

EXPLORING AN ASPIRATIONS FAILURE TRAP AMONG BACKWARD CASTES AND
MUSLIMS IN INDIA

By

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Abstract

India has the greatest number of poor people in the world. It is also a deeply divided community with multiple overlapping identities. This paper explores the role aspirations play in perpetuating poverty and furthering social stratification. More specifically, it explores trends in the occupational and educational aspirations of the youth from disadvantaged communities in India to determine if the conditions are consistent with the criterion for a poverty trap. This is particularly relevant because 34.8% of the Indian Population is between the age group of 15-24 years, classified youth (2011 census).

Using data from the Young Lives dataset, the paper explores the mechanisms through which occupational and educational aspirations are formed: culture, external constraints, and self-concepts. It also empirically tests the theorized non-monotonic, inverse-U shaped relationship between aspirations gap and agency in the Indian context. The paper finds that occupational aspirations are shaped by all three channels while educational aspirations are mainly constrained by access. Muslims and Scheduled Castes aspire to occupations with lower levels of prestige.

Key Words: Aspirations, Poverty Trap, Caste, India, Muslim

1. Introduction

Most work on poverty traps focuses on external constraints, for instance malnutrition or credit market imperfections etc. (La Ferrara 2019). This paper seeks to add to the literature that explores the role of internal constraints in generating poverty traps. It explores whether aspirations failures can create the vicious circle of a poverty trap. Can aspirations condition current behavior to become self-fulfilling prophecies?

There is disagreement among theorists regarding the mechanism through which aspirations are formed. This paper explores the three main mechanisms of identity, psycho-social concepts and external constraints in shaping occupational and educational aspirations. I conduct regression analysis using the Young Lives dataset on children in India. I further explore whether caste and religious identities can form the basis of a social- exclusion based aspirations poverty trap through aspirations failure for these communities. Finally, I empirically test Debraj Ray's 2006 model of Aspiration Failure.

India provides an ideal ground for the study of the different channels of aspiration formation and the relationship between social identity and poverty outcomes because it is a vertically segregated and highly diverse society; multiple dimensions of the role that deep social divisions play in aspiration formation can be explored. This paper explores the relationship of aspirations with social, individual and economic conditions in the Indian context. This analysis is all the more important and relevant because 34.8% of the Indian population is classified as youth based on the 2011 census. Further, occupational aspirations have a strong hereditary component

because of the caste system that segregated individuals based on occupation. This increases the potential of the existence of an aspiration-based poverty trap. Ultimately, I find occupational aspirations to be a better reflection of the aspirations of individuals because of their greater correlation with agency than educational aspirations. This might be indicative of inflated educational attainment as a social indicator rather than as a means to better one's socio-economic situation.

1.2 Aspiration background and context

Research on aspirations falls into the domains of Sociology, Psychology and Economics. Sociological research tends to be concerned with aspirations relationship with social inequality and stratification. The associated conceptualization of aspirations employs terminology of beliefs and orientations. One definition of aspirations is “stable prefigurative orientations composed of specific beliefs about one's future trajectory through the educational system and one's ultimate class or status position” (Morgan 2007). Psychology focuses more on the relationship between aspirations and individual motivation and behavior. Another definition of aspirations, relatedly, refers to goals individuals set for themselves. Within Economics, aspirations research is typically of most interest to identity and behavioral economists. Aspirations are commonly explored in relation to individual preferences and desires. Some economists acknowledge the social role in the determination of aspirations, defining it as, for instance, “social grounding of individual desires” (Ray 2006). Others instead take a more rational approach to aspirations, considering them the outcome of a utilitarian and rational calculation of risks and benefits. In addition to the definitions, two fundamental and relevant features of aspirations have been outlined by Dalton et

al. (2014) First, different aspirations differ per person in terms of importance as reference points. Second, an aspiration level is the reference point which determines utility from the final outcome.

1.3 Definition and Types of Poverty Traps

The lived experience of poverty is associated with various negative consequences such as poor health, inadequate nutrition, inferior educational resources, exposure to risk and lack of security (Banerjee and Duflo 2011; Appadurai 2004). More recent literature in the field of behavioral economics has added to this list the negative psychological consequences of limited self-control and increased bias in decision making. Seminal work by Mullainathan and Shafir (2013) has shown that individuals have a limited bandwidth of attention. Any perceived scarcity, for instance economic, social or temporal, focuses attention on the scarcity, limiting the mental consideration available for other factors. In the case of poverty, the material deprivation and the consequent limited attention is associated with short term thinking and bias prone behavior. As Duflo (2011) points out, the notion of the poverty trap is related to that of capabilities, as developed by Amartya Sen. Poverty deprives individuals of central capabilities, limiting their collective ability to achieve. That deprivation in turn limits how much income those individuals can earn, keeping them both poor and with low capabilities.

A poverty trap can be defined as poverty that is self-reinforcing due to poor's equilibrium behaviors (Barret et al 2016) The intuition behind poverty trap is that there exist circumstances in which an individual or a group of individuals once poor will always remain poor; the circumstances that result from poverty in turn cause poverty. Mathematically, a poverty trap

manifests in a S shaped curve with income today on the X axis and income tomorrow on the Y axis (Banerjee and Duflo 2011). If income today were perfectly predictive of income tomorrow, it would result in a 45-degree curve. Instead an S shaped curve indicates there is a threshold beyond which income today allows for the accumulation of income potential in the future and below which income tomorrow is less than income today. The individuals below the threshold suffer from a poverty trap. Poverty traps can be classified based on the scale on which they operate as well as the means of their origin.

Poverty traps can occur at the micro, meso and macro levels (Barret et al. 2016). At the micro level, poverty traps occur through families via mechanisms such as human capital formation, educational investments and more recent findings on fetal origins of health. At the meso level, social networks and norms can exclude groups from accumulating assets. Social poverty traps may operate through institutional or social mechanisms. Examples of institutional mechanisms are inner city ghettos and neighborhood effects. Examples of social mechanisms are absence of role models, negative peer effects, identity formation etc. At the macro level, features such as national institutions, norms, geography, market coordination and level of trust can perpetuate conditions of poverty. If a large share of a country is poor and it cannot grow because it is poor to begin with, this is an example of a national poverty trap.

Further, poverty can be manmade or natural (Barret et al. 2016). Natural poverty trap is when persistent poverty is the natural consequence of the group-defining characteristic. This is also known as a single equilibrium poverty trap since there is only a single outcome possible. Man-made poverty traps are multi-equilibria poverty traps. Both poor and non-poor equilibria exist,

however conditions induce the poor to choose poverty reinforcing behaviors. An example of a multi-equilibria, manmade poverty trap is education (Bannerjee and Duflo 2011). While in reality returns to education tend to be linear, parents often believe that returns only accrue beyond a certain level of educational achievement; this leads them to choose sub optimal education levels for their children and withdraw prematurely. Ultimately, multi-equilibria poverty traps exist through one of two mechanisms. They can either exist through lack of access or through individual choice that doesn't favor the high return asset. Education is an example of the latter. Both mechanisms require the existence of exclusionary mechanisms. Some of the exclusionary mechanisms outlined by the literature are social exclusion, financial exclusion and non-financial capital accumulation.

Barrett et al (2013) identified indirect measures as better for empirically testing poverty trap because of diversity in types of poverty, econometric limitations, the possibility of coexistence of single equilibria or multiple equilibrium poverty traps and the possibility that only a subset of the population experiences multi-equilibria poverty trap. Tests that check for multimodal cross-sectional asset distributions, as demonstrated by Barrett, only work for very specific sorts of stochastic processes. Poverty traps can instead be measured by checking for the presence of behavioral implications of poverty traps: asset smoothing, risk taking by the risk averse, multiplier effect of small asset transfers and crowding in effects of risk reduction. This paper seeks to add to the indirect measures.

1.4 Models for an Aspirations-based Poverty Trap:

An aspirations-based poverty trap would necessitate the satisfaction of two conditions. First, poverty must result in or produce certain outcomes and features related to aspirations (for example low aspirations, misplaced aspirations etc.). Second, said feature must in turn reinforce the condition of poverty. Poverty traps are, thus, bidirectional self-reinforcing associations. In order to understand poverty's interaction with aspirations, it is useful to understand how aspirations are formed and the way in which aspirations influence outcomes. After elaborating on this, the paper presents some popular theoretical models of aspiration-based poverty traps and their empirical evidence.

Three main approaches are identifiable to understanding the mechanisms aspiration formation. The first approach takes aspirations to be culturally and socially determined. The second takes aspirations to be determined rationally based on utilitarian calculations. The third explores the role of self-concepts and psychological forces in aspiration formation.

Appadurai and Ray are the thought leaders of the cultural view point. Appadurai (2004) writes that "the target, intensity, and composition of aspirations in any given community reflect the dominant worldviews and ideologies about the nature of worldly possessions and their relative value to social relations, as well as deeper ideas about the meaning of life, family, community, and death". Ray defines aspirations as an individual's desires and behaviors and are socially conditioned. For him, too, aspirations are determined by an individual's aspiration window. An aspiration window is a cognitive zone of people that an individual considers similar and represent possibilities to the individual. In addition to the cultural influence of the individual's immediate community, an individual is influenced by the composition of who they perceive to be

similar. Included in the cultural influence of aspirations then is also the influence of social mobility. As Appadurai notes, the poor have an understanding of themselves and the world that has a cultural dimension and this is what influences the world. Evidence from a qualitative study in East London also points towards the importance of individual and group identities and the marking of intergroup boundaries in the formation of aspirations. More specifically, moral meanings and normative narratives that children attached to who they were drove their aspirations (Baker 2017).

Another set of theorists claim that differences in aspirations can be explained through differing self-concepts, psychological schemas and social and psychological experiences. The differences between aspirations of children from higher and lower socioeconomic status group have been thought to be explained by difference in social and psychological experiences of children in different status groups (Robert 1980). Pasquier-Doumer and Risso (2013) find ‘internalized discriminatory values’ to be formative in the determination of aspirations. Disadvantaged communities bear a psychological cost of their oppression. While, they would have classified internalized discriminatory values under the cultural category, this paper reclassifies it under the category for self-concepts and psychological experience. There is undeniable overlap between the two categories: identity forms the basis of discrimination and exclusion that lead to the internalization of stigma. However, clubbing the two categories together leads to loss of nuance in analysis. Culture also includes the norms associated with group identity. Similarly, not all self-concepts such as self-esteem, self-efficacy and subjective wellbeing are a result of group experience.

Aspirations are also thought to be based on external access constraints. Individuals adapt to these external constraints to form their aspirations and behaviors. Some theorists believe that individuals react to these constraints rationally. For instance, Portes (1972) found in ‘Rationality in the Slums’, a sociological study, that in a Latin American urban slum the majority of individuals were rational in their aspirations which were a calculated sequence of actions aimed at the attainment of realistic ends. Theorists from the more recent work on irrational economic actor, identify two parts to the external constraints. The resources interact with the heuristic biases to form the aspirations (Mullainathan; Dalton et al). The rich and poor have same preferences and behavioral biases, but the conditions of the external constraints lead to different behaviors (Dalton et al 2014). The original source of the aspirations continues to be the external constraints. Appadurai (2004) too underlines the role of external constraints in the determination of aspirations. Since aspirations are restricted by the resources and pathways visible to a community and are bounded by external constraints, he ultimately considers aspirations to be a “Navigational Capacity”.

A key difference amongst these three camps of aspiration formation is the degree of the control that an individual has over aspirations. When aspirations are culturally determined, the individual has little control over the choice of aspirations and aspirations would be considered given in an empirical model. On the other hand, when an individual chooses an aspiration in the face of external constraints, they are an active participant.

Aspirations are also instrumental in impacting several outcomes, in isolation or in interaction with other factors. Perhaps the single most significant outcome of aspirations on the individual is

that they determine effort. Individuals that have higher goals have been found to exert more effort as well as persist more in physical and cognitive tasks. (Heath et al. 1999, Dalton et al. 2014). According to Mani and Galton, aspirations and effort are jointly determined and influencing the level of aspirations influences effort choice. Aspirations influence future-oriented behavior and investments as well as determine time use patterns for individuals. Bernard et al. (2014) and (Lybbert and Wydick, 2016) find short inspirational documentary films increase aspirations, and in some instances increase investment, in Ethiopia and Mexico, respectively. Aspirations are considered one of the integral requirements of hope (Lybbert 2018). Hope in turn is construed to be a basic capability as defined by Sen (Duflo 2011).

The ‘aspiration gap’ is an interaction that too has significant outcomes. Aspirations that interact with a current state that is too far removed from the ideal create an aspirations gap. Too wide an aspiration gap results in an aspiration failure characterized by low agency, low levels of educational attainment, underinvestment in small enterprises and lack of concern for the quality, safety or health of one’s dwelling (Ray). Bernard et al (2011) have also shown that aspiration failure and fatalism among Ethiopian farmers is negatively correlated with future oriented economic behavior. Further, aspirations and distributions of income evolve jointly (Genicot and Ray 2017). Individual aspirations determine economy-wide outcomes, inequality and social stratification. When there is sustained growth, aspirations can play a role in equalizing the economy or creating more disparity, based on initial history. Depending partially on aspirations, growth can lead to convergence to an equal distribution or divergence across clusters.

Ray, Dalton et al, and Lybbert and Wydick have developed three of the most prominent behavioral trap models in the field. Ray considers the trap to stem from the aspirations gap, Dalton et al consider it to result from low aspirations and Lybbert considers low aspirations to be a partial cause of the hopelessness that creates a trap. All three theorists also stress the importance of agency in various capacities.

Debraj Ray (2006) has provided a theoretical model for understanding aspirations-based poverty traps. He theorizes that aspirations are socially determined and influence an individual's effort choice based on the size of the aspiration gap, the gap between an individual's current and aspirational self. Aspirations failure occurs when the gap is too wide, combined with the absence of exposure to individuals at the aspirational level. In other words, a poverty trap is created in an unequal and socially stratified society.

Dalton, Ghosal and Mani's (2016) empirical model has shown how aspirations failure, "failure to aspire to one's own potential" can create conditions for a behavior-based poverty trap. The model is premised on the mechanism that effort and aspirations are jointly determined through a two-way feedback loop. Aspiration and effort pairs occur at various levels, and the poor have a significantly higher probability of choosing the lowest level of aspiration-effort possible. This is because of the lower marginal benefit for the poor in exerting effort for the same aspiration as someone not poor. Their paper found a complementarity between initial wealth and effort choice.

Lybbert and Wydick's (2018) model considers aspirations to be one of the three key determinants of hope. The other two determinants are agency and the availability of pathways to

reach the goal. According to him, poverty traps are driven by a state of mind characterized as low-agency hopelessness. The model is based on Sen's thoughts that the internalized constraints of the poor can degrade an individual's perception of agency to the point that internal constraints are more binding than tangible economic constraints, effectively creating poverty traps.

Tying in aspirations-based poverty trap, to poverty trap classifications introduced in section 1.3 of the paper, aspirations-based poverty trap could either be micro or meso. If aspirations result from individual features and constraints it would operate at the micro level, but if they are symptomatic of social exclusion, then they would operate at the meso level. Further, it would fit the classification of man-made and multi-equilibria poverty trap. Low aspirations cannot be the single equilibrium condition for the poor, thus, it would be enforced by external features, either market failures or induced behavior. Consequently, if a trap exists it could be either behavior based or resulting from lack of access.

1.5 Identity and Disadvantage in India

India is unique in the intersection of a large number of overlapping identities. India has strong linguistic, regional, caste, religious, and class identities. While each identity has been the basis of advantage and disadvantage in some context, two of the most marginalized and disadvantaged communities are organized along caste and religious identities. Scheduled Castes (SC), Scheduled Tribes (ST) and other Backward Classes (BC) are the most disadvantaged castes while Muslims have witnessed the most religious persecution in India. In this section I elaborate on who the people are that constitute SC, ST and BC and the history of their disadvantage.

The Indian Caste System is a form of social stratification that originated from a 3000-year-old Hindu religious text titled Manusmriti (Sankaran et al. 2016). The two bases for the stratification are occupation and duty. The categories of the caste system, ranked by hierarchy are: Brahmins (priests/teachers), followed by Kshatriyas (rulers/warriors), then Vaishyas (farmers/traders/merchants) and then Shudras (laborers) (Pick and Dayaram, 2006; Sankaran et al 2017). A fifth category, Dalits, lie outside the four-fold caste system for individuals that do unclean work. This fixed social order has endured for centuries with caste continuing to play a relevant role in society including in discrimination and structural disadvantage.

According to historians, until the 18th century social identities were flexible (Chakravorty 2019). Hard boundaries were set by British Colonial rulers through their administrative policies. The term Scheduled Castes originated and was first applied to Dalits by the British when they included a category of ‘scheduled castes’ as a basis of reservation for governmental posts in the Government of India Act, 1935. The list of castes included those whose “extreme backwardness” arose out of the practice of untouchability (Mosse 2018). The selection of the said castes was conducted without any definition or test of untouchability and comprise about 16.2% of the total population as of the 2001 census. Since untouchability was a Hindu practice, scheduled castes exclude other religious majorities that have experienced caste disadvantage. In 1950, the government enforced quotas in government jobs and educational institutions for scheduled castes and tribes as well as enforced articles preventing discrimination. Scheduled tribes were also given protection through the constitution. Scheduled Tribes. As per the census of 2001, scheduled tribes compose 8.2% of the total Indian population.

The government first identified Other Backward Classes in 1952 which include other sections of the population that should be considered backward other than SC and ST (Deshpande and Ramchandran 2014). The current identification of OBCs follows the 1978 Mandal Commission's recommendations based on eleven social, economic and educational indicators. Other Backward Classes (OBC/ BC) include a listing of 3743 castes and constitute 52% based on the 1931 census. No data has been collected on OBCs since 1931, which was also the basis on which their disadvantage was selected. The exact identification of groups and communities to be counted as OBC has generated a great deal of controversy and occurs at the state level. Some states favor caste criterion, while others favor economic criterion more heavily. Consequently, each state has a different metric for the judging BCs; a caste considered BC in one State may not be considered BC in another. The term has come to represent two groups in common usage: one, communities that require preferential treatment and two, castes low in the socio-economic hierarchy but not as low as the untouchables.

Disadvantage, discrimination and exclusion against SC, ST and OBC continues to be relevant. It is most apparent in rural areas where social separation, graded status and occupational specialization persist (Mosse 2018). The crime rates against lower castes are extremely high; they continue to face normative repercussions of 'untouchability' despite its criminality by law. Using Employment Underemployment Surveys, Deshpande and Ramchandran (2014) observed that for all indicators of material wellbeing, such as marginal per capita consumption expenditure, years of education, wages, and occupational categories SC/ST were at the bottom, with OBC above them and the others at the top, mirroring traditional caste hierarchies. Further, qualitative studies across the country point to the shackles of caste-labelling, low expectations

and classroom segregation that defeat Dalit ambition (Nambissan 2010, cited by Mosse 2018). Indeed, using a national data set of 51,550 households, Desai, Adams, and Dubey (2010) find that while poor educational outcomes among OBCs and Scheduled Tribes have to do with low enrollment or parents' education or income, in the case of Dalits, caste identity independently affects the impact of schooling. The hereditary occupations and persistent discrimination provide a strong case to investigate caste identity as the basis of a meso level, aspirations-based poverty trap.

Muslims rank lower than Hindus on almost all socio-economic indicators: Muslims have the highest illiteracy rate of any religious group in India, are less likely to attend school and less likely to stay in school (Alam 2010). The Sachar Committee report, a report sanctioned in 2005 by the then Prime Minister of India on the conditions of Muslims, found the status of Muslims to be below even those of SC/ST (Basant 2012). It also identified that in addition to the difficulties faced by the poor and all minorities there existed difficulties faced exclusively by Muslims. Overall, there is considerable diversity in socio-economic status of Muslims. Finally, as compared to other religions, Muslims have a higher perception of unfairness and this sense of discrimination is especially high in the education and employment spaces.

1.6 Historical Occupational Trends of Scheduled Castes and Muslims in India

Caste has historically been based on occupation. Consequently, it has given rise to hereditary occupations along caste lines. Caste-typed roles include those dealing with waste, cleaning and low-end service jobs such as masonry and carpentry (Mosse 2018). As an example, SCs form nearly 60% of the sweepers in central government compared to only 18% of other Class D workers (GoI 2006; cited by Desai et al 2012). Brahmins, on the other hand, constituted about

37% of the Indian Administrative Services officers as late as 1985 (Goyal 1989; cited by Desai 2012), a disproportionately large number since brahmins form only about 5% of the population. Caste- identity bound work is most characteristic of stigmatized occupations, especially filthy, dehumanizing and unprotected work of dealing with human excreta, known as “manual scavenging” (Singh 2014; cited by Mosse 2018). Within the same businesses too, SC and ST are found to be pursuing the “Lower-Ranked” occupations (Mosse 2018). Qualitative studies have found that in the garment industry they are more likely to be found working in the low-skill dirty dyeing units, while non-Dalits in the skilled tailoring sections; similarly, in restaurants, Dalits are more likely to be concerned with cleaning while the kitchen staff are non-Dalits. In the business economy, networks play a role in excluding SC/ST from certain markets. Concomitantly, strong caste networks develop in shunned markets such as leather, cleaning services and waste economy (Jodhka 2010, cited by Mosse 2018).

Further, caste also influences labor market outcomes. SC/ST have been found to face discrimination in both the public and private sector and have lower gross earnings (Madheshwaran and Paul Attewell 2007). Occupational discrimination plays a considerably greater role in accounting for the lower earnings than wage discrimination (Masheshwaran and Subramanian 2006). The intergenerational mobility for males in India over three decades (1983-2012) has declined more steeply for members of the SC, ST than other sections of the population (Reddy 2015). A field experiment by Thorat and Attewell (2007) observed statistically significant pattern by which on average college educated lower caste and Muslim job applicants fared less well than equivalently qualified high caste names.

Basant (2012) found in an analysis of data from a National Sample Survey that Muslims are predominantly engaged in self-employment and their participation as regular workers is low in urban areas compared to other socio-religious communities. This difference was found to be partially attributed to discrimination in the formal labor markets and differences in educational endowments and experience. Muslims also have significantly lower Worker Population Ratio – the proportion of an economy’s working age population that is employed – as compared to the other major religious groups: Hindus, Christians and Sikhs. Muslims make 3.3% of the employees in central Public Sector Undertakings (PSUs) and 10.8% of employees in state level PSUs, despite making up 14.2% of the population according to the 2011 census. Further, they are better represented in lower level jobs than high level jobs.

1.7 Research Questions and Hypotheses

This paper conducts a three-part analysis. The first part identifies the level at which aspiration formation occurs. ‘Are aspirations social, individual or economic outcome, and to what extent?’. In asking this question, the paper seeks to identify the right level of intervention for policy makers looking to raise aspirations. The second part of the analysis, closely related to the first, explores the question ‘Whether Backward Castes and Muslims under aspire based on their group identities?’ This analysis is partly inspired from Pasquier-Doumer and Risso (2013) study ‘Aspiration Failure- A poverty trap for indigenous children’ which explore whether ethnic identity formed the basis of exclusion. Adapted to the Indian context, instead of indigenous people, I explore the exclusion of scheduled castes, backwards classes and scheduled tribes as well as of Muslims. The bigger-picture aim of this question is to explore whether caste and religious identity could form the basis of a social-exclusion based man-made poverty trap in

India. The third part of the analysis seeks to empirically test Debraj Ray's theory on aspirations gap, aspirations window and aspiration failure. "Is a large aspiration gap, combined with a poor aspirations window predictive of fatalism?" The purpose of this question is to explore a mechanism through which aspirations can impact outcomes.

For the first question, I hypothesize that at each level indicators will be predictive of occupational and educational aspirations. That is to say, identity, economic constraints and self-concepts all play a predictive role in aspiration level. For the second question, I hypothesize that belonging to a scheduled caste, scheduled tribe or backward caste or identifying as Muslim are both associated with lower occupational and educational aspirations based on the historical disadvantage and discrimination faced by these communities. Caste and religious identity would thus act as an exclusionary mechanism. For the third question, I hypothesize that Ray's theory holds and a large aspiration gap along with a small aspirational window is associated with fatalism.

2. Data and Methodology

2.1 Background and Context on Data

The analysis is conducted based on data collected through the Young Lives Longitudinal Study, following a cohort of 2000 children. Each child is sampled at three different points of time, when it is aged 8, 12 and 15, in the years 2009, 2013 and 2016 respectively (Rounds 3, 4 and 5 of the Survey). The attrition rate across rounds is relatively low for the study, possibly because the same field supervisor was used across all survey rounds, enabling the building of relationships

with surveyed families (3.7% since the start of the Study). The surveys were conducted in the Indian states of Andhra Pradesh and Telangana. 20 clusters were chosen in these states in 2001 using a semi-purposive sampling strategy. 6 districts were selected first, following which 20 sentinel sites were located within those districts. Undivided Andhra Pradesh consisted of 23 districts, subdivided into Mandals (numbering 1125 in total), which further consisted of 20-40 villages (numbering 27000 villages in total). The 6 districts were chosen such that they were representative of the three agro-climatic regions: (Coastal Andhra, Rayalaseema and Telangana), with a poor and non-poor district in each region. The Mandals were used to select the 20 sentinel sites, based on development level. Each sentinel site was also divided into four contiguous areas and a village randomly selected from each geographical area. The surveys contain information at the individual, household and community level. As such, the sample includes households with better access to services, greater ownership of assets and slightly wealthier than the average household in Andhra Pradesh.

Table 1: Demographics in Round 1			
	Mean	SD	N
Gender			
Male	0.538	0.499	2011
Caste			
Scheduled Caste, Backward Caste, Scheduled Tribe	0.789	0.408	2011
Religion			
Hindu	0.860	0.338	2011
Muslim	0.075	0.263	2011
Language			
Telugu	0.788	0.409	2011

Location			
Rural	0.710	0.454	2011
Age (in years)	7.951	0.320	1931
Number of people in household	5.441	2.264	1931
Father's education (in years)	7.193	11.025	1880
Mother's education (in years)	5.450	11.428	1922
Wealth Index	0.514	0.178	1929

2.2 Context and Measurement of Variables of Interest

The first analysis seeks to explore the avenues through which aspirations are formed. Based on the literature, the avenues can be categorized into the following three channels: identity, access to resources and psychological conceptions of the self. In this section we define variables that measure or act as proxies for aspirations as well as the three channels.

The broad nature of aspirations, as outlined in the introduction, creates the need to operationalize it. Young lives has collected data on occupational and educational aspirations. Occupational aspirations are self-reported by the children in response to close variants of the same question. Children in Round 3 answer the question “What do you want to be when you grow up?”, while in Rounds 4 and 5 of the Survey they answer the question “When you are about 25 years old, what job would you like to be doing?”. I’ve assigned the aspirational professions a numerical rating based on the Standard International Socio-Economic Index of Occupational Status (Ganzeboom, De Graaf and Treiman 1992). The index takes a hierarchical approach to

occupational stratification. Prestige values are calculated based on the linear combination of years of education and level of income based on 73,000 men from 16 countries. This method of measuring occupational prestige presents two key limitations. Firstly, the prestige value ranking is based solely on prestigious occupations from a male perspective. Gendered differences in prestige are not considered. Secondly, the prestige values aren't specific to the Indian context, and as such miss out on some cultural nuances of prestige. Pasquier-Doumer and Risso (2013) list the following merits of occupational aspirations as opposed to education or income aspirations: division of labor is a key factor of social inequality and occupation reflects very closely on social status. In my paper, Educational Aspirations are measured through the question "Imagine you had no constraints and could study for as long as you liked, or go back to school if you have already left. What level of formal education would you like to complete?". It is measured in terms of the number of years of education the children aspire to. Educational aspirations are not measured for the younger cohort in Round 3.

I adopt Akerlof and Kranton's definition of identity (2010): identity is based on social categories that determine the norms for that category, influencing behavior. Of the social categories that are important determinants of identity in India, I incorporate the categories of caste and religion in the identity channel. The variable *SC_ST_BC* is a binary variable that identifies whether or not an individual belongs to one of the historically disadvantaged castes. The variable takes a value of 1 for individuals that are from scheduled castes, scheduled tribes or backward castes. Second, the binary variable of religious identity identifies whether or not an individual belongs to the Muslim faith. The variable *Muslim* takes the value of 1 for individuals from the Muslim faith and 0 for individuals of all other religions.

External constraints can be subdivided into economic and informational constraints. I use the wealth index as a measure of economic constraint. The wealth index is the average of the Housing Quality Index, Consumer Durable Index and Services Index. The Housing Quality Index is based on the number of rooms per person in the household and the main materials used for the walls, roof and floor. Consumer Durable Index is based on the number of non-productive assets owned by the household of the following list: radio, refrigerator, bicycle, television, motorbike/scooter, car, mobile phone, landline telephone, fan, wardrobe, and clock. The Services Index is based on whether the dwelling has electricity, the source of drinking water, type of toilet facility and the main type of fuel used for cooking. This is the main instrument used in the survey to measure socio-economic status of the household and has been designed to include sufficient variables that vary substantially across sample according to wealth. I include binary variables for language and location (rural or urban) as measures of informational constraint. While both language and rurality are also markers of identity, I have chosen to include them in the external channel because they limit access to information as well as the nature of opportunities. Information is not equally available in all languages and information is concentrated in urban instead of rural landscapes. Further, while a lot of research has well documented the effects of gender norms and roles on occupational and educational choice and aspirations, I also choose to classify gender in the external channel. My primary motivation in doing this is the differing access to resources that children are afforded within the household based on gender.

For the third channel of self-concepts, I identify four variables of agency, perception of inequality, subjective wellbeing and self-esteem. I use self-identifying statements as measures for these four variables. For agency, children rate on a scale of 1 to 5 the extent to which they agree with the following statement: “If I try hard, I can improve my situation in life”. Children that strongly agree with the statement demonstrate a high locus of control while children that disagree with statement show a state of learned helplessness. Based on the distribution of children's answers to the question, the strongest split occurs between levels four and five, ‘agree’ and ‘strongly agree’ respectfully (**Table 2.1**). Thus, to meaningfully interpret this data, I code agency as a binary variable, taking the value of 1 for the response of strongly agree and taking the value of 0 for all other responses. Perception of inequality is measured by the statement, “compared to other families in the locality, how many things does your family have”. Individuals that respond they have less things than most families, consider themselves below others, shown to cause psychological distress (Brunner 1997). The following statement measures subjective wellbeing: “There are nine steps on this ladder. Suppose we say that the ninth step, at the very top, represents the best possible life for you and the bottom represents the worst possible life for you, where on the ladder do you feel you personally stand at the present time?”. In aligning themselves with a rung on the ladder, children express their subjective wellbeing and life satisfaction. To measure self-esteem, I take an average of the responses to the following four statements that measure pride:

1. I am proud of my shoes or having shoes
2. I am proud of my clothes
3. I am proud of the work I have to do
4. I am proud that I have the correct uniform

My second analysis is concerned with understanding the conditions of fatalism. The three concepts associated with this analysis are fatalism, aspirations gap and aspirations window. *Fatalism*, as conceptualized by Ray (2006), can be of two types: true fatalism and aspiration failure. The former refers to the deep beliefs that an individual's destiny is preordained and beyond control; the latter refers to the belief that there is little hope of betterment because of the way that things have always been. Both speak to the absence of agency or the individuals' perception of the link between their behavior and its consequences (Rotter 1966). I use the same measure for agency as used in the first analysis and treat it as the independent variable here.

I create two measures for aspirations gap along the earlier identified dimensions of education and occupation. *Aspirations gap* is defined as the difference between the standard of living aspired to and the standard of living that one already has (Ray 2006). In both educational and aspirational cases, I take the standard aspired to be equal to the aspirational level measures. For occupational aspirations, I take the standard of living that one already has to be reflected in the caregiver's expectation of the child's future career outcome. For educational aspirations, this data is not available. Instead, I take the average of the parents' education level in years to denote the standard that one already has. The following formulas then create the relevant measures:

1. Occupation aspiration gap = occupational aspiration of child - occupational expectation of caregiver
2. Educational Aspiration gap = educational aspiration of child - educational level of parents (average in years)

Aspirations window refers to an “individual’s cognitive world; their zone of similar, attainable individuals”. Since the sampling in the survey is done to include a rich and a poor district in each of the three regions, I use the development of the district as a marker of different aspirational windows. The assumption is that controlling for household wealth, children in wealthier districts have a wider cognitive world with access to more individuals with aspirational education and occupation levels.

2.3 Summary Statistics for Outcome Variables

The means of the self-concept measures are constant at the same value throughout the rounds as shown in table 2.1. This indicates that there are not significant changes in the psychological experiences of children across different ages. The average educational and occupational aspirations are also consistent (table 2.2). There is a slight dip in average occupational aspirations in the third round when the children are aged 15. However, due to the large standard deviation, this difference is not statistically significant. The majority of the children either agree or strongly agree with the statement denoting agency throughout the three rounds (table 2.3). 90% of the children fit into one of those categories. The difference between agree and strongly agree appears telling in this context. The number of children strongly agreeing with the possession of agency increases considerably in the third round, when children are aged 15. There is considerable stability in the top 4 occupations aspired to across the categories, in no particular order: teachers, doctors, engineers and policeman (table 2.4). Only the category of wealth index < 0.5 completely excludes engineering from its top 4 occupational aspirations, indicating access to the occupation may require more monetary investment. Occupational

aspirations also appear to be heavily gendered, with the top four careers for females being the inverse of those for males.

Table 2.1 Self Concept Statistics					
	Round 1	Round 2	Round 3	Scale	N (Round 1)
<u>Variable</u>	<u>Mean (SD)</u>	<u>Mean (SD)</u>	<u>Mean</u>		
Agency	4.315 (0.664)	4.268 (0.658)	4.515 (0.581)	1 to 5	1635
Subjective Well Being	5.188 (2.240)	4.645 (1.488)	5.155 (1.388)	1 to 9	1632
Self-esteem	2.875 (0.600)	2.730 (0.559)	3.604 (0.701)	1 to 5	1546
Perceived Inequality	2.207 (0.725)	2.259 (0.679)	2.217 (0.579)	1 to 3	1635

Table 2.2 Aspiration Statistics					
	Round 1	Round 2	Round 3	Scale	N (Round 2)
<u>Variable</u>	<u>Mean (SD)</u>	<u>Mean (SD)</u>	<u>Mean (SD)</u>		
Education Aspiration (in years)	X	14.433 (0.6794336)	14.548 (2.451)	0 to 17	1558
Education Aspiration Gap	X	9.506 (4.228)	9.431 (4.505)	-17 to 17	1558
Occupational Aspiration	68.943 (15.945)	68.627 (15.765)	64.803 (15.595)	0 to 100	1557
Occupational Aspiration Gap	X	13.107 (31.037)	4.230 (24.313)	-88 to 88	1557

	Agency		
	If I try hard, I can improve my situation in life		
	Round 1	Round 2	Round 3
Strongly Disagree	0.21	0.16	0.16
Disagree	1.3	1.57	0.53
More or Less	5.99	6.5	2.49
Agree	53	55.45	43.65
Strongly Agree	39.01	35.12	53.02

Note: values are the percentage of individuals reporting that level of the outcome.

	<u>Category</u>	<u>Top ranked Occupation</u>	<u>2nd ranked Occupation</u>	<u>3rd Ranked Occupation</u>	<u>4th ranked Occupation</u>
Overall		Teacher	Doctor	Policeman	Engineer
Gender	<i>Female</i>	Teacher	Doctor	Engineer	Policeman
	<i>Male</i>	Policeman	Engineer	Doctor	Teacher
Caste	<i>SC/ST/BC</i>	Teacher	Doctor	Policeman	Engineer
	<i>OC</i>	Engineer	Doctor	Policeman	Teacher
Religion	<i>Hindu</i>	Teacher	Doctor	Policeman	Engineer
	<i>Muslim</i>	Doctor	Engineer	Policeman	Teacher
Language	<i>Telugu</i>	Teacher	Doctor	Policeman	Engineer
	<i>Other</i>	Teacher	Doctor	Policeman	Engineer
Location	<i>Rural</i>	Teacher	Doctor	Policeman	Engineer
	<i>Urban</i>	Doctor	Policeman	Engineer	Teacher
Agency	<i>Strongly Agree</i>	Doctor	Teacher	Engineer	Policeman
	<i>Other</i>	Teacher	Doctor	Policeman	Engineer

Subjective Well Being	<i>Greater than 5</i>	Doctor	Engineer	Teacher	Policeman
	<i>Less than 5</i>	Teacher	Doctor	Policeman	Engineer
Community	<i>Rich</i>	Doctor	Engineer	Teacher	Policeman
	<i>Not Rich</i>	Teacher	Doctor	Engineer	Engineer
Wealth	<i>Index > 0.5</i>	Doctor	Teacher	Engineer	Policeman
	<i>Index < 0.5</i>	Teacher	Doctor	Policeman	Farmer*
Notes: Rankings were created based on averaging the ranking for all three rounds for each category. Further, Wealth Index below 0.5 was the only category in which Engineering was not present in the top 5 aspiration professions at all.					

3. Analysis

3.1 Identity, Access and Self-Concepts as predictors of Occupational Aspirations

The regression analysis of occupational aspirations is conducted using an iterative approach, starting with a basic model of predictors of aspirations and gradually adding further variables.

The purpose of this approach is to observe whether the effects observed in the simplistic models are in fact masking effects from other factor variables. This allows for the more accurate identification of relevant predictors of aspirations as well as their internal mechanisms and associations. The following equation represents how the aspiration level is shaped by identity, external constraints and psychological self-concepts. A_i represents the aspiration level of an individual, i . For the first two analyses this represents the occupational aspiration and thereafter it represents the educational aspiration. X_1 is a vector of two dummy variables that take the value of 1 if the child is SC/ST/BC or if the child is Muslim, respectively. X_2 is a vector of variables that measure external access constraints. X_3 is a vector of variables that represent psycho-social concepts. $\beta_0, \beta_1, \beta_2, \beta_3$ are the corresponding coefficient terms and ϵ is the residual term.

$$A_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \quad (1)$$

Regressing only the identity variables, being a member of a scheduled caste, scheduled tribe or a backward caste (SC/ST/BC) is significantly predictive of lower occupational aspirations.

SC/ST/BC individuals approximately have occupational aspirations that are 2 points lower in prestige than others. Given the standard deviation for occupational aspiration is 16, this is a slight yet significant association. Identifying as Muslim is also negatively associated with occupation aspiration level, but not significantly. Adding the external access constraint variables, makes all features significant predictors of aspirations. The negative association between Muslim identity and occupational aspiration increases and becomes significant, indicating that the weaker association for Muslims without controlling for access was likely a reflection of low external constraints for a portion of the Muslim population. This interpretation would also resonate with the Sachar Committee reports findings, cited earlier, that there is considerable diversity of outcomes within the Muslim Population. While SC/ST/BC continues to be negatively associated with job aspiration, the strength of the association weakens considerably, staying significant at 5 percent level. This implies that the stronger effect from the earlier model masked over strong access constraints faced by the population. Access and SC/ST/BC are strongly associated, indicating that they face greater external constraints and barriers. Including psychological variables in the model does not impact the coefficient on SC/ST/BC and Muslim but reduces their significance.

The 'external constraint' variables are all statistically significant predictors of occupational aspiration. The direction of the relationships for wealth index and rural location with aspirations are as anticipated, while the direction for gender (male) and language (Telugu) are the opposite.

Occupational aspirations increase with youth's wealth and decrease for youth in rural communities. Rural communities have smaller networks, fewer opportunities and more constraints on information (Pasquier- Doumer and Risso 2013). Therefore, this outcome would stand to reason. Telugu, however, is the state language and native Telugu speakers would intuitively be expected to have an edge over others. One plausible reason for a negative association with occupational aspirations is that non-Telugu native speakers in the State might be forced to acquire English skills, resulting in greater occupational opportunity for them.

Further, given that females in India make up a smaller part of the labor force and face norms against pursuing occupations, the finding that women have higher occupational aspirations is surprising and unintuitive. It also opens up an investigative path. However, it is possible that this stems from gendered occupational preferences and the prestige ranking system. The top ranked professions are extremely gendered as shown in table 2.4. Female children aspire, primarily, to careers as Doctors and Teachers, while Male children aspire to careers as Engineers or Policeman. The Standard International Socio-Economic Index of Occupational Status assigns prestige values of 88 and 71 the more female-desired occupations of Doctor and Teacher, respectively, while assigning values of 71 and 54 to Engineer and Policeman respectively. The lower prestige of the "male professions" explains their overall lower aspirations. I find this assignment to be culturally misrepresentative. Medicine and Engineering, especially, can be considered roughly equivalent in prestige value in the Indian context. In order to account for this, I substituted the prestige value of engineering to be 88 instead of 71 and reconducted the analysis in the next analysis summarized in table 3.2.

In the third iteration of the model, all psychological, self-concept measures are statistically significant predictors. Of the self-concept measures, agency has the strongest relationship with

occupational aspiration. A belief that one can make a difference, is a considerable motivator for setting higher goals, as reflected through higher aspirations. The strength of this relationship is echoes the importance given to agency in theoretical and empirical models (ray 2006, Dalton et al 2014, Lybbert 2018). Literature for relationships between inequality and aspirations is less conclusive, with arguments and evidence on both sides. Perceived inequality has a negative correlation with aspirations, indicating that inequality in this scenario does not act as a motivator to raise aspirations with those above, but rather has a demotivating influence. The negative correlation of esteem with occupational aspiration is opposite to the intuitive direction. This could indicate that a dissatisfaction with the one's current situation, feeling bad about one's circumstances or a desire for more pride, could motivate individuals to pursue higher goals.. Subjective well-being, is positively correlated with occupational aspirations. A possible interpretation is that having higher aspirations may be a component of subjective well-being. As Duflo highlights, hope and aspirations are basic capabilities to live a good life. Another possibility is that stability represented through subjective well-being allows for the direction of one's attention towards goal attainment.

Table 3.1 Occupational Aspiration Regressed on Variables of Identity, Access and Self-Concept

VARIABLES	Occupational Aspiration		
Scheduled Caste, Scheduled Tribe, Backward Class	-2.383*** (0.620)	-1.408** (0.573)	-1.062* (0.554)
Muslim	-0.375 (1.011)	-1.818* (1.077)	-1.283 (1.032)
Wealth Index		7.067*** (1.581)	3.222** (1.611)
Telugu Mother Language		-1.382** (0.660)	-1.424** (0.640)
Rural		-1.736***	-1.507***

		(0.571)	(0.553)
Male gender		-7.772***	-7.662***
		(0.468)	(0.447)
Subjective Well Being (ladder)			0.379***
			(0.129)
Perceived Inequality			-0.747**
			(0.344)
Agency			1.012**
			(0.432)
Esteem			-0.772***
			(0.287)
Constant	69.24***	71.10***	75.35***
	(0.557)	(1.454)	(1.909)
<hr/>			
Dependent Variable Mean	67.306	67.306	67.306
Dependent Variable SD	16.142	16.142	16.142
Observations	5,368	5,368	5,368
R-squared	0.003	0.071	0.114

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: Variables for 'Scheduled caste, Scheduled tribe, Backward caste', 'Muslim', 'Telugu Native Language', 'Rural', 'Male Gender' and 'Agency' are dummy variables, coded one for yes. Occupational Aspiration is measured in terms of the prestige value of the aspired occupation. A separate indicator variable was created for missing values, coded one for missing and removed from final analysis table. Coefficients on missing variables were generally negative and non-significant.

After adjusting the values of occupational prestige for engineering, the male children still have lower occupational aspirations than female children on average. However, this difference is reduced compared to before. This is an interesting potential research question. Despite higher occupational aspirations, what factors lead to lower female attainment? How does this effect their agency and psychological well being?

There are some other noteworthy changes between the two models. Firstly, in the model 3.2, all variables are significant predictors of occupational aspiration. While in the final model 3.1, Muslim identity was not a significant predictor of occupational aspirations, in the final model of

3.2, Muslim identity is a significant predictor at the 10 percent level. Further, the strength of the correlation coefficients on SC/ST/BC and Muslim have both increased and they have a stronger negative association with occupational aspirations. This indicates SC/ST/BC and Muslims don't aspire to careers as Engineers. On the other hand, coefficient on Wealth Index has increased from 3.2 to 8.771, indicating that the wealthy aspire to engineering careers significantly more. It is also worth mentioning that the Wealth Index is the most strongly associated with the self-concept measures; it shows the greatest change in value between the second and the third iteration. While this does not give us information regarding the individual association with self-concept measures, it is likely that the wealthy have more positive self-concepts. The relationship between self-concepts and occupational aspirations does not change much between 3.1 and 3.2. In conclusion, identity, psychological concepts and external constraints all play a role in occupational aspiration formation.

Table 3.2 Recoded Occupational Aspiration Regressed on Variables of Identity, Access and Self-Concept

VARIABLES	Occupational Aspirations (Recoded for Engineers)		
Scheduled Caste, Scheduled Tribe, Backward Class	-4.502*** (0.708)	-2.689*** (0.679)	-2.332*** (0.656)
Muslim	-0.996 (1.139)	-2.673** (1.249)	-2.115* (1.199)
Wealth Index		13.14*** (1.720)	8.771*** (1.747)
Telugu		-1.127 (0.722)	-1.156* (0.696)
Rural		-2.138*** (0.661)	-1.874*** (0.641)
Male Gender		-5.855*** (0.519)	-5.731*** (0.497)
Subjective Well Being (ladder)			0.387*** (0.139)
Perceived Inequality			-0.790**

Agency			(0.371) 1.209** (0.475)
Esteem			-0.566* (0.326)
Constant	73.34*** (0.644)	70.09*** (1.624)	74.01*** (2.118)
Observations	5,368	5,368	5,368
R-squared	0.010	0.060	0.102

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: Variables for ‘Scheduled caste, Scheduled tribe, Backward caste’, ‘Muslim’, ‘Telugu Native Language’, ‘Rural’, ‘Male Gender’ and ‘Agency’ are dummy variables, coded one for yes.

Occupational Aspiration is measured in terms of the prestige value of the aspired occupation, recoding the prestige value so that it equals the prestige value of Doctors. A separate indicator variable was created for missing values, coded one for missing and removed from final analysis table. Coefficients on missing variables were generally negative and non-significant

With regards to educational aspirations, when considering only SC, ST, BC and Muslims variables, both categories have statistically significant lower educational aspirations. SC, ST, BC children aspire to 0.716 years on average, while Muslim Children aspire to 0.337 years less of schooling on average. While SC, ST and BC, aspire to fewer years of education than Muslims, this trend is reversed when adding access variables to the model. Further, including psychological self-concept measures eliminates caste and occupation identity as significant predictor of educational aspirations.

In the full model, Wealth index and Telugu (External Constraints) and Subjective well-being (Self-concept) are the only significant predictors of educational aspirations. This indicates the three hypothesized channels have a weak relationship with educational aspirations. Wealth index and subjective well-being have the strongest and nearly equal predictive power, suggesting that wealth is the strongest external constraint on pursuing education. Native Telugu speakers also

have lower educational aspirations on average. This may be indicative of fewer higher education opportunities in Telugu.

I consider there to be three possible reasons why caste identity, religious identity, self-concept measures and half the access measures are not predictive of educational aspirations. First, agency has nearly no relationship with educational aspirations. This could indicate that children don't see education as a means of bettering their situation. As such, education is not considered a means of social mobility or attainment. This interpretation is further supported by noting that subjective well-being, is the strongest and only significant psychological predictor of educational aspirations in the model. Satisfaction with the current situation in life would indicate less desire to better or improve or modify the current situation. This association can be interpreted as youth satisfied with their life are more likely to pursue higher educational aspirations. Those that are unsatisfied, appear to be more inclined to move out of education and invest their time and resources elsewhere. Second, it is possible that there are nationally inflated educational aspirations because of their role as a social marker. This could be unassociated with improvement of circumstances, similar to the "education myth" observed in Peru whereby education aspirations are very high (Pasquier-Doumer and Risso 2013). This would be a reasonable interpretation given that the average educational aspiration level, as shown in table 2.2, is approximately 14 years of education. Third, it is possible that years of education are not the best measure for educational aspirations. A better measure could be choice of educational stream.

Table 3.3 Educational Aspiration Regressed on Variables of Identity, Access and Self-Concept

VARIABLES	Educational Aspiration (in years)		
Scheduled Caste, Scheduled Tribe, Backward Class	-0.716*** (0.102)	-0.312*** (0.101)	-0.158 (0.299)
Muslim	-0.337* (0.203)	-0.705*** (0.213)	0.200 (0.707)
Wealth Index		3.158*** (0.307)	2.735*** (0.699)
Telugu Native Language		-0.370*** (0.116)	-0.808*** (0.287)
Rural		-0.0824 (0.108)	-0.0567 (0.263)
Male gender		0.260*** (0.0966)	-0.0173 (0.194)
Subjective Well Being (ladder)			0.224*** (0.0618)
Perceived Inequality			-0.0251 (0.145)
Agency			0.0392 (0.191)
Esteem			0.114 (0.139)
Constant	14.92*** (0.0841)	12.93*** (0.274)	12.82*** (0.879)
<hr/>			
Dependent Variable Mean			
Dependent Variable SD			
Observations	3,763	3,763	3,791
R-squared	0.011	0.063	0.055
<hr/>			
Robust standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			
Note: Variables for 'Scheduled caste, Scheduled tribe, Backward caste', 'Muslim', 'Telugu Native Language', 'Rural', 'Male Gender' and 'Agency' are dummy variables, coded one for yes. A separate indicator variable was created for missing values, coded one for missing and removed from final analysis table. Coefficients on missing variables were generally negative and non-significant			

The empirical analysis shows that some aspirations can be determined through each channel: identity, self-concepts and access variables while others through a single channel. All channels have a significant and predictive relationship with occupational aspirations. Educational

aspirations, alternatively, are mostly determined by external access constraints and more specifically by wealth index.

Identity plays a role in determining occupational aspirations, but not educational aspirations.

Identity, through the means of social categories, continues to be a significant predictor of occupational aspirations, even when controlling for access and self-concept measures. This not only indicates that identity is significant, but that the cultural aspects of identity are significant.

In contradiction to work by some authors that predicts that identity operates through the mechanism of internal mental representations and psychological concepts, identity also operates through cultural norms independent of those internal factors. Historically disadvantaged communities of Muslims and SC/ST/BC under aspire in occupational aspiration but not in educational aspirations. This demonstrates that the difference between communities emerges at the level of the occupational choice, as opposed to educational choice.

3.2 Empirical Evidence for Aspirations Gap and Fatalism

Debraj Ray's Model (2006) provides a theory for understanding the mechanism of aspirations-based poverty traps. When the size of individual's aspirations gap is too large, the individual experience an aspirations failure or fatalism, believing they have no agency. Fatalism can be understood as the perception of lack of link between effort and achievement. It is also indicated by an external locus of control, or the belief that individual has no control over their life outcomes. An aspirations gap is the distance between an individual's current and aspirational self. While aspirations failure can occur on many fronts, I focus on educational and occupational aspirations for reasons stated in the background section. I take the occupational aspiration gap to

be the prestige value of child's aspiration minus the prestige value of the occupation the parents expect their child to pursue. I calculate the education aspiration gap equal to the number of years of education child aspires to minus the average number of years parents were formally educated. The model theorizes a non-monotonic and inverse- U shape relationship between aspirations gap and future oriented behavior (Genicot and Ray 2017). Equation (2) below represents a parametric model that is an empirical test for this relationship in the context of Indian Children.

$$Y = \beta_1 gapq_1 + \beta_2 gapq_2 + \beta_3 gapq_3 \dots + \varepsilon \quad (2)$$

The dependent variable, Y, is the binary variable for agency. Strong agency refers to the children that responded 'Strongly Agree' with the agency self-identification statement, "If I try hard, I can improve my situation in life" and have Y= 1. The gaps, $q_1, q_2 \dots$ are indicator variable for different buckets of the aspirations gap (occupational aspirations gap in 3.2.1 and educational aspirations gap in 3.2.2). For instance, in the case of educational aspirations, $q_1 = 1$, if the number of years of education the child aspires to minus the average number of years the parents were formally educated is between – eight and half and six and a half years. Similarly, q_2 , is the bucket for between six and a half and ten years. I expand on the process of selecting buckets further ahead in this section.

A second feature of the model pertains to an individual's cognitive window. An individual's cognitive window refers to the zone of similar attainable individuals. According to Ray's theory, if an individual has a wider cognitive window, that includes individuals at his/her ideal aspirational level, it acts as a network resource to make the aspirational level more attainable. Moreover, an interaction of a high aspirations gap with a narrow cognitive window is theorized

to lead to fatalism. In equation (3) below, I extend the model from above to allow for interactions with cognitive window. I take the wealth of a district as a measure for how rich the cognitive window is, based on the assumption that poor districts would entail a narrower cognitive window, resulting from fewer individuals at the aspiration level.

$$Y = \beta_1 gapq_1 + \beta_2 gapq_2 \dots + D + \beta_1 gapq_1 * D + \beta_2 gapq_2 * D \dots + \varepsilon \quad (3)$$

D is a dummy variable indicating whether a district is a poor district. The interaction terms are included to test whether the combination of a certain aspirations gap with a poor district has a relationship with agency.

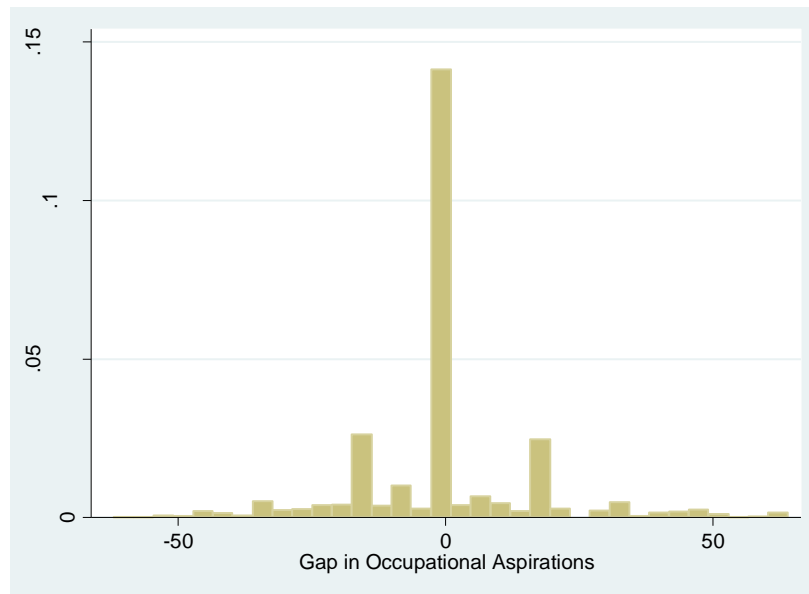
Given the lack of direct measures for the concepts of aspiration gap and aspirations window, I have used proxies through creating variables that measure similar features. This is a significant limitation of the analysis. The educational and occupational aspirations gap are measured differently and so lack direct comparability. Further, poor districts are not perfect substitutes for poor aspirational cognitive windows. An aspiration window would be better reflected through a measure for the degree of stratification in a community as opposed to the resources in it.

3.2.1 Occupational Aspirations Gap and Fatalism

Based on Graph 3.4 Below, there is an uneven distribution in occupational aspirations gaps. A considerable majority of children have an occupational aspiration gap of 0 with children aspiring to the same jobs as their parents' expectations. Given the distribution, it is hard to capture an inverse U-shaped relationship where a high aspirations gap is positively associated with agency but a very high aspirations gap is negatively associated with agency. Instead, I capture the

relationship between individuals with negative aspirations gap, zero aspirations gap and positive aspirations gap with agency (through bucketing and creating indicator variables). I anticipate negative aspirations gap to be negatively associated with agency, zero aspirations gap to be unassociated and high aspirations gap to be positively associated. While theoretically, a small positive gap is positively associated and a large positive gap is negatively associated, I generalize that a positive gap is positively associated with agency given the limited data on positive occupational gaps. Further, I presume that in comparison with negative gaps representing children that aspire to jobs with less prestige than their parents' expectations, positive gaps with aspirations higher than expectations should be positively associated with agency. There are 1591 observations of job aspirations gap = 0, 777 observations of negative job aspirations gap and 702 observations of positive aspirations gap. It is also worth noting that a distribution with a peak at 0 aspirations gap could be indicative of a limitation in using parental expectations as a measure of the realistic outcomes of children. It could also speak to the role parental expectations have in shaping aspirations.

Graph 3.4 Occupational Aspirations Gap Distribution



The parametric regression analysis finds a significant association between the different job gap levels and strong agency. However, contrary to the hypothesis, there is no variation in the relationship. All gap levels are positively associated with agency. A negative job gap, representing children occupational aspirations lower than parental expectations is as predictive of strong agency as is no gap or a positive gap. A narrow cognitive window, measured through poor district wealth is the only factor variable associated with lower agency. The interaction effects between cognitive window and different levels of the occupational aspiration gap are not significant predictors. The results lend partial support to Ray's theory. There is little evidence to show that there is an inverse U-shaped relationship between aspiration gap and agency or that the interaction of extremely high gaps with narrow cognitive windows yields in fatalism. The results do support the theory that narrower cognitive window, without the presence of role models in aspirational occupations, results in reduced agency. This finding too should be taken with a grain of salt because a poor district is not perfectly comparable to cognitive window and there a

number of other features of poor districts that could be at play here and should be further explored. More generally too, because of the limitations in the data sample as well as the large number of missing data points, the results should be cautiously interpreted.

Table 3.5 Occupational Aspirations Gap and Agency

VARIABLES	Agency	
Negative Job Gap	0.209*** (0.0233)	0.211*** (0.0234)
Zero Job Gap	0.208*** (0.0196)	0.247*** (0.0287)
Positive Job Gap	0.204*** (0.0241)	0.240*** (0.0349)
Negative Job Gap*Poor District		0.0648* (0.0361)
Zero Job Gap*Poor District		-0.0158 (0.0410)
Positive Job Gap*Poor District		0.0109 (0.0474)
Poor District		-0.0930*** (0.0278)
Constant	0.257*** (0.0150)	0.271*** (0.0188)
Observations	4,022	4,022
R-squared	0.032	0.037

Robust standard errors in parentheses, clustered at the child code level

*** p<0.01, ** p<0.05, * p<0.1

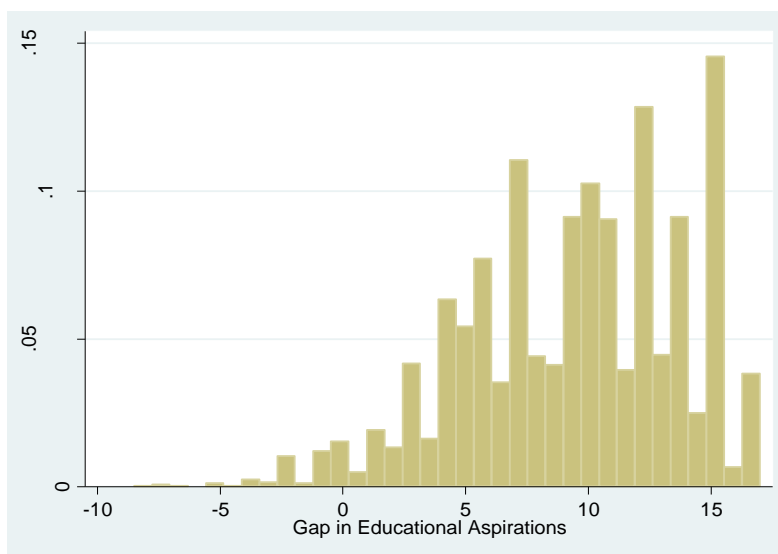
Note: "Occupation Aspiration Gap" is prestige value of child aspiration minus prestige value of occupation expected by parents for child.

All missing values of job gap (n = 1049) were dropped for this analysis. When a separate indicator variable was created for missing values its coefficients negative and statistically significant. The large number of missing variables and their statistical significant is a serious limitation of this analysis.

3.2.2 Educational Aspirations Gap and Fatalism

The distribution of the educational aspirations gap shows that children on average aspire to ten greater years of education than the mean of their parent's formal education in years. The distribution appears to be normal and I use quartiles as the basis for buckets. The years for specific quartiles are specified in table 3.7 below. Individuals with negative or extremely small aspirational gaps, as in the first quartile can be understood to have relatively low aspirations. As such, I hypothesize them to be negatively associated with agency. Individuals in the second quartile have a small aspirations gap, but do not under aspire to the same extent as individuals in the first quartile; I hypothesize that this bracket would have no significant association with agency. Individuals in the third quartile have relatively higher aspirations, but the aspirations gap is not so large that it would eclipse agency; these individuals should collectively have a positive association with agency. Individuals in the fourth quartile, and with highest relative aspirations and largest aspirations gap are likely to experience fatalism and should, connectedly, be negatively associated with agency.

Graph 3.6 Educational Aspirations Gap Distribution



All levels of educational aspiration gaps have a significant positive association with agency. Interestingly, the lowest educational gap, which includes negative aspiration gaps where children aspire to fewer years of education than their parents, has the highest association with strong agency. In line with the theory, the largest educational aspirations gap of 13-17 years is associated with the lowest agency. Interpreted as per the theory, the large difference could be daunting. Further, all gaps switch the signs of the effect when interacted with the indicator for poor districts. While children in all educational aspiration gaps tend to have stronger agency, this trend reverses for children from poor districts for all aspiration gap levels. The agency is likely to be lowest for children from the second quartile with an educational aspiration gap of between six-and-a-half and ten years. Overall, the data does not follow the theorized pattern. A reason why education gap is not associated with negative agency could stem from the inherent lack of an association between agency and educational aspirations observed in Analysis 3.3 above. The lack of association between agency and educational aspirations can be understood to mean that individuals that have high agency don't have higher educational aspirations and so education is not seen as a means to better one's situation in life. Logically following from that, too large a gap

in educational aspirations would not be expected to negatively impact one's agency or belief that one can do better in life. It could also be indicative of the lack of barrier posed by parental education. If parental education attainment is too low compared to the child's aspiration, it does not pose too daunting a barrier to hamper the child's belief in their ability to achieve.

Table 3.7 Educational Aspirations Gap and Agency

VARIABLES	Agency	
Education Gap1(First Quartile: -8.5 – 6.5 yrs)	0.209*** (0.025)	0.217*** (0.025)
Education Gap2(Second Quartile: 6.5 -10 yrs)	0.143*** (0.025)	0.191*** (0.033)
Education Gap 3(Third Quartile: 10 - 13 yrs)	0.151*** (0.025)	0.172*** (0.035)
Education Gap 4(Fourth Quartile: 13 - 17 yrs)	0.120*** (0.025)	0.148*** (0.034)
Education Gap1*Poor District		-0.138* (0.078)
Education Gap2*Poor District		-0.215** (0.085)
Education Gap3*Poor District		-0.152* (0.084)
Education Gap4*Poor District		-0.164* (0.084)
Poor District		0.105 (0.106)
Constant	0.291*** (0.0173)	0.299*** (0.0205)
Observations	4,022	4,022
R-squared	0.020	0.024
Robust standard errors in parentheses, clustered at the child code level		
*** p<0.01, ** p<0.05, * p<0.1		
Note: "Educational Aspiration Gap" is the number of years of education child aspires to minus the average number of years of parents' education. All missing values of education gap (n = 731) were dropped for this analysis. When a separate indicator variable was created for missing values its coefficients negative and statistically significant. The large number of missing variables and their statistical significant is a serious limitation of this analysis.		

4. Discussion and Conclusion:

4.1 Policy Implications

Occupational aspirations are concentrated around four occupations: doctors, engineers, teachers and policeman. The dense concentration is all the more astonishing for children given the numerous (approximately eighty) and wide range of options (actors, journalists etc. to name a few) they chose from. The limited focus without associated opportunities, sets the scale for a large-scale aspiration failure and creates a mismatch between supply and demand in the labor market. The ideal aspirational careers of these children are too difficult to attain, at the primary level, because numerically there isn't a need for as many of these professionals in society as the number of children that aspire to them. The aspirations failure is worsened because of the stiff competition to reach these careers. Careers in medicine and engineering require many years of resource intensive preparation to crack the entrance exams. This set the basis for uneven access to attaining aspirations, fueled further by extensive entrance preparation agencies. The heavy resources required create a basis for narrow aspirational windows based on wealth.

In order to tackle occupational aspirations failure, policies need to target increasing the aspirational value of alternative careers as well as increasing their accessibility. Further, raising the aspirational value is also key to the success of government skilling and vocational programs. Many government skilling and vocational training initiatives report high dropout rates because they do not match the aspirations of the youth (Upadhya 2019). The youth often use vocational programs to better desirable skills such as computer knowledge or English language and drop out

of their occupational placements. The government has recognized the importance of aspirational value in two recently approved vocational schemes from 2017: Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP) and Skill Strengthening for Industrial Value Enhancement (STRIVE). In addition to the aims of improving implementation strategy of vocational education and promote coordination among central, state and private actors, a part of the mandate seeks to improve “aspirational value of skill development programs by increasing the marketability of skills, through better industry connect and quality assurance”. To clarify, the increase in aspirational value should not be a mere effect of branding and marketing but should also be connected to increase in quality opportunities. An example of a country that has successfully maintained high aspirational value for manufacturing jobs (typically with low prestige) is Germany. It has a replicable apprenticeship model that derives its aspirational value from the high-quality apprenticeships focused on human capital development and high quality products (. Further, effort should be made to increase aspirational window through including mentorship and networking in the skilling programs.

Another policy approach can involve raising aspirations of historically disadvantaged communities. The analysis in part 3 shows that caste identity and religious identity could be the basis of a social-exclusion based poverty trap in India. At the very least, they cannot be discounted as a source of disadvantage based on aspirational levels. Scheduled Tribes and Backward Classes under-aspirate in occupational and educational goals, even after controlling for external constraints and psychological self-concepts that represent internalized discrimination. Both caste and religion are, thus, appropriate targets for policies seeking to raise aspirations. Further, policies raising aspirations should target both internal and external constraints. Analysis

shows that psychological features, such as agency and subjective wellbeing, and external constraints, such as wealth, are both associated with aspirational level. Past attempts at targeting internal and external constraints have also been successful in raising aspirations in the Italian context. An intervention lead by La Ferrara (2019) provided information on high-schools and job opportunities (external constraints), extended psychological support (self-concept) and increased Italian language proficiency through tutoring (external constraint). The educational aspirations of marginalized immigrant children in Italian high schools were seen to raise significantly as a result, bringing them almost at par with native Italian children. While educational aspirations showed limited association with psychological and identity measures in India, this intervention has the potential to be scalable in the Indian context, at least for occupational aspirations. It may be relevant to educational aspirations as well if a different measure of educational aspirations is taken. For instance, instead of measuring educational aspirations through number of years aspired to, it could be measured through the “track” aspired to. Educational tracks vary in aspirational level based on the difficulty, prestige and associated job outcomes.

Lybbert (2018) raised an important question in his work: “Can greater aspirations alone help to break poverty cycles, or do higher aspirations only complement tangible interventions that directly improve productivity and enhance human development and welfare?” This question is relevant in determining whether the suggested policies can work in isolation or need to be jointly implemented. While there is a dearth of research on this question, the narrow job categories considered aspirational highlights the need for increasing job categories with aspirational value. This involves a joint effort of marketing and improving job quality. Raising aspirations without associated opportunity is likely to result in increased aspiration failure and unrest. In the other

direction, increasing aspirational opportunities without raising aspirations of the historically disadvantaged is likely to accumulate disadvantage and increase social stratification. Further, given the stratification in Indian society and tradition of hereditary occupations the role that aspirations play in shaping economy-level distribution outcomes becomes very significant. Policies should take care to consider the economy level outcomes, societal effects and access, especially as they try to improve the aspirational value of alternative career paths.

4.2 Conclusion

In this paper I conduct three analyses. First, I examine the channels through which occupational and educational aspirations are determined. Second, I examine whether scheduled castes, scheduled classes and backward tribes, and Muslims under aspire to determine if the aspirations failure could be the basis for a poverty trap. Third, I provide empirical evidence for Debraj Ray's model of aspirations gap, aspirations window and aspiration failure.

Occupational aspirations measured in terms of prestige value are determined through all three channels: identity, self, concept and external constraints. Educational aspirations, measured in years of education, are mostly determined through wealth index and subjective well-being measures. Moreover, the historically disadvantaged Scheduled Castes, Scheduled Tribes and Backward Classes and Muslims under aspire for occupational aspirations. This leads to the possibility of a meso level, occupational aspirations-based multi equilibria poverty trap. There is little empirical evidence based on the data for Ray's theory of aspiration failure. This, in part, is a reflection of the limitations of the data set. Children from poor districts tend to have less access to role models; the data shows that these children with narrow aspirations window are likely to

have weaker agency.

There are a number of policy measures that can be taken to tackle historical disadvantage for marginalized communities. One is to raise occupational aspirations for the stigmatized communities through reducing psychological and external constraints. Another is increasing the aspirational value of alternative careers through labor market restructuring. Further still, the aspirational occupations can be made more attainable through role modelling, mentorship and sponsorship.

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Appendix

Table 5.1 Occupation Prestige Rankings Based on the Standard International Socio-Economic Index of Occupational Status

Job Category	Prestige Ranking
Accountant -	69
Actor/Actress	64
Artist	55
Civil servant	81
Computer operator	48
Conductor	37
Construction worker	32
Cook	29
Dentist	86
District collector	53
Doctor	88
Domestic worker	24
Driver	37
Engineer	71
Farmer	26
Fireman/woman	44
Fisherman/fisherwoman	30
Labourer	24
lawyer	85
Lecturer	78
Shop assistant/ market trader	35
Mason	32
Mechanic	31

Nurse	39
painter/decorator	32
Pilot	71
Policeman/woman	54
Politician	73
President	81
Scientist	67
Singer	54
Soldier	58
Sportsman	55
Tailor	37
Taxi driver	33
Teacher	71
trader/businessman	67
traditional occupation	43
Vet	84
Administrative assistant / secretary	55
Religious leader/ priest	55
Manager	67
Factory worker	25
Journalist	66
Banker/ bank manager	60
Musician/Dancer	59
Lab assistant/ technician	47
pharmacist	81
sailor/seaman	36
carpenter	32
security guard	35
cabin crew/ air hostess	44
psychologist	72
software programmer	64
hair stylist/beautician	32
health officer	52