly in India, Desai et al (2010) find that reading and mathematical skills are higher for urban than for rural children, likely correlated to higher-income households living in urban areas. In urban areas, many families have access to more income, but the economic inequalities can also be wide. Children in urban areas from well-off families may have access to better schools, but it is yet to be seen if all children benefit from being in an urban environment or if

the economic divide makes learning outcomes worse for children living in poverty in urban areas. Many studies, both qualitative and quantitative, show that dalits are far worse off economically in most parts of India than the brahmins and FCs (Deen 2020; Pradhan, Pradhan, and Kandapan 2023; Thorat and Newman 2012). One study analyzing caste-based childhood poverty found that the incidence of multidimensional poverty with lower access to education, safe drinking water, and assets (housing, banking, indicators of standard of living), is highest among STs and SCs in India. STs have a much higher rate of deprivation in all the indicators of multidimensional poverty compared to other social groups, followed by SCs. (Pradhan, Kandapan, and Pradhan 2022; Kumar et al. 2023). Further, this economic gap between dalits and dominant castes seems to be increasing, as evidenced by the increasing gap in average monthly per capita expenditure (often used as a proxy for income) between caste groups (Ashwini Deshpande 2017).

Among children at the same grade level, children from upper castes and religious groups like Christian, Sikh, and Jains have higher reading and math scores than OBC, SCs, Adivasis, and Muslims (Sonalde Desai, Adams, and Dubey 2010; Thorat and Newman 2012; Sonalde Desai et al. 2009). These differences may be due to dominant caste parents being better off economically and therefore being able to access better schools. Teacher behavior may also influence student achievement, and that teacher behavior may depend upon which social class of students they are teaching as found by studies in the US (Gregory, Skiba, and Noguera 2010). Sonalde Desai et al, (2008), find that private schooling benefits are larger for poorer students in India which is reflective of the influence of school characteristics (Sonalde Desai et al. 2009). The economic distance between caste groups would be particularly correlated with learning outcomes if the well-off families in a district all send their children to an expensive private

school, allowing those children to have a higher quality learning environment than their worse-off peers attending the district public school. The Economic Distance between caste groups will also be correlated to a child's learning outcomes if parental behaviors differ based on SES. For example, if a family needs older children to help at home or take on childcare duties if both parents work outside the home, that implies that the older child is missing a lot of school, impacting their learning outcome. Research using IHDS data takes into account caste as an SES factor and finds that parents in India from low SES backgrounds are more likely to think their child is below average in academics, regardless of the actual achievement gap (Duhon 2023). Other scholars have shown that parental beliefs about children's abilities influence their investment in the child's education (Dizon-Ross 2019).

This research on SES and learning outcomes goes to show why it's important to take the relative economic gap between caste groups seriously in studying a child's learning outcome and why it may be conditional on economic inequality by caste. Given the caste disparities in education that seem to mirror SES disparities, it is important to include the regional economic distance between castes as a core explanatory variable in addition to the social distance.

Differences in perspective

From my own fieldwork and other qualitative scholarship, there has been a clear difference in how dalits view education as compared to dominant castes. This does not mean that all dalits across India are similar or that all dominant castes are similar, but more that caste differences in educational outcomes may depend upon the regional context.

Studies in states like Tamil Nadu and my own work in Andhra have found that dalits view education as a means of freeing themselves from oppression and resisting the historical injustices faced by their communities. One study highlights this attitude when asking dalit

students about the significance of learning English in Tamil Nadu and finds that English is seen as a language to free them from caste identity encoded in their mother tongue and help with social mobility (Ramamoorthy and Mishra 2024). In my fieldwork, especially in Andhra, education was the way out of poverty and an equalizing force for dalits, and some referred to Ambedkar's legacy to show the value of education. In contrast, dominant castes in my fieldwork saw education as an option in addition to their business or land management endeavors. However, literature in this area is sparse and inconsistent. For example, a study conducted in Punjab examining the attitudes of the dalit and non-dalit parents regarding girls' education found that dalit parents do not view education favorably for their daughters while non-dalit parents were moderately favorable toward education, especially the mothers as compared to fathers (Kaur and Kaur 2020).

These marked differences in attitude highlight the importance of studying the learning outcomes of dalit children separately from those of dominant caste children even if they are in the same area and experiencing the same levels of social and economic distance. Studying caste groups separately is so important because dalits would be at the receiving end of caste discrimination while dominant caste children may benefit from caste disparities, if they exist, in their locality. This is why the localized measures of social caste distance and economic caste distance in this study are such powerful tools for analyzing the impact of caste on children’s learning outcomes, taking into account granular geographic differences.

6.2 Research Objectives

6.2.1 Research Questions

Q1. Do the learning outcomes of children differ between different caste groups?

Q2. Is the social distance between caste groups associated with higher or lower learning outcomes for oppressed caste children? For dominant caste children?

Q3. Is the economic distance between caste groups associated with higher or lower learning outcomes for oppressed caste children? For dominant caste children?

Q4. How does social and economic distance jointly determine learning outcomes for oppressed caste children? For dominant caste children?

6.2.2 Data

The data analyzed in this research paper comes from wave two of the India Human Development Survey (IHDS). For this paper, I specifically use the two variables measuring the ability of children in reading and in math. The measures are unique because the interviewer tests the child as part of the questionnaire, so the resulting classification would not be an indication of school type or judgment of the teacher. I narrowed the dataset to include only children between the ages of 8 and 11, resulting in 11,232 children included in the final model of this paper. IHDS allows me to localize the social caste distance and economic caste distance variables to really understand their influence on individual experiences and it is a large enough data set to make these measures comparable across India.

6.2.3 Hypotheses

This study uses the IHDS data to test the following hypotheses associated with each research question. Hypothesis 1 seeks to confirm previous scholarship showing children from different castes have a different level of math and reading skills, Hypothesis 2 evaluates caste as a social distance impacting children's learning, Hypothesis 3 evaluates caste as an economic distance impacting children's learning, and Hypothesis 4 looks at caste as an interaction of social and economic distances and how those may jointly influence children's learning.

Q1. Do the learning outcomes of children differ between different caste groups?

Hypothesis 1: Caste identity is associated with differences in learning outcomes. Dalit children will have lower learning outcomes than dominant caste children.

Q2. Is the social distance between caste groups associated with higher or lower learning outcomes for oppressed caste children? To what extent are caste differences in learning outcomes moderated via social distance?

Hypothesis 2: Greater social distance (more untouchability practice) is associated with lower learning outcomes of dalit children as compared to dominant caste children in the same locality but once we control for social distance, caste differences in learning outcomes will diminish.

Q3. Is the economic distance between caste groups associated with higher or lower learning outcomes for oppressed caste children? To what extent are caste differences in learning outcomes moderated via economic distance?

Hypothesis 3: Greater economic distance is associated with lower learning outcomes of dalit children as compared to dominant caste children in the same locality but once we control for economic distance, caste differences in learning outcomes will diminish.

Q4. How does social and economic distance jointly determine learning outcomes for oppressed caste children?

Hypothesis 4: Areas with high social and high economic distance would be associated with the largest difference in learning outcomes between children of different caste groups. I expect areas where social distance is high but economic distance is relatively narrow there will be a lower gap in learning outcomes between dalit children and dominant caste children. In areas where both social and economic distance is low, I expect dalit children and dominant caste children to have similar learning outcomes.

6.3 Methods

6.3.1 Dependent Variables

The primary outcome variables are TA8B and TA9B, both testing a child's reading level and math level, respectively[2]. Both variables are variables are filled in by the interviewer after an assessment of the child. The assessments are adopted from the extensively used Annual Status of Education Report (ASER) (Banerji, R. Et al. 2013) which is a large-scale, nationwide survey conducted in India to assess the quality of education. ASER data has been extensively used in

[2] There is a third learning outcome variable included in IHDS, which is the Writing level (TA10B), but I decided not to include the writing level in this study because it is more than the Math and Reading outcomes subjective and has fewer categories.

India and internationally as a primary source for research on basic literacy and math skills among children (Johnson, D. and Parrado, A., 2021; Kumar, D. et al. 2023; Kalliyil, M. et al. 2023).

The answer choices for TA8B are:

- "Cannot Read"
- "Letter"
- "Word"
- "Paragraph"
- "Story"

The answer choices for TA9B are:

- "Cannot Recognize Number"
- "Number"
- "Subtraction"
- "Division"

I keep the outcome variables for Math and Reading separate because they are different skills and may be impacted differently by the explanatory variables.

6.3.2 Independent Variables

Explanatory variables: UNTOUCHTOPCODE95, CASTEASSETSRATIO, GROUPS,

For a description of UNTOUCHTOPCODE95 and CASTEASSETSRATIO, see sections 3.2 and 3.3.

GROUPS is a categorical variable with seven categories representing the main caste/community divisions: Brahmins, Forward Castes(FC), OBCs, Dalits(SC), Adivasis(ST), Muslims and a single category for Christians, Sikhs and Jains. I combine Brahmins and FCs due to the small sample size and because they are both at the dominant end of the caste hierarchy. This variable allows us to see if a correlation exists between conflict and the caste or religious community of the respondent.

Control variables: I also control for several background factors that might determine the outcomes. These include:

- HHEDUC – Education of Household head,
- URBAN4_2011 – four categories indicating rural or urban status from 2011,
- INCOMEPC – Per Capita Income,

- NPERSONS – number of people in the household,
- ASSETS – household assets scale from 0 to 33,
- STATEID2 - a list of states with small territories consolidated into the states that they neighbor.

6.3.3 Descriptive Statistics

From Tables 6.1 and 6.2 we see that compared to FC+brahmin and OBC groups, a higher percentage of children in the SC, ST, and Muslim groups cannot read letters or recognize numbers. We also see that a comparatively higher percentage of the FC+brahmin and Christian children can read a story and do division.

From Table 6.3 and 6.4, we see that compared to the 1st quintile of untouchability score, a higher percent of children in the 4th and 5th quintile of untouchability score are in the "cannot read" and "cannot recognize numbers" category. Interestingly, there is a relatively high percentage of children in the 5th quintile of untouchability that fall in the highest groups of reading outcome "story". Interestingly, they are not metro urban children, a majority of them (466/979) are in less developed villages, indicating that further disaggregation by caste or other factors is needed to see any patterns. There is no clear trend from the descriptive tables which indicates that a deeper look is needed to see which children in the higher or lower untouchability areas have the lowest learning outcome.

From Tables 6.5 and 6.6, we see that a relatively high percentage of children "cannot read" and "cannot recognize numbers" in areas in the 5th quintile of the Caste assets ratio, where the economic distance is highest. Beyond that observation, these descriptive tables indicate that further disaggregation of demographic factors is needed as there is no clear trend looking at the learning outcomes and the economic distance between caste groups alone in bivariate statistics.

Table 6.1: Tabulation between Child Reading Outcome & Caste Group							
Reading Level	**FC+Brahmin**	**OBC**	**Dalit**	**Adivasi**	**Muslim**	**Christian**	**Total**
Cannot read 0	72	370	381	171	285	7	1,286
	3.5%	9.4%	14.2%	16.8%	16.0%	3.6%	11.0%
Letters 1	200	547	412	200	253	12	1,624
	9.7%	13.8%	15.4%	19.6%	14.2%	6.2%	13.9%
Words 2	356	759	577	227	413	35	2,367
	17.2%	19.2%	21.6%	22.3%	23.1%	17.9%	20.2%
Paragraph 3	434	773	472	179	347	40	2,245
	21.0%	19.6%	17.6%	17.6%	19.4%	20.5%	19.2%
Story 4	1,005	1,501	835	241	488	101	4,171
	48.6%	38.0%	31.2%	23.7%	27.3%	51.8%	35.7%
Total	2,067	3,950	2,677	1,018	1,786	195	11,693
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 6.2: Tabulation between Child Math Outcome & Caste Group							
Math Level	**FC+Brahmin**	**OBC**	**Dalit**	**Adivasi**	**Muslim**	**Christian**	**Total**
Cannot recognize 0	125	597	504	235	357	5	1,823
	6.1%	15.2%	18.9%	23.2%	20.1%	2.6%	15.7%
Numbers 1	616	1383	1001	450	694	46	4,190
	29.9%	35.2%	37.5%	44.5%	39.0%	23.6%	36.0%
Subtraction 2	721	1227	714	235	512	93	3,502
	35.0%	31.2%	26.8%	23.2%	28.8%	47.7%	30.1%
Division 3	597	724	450	92	215	51	2,129
	29.0%	18.4%	16.9%	9.1%	12.1%	26.2%	18.3%
Total	2,059	3,931	2,669	1,012	1,778	195	11,644
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 6.3: Tabulation between Child Reading Outcome & Social Distance Quintiles						
	Social Distance Quintiles					
Reading Level	**1**	**2**	**3**	**4**	**5**	**Total**
Cannot read 0	108	193	281	350	354	1,286
	4.6%	9.0%	11.6%	14.7%	14.9%	11.0%
Letters 1	251	298	358	341	376	1,624
	10.6%	13.9%	14.8%	14.3%	15.8%	13.9%
Words 2	572	500	461	458	376	2,367
	24.1%	23.4%	19.0%	19.2%	15.8%	20.2%
Paragraph 3	697	462	414	378	294	2,245
	29.4%	21.6%	17.1%	15.9%	12.4%	19.2%
Story 4	743	687	907	855	979	4,171
	31.3%	32.1%	37.5%	35.9%	41.2%	35.7%
Total	**2,371**	**2,140**	**2,421**	**2,382**	**2,379**	**11,693**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 6.4: Tabulation between Child Math Outcome & Social Distance Quintiles						
	Social Distance Quintiles					
Math Level	**1**	**2**	**3**	**4**	**5**	**Total**
Cannot recognize 0	164	248	406	508	497	1,823
	6.9%	11.7%	16.8%	21.5%	21.0%	15.7%
Numbers 1	788	803	821	897	881	4,190
	33.3%	37.7%	34.1%	37.9%	37.1%	36.0%
Subtraction 2	939	738	687	569	569	3,502
	39.7%	34.7%	28.5%	24.1%	24.0%	30.1%
Division 3	477	339	497	391	425	2,129
	20.1%	15.9%	20.6%	16.5%	17.9%	18.3%
Total	**2,368**	**2,128**	**2,411**	**2,365**	**2,372**	**11,644**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 6.5: Tabulation between Child Reading Outcome & Economic Distance Quintiles						
	Economic Distance Quintiles					
Reading Level	**1**	**2**	**3**	**4**	**5**	**Total**
Cannot read 0	169	167	265	280	379	1,260
	7.5%	7.4%	12.0%	12.8%	16.4%	11.2%
Letters 1	301	297	296	334	325	1,553
	13.3%	13.1%	13.4%	15.2%	14.1%	13.8%
Words 2	506	461	444	441	410	2,262
	22.3%	20.3%	20.1%	20.1%	17.8%	20.1%
Paragraph 3	520	447	399	368	398	2,132
	23.0%	19.7%	18.1%	16.8%	17.3%	19.0%
Story 4	768	896	806	768	792	4,030
	33.9%	39.5%	36.5%	35.1%	34.4%	35.9%
Total	2,264	2,268	2,210	2,191	2,304	11,237
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 6.6: Tabulation between Child Math Outcome & Economic Distance Quintiles						
	Economic Distance Quintiles					
Math Level	**1**	**2**	**3**	**4**	**5**	**Total**
Cannot recognize 0	281	276	335	375	521	1,788
	12.5%	12.2%	15.2%	17.2%	22.7%	16.0%
Numbers 1	821	794	796	797	817	4,025
	36.4%	35.2%	36.2%	36.5%	35.6%	36.0%
Subtraction 2	755	734	627	624	597	3,337
	33.5%	32.5%	28.5%	28.6%	26.0%	29.8%
Division 3	400	452	442	388	359	2,041
	17.7%	20.0%	20.1%	17.8%	15.6%	18.2%
Total	2,257	2,256	2,200	2,184	2,294	11,191
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

6.3.4 Statistical Model

This study will use an Ordered logit (Ologit) to determine the correlation between children's learning outcomes (Math & Reading) in an area and the severity of untouchability in an area, with the primary explanatory variables being caste group, indicators for social and economic distance. This analysis will also control for other background factors like education, income, and state of residence. A logit model is used when there is a binary dependent variable, but because the dependent variables in this paper (TA8B and TA9B) have more than two values, where a higher value indicates better learning, an Ologit model was chosen. The resulting coefficients are in log odds units, and I interpret them by estimating the predicted probabilities and marginal effects.

Following Torres-Reyna (2008) the Ologit model estimates a score "S" for each category of the outcome variable, as a linear function of the Xs, exemplified by the equation below:

$$S = \beta_1 X_1 + \beta_2 X_2 \ldots\ldots\ldots + \beta_k X_k$$

"X_1, X_2,…, X_k" are the independent variables that can be either continuous or categorical. They are listed earlier in this chapter including caste groups, social and economic distance variables, and the control variables. Categorical variables are represented using dummy variables for each category. The Ancillary parameters at the bottom of the model (/cut1, /cut2, etc.) define the changes among the categories. For example, in this study, the equation for Model 5_SC for the Reading outcomes would be:

$$S = \beta_1 \text{UNTOUCHTOPCODE95} + \beta_2 \text{CASTEASSETSRATIO} + \beta_3 \text{UNTOUCH\&CASTEASSETS_Interaction} + \beta_4 \text{HHEDUC} + \beta_5 \text{URBAN4(Metro Urban)} + \beta_6 \text{URBAN4(Other Urban)} + \beta_7 \text{URBAN4(More Dev village)} + \beta_8 \text{URBAN4(Less Dev village)} + \beta_9 \text{INCOMEPC} + \beta_{10} \text{NPERSONS} + \beta_{11} \text{ASSETS} + \beta_{12} \text{(State 1)} + \beta_{13} \text{(State 2)} + \ldots\ldots + \beta_{44} \text{(State 33)}$$

When replaced by the coefficients

S = 2.55*UNTOUCHTOPCODE95 + 0.15*CASTEASSETSRATIO - 1.58* InteractionTerm + 0.07*HHEDUC + (Omitted Metro Urban) + 0.39*URBAN4(Other Urban) + 0.50*URBAN4(More Dev village) + 0.38*URBAN4(Less Dev village) - (4.10e^(-06))*INCOMEPC - 0.08*NPERSONS + 0.10*ASSETS + (State 1 Omitted) - 1.02*(State 2) +.....-1.73*(State 33)

The predicted probabilities for each Reading category are estimated as:

- P(y_ordinal= "0") = P(S+u <= _cut1) = P(S+u <= -0.97076)
- P(y_ordinal= "1") = P(_cut1< S+u <= _cut2) = P(-0.97076 <S+u <= 0.021234)
- P(y_ordinal= "2") = P(_cut2< S+u <= _cut3) = P(0.021234 <S+u <= 1.170243)
- P(y_ordinal= "3") = P(_cut3< S+u <= _cut4) = P(1.170243 <S+u <=2.131298)
- P(y_ordinal= "4") = P(_cut4< S+u) = P(2.131298 <S+u)

(Torres-Reyna 2008)

For each of the outcome variables, I estimate a first model using an Ologit with only the caste identity variable to see which caste groups have the highest and lowest children's learning outcomes. My second model estimates an Ologit with caste and only the social distance explanatory variable and a third model estimates an Ologit with only the economic distance explanatory variable to compare which results in a better fitting model. The fourth model includes both the social and economic distance variables as well as the control variables. I then run this fourth model for only dalit children and then for only dominant caste children to see if there are any stark differences in how social and economic caste distance correlate with educational outcomes. The sample size starts to become small when the sample is only children within the age range disaggregated by caste group, which is something to keep in mind when interpreting results from Model 4_SC and Model 4_FC.

6.4 Results

Regarding learning outcomes, there seems to be a difference in the patterns observed for Reading outcomes vs math outcomes. Table 6.7a shows the models with the outcome variable for Reading and Table 6.8a shows the same models for the learning outcome for Math. In the first model, only the caste group variable is included to see if there is any relationship between caste identity and learning outcome. We can see that compared to brahmins+FCs, all other caste groups have lower math and reading scores. This difference in learning outcomes among caste groups is sustained through all the models for dalits, adivasis, and Muslims.

Model 2 in each table adds in the social distance variable, and the results indicate that the likelihood of children having a higher learning outcome is negatively correlated where there is untouchability practice for both math and reading. The correlation is more negative for math outcomes than reading outcomes, meaning the social distance between castes matters for all children's reading and they matter even more for math outcomes. Model 3 indicates that the economic distance between castes at the local level also matters for both reading and math and again slightly more for math. Children living in districts with a higher economic distance have worse learning outcomes compared to their counterparts living in districts with lower caste economic inequity.

However, it is striking that while both social and economic distance lead to lower learning outcomes, they do so for **all** children, leaving caste coefficients mostly unchanged.

Table 6.7a: Paper3 - Reading Outcome Results Table Consolidated						
Variables	**Model 1 N=11,693**	**Model 2 N=11,693**	**Model 3 N=11,237**	**Model 4 N=11,232**	**Model 4_SC N=2,664**	**Model 4_FC N=2,003**
Outcome: Reading	X	X	X	X	X	X
Explanatory Variables						
Caste Group					Only SC	Only FC
OBC	-0.56***	-0.53***	-0.60***	-0.07		
Dalit	-0.92***	-0.91***	-0.94***	-0.37***		
Adivasi	-1.07***	-1.07***	-1.14***	-0.37***		
Muslim	-0.82***	-0.85***	-0.85***	-0.39***		
Christian, Sikh, Jain	0.00	-0.07***	-0.06	-0.30*		
Social Distance		-0.67***		-0.20	0.48	-0.15
Economic Distance			-0.20*	0.02	-.39*	0.32
Control Variables				X	X	X

Table 6.8a: Paper3 - Math Outcome Results Table Consolidated						
Variables	**Model 1 N=11,644**	**Model 2 N=11,644**	**Model 3 N=11,191**	**Model 4 N=11,186**	**Model 4_SC N=2,656**	**Model 4_FC N=1,996**
Outcome: Math	X	X	X	X	X	X
Explanatory Variables						
Caste Group					Only SC	Only FC
OBC	-0.62***	-0.57***	-0.63***	-0.05		
Dalit	-0.92***	-0.91***	-0.91***	-0.37***		
Adivasi	-1.23***	-1.25***	-1.29***	-0.40***		
Muslim	-0.89***	-0.96***	-0.90***	-0.48***		
Christian, Sikh, Jain	0.18	0.03	0.18	-0.27*		
Social Distance		-1.39***		-0.22	.67*	-.68
Economic Distance			-0.38**	0.05	-.61*	.25
Control Variables				X	X	X

See Appendix for Tables 6.7b-6.7g and 6.8b-6.8g showing Model 1- 4 and Model 4_SC and Model 4_FC for Reading and Math outcomes respectively.

For both the math and reading outcomes, when both social and economic distance are included in Model 4, the coefficients of both social and economic distance lose significance and caste coefficients diminish. This could be due to multicollinearity or small sample sizes. In any case, we find that the addition of household conditions such as child's sex, family education, family size, and assets in Model 4 for both outcomes reduces the significance of both social and economic distance variables and caste differentials. Model 4 shows that all these control variables are significantly related to a child's learning outcome, perhaps even more than the contextual caste variables like social and economic distance. What is also clear across all models for both reading and math outcomes is that there are statistically significant differences between caste groups, so the caste identity plays a factor, but perhaps not through the contextual caste atmosphere of the locality but through some other way when we look at children of all caste groups. After running Model 4 for reading outcome, holding all other variables at their mean value, dalit children have 0.26 probably of being about to read a story while dominant caste children have 0.34 probability of being able to read a story. After running Model 4 for math, holding all other variables at their mean value, dalit children have 0.11 probably of being about to do division while dominant caste children have 0.15 probability of being able to do division. These differences in probability indicate that there is a difference based on caste identity and given that there are significant differences in educational outcomes across caste groups, this analysis runs Model 4 separately for dalit children (Model 4_SC) and dominant caste children (Model 4_FC) to see if there are diverging trends in how contextual caste variables correlate with children of different caste groups.

For FC children, for both math and reading outcomes, the contextual caste variables of social and economic distance are not significant. When Model 4, is run for only SC caste

children, the economic distance term is significant with a negative coefficient for both math and reading outcomes, indicating that dalit children in areas with high economic inequality are less likely to have high reading and math outcomes. The social distance is significant for SC children's math outcome but in a counterintuitive way where the coefficient is positive. The social distance coefficient is also positive for SC children for reading outcomes, though not significant. This may be due to small sample sizes when we look only at SC children and then control for all the other variables. It may also be due to the economic distance being more predictive of educational outcomes than social distance, where areas with high social distance but low economic distance, where dalit households may have gained in economic status, may have higher achieving children. What seems to be a clearer story from this analysis is seen in the full regression tables of Model 4 for both reading and math outcomes (in the appendix), where all of the coefficients for the control variables are shown. From those full results tables, we can see that for both learning outcomes for SC and FC children, household education and the assets of the household are significant consistently. For reading outcomes the urban/rural status of the household is significant for all children taken together and especially for SC children, but not for FC children. Interestingly, unlike for reading outcomes, the urban/rural status does not seem as significant for math outcomes. This is the case for all children, dalit or dominant caste. Perhaps there is something about learning math that is resistant to the different experiential impacts of being in a rural area vs an urban area. For example, the math curriculum focuses on problem-solving and logic while reading may be influenced by parental involvement and children's emotions related to reading. (Yang et al. 2023; H. Dumont et al. 2014). One study using longitudinal data for young children in the U.S. found that children in large urban and rural areas entered kindergarten with less advanced academic skills than children in small urban areas and

suburbs, indicating that we may need data on children at younger ages and future work in the Indian context might need to disaggregate large cities from surrounding smaller urban areas or more developed villages. Exploring this difference in math vs reading disparities between urban and rural areas and across caste groups is a possible path forward for further research on children's learning outcomes.

As a general statement for all children, indicators of household socio economic status in our models may perhaps be more important for children's learning outcomes, especially for reading, than the social or economic distance between castes. The most important exception to the previous general statement is for dalit children, where Model 4_SC for both math and reading outcomes shown, indicates that the contextual caste variables are playing a role. Given that dalit children seem to be impacted by contextual caste conditions, figures 6.1-6.4 show the predicted values of math and reading outcomes for social and economic distance for SC children to better visualize what may be predictive of worse learning outcomes for dalit children.

Figures 6.1 and 6.2 show Model 4_SC for reading outcomes which runs Model 4 with only dalits. This reduces the sample size to roughly ~2600 children but shows a contrast in learning outcomes based on the social and economic distance of the locality in which the child resides. For economic distance especially, we can see in figure 6.2 that the likelihood of dalit children not being able to read goes up in areas with high economic distance and the likelihood of being able to read a story decreases. Similarly, Figure 6.4 shows that high economic distance is a clear correlation with low reading outcomes for dalit children, and fig 6.3 shows that social distance is not such a clear result.

Figure 6.1: Predicted Reading Outcome for Model 4 for Dalits by Social Distance

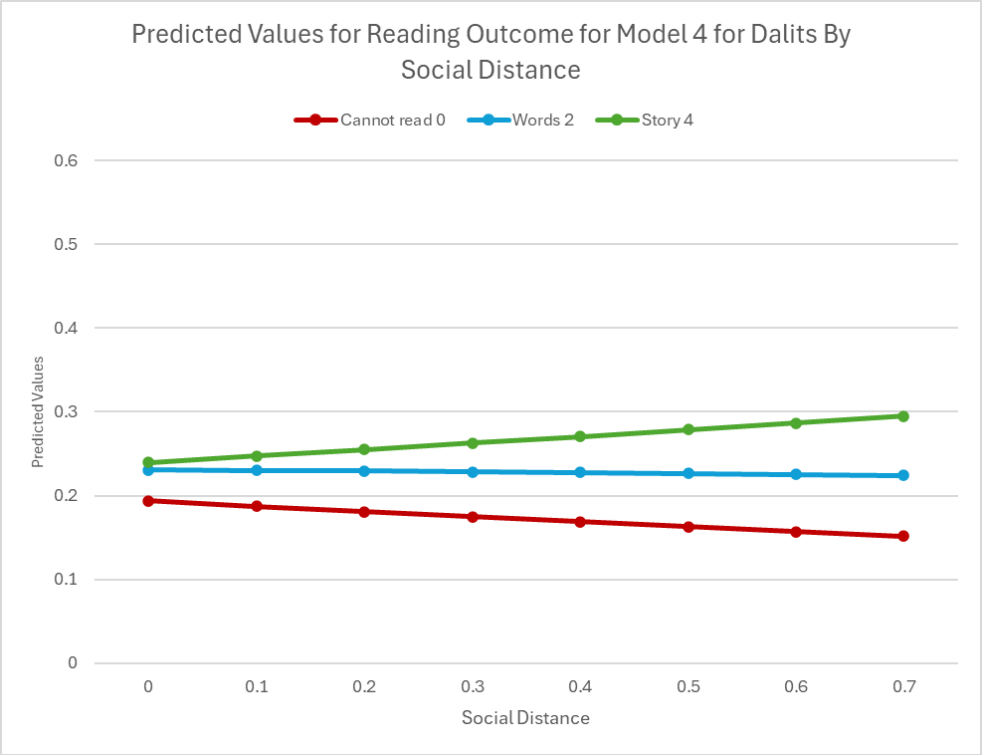


Figure 6.2: Predicted Reading Outcome for Model 4 for Dalits by Economic Distance

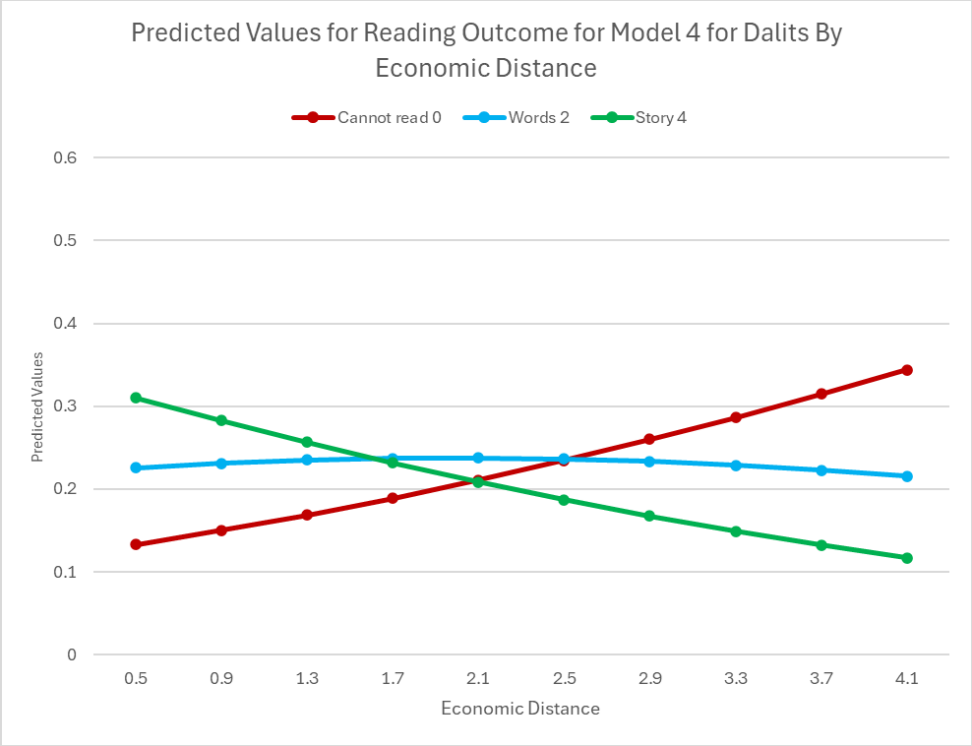


Figure 6.3: Predicted Math Outcome for Model 4 for Dalits by Social Distance

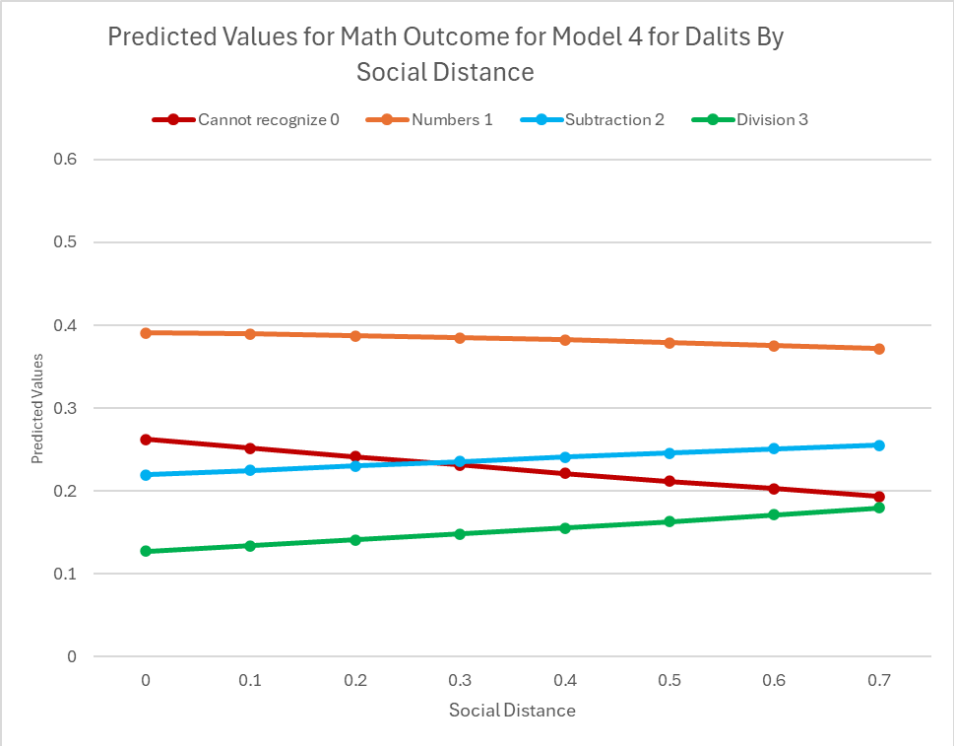
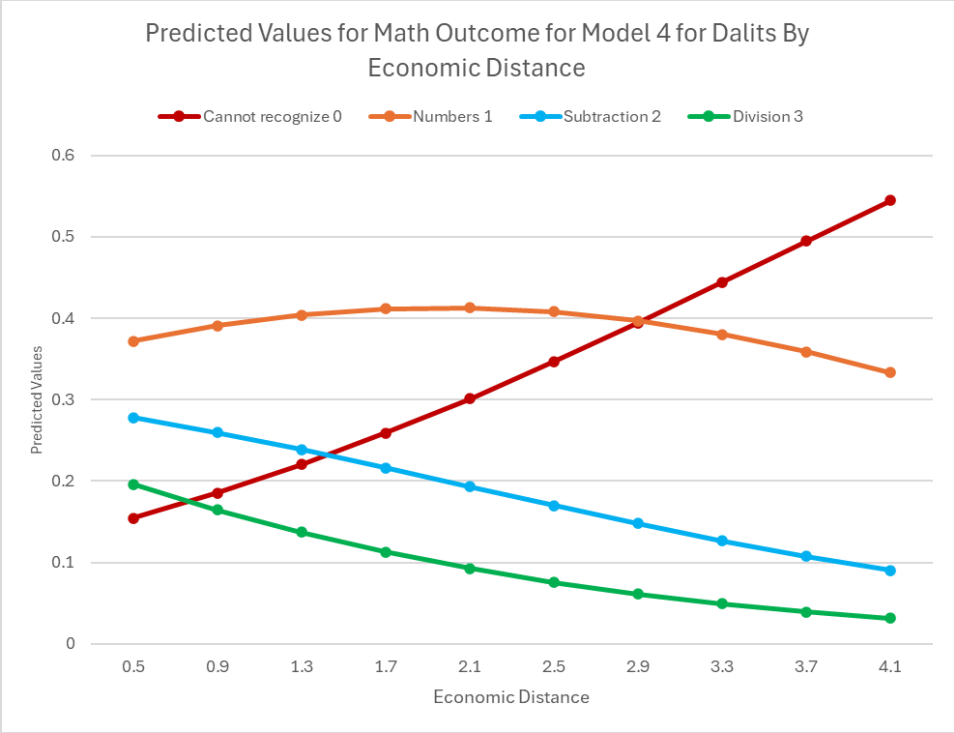


Figure 6.4: Predicted Math Outcome for Model 4 for Dalits by Economic Distance



We would expect dalit children to have worse reading outcomes if social distance is high, but it looks like increasing social distance in this model for both math and reading outcomes shows a higher predicted learning outcome for dalit children (depicted in figures 6.2 and 6.4). Given that sample sizes at this level of sub-sample are small, it's difficult to make broad generalizations about these findings, but the finding is counterintuitive enough, that it is worthwhile to study further in future work.

I undertook preliminary analysis to see the economic distance distribution and urban/rural distribution of the dalit children who are scoring high (4) in reading outcome and also live in areas with a high social distance (top quintile). I wanted to see if these areas are urban or rural and see how they rank in economic distance. What I found was that in the top 5th quintile of Social Distance, there were 186 dalit children who could read a story and the majority of them (159) lived in a village (more or less developed villages). Of these 159, the majority live in areas with low economic caste distance in the village (142 in the first 3 quintiles of Economic distance). This qualitatively suggests that the narrowing of economic distance matters to dalit children's reading, even if they are in a village with high untouchability practice. These tabulations are presented in Table 6.9.

Table 6.9: Dalit Children Scoring High in Reading & in Areas with High Social Distance

CASTEASSETSRATIO Quintiles	Metro Urban	Other Urban	More developed Village	Less Developed Village	Total
1st Quintile	0	3	6	11	20
2nd Quintile	3	8	22	45	78
3rd Quintile	0	4	22	18	44
4th Quintile	2	4	4	13	23
5th Quintile	0	3	9	9	21
Total	5	22	63	96	186

6.5 Discussion

This chapter examined the influence, if any, that the social and economic distance between castes at the local level may have on the learning outcomes of children. We know that dalit children's learning outcomes are worse than comparable dominant caste children, therefore this study sought to see how large the learning gap is and how much of it may be due to the social behaviors of caste vs the economic differences between caste groups. This analysis takes advantage of the reading and math assessments conducted in the IHDS data as a measure of children's learning outcomes, along with the granular household-level demographic data that allows for localized social and economic caste distance measures.

The results show that while caste distance, both social and economic, is bad for children's learning outcomes overall, they do not moderate the caste gap in learning outcomes. We can initially conclude, as many scholars have before, that the main predictive factors for children's learning outcomes remain the household's socio-economic status, given that the three control variables that yield significant coefficients and reduce the coefficients for caste in Model 4, for both reading and math outcomes, are household education, the number of people in the household and the assets that the household has. But when looking at dalit children and FC children as separate groups, my analysis highlights that dalit children may experience the negative impact of the economic distance between castes in a locality in a way that FC children do not. This can be seen in the significance of the economic distance variable only for the subset of dalit children's reading outcomes and not for FC children.

To answer my initial research questions, the learning outcomes of children significantly differ among different caste groups, but this may be due to the conditions under which their households live rather than the caste climate in their locality. One thing that is clear among all

four models for both reading and math outcomes is that there is a statistically significant difference between FC+brahmin children and dalit children. In the model 4 where both social and economic caste distance are included, the difference between FC and OBC children loses significance for both math and reading, but the difference in outcomes remains significant between dalit and FC children for both math and reading. Dalit children have a lower learning outcome for both math and reading than dominant caste children.

Higher social distance seems to predict lower learning outcomes for all children taken together, for both reading and math. When both economic distance and social distance are included in the model, social distance loses significance when looking at all children, likely due to diverging trends in the influence of social distance based on which caste group of the child. That is why the model including both social and economic distance and all control variables is run for dalit children and FC children separately to allow for examining any diverging trends, We find that economic distance is significant and predictive of negative math and reading outcomes for dalit children, but has no significance for dominant caste children. Social distance is also significant for dalit children's math outcomes, albeit in a counterintuitive direction. For dalit children social distance seems predictive of higher math and reading scores, which is counterintuitive to what much of the previous scholarship in India or elsewhere would predict about the learning outcomes of children when faced with discrimination. This counterintuitive trend indicates that I should acknowledge the low sample sizes for dalit students living in high social distance areas in this study, but also that further research into this subset of children and factors influencing their learning would be worthwhile. Basically, dalit children may be learning even if the social distance is high in their locality, or perhaps *especially* if the social distance is high, BUT they are more likely to struggle with reading if they are living in a locality with both

high economic and social distance, probably because they are the children in that locality that are not benefitting from the economic disparity. This finding about the negative impact of economic disparity is consistent with previous scholarship on developing countries that highlights the positive impact of a household's economic status on children's access to quality education as well as allowing for children to go to school instead of childcare or income generating responsibilities (Croninger and Lee 2001; Sonalde Desai, Adams, and Dubey 2010)

For both oppressed caste and dominant caste children, the variables that are significant when it comes to learning outcomes seem to be the socio-economic factors apart from the caste distance like household education, assets, and in the case of reading, the urban/rural status. This study and discussion examining children's learning outcomes point toward a need to delve deeper into the factors that influence children's learning. Further studies need to take caste into account and use the social and economic distance variables to analyze oppressed caste children's learning given that there is an influence on dalit children that does not exist for FC and brahmin children. This study does go on to reiterate that the local level social distance between castes should be held distinct from the economic distance when running an analysis or designing an intervention.

Chapter 7: Conclusion

I embarked on my graduate school journey precisely because I sought to understand caste better. To study theories and methods in demography and social stratification from different country contexts and then seek the historical context and sociological theories that may help make sense of caste. This dissertation study is my first attempt at an original way of quantifying

caste, founded on my understanding of previous scholarship and accounting for the vast diversity of lived experiences that I saw during my qualitative work in India.

In this study, I try to understand how India's caste system is changing and how it impacts the lives of individuals. I acknowledge that social change means that the power structures between groups shift and dominant groups react differently than the oppressed groups. This study takes the historical social and political movements in different regions in stride by empirically examining the social and economic distance between caste groups using localized measures.

The conceptual framework of this study centers around caste as an economic distance that ought to be measured separately from caste as a social distance, but not as a replacement of the social distance between castes. This framework comes from the understanding of previous scholarship setting out how social discriminatory structures like racial, ethnic, or religious disparities, though related to economic outcomes, cannot be fully defined by economic measures or accounted for by purely economic gains(Arrow 1998; Pearman 2022; McCoy 2021; Chatters et al. 2009). Scholarship shows that the social discrimination, which is the basis of social distance between caste groups has not disappeared (Macdonell 1914; Ketkar 1909; Pandey 2013; Thorat et al. 2006; Narula and Human Rights Watch (Organization) 1999; Rawat 2011) but that the social discrimination over time has resulted in economic outcomes that then contribute to an economic distance between castes which reinforces the socio-economic status differentials along caste lines (Thorat and Newman 2012; Deen 2020; K. Hoff and Walsh 2018; Banerjee and Iyer 2005; Ashwini Deshpande 2017; Aswini Deshpande 2021; Pradhan, Kandapan, and Pradhan 2022; Pradhan, Pradhan, and Kandapan 2023).

In an effort to understand caste from these two local and contextual lenses (social and economic), I chose three outcomes that represent different aspects of lived experience based on my qualitative fieldwork. Stemming from my respondents' stories of facing caste-related tensions and conflict in their villages, the first outcome I chose is neighborhood-level conflict, measured at the household level in the IHDS data. The narratives of women's hopes for themselves and the differences I noted in dalit and dominant caste women inspired my choice of the second outcome, women's wage labor, to look at the gendered aspect of caste. I chose children's math and reading skills as my third outcome because of the different ways my respondents spoke of their hopes for their children, how dalit women hoped their children's experience should not be influenced by caste while dominant caste women hoped their children would not be held back due to the government's reservation policies to benefit dalits. I hoped that between these three outcomes, I would be able to see how the localized measures of social caste distance and economic caste distance correlate to different aspects of lived experience.

So how does everything tie together? What is clear is that the shifting social structure of caste is influencing the lives of individuals in India in very different and sometimes unexpected ways. The results from each of the three papers encompassed in this study demonstrate that social distance is indeed different from economic distance, but that the two aspects of caste distance interact and compound the influence of caste to varying degrees on different individuals. It is clear that the dominant caste groups behave very differently than dalits in different caste contexts. Further, each of the outcome variables in chapters 4, 5 and 6 highlight different influences. The contextual caste variables of social and economic distance seem to correlate with, or better predict, conflict outcomes at the household level and work behavior outcomes for women. The caste identity also correlates with the differing work behavior of women in dalit vs

dominant caste groups and in addition, the caste identity seems to predict different learning outcomes of children in dalit vs dominant caste groups. The Socio economic status of a household also correlates with, or better predicts, the learning outcomes of children as well as the likelihood of a woman to work across all castes and contextual caste atmospheres. These different influences on the outcome variables are summarized in Table 7.1.

Table 7.1: Different Influences on Outcome Variables			
	SES (Income, Assets, HHEduc)	Caste Identity	Caste Context(Social and/or Economic Distance)
Study 1: Conflict			**X**
Study 2: Women Waged Work	**X**	**X**	**X**
Study 3: Children's learning outcomes	**X**	**X**	

Chapter 4 results find that a high social distance between caste groups is predictive of a high conflict outcome, but that a narrowing economic distance may help mitigate the incidence of conflict. Social ties, exemplified by a low social distance between castes, make conflict less likely. This means that social ties are still crucial in preventing conflict, separate from low or high economic distance. The social distance is even more significant than economic distance, highlighting the importance of reducing socially discriminatory behaviors like untouchability and the belief system around purity and pollution that upholds such practices. However, given the increasing importance of economic gains in a modernizing world, an important finding is the protective effect of relative economic gains from the conflict outcome, even in the absence of strong social ties. This means that when there is a higher incidence of untouchability practice in a locality, and the economic distance between castes is high, conflict is more likely but if the high untouchability exists with a narrow relative economic gap between castes, then the likelihood of

conflict decreases. The narrowing of the economic distance effectively means that dalits have gained economically, and perhaps this path out of poverty is a mitigating factor for conflict. Further studies can delve into the reasons behind these findings. Perhaps the narrowing of the relative economic gap means dominant groups are less likely to violently enforce caste social distance, and dalit groups can protect themselves. Perhaps in areas with a low economic distance, dalit groups may not be so resource-constrained and frustrated enough to engage in conflict. What is clear from this study's results is that the social distance variable remains more significant to conflict outcomes, but that narrowing economic distance has an interacting role in mitigating conflict which is heartening.

Chapter 5 examines the gendered aspect of caste, highlighting the stark difference in dalit women's labor force participation (LFP) trends as compared to dominant caste women's LFP. The results of this chapter show that when looking across all castes, for FLFP, the social distance measure matters more than the economic distance between castes. This means that all women are less likely to work in areas with high social caste distance, perhaps indicating that those areas are more conservative overall, and practice more conservative gender norms, where women are more likely to be confined to the home. What is important to note is that the likelihood of dalit women working is higher across the board than dominant cast women. Even in areas with a high social distance, dalit women still are more likely to work than dominant caste women. Further, dalit women, in stark contrast to dominant caste women, are significantly more likely to work when an area has a high economic distance. Therefore, when looking at only dalit women, the economic distance measure is more predictive of LFP than the social distance measure. This is a somber finding, indicating that though the caste based social distance may be reducing in some localities, they are replaced by the economic aspect of caste exerting an influence on dalit

women, forcing them to work in order to make ends meet. Dominant caste women are not as likely to work generally, and given a high economic distance, their likelihood of working does not seem impacted, probably because they are in families at the wealthy end of the economic distance.

Chapter 6 sought to understand how caste is influencing some of the youngest members of society by looking at the learning outcomes of children aged 8-11. The results regarding social or economic caste measures are not conclusive when looking at children of all caste groups together, and there was a need to look at diverging trends between children of different castes. Generally speaking, for children's learning outcomes, more than the social and economic distance between castes in their locality, the individual family factors and urban/rural status are more significant. Family factors such as household education, the number of people in the household and the assets are significant for all children. When looking at sub-sections of the sample for children, the sample sizes get low but are still telling of differing influences of caste on dalit children as compared to dominant caste children. For dalit children analyzed separately from other children, the economic distance between caste groups seems to be more significant regardless of high or low social distance. Dalit children in areas with a low economic distance can read and do math better than dalit children in areas with a high economic distance, likely due to the dalit children experiencing poverty and associated poor learning outcomes. The analysis of children's learning outcomes opens the door to further research needed and the possibility that for some outcome variables, caste distance may not be particularly salient. Even when social distance is present for dalit children, in modern times, it may be overtaken by the salience of economic distance.

The diverging patterns regarding which aspect of caste distance is more important for each of the outcome variables means that some outcome variables should be addressed using policy related to economic caste distance while other outcomes should be addressed with a focus on correcting the social distance behaviors and discrimination. Further, When looking at different outcomes, sometimes caste identity is most predictive of the outcome, sometimes it's the contextual caste variables that I examine in this analysis (Social and economic caste) and sometimes it is other factors like SES (encompassing household education, income assets etc.) Some outcomes may need a cross cutting approach focusing on interventions in specific localities where the intersecting conditions of contextual caste, caste identity and SES result in negative outcomes. Therefore, the influence of caste should be measured from different angles and account for the localized contextual influence of caste as a relational measure between caste groups in addition to the caste identity. Any interventions need to be tailored to the outcome and the intersecting social characteristics predictive of that given outcome.

7.1 Limitations of This Research

This study uses the IHDS wave 2 data which has more than 42 thousand households, along with household and individual level variables. It is one of the largest, nationally representative datasets that collects demographic data in India. I had relatively granular data, at the district level, and the best data available for the untouchability measure as well as the outcome variables I chose. However, like all research, this research has some limitations.

One limitation of this study is the measure that was available to construct the social distance between castes is untouchability, which may not capture the full extent of social distances. For example, if dominant caste respondents show social desirability bias and claim not to practice untouchability, but still do not eat with dalits or touch the money that dalits pay

within the shop, then the measure may not be capturing the true extent of social caste distance. Further, there are other behaviors beyond untouchability that can enforce social caste distance such as endogamy, not allowing dalit tenants in a rental room, or discriminating in hiring for skilled labor based on caste identity. These aspects of social caste distance are not captured in the untouchability measure constructed from IHDS data.

Another limitation is that the focus of the economic distance variable has been on the relative economic gap between forward castes and SCs, but it could also be constructed to include OBCs who have become dominant in certain localities or include STs who are arguably just as or more marginalized than SCs in many areas. There are other ways to measure the relative economic gap beyond a ratio of assets that could yield results from a different lens. For example, if the relative economic gap was chartered using wealth and income, it may give different insights. One could also chart the economic distance between different caste groups as a continuous measure, then create asset ratios between specific subsets of the population based on which caste groups are richest and poorest in a specific region. This way, the relative economic distance between FCs, OBCs, SCs, and STs could all be examined as asset ratios specific to the pair of castes being compared. For example, for the children's learning outcome study, a more detailed measure of the relative economic gap may yield unforeseen patterns in how the economic distance between castes may be influencing children from dalit groups vs OBCs vs STs. This is a possible future direction to study children's learning outcomes.

Finally, I would have wanted to localize the caste identity variable further to capture local jati names and local hierarchies of caste that sometimes differ from the overarching categories of FC and SC. For example, in Andhra Pradesh, the Kammas have become dominant castes economically, politically, and sometimes even religiously, by performing religious rites like

brahmins. Surprisingly, they are categorized by the varna system as “sudra” and by the government of India as OBC and not FC. In this study, that would mean that the economic distance variable would not capture the relative economic gap between a Kamma and a dalit in the districts of Andhra Pradesh, even though a particular dalit person’s entire lived experience of social and economic caste distance could be in relation to the dominant Kamma families in their village rather than brahmins or other FCs. Emerging and contested scholarship also notes that some dalit caste groups have discriminated against other dalit groups and exert some form of status hierarchy within dalit groups at the local level(Bathran 2016). This divergence between SC groups is also not captured in the measures used in this study.

The final limitation is a limitation of the data available and highlights the need for a nationally representative caste census to be taken. The Indian judicial system has debated and made decisions about the need for sub-classification of SCs and revision of reserved categories without any recent nationally representative caste data to back up their decision. An empirical, nationally representative survey of caste groups that includes jati-level data is needed to better localize caste measures such as social and economic caste distance.

7.2 Future Work

Further work can delve into how the social or economic distance measures can be improved. In addition to the outcomes I have studied here, there are so many other outcomes to examine from the framework of separating social caste distance from economic caste distance. I want my work to be useful in understanding how caste is impacting people and where the most intense impact is. This way, I and other scholars can better inform organizations or governments that might be considering interventions in specific areas or related to specific outcomes. For example, if a US-based dalit organization like Ambedkar International Center were to start a

fund to help education for dalit children or for women's empowerment, I hope they can use measures such as the social and economic distance measures to identify which districts in India might need that funding the most and the interventions that would be most effective.

Localized and granular caste data is key to making good measures that can be used for policy recommendations (Sonalde Desai, 2010). Robust measures of social and economic caste distance can also be used in future work to highlight areas where a certain political mobilization or resource allocation policy has had a positive impact on caste relations. Such a study could inform policymakers of the kinds of legislation to replicate in other areas.

Another stream of further research would be qualitative work to delve into some of the questions that this study brought up. For example, in children's learning outcomes, there were a few dalit children in areas with high social distance that had positive learning outcomes. Many of these children lived in areas with low economic distance, so a qualitative work looking at areas with low economic distance and school choice could be insightful to identify strategies that dalits living in high social distance areas are employing to help their children learn. Further qualitative work could delve into the economics of a village and if social distance practices may be influencing and perpetuating economic caste distance or if the narrowing of economic caste distance may help to reduce social caste distance. The intersection of the social and economic distance has shown interesting results in the analysis done in this study and qualitative work may help unpack how some of the interaction is happening in the field. A follow-up study returning to the villages of Lavanya and Sarita, mentioned in Chapter 2, could also yield more insights into how the results of this study could be made available and useful to the individuals who inspired the work.

In summary, this dissertation underscores that caste as a social distance may be very different from caste as an economic distance and should be discussed separately, using evidence-based observations to decide on which policy to support and for what purpose. I hope to continue my work in understanding caste in a changing society by further testing, fine-tuning, and localizing the measures developed here. I hope that my work will positively impact the respondents I learned from and the populations that my respondents represent.

Appendix

Table 4.4b: Model 1						
CONFLICT	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	0.0774205	0.0357746	2.16	0.032	0.006868	0.147973
Dalit	0.0497843	0.0405895	1.23	0.221	-0.03026	0.129833
Adivasi	0.2640861	0.047168	5.6	0	0.171064	0.357108
Muslim	-0.057039	0.0454267	-1.26	0.211	-0.14663	0.032549
Christian,Sikh,Jain	-0.547215	0.0736297	-7.43	0	-0.69242	-0.40201
/cut1	0.0715197	0.0321425			0.00813	0.134909
/cut2	0.473545	0.0306669			0.413066	0.534024
/cut3	2.026959	0.0334256			1.961039	2.092879
/cut4	2.739539	0.0372778			2.666022	2.813056

Table 4.4c: Model 2						
CONFLICT	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted						
OBC	0.013652	0.038325	0.36	0.722	-0.06193	0.089235
Dalit	0.029598	0.0418102	0.71	0.48	-0.05286	0.112054
Adivasi	0.229105	0.0480892	4.76	0	0.134266	0.323944
Muslim	-0.02119	0.04429	-0.48	0.633	-0.10854	0.066151
Christian,Sikh,Jain	-0.41926	0.0760602	-5.51	0	-0.56926	-0.26926
SOCIAL DISTANCE	1.429409	0.0513269	27.85	0	1.328185	1.530633
/cut1	0.428793	0.031672			0.366331	0.491255
/cut2	0.843004	0.0310523			0.781765	0.904244
/cut3	2.425584	0.0367885			2.353032	2.498137
/cut4	3.140875	0.0392109			3.063546	3.218205

Table 4.4d: Model 3						
CONFLICT	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	0.077315	0.036318	2.13	0.035	0.005691	0.148939
Dalit	0.027634	0.040945	0.67	0.501	-0.05311	0.108382
Adivasi	0.272018	0.054631	4.98	0	0.164277	0.379759
Muslim	-0.06937	0.047141	-1.47	0.143	-0.16234	0.023594
Christian,Sikh,Jain	-0.56688	0.075071	-7.55	0	-0.71493	-0.41883
ECONOMIC DISTANCE	0.250201	0.04269	5.86	0	0.16601	0.334391
/cut1	0.373782	0.062277			0.250963	0.496602
/cut2	0.770891	0.062401			0.647827	0.893956
/cut3	2.314491	0.059693			2.196769	2.432214
/cut4	3.029806	0.064823			2.901966	3.157646

Table 4.4e: Model 4						
CONFLICT	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	-0.07444	0.046156	-1.61	0.108	-0.16546	0.016589
Dalit	-0.00159	0.049121	-0.03	0.974	-0.09846	0.095286
Adivasi	0.134875	0.070622	1.91	0.058	-0.0044	0.274152
Muslim	0.081136	0.054513	1.49	0.138	-0.02637	0.188643
Christian,Sikh,Jain	0.003755	0.093158	0.04	0.968	-0.17997	0.187476
SOCIAL DISTANCE	1.581149	0.11339	13.94	0	1.357529	1.804769
ECONOMIC DISTANCE	0.100728	0.04822	2.09	0.038	0.005631	0.195824
HOUSEHOLD EDUC	0.004546	0.003036	1.5	0.136	-0.00144	0.010533
URBAN/RURAL (Urban omitted)						
other urban 1	-0.53771	0.041211	-13.05	0	-0.61898	-0.45643
more dev vill 2	-0.65517	0.055943	-11.71	0	-0.7655	-0.54485
less dev vill 3	-0.49965	0.059232	-8.44	0	-0.61646	-0.38284
INCOME PER CAPITA	-5.50E-07	3.08E-07	-1.8	0.074	-1.20E-06	5.38E-08
PERSONS IN HOUSEHOLD	-0.00471	0.007339	-0.64	0.522	-0.01919	0.009763
ASSETS	-0.00921	0.00354	-2.6	0.01	-0.01619	-0.00223
stateid2	[Omitted individual State Coefficients]					
/cut1	0.679142	0.140438			0.402179	0.956105
/cut2	1.126968	0.139679			0.851502	1.402434
/cut3	2.791733	0.139985			2.515662	3.067803
/cut4	3.523728	0.135745			3.25602	3.791437

Table 4.4f: Model 5						
CONFLICT	**Coefficient**	**std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	-0.08132	0.046091	-1.76	0.079	-0.17222	0.009575
Dalit	-0.00808	0.048873	-0.17	0.869	-0.10447	0.088302
Adivasi	0.115075	0.069699	1.65	0.1	-0.02238	0.25253
Muslim	0.083282	0.054126	1.54	0.126	-0.02346	0.190026
Christian,Sikh,Jain	0.006516	0.093319	0.07	0.944	-0.17752	0.190554
SOCIAL DISTANCE	0.099411	0.259784	0.38	0.702	-0.41292	0.611742
ECONOMIC DISTANCE	-0.31069	0.089685	-3.46	0.001	-0.48756	-0.13381
SOCIAL DISTANCE # ECONOMIC DISTANCE	1.163078	0.214026	5.43	0	0.740988	1.585168
HOUSEHOLD EDUC	0.004304	0.002985	1.44	0.151	-0.00158	0.010191
URBAN/RURAL (Urban omitted)						
other urban 1	-0.50833	0.041928	-12.12	0	-0.59102	-0.42565
more dev vill 2	-0.61638	0.055256	-11.16	0	-0.72536	-0.50741
less dev vill 3	-0.46126	0.059698	-7.73	0	-0.579	-0.34353
INCOME PER CAPITA	-5.70E-07	3.07E-07	-1.86	0.065	-1.20E-06	3.50E-08
PERSONS IN HOUSEHOLD	-0.0041	0.007231	-0.57	0.571	-0.01836	0.010162
ASSETS	-0.00898	0.003492	-2.57	0.011	-0.01587	-0.0021
stateid2	[Omitted individual State Coefficients]					
/cut1	0.195228	0.162356			-0.12496	0.515417
/cut2	0.643753	0.16282			0.322649	0.964857
/cut3	2.311356	0.167496			1.981031	2.641681
/cut4	3.044233	0.16037			2.727961	3.360505

Table 5.4b: Model 1						
WAGELABOR	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	0.7311173	0.0488386	14.97	0	0.6347946	0.8274401
Dalit	1.266021	0.0596257	21.23	0	1.148423	1.383619
Adivasi	1.516073	0.0602316	25.17	0	1.39728	1.634866
Muslim	0.0115651	0.089926	0.13	0.898	-0.1657931	0.1889233
Christian,Sikh,Jain	0.4492716	0.1182601	3.8	0	0.2160309	0.6825122
_cons	-1.73097	0.0428064	-40.44	0	-1.815396	-1.646545

Table 5.4c: Model 2						
WAGELABOR	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	0.7423718	0.0483465	15.36	0	0.6470195	0.8377241
Dalit	1.267866	0.0591877	21.42	0	1.151132	1.3846
Adivasi	1.522213	0.0600239	25.36	0	1.40383	1.640596
Muslim	0.0044901	0.0884587	0.05	0.96	-0.1699741	0.1789544
Christian,Sikh,Jain	0.429928	0.1181954	3.64	0	0.1968151	0.6630409
SOCIAL DISTANCE	-0.2438221	0.0718459	-3.39	0.001	-0.3855214	-0.1021227
_cons	-1.672004	0.0458282	-36.48	0	-1.76239	-1.581619

Table 5.4d: Model 3						
WAGELABOR	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	0.7544016	0.0488479	15.44	0	0.6580604	0.8507427
Dalit	1.298426	0.0640993	20.26	0	1.172006	1.424847
Adivasi	1.456458	0.0611317	23.82	0	1.33589	1.577026
Muslim	0.0801873	0.089128	0.9	0.369	-0.0955969	0.2559716
Christian,Sikh,Jain	0.4976598	0.1126017	4.42	0	0.2755791	0.7197406
ECONOMIC DISTANCE	-0.0089916	0.0546624	-0.16	0.87	-0.1168004	0.0988172
_cons	-1.750302	0.0665268	-26.31	0	-1.88151	-1.619093

Table 5.4e: Model 4						
WAGELABOR	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	0.2819467	0.0577899	4.88	0	0.1679695	0.3959239
Dalit	0.8277096	0.0684754	12.09	0	0.6926579	0.9627614
Adivasi	0.7221099	0.0641121	11.26	0	0.5956637	0.8485562
Muslim	-0.0582926	0.0887257	-0.66	0.512	-0.2332833	0.1166982
Christian,Sikh,Jain	0.5481988	0.1226827	4.47	0	0.3062357	0.7901618
SOCIAL DISTANCE	-0.5248657	0.1176377	-4.46	0	-0.7568788	-0.2928526
ECONOMIC DISTANCE	0.0375179	0.0655842	0.57	0.568	-0.0918316	0.1668674
AGE	0.0349909	0.0015069	23.22	0	0.0320189	0.0379629
EDUCATION	-0.016687	0.0051872	-3.22	0.002	-0.0269175	-0.0064566
URBAN/RURAL (Urban omitted)						
other urban 1	0.1984101	0.0618523	3.21	0.002	0.0764208	0.3203993
more dev vill 2	0.4885715	0.0801458	6.1	0	0.3305026	0.6466404
less dev vill 3	0.387054	0.0844211	4.58	0	0.2205531	0.553555
HOUSEHOLD INCOME NOT EARNED BY THE WOMAN	-0.000000661	0.000000215	-3.07	0.002	-0.00000109	-0.000000237
PERSONS IN HOUSEHOLD	-0.0659647	0.0071114	-9.28	0	-0.0799904	-0.051939
ASSETS	-0.1084357	0.0046026	-23.56	0	-0.1175133	-0.0993582
stateid2	[Omitted individual State Coefficients]					
_cons	-1.406406	0.2230861	-6.3	0	-1.846391	-0.9664204

Table 5.4f: Model 4: Only Scheduled Castes						
READING	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
SOCIAL DISTANCE	-0.9361	0.264538	-3.54	0.001	-1.45911	-0.41309
ECONOMIC DISTANCE	0.348084	0.142244	2.45	0.016	0.066859	0.629308
AGE	0.049058	0.003716	13.2	0	0.041711	0.056405
EDUCATION	-0.04232	0.009372	-4.52	0	-0.06085	-0.02379
URBAN/RURAL (Urban omitted)						
other urban 1	0.213467	0.164559	1.3	0.197	-0.11188	0.538809
more dev vill 2	0.741919	0.158588	4.68	0	0.428383	1.055455
less dev vill 3	0.696266	0.148222	4.7	0	0.403223	0.989309
HOUSEHOLD INCOME NOT EARNED BY THE WOMAN	-2.5E-06	1.01E-06	-2.44	0.016	-4.5E-06	-4.7E-07
PERSONS IN HOUSEHOLD	-0.04117	0.017783	-2.32	0.022	-0.07633	-0.00601
ASSETS	-0.09677	0.008647	-11.19	0	-0.11387	-0.07968
stateid2	[Omitted individual State Coefficients]					
_cons	-1.65874	0.549502	-3.02	0.003	-2.74514	-0.57235

Table 5.4g: Model 4: Only Forward Castes						
READING	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
SOCIAL DISTANCE	-0.2785362	0.2699544	-1.03	0.304	-0.81239	0.255315
ECONOMIC DISTANCE	-0.3393673	0.1844849	-1.84	0.068	-0.7042	0.025463
AGE	0.0223467	0.0043842	5.1	0	0.013677	0.031017
EDUCATION	0.0419411	0.0088017	4.77	0	0.024535	0.059347
URBAN/RURAL (Urban omitted)						
other urban 1	0.402532	0.1794296	2.24	0.026	0.047699	0.757365
more dev vill 2	0.3926947	0.1914057	2.05	0.042	0.014178	0.771211
less dev vill 3	0.1826612	0.1672195	1.09	0.277	-0.14803	0.513348
HOUSEHOLD INCOME NOT EARNED BY THE WOMAN	-3.72E-07	2.34E-07	-1.59	0.114	-8.3E-07	9.01E-08
PERSONS IN HOUSEHOLD	-0.0647897	0.01792	-3.62	0	-0.10023	-0.02935
ASSETS	-0.083869	0.0093419	-8.98	0	-0.10234	-0.06539
stateid2	[Omitted individual State Coefficients]					
_cons	-1.01315	0.4321152	-2.34	0.02	-1.86768	-0.15862

Table 6.7b: Model 1						
READING	Coefficient	Linearized std. err.	t	P>|t|	[95% conf. interval]	
CASTE GROUP (FC omitted)						
OBC	-0.5599392	0.0770737	-7.26	0	-0.7121308	-0.4077476
Dalit	-0.9166327	0.0673134	-13.62	0	-1.049551	-0.783714
Adivasi	-1.065062	0.0933488	-11.41	0	-1.249391	-0.8807328
Muslim	-0.8210875	0.0757639	-10.84	0	-0.9706928	-0.6714823
Christian,Sikh,Jain	0.0010059	0.167101	0.01	0.995	-0.3289558	0.3309676
/cut1	-2.567553	0.0786861			-2.722929	-2.412178
/cut2	-1.648003	0.0644559			-1.775279	-1.520727
/cut3	-0.7063291	0.0581267			-0.8211075	-0.5915506
/cut4	0.1130913	0.0549903			0.0045061	0.2216765

Table 6.7c: Model 2						
READING	Coefficient	Linearized std. err.	t	P>|t|	[95% conf. interval]	
CASTE GROUP (FC omitted)						
OBC	-0.53059	0.076683	-6.92	0	-0.68201	-0.37917
Dalit	-0.90802	0.066909	-13.57	0	-1.04014	-0.7759
Adivasi	-1.06722	0.0907	-11.77	0	-1.24632	-0.88812
Muslim	-0.85303	0.072206	-11.81	0	-0.99561	-0.71045
Christian,Sikh,Jain	-0.07042	0.170942	-0.41	0.681	-0.40797	0.267122
SOCIAL DISTANCE	-0.67278	0.100364	-6.7	0	-0.87096	-0.4746
/cut1	-2.76886	0.072408			-2.91184	-2.62588
/cut2	-1.83998	0.062115			-1.96263	-1.71732
/cut3	-0.89093	0.057147			-1.00378	-0.77809
/cut4	-0.07178	0.057055			-0.18444	0.040879

Table 6.7d: Model 3						
READING	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	-0.60496	0.07569	-7.99	0	-0.75442	-0.45551
Dalit	-0.94008	0.068829	-13.66	0	-1.07599	-0.80416
Adivasi	-1.14347	0.094323	-12.12	0	-1.32972	-0.95722
Muslim	-0.84738	0.077101	-10.99	0	-0.99963	-0.69514
Christian,Sikh,Jain	-0.05835	0.172873	-0.34	0.736	-0.39971	0.283009
ECONOMIC DISTANCE	-0.20441	0.106021	-1.93	0.056	-0.41376	0.004944
/cut1	-2.83524	0.164957			-3.16096	-2.50951
/cut2	-1.93124	0.155865			-2.23901	-1.62346
/cut3	-0.98088	0.144034			-1.2653	-0.69647
/cut4	-0.1697	0.142379			-0.45085	0.11144

Table 6.7e: Model 4						
READING	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	-0.06717	0.08667	-0.78	0.439	-0.23831	0.10397
Dalit	-0.36885	0.07441	-4.96	0	-0.51578	-0.22191
Adivasi	-0.36578	0.0956	-3.83	0	-0.55456	-0.17701
Muslim	-0.39419	0.087314	-4.51	0	-0.5666	-0.22178
Christian,Sikh,Jain	-0.29823	0.16283	-1.83	0.069	-0.61976	0.023297
SOCIAL DISTANCE	-0.19573	0.195053	-1	0.317	-0.58088	0.189428
ECONOMIC DISTANCE	0.021018	0.110553	0.19	0.849	-0.19728	0.239319
SEX	-0.03732	0.062247	-0.6	0.55	-0.16023	0.085598
HOUSEHOLD EDUCATION	0.077542	0.009165	8.46	0	0.059444	0.09564
URBAN/RURAL (Urban omitted)						
other urban 1	0.304261	0.062511	4.87	0	0.180826	0.427696
more dev vill 2	0.39952	0.094036	4.25	0	0.213834	0.585207
less dev vill 3	0.374977	0.09493	3.95	0	0.187526	0.562428
INCOME PER CAPITA	-2.1E-06	6.46E-07	-3.28	0.001	-3.4E-06	-8.4E-07
PERSONS IN HOUSEHOLD	-0.07547	0.010313	-7.32	0	-0.09583	-0.0551
ASSETS	0.094787	0.007843	12.09	0	0.0793	0.110273
stateid2						
/cut1	-0.74325	0.321395			-1.37789	-0.10862
/cut2	0.24953	0.315888			-0.37423	0.873289
/cut3	1.327426	0.310004			0.715284	1.939568
/cut4	2.253763	0.316735			1.62833	2.879196

Table 6.7f: Model 4_SC						
READING	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
SOCIAL DISTANCE	0.4795713	0.3610075	1.33	0.187	-0.23601	1.195151
ECONOMIC DISTANCE	-0.3856508	0.1781752	-2.16	0.033	-0.73883	-0.03248
SEX	-0.0767877	0.0930048	-0.83	0.411	-0.26114	0.107564
HOUSEHOLD EDUCATION	0.0713126	0.0104187	6.84	0	0.050661	0.091964
URBAN/RURAL (Urban omitted)						
other urban 1	0.4070562	0.1432434	2.84	0.005	0.123123	0.690989
more dev vill 2	0.5256585	0.1669501	3.15	0.002	0.194735	0.856582
less dev vill 3	0.4287892	0.1750494	2.45	0.016	0.081811	0.775767
INCOME PER CAPITA	-0.00000441	0.00000261	-1.69	0.094	-9.6E-06	7.66E-07
PERSONS IN HOUSEHOLD	-0.0820218	0.0298391	-2.75	0.007	-0.14117	-0.02288
ASSETS	0.1010541	0.0098866	10.22	0	0.081457	0.120651
stateid2	[Omitted individual State Coefficients]					
/cut1	-1.736946	0.5553779			-2.8378	-0.63609
/cut2	-0.7491673	0.5579738			-1.85517	0.356834
/cut3	0.3969978	0.5461909			-0.68565	1.479643
/cut4	1.357542	0.5512036			0.264961	2.450123

Table 6.7g: Model 4_FC						
READING	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
SOCIAL DISTANCE	-0.153341	0.4814284	-0.32	0.751	-1.10848	0.8018
ECONOMIC DISTANCE	0.3187647	0.2661228	1.2	0.234	-0.20922	0.846745
SEX	-0.150294	0.1179543	-1.27	0.206	-0.38431	0.083724
HOUSEHOLD EDUCATION	0.0570556	0.015094	3.78	0	0.02711	0.087002
URBAN/RURAL (Urban omitted)						
other urban 1	0.2589437	0.1721655	1.5	0.136	-0.08263	0.600515
more dev vill 2	0.0697472	0.1672984	0.42	0.678	-0.26217	0.401662
less dev vill 3	0.4574277	0.1868551	2.45	0.016	0.086713	0.828143
INCOME PER CAPITA	-3.5E-07	0.00000079	-0.44	0.659	-1.9E-06	1.22E-06
PERSONS IN HOUSEHOLD	-0.088837	0.020045	-4.43	0	-0.12861	-0.04907
ASSETS	0.0942205	0.0147404	6.39	0	0.064976	0.123465
stateid2	[Omitted individual State Coefficients]					
/cut1	-1.098476	0.7945393			-2.67482	0.477867
/cut2	0.1608335	0.7803097			-1.38728	1.708946
/cut3	1.305062	0.7571545			-0.19711	2.807235
/cut4	2.425197	0.7614781			0.914447	3.935948

Table 6.8b: Model 1						
MATH	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	-0.62324	0.069267	-9	0	-0.76001	-0.48646
Dalit	-0.92185	0.074764	-12.33	0	-1.06948	-0.77422
Adivasi	-1.23336	0.083664	-14.74	0	-1.39856	-1.06815
Muslim	-0.88891	0.073314	-12.12	0	-1.03368	-0.74414
Christian,Sikh,Jain	0.17797	0.120475	1.48	0.142	-0.05992	0.415863
/cut1	-2.24996	0.076785			-2.40159	-2.09834
/cut2	-0.48122	0.064619			-0.60882	-0.35362
/cut3	0.989536	0.053271			0.884345	1.094727

Table 6.8c: Model 2						
MATH	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	-0.56685	0.069458	-8.16	0	-0.704	-0.4297
Dalit	-0.91404	0.072364	-12.63	0	-1.05694	-0.77115
Adivasi	-1.25162	0.084001	-14.9	0	-1.41749	-1.08575
Muslim	-0.96211	0.070892	-13.57	0	-1.10209	-0.82212
Christian,Sikh,Jain	0.030614	0.130769	0.23	0.815	-0.22761	0.288834
SOCIAL DISTANCE	-1.38751	0.097595	-14.22	0	-1.58022	-1.1948
/cut1	-2.6895	0.086279			-2.85987	-2.51913
/cut2	-0.87596	0.069289			-1.01278	-0.73914
/cut3	0.615007	0.055591			0.505236	0.724779

Table 6.8d: Model 3						
MATH	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	-0.62528	0.072827	-8.59	0	-0.76909	-0.48148
Dalit	-0.91409	0.076132	-12.01	0	-1.06442	-0.76375
Adivasi	-1.29072	0.091977	-14.03	0	-1.47234	-1.1091
Muslim	-0.90418	0.075598	-11.96	0	-1.05346	-0.75491
Christian,Sikh,Jain	0.175567	0.131414	1.34	0.183	-0.08393	0.435061
ECONOMIC DISTANCE	-0.37986	0.108256	-3.51	0.001	-0.59363	-0.1661
/cut1	-2.7169	0.173109			-3.05872	-2.37508
/cut2	-0.95259	0.158946			-1.26645	-0.63874
/cut3	0.502328	0.146855			0.212345	0.79231

Table 6.8e: Model 4						
MATH	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
CASTE GROUP (FC omitted)						
OBC	-0.0527966	0.0750136	-0.7	0.483	-0.20092	0.095327
Dalit	-0.3658004	0.0820834	-4.46	0	-0.52788	-0.20372
Adivasi	-0.3994477	0.1050029	-3.8	0	-0.60679	-0.19211
Muslim	-0.4756558	0.0974554	-4.88	0	-0.66809	-0.28322
Christian,Sikh,Jain	-0.2716294	0.1569677	-1.73	0.085	-0.58158	0.038323
SOCIAL DISTANCE	-0.22364	0.2097595	-1.07	0.288	-0.63784	0.190556
ECONOMIC DISTANCE	0.0525979	0.08873	0.59	0.554	-0.12261	0.227806
SEX	-0.2181131	0.0620466	-3.52	0.001	-0.34063	-0.09559
HOUSEHOLD EDUCATION	0.0791918	0.0087415	9.06	0	0.061931	0.096453
URBAN/RURAL (Urban omitted)						
other urban 1	0.0463253	0.0738246	0.63	0.531	-0.09945	0.192101
more dev vill 2	-0.0010295	0.101174	-0.01	0.992	-0.20081	0.198751
less dev vill 3	0.0645031	0.097624	0.66	0.51	-0.12827	0.257274
INCOME PER CAPITA	-6.44E-07	5.86E-07	-1.1	0.273	-1.8E-06	5.13E-07
PERSONS IN HOUSEHOLD	-0.0721571	0.0097159	-7.43	0	-0.09134	-0.05297
ASSETS	0.0951464	0.0058496	16.27	0	0.083596	0.106697
stateid2	[Omitted individual State Coefficients]					
/cut1	-1.293486	0.386616			-2.05691	-0.53006
/cut2	0.7600372	0.3785611			0.012521	1.507553
/cut3	2.430707	0.3781279			1.684046	3.177367

Table 6.8f: Model 4_SC						
MATH	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
SOCIAL DISTANCE	0.6718769	0.2791885	2.41	0.018	0.118477	1.225277
ECONOMIC DISTANCE	-0.6094509	0.2638956	-2.31	0.023	-1.13254	-0.08636
SEX	-0.2424056	0.0806961	-3	0.003	-0.40236	-0.08245
HOUSEHOLD EDUCATION	0.0510203	0.0114994	4.44	0	0.028227	0.073814
URBAN/RURAL (Urban omitted)						
other urban 1	0.1349224	0.1339316	1.01	0.316	-0.13055	0.400398
more dev vill 2	0.0679384	0.1654202	0.41	0.682	-0.25995	0.39583
less dev vill 3	0.1182706	0.1601654	0.74	0.462	-0.19921	0.435746
INCOME PER CAPITA	-8.09E-07	0.00000243	-0.33	0.74	-5.6E-06	4.01E-06
PERSONS IN HOUSEHOLD	-0.0751937	0.0320836	-2.34	0.021	-0.13879	-0.0116
ASSETS	0.1118183	0.0129938	8.61	0	0.086062	0.137574
stateid2	[Omitted individual State Coefficients]					
/cut1	-2.158862	0.6068865			-3.36182	-0.95591
/cut2	-0.0565961	0.6102139			-1.26615	1.152954
/cut3	1.49865	0.6164679			0.276704	2.720596

Table 6.8g: Model 4_FC						
MATH	**Coefficient**	**Linearized std. err.**	**t**	**P>|t|**	**[95% conf. interval]**	
SOCIAL DISTANCE	-0.6764283	0.4132327	-1.64	0.105	-1.49627	0.143414
ECONOMIC DISTANCE	0.2474298	0.249537	0.99	0.324	-0.24764	0.742504
SEX	-0.2799954	0.1087026	-2.58	0.011	-0.49566	-0.06433
HOUSEHOLD EDUCATION	0.0700617	0.0145226	4.82	0	0.041249	0.098874
URBAN/RURAL (Urban omitted)						
other urban 1	-0.1509857	0.1708092	-0.88	0.379	-0.48987	0.187895
more dev vill 2	-0.1351337	0.1774579	-0.76	0.448	-0.48721	0.216938
less dev vill 3	-0.0070266	0.1892309	-0.04	0.97	-0.38246	0.368402
INCOME PER CAPITA	-8.77E-07	6.62E-07	-1.33	0.188	-2.2E-06	4.35E-07
PERSONS IN HOUSEHOLD	-0.0908989	0.022648	-4.01	0	-0.13583	-0.04597
ASSETS	0.1158577	0.0152382	7.6	0	0.085626	0.14609
stateid2	[Omitted individual State Coefficients]					
/cut1	-0.9526395	0.8404721			-2.62011	0.714833
/cut2	1.380865	0.8023726			-0.21102	2.972749
/cut3	3.241663	0.8033888			1.647762	4.835563

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