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Exploring Educational Inequalities and Human Capital Development in Rural Punjab: Insights from Two Villages

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Abstract: This study investigates educational inequalities and human capital development in two villages of Punjab, Saleh Chak and Katt, through a detailed analysis of literacy rates, enrollment patterns, educational attainment, and household educational expenditures across caste, class, and gender. Drawing from primary data collected from 443 households, the research identified significant disparities in access to education and human development outcomes. The findings revealed that while literacy rates improved over time, gaps persisted across social and economic categories, particularly disadvantaging scheduled and backward caste communities. Private school enrollment and household spending on education were highest among Forward Caste and economically better-off families, reflecting socio-economic privilege that played a key role in accessing quality education. Female education has shown notable progress, but gender disparities remain prominent, especially at higher education levels. Human Development Index (HDI) scores by caste revealed stark inequalities: forward castes had the highest HDI, while scheduled castes lagged significantly. These findings highlighted structural inequalities and stressed the urgent need for inclusive policy interventions to address educational deprivation. The paper appeals for targeted public investment, scholarship programs, and gender-sensitive strategies to bridge the educational divide and promote equitable human capital formation in rural Punjab.

Introduction

The 21st century has witnessed pronounced progress in living standards, with an unprecedented number of people around the world making a "great escape" from

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hunger, disease, and poverty, moving above the minimum subsistence level. The Human Development Index shows impressive improvement on average; still, many people have been left behind, and inequalities remain widespread across all capabilities. Some refer to life and death, others to access to knowledge and life-changing technologies (HDR, 2019). Stanton (2007) argues that HDI has played two key roles in the field of applied development economics: 1) as a tool to popularize human development as a new understanding of well-being, and 2) as an alternative to GDP per capita as a way to measure levels of development for comparison across both countries and time. The importance of these dual roles cannot be overemphasized.

The first Global Human Development Report was released in 1990, and the data track India's HDI scores and ranks. HDI provides a measure to assess human development, i.e., how people's lives are changing, measured in terms of health, education, and income indicators. India is currently ranked 134th out of 193 countries in the HDI 2021, a decline of 2 places over 9 years. India's Human Development Index (HDI) score in 2022 is 0.644. The fact that the performance score has not moved much since 2020 only shows that India has not made much progress in improving its human capital. India's HDI has remained low.

Literature on human capital emphasizes the role of human as a very important - if not the most important - source of growth [Arrow (1962); Aghion and Howitt (1992)]. The general conceptualisation of the human role as a source of economic activity and economic growth encompasses many attributes. These include education, health, knowledge, skills, and many other factors relevant to economic activities [OECD (1998)]. In the existing literature, some of these attributes were much more focused on identifying the role of human capital in economic activities and growth.

As far as education is concerned, it is considered the main ingredient in establishing human capital to ensure economic growth [Lucas (1988); Barro (1991); Owen et al. (2009)]. The quality of the educational system has also been shown to condition the effect of human capital on growth. Primary education is found to be the most important in least developed countries (LDCs), while secondary and tertiary education are found in intermediate countries and OECD countries, respectively [Gemmel (1996); Muhammad et al., 2015].

In the context of human capital, the role of the state as a conditioning factor in general, better-governed states make better use of their human capital and

accumulate more wealth. However, comparing averagely well governed the best-governed ones reveals that there might be a threshold beyond which governance in human capital-led growth. Economic growth in our modern society is driven by pervasive, all-encompassing innovations at every stage of its reproductive process. The generator and consumer of all new ideas is represented by a person (a citizen and a customer), who is also a highly qualified employee with up-to-date knowledge (which needs to be constantly updated and refined throughout their whole life), as well as real-life experience. The complexity of this situation can be viewed from a multi-faceted perspective including the following elements: (i) qualitative changes in the labor force and its composition are necessary due to the changes in the conditions and specifics of human labor and labor markets in the 21st century; (ii) the growing need for skilled labor and new professions with many professions losing their relevance or ceasing to exist (e.g., tour guides, bank clerks, office workers, or postmen); (iii)the increasing attention to the issues of activating the human factor in all spheres of production and development as well as the person's readiness for innovation and transformation. (Gruzina et al, 2021)

The adoption of policies driven by neoliberal ideals and associated neo-classical economic principles in the delivery of education has brought education under market forces, encapsulating it with an economic purpose. In this regard, Mukherjee (2004) argued that the LPG policy framework appears to have fostered anti-egalitarian effects. While opportunities for highly educated and skilled individuals have increased, diminishing State support for education has made it harder for the general populace to access even basic education. This has led to growing polarization in human capital formation, further exacerbating socio-economic disparities. Kumar (2014) critically analyzes the neoliberal policies of education and argues that, where private capital plays a decisive role (as it does now), this nurtures only an undemocratic and authoritarian ethos with no space for the poor, dalits, and women in its imagination (cited in Shergill & Sidhu, 2020).

Human Capital Development in Punjab has been a critical topic. Economists recognize the significance of nurturing and harnessing the potential of its human resources, which is essential for economic development (Shergill et al., 2018). Wide disparities were observed among groups and classes in accessing education, from the primary level to the higher levels. Apart from the literacy rate, there were differences in enrollment rates across the three stages and in educational levels. Access to learning and knowledge depends on state policy and

parental preferences. The state has made substantial efforts to expand educational opportunities, aiming to empower its citizens and create a workforce equipped with the knowledge and skills needed for a rapidly evolving regional, national, and global economy. However, challenges such as regional disparities, social class and economic category-wise disparities, gender differences, and unequal access to quality education remain (Shergill et al, 2018). Improving educational attainment in India has been challenging over time because society predominantly follows the principles of hierarchy, division, and mutual repulsion (Velaskar, 2010, cited in Garg et al., 2022). According to Garg et al (2022), the level of AYS has improved in India over the period and reached 7.7 years in 2018. Further, the level of educational inequality gone down between 2000 and 2018, but the Gini indices are still concentrated around 38 percent. Decomposition of the Gini and Shapley regression approaches indicates that the within-group component and the rural-urban division contribute most to educational inequality. Goswami (2022) argues that, in West Bengal, a person's social class and family's economic status determine whether they continue higher education, indicating that inequality exists in higher education attainment. Apart from the exclusion from educational opportunities, social exclusion also acts as a determinant of lower higher education attainment for disadvantaged groups. The literature identifies that factors such as household occupation, wealth quintile, and household size play a key role in determining educational attainment.

The human development lens is central to approaching inequality, asking why it matters, how it manifests, and how best to tackle it. Imbalances in economic power are eventually translated into political dominance. And that, in turn, can lead to greater inequality and environmental disasters. According to the Human Development Report (1990) People are the real wealth of a nation. The basic objective of development is to create an enabling environment for people to enjoy long, healthy, and creative lives. This may seem like a simple truth. But it is often forgotten in the immediate concern with the accumulation of commodities and financial wealth. In light of the preceding discussion, this study explores educational inequalities in enrollment rates, educational levels, and household spending on education by gender across various social and economic categories in two selected villages. The second objective is to assess the human development index (HDI) levels across different social categories and genders, reflecting how disparities in educational attainment affect HDI differences among these groups.

This paper is structured into four main sections, including the introduction. The second section discusses the data, methodology, and research objectives. The third section analyzes the various dimensions of educational inequalities and the Human Development Index (HDI). And, the last section presents the key findings and outlines their policy implications.

Data, Methodology, and Research Goals

The aim of this study is to rigorously examine the disparities in educational attainment and human capital development across diverse economic and social categories in two villages. We will delve into critical factors, including literacy rates, enrollment rates, educational attainment, household expenditure on education, Mean Years of Schooling (MYS), and Expected Years of Schooling (EYS), in two villages in Punjab. The Human Development Index (HDI) for both villages and across socio-economic categories is also examined using the standard method. The study is based on a census survey of two villages, Saleh Chak and Katt, selected from the districts of Gurdaspur and SBS Nagar, respectively, based on the rural infrastructure index, which covers 443 households. Of the total households, 274 belonged to the forward caste category, 101 to the backward caste category, and 68 to the scheduled caste category. In Punjab, farmers are classified into four different categories based on landholding size. These categories included 53 households, 52 households, 45 households, and 32 households from marginal farmer, small farmer, medium farmer, and large farmer landholding categories, respectively. The 88 households belonged to the landless category, 94 to the self-employed category, and 73 to the salaried employee's category. This detailed categorization aims to facilitate an in-depth analysis of socio-economic patterns and disparities in two villages.

Literacy Matters: Assessing the State of Education:

With a vital understanding of population demography across caste and gender, the analysis of educational demography in two locations, Saleh Chak and Katt, over three years: 2001, 2011, and 2017, is presented in Table 1, Table 1A, and Table 1B. These three tables highlight the gender-wise literacy rate across the socio-economic categories over time.

There has been a notable increase in the percentage of literate individuals in both villages over the years (Table 1). For instance, the literacy rate in Saleh Chak rose from 48.05 percent in 2001 to 61.10 percent in 2017, while in Katt, it increased

Table 1: Education Demography across Gender

Year	*Total Number, Literate Persons*and Percent***	*Total Number, Literate Persons*and Percent***	*Total Number, Literate Persons*and Percent***	*Total Number, Literate Persons*and Percent***	*Total Number, Literate Persons*and Percent***	*Total Number, Literate Persons*and Percent***
Year	*Male*	*Male*	*Female*	*Female*	*Total*	*Total*
Year	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
2001	571 (305) [53.42]	559 (408) [72.98]	511 (215) [42.07]	511 (340) [66.53]	1082 (520) [48.05]	1070 (748) [69.90]
2011	650 (417) [64.15]	530 (419) [79.06]	610 (290) [47.02]	499 (348) [69.74]	1260 (707) [56.11]	1029 (767) [74.54]
2017	709 (497) [70.10]	522 (443) [84.87]	669 (345) [51.57]	483 (354) [73.29]	1378 (842) [61.10]	1005 (797) [79.30]

Source: Village Directory (2001, 2011) and Field survey (2017), *literate Persons in round bract and **denotes percentage in []

from 69.90 percent to 79.30 percent. In both areas, the literacy rate among males was higher than that among females over time. For instance, in 2017, the male literacy rate in Saleh Chak was 70.10 percent, compared to 51.57 percent for females. The increase in education levels was significant, particularly among males. Saleh Chak observed a rise from 53.42 percent (2001) to 70.10 percent (2017), indicating progress in rural education. The village of Katt also showed improvements in literacy, with the male literacy rate rising from 72.98 percent to 84.87 percent. Although females had a lower percentage than males, their growth trend is encouraging. In Saleh Chak, female education improved from 42.07 percent to 51.57 percent, and in Katt, from 66.53 percent to 73.29 percent. Both Saleh Chak and Katt have demonstrated significant progress in literacy rate from 2001 to 2017. Despite overall growth in education, gender disparities persisted. The data suggest that while good strides have been made, there is still potential to further enhance overall literacy levels, particularly among females in both areas, to enrich human capital development.

Table 2 shows that across both Saleh Chak and Katt, male literacy rates are consistently higher than those of females within each social Category. There is a notable overall trend: Katt exhibited higher literacy rates than Saleh Chak across both genders and all social categories. Males from the forward Category showed literacy rates of 72.54% (Saleh Chak) and 86.59% (Katt). Females had lower rates at

Table 2: Literacy Rate by Social Category and Gender (2017)

Social Category	*Number of Total and Literate Person*	*Number of Total and Literate Person*	*Number of Total and Literate Person*	*Number of Total and Literate Person*	*Number of Total and Literate Person*	*Number of Total and Literate Person*	*percent*	*percent*	*percent*	*percent*	*percent*	*percent*
Social Category	Male	Male	Female	Female	Total	Total	Male	Male	Female	Female	Total	Total
Social Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Forward Caste	426 (309)	261 (226)	370 (216)	242 (181)	796 (525)	503 (407)	72.54	86.59	58.38	74.79	65.95	80.91
Backward Caste	231 (157)	64 (51)	249 (108)	56 (39)	480 (265)	120 (90)	67.97	79.69	43.37	69.64	55.21	75.00
Scheduled Caste	52 (31)	197 (166)	50 (21)	185 (134)	102 (52)	382 (300)	59.62	84.26	42	72.43	50.98	78.53
Total	709 (497)	522 (443)	669 (345)	483 (354)	1378 (842)	1005 (797)	70.10	84.87	51.57	73.29	61.10	79.30

Source: Field survey 2017

58.38 percent for Saleh Chak and significantly higher rates at 74.79 percent for Katt. The total literacy rate for this Category is 65.95 percent in Saleh Chak, compared to 80.91 percent in Katt. In the case of Backward Category, the literacy rates for males were 67.97percent (Saleh Chak) and 79.69percent (Katt). Female literacy was notably lower, at 43.37% in Saleh Chak and 69.64% in Katt. The total percent reflected a similar pattern: 55.21 percent for Saleh Chak vs. 75.00 percent for Katt. In the case of Schedule Category, the literacy rate for males was 59.62 percent (Saleh Chak) and 84.26 percent (Katt). The female literacy rate was also low, at 42 percent in Saleh Chak and 72.43 percent in Katt. The overall literacy rate was 70.10 percent for males and 51.57 percent for females in Saleh Chak, compared to 84.87 percent for males and 73.29 percent for females in Katt. The total literacy rate reflected a significant gender gap, especially in Saleh Chak. There was a clear gender disparity in literacy rates, with males significantly outperforming females across all categories and both villages. The forward category had the highest literacy rates, indicating that a higher social class is associated with better literacy outcomes. Conversely, those in the Scheduled Caste Category have the lowest rates, demonstrating that social class affects educational opportunities and outcomes. The consistently higher literacy rates in Katt suggest better educational resources, infrastructure, or socio-economic conditions compared to Saleh Chak. The data underscores the necessity of targeted educational interventions, especially to improve female literacy, particularly among lower social categories and in Saleh Chak.

Table 3 presents the literacy rates categorised by economic category, encompassing various types of farmer households, labourers, self-employed individuals, and salaried workers, with separate data for both males and females.

The total literacy rate for males (70.10 percent in Saleh Chak and 84.87 percent in Katt) was higher than that for females (51.57 percent in Saleh Chak and 73.29 percent in Katt). This indicates a consistent gender disparity in literacy across both regions. Katt generally demonstrates higher literacy rates across all economic classes compared to Saleh Chak. The Marginal Farmer Category has the lowest literacy rates, particularly for females (50.68 percent in Saleh Chak, 74.60 percent in Katt), suggesting that economic challenges are correlated with lower literacy levels. In the Small and Medium Farmers Categories, literacy rates improved slightly but remain below the average for salaried individuals. Conversely, the Large Farmer Category shows a notable increase in literacy rates for both genders, suggesting that higher economic status may facilitate greater educational access. This casual labor

Table 3: Literacy Rate by Economic Category and Gender

Economic Category	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Economic Category	Male	Male	Female	Female	Total	Total	Male	Male	Female	Female	Total	Total
Economic Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Marginal Farmer Households	64 (45)	76 (66)	73 (37)	63 (47)	137 (82)	139 (113)	70.31	86.84	50.68	74.60	59.85	81.29
Small Farmer Households	77 (56)	68 (57)	76 (41)	56 (41)	153 (97)	124 (98)	72.73	83.82	53.95	73.21	63.40	79.03
Medium Farmer Households	78 (54)	56 (47)	91 (48)	46 (33)	169 (102)	102 (80)	69.23	83.93	52.75	71.74	60.36	78.43
Large Farmer Households	64 (48)	31 (26)	66 (35)	25 (20)	130 (83)	56 (46)	75.00	83.87	53.03	80.00	63.85	82.14
Labour Households	158 (94)	107 (87)	142 (59)	102 (62)	300 (153)	209 (149)	59.49	81.31	41.55	60.78	51.00	71.29
Self-employed Households	144 (106)	98 (83)	122 (67)	101 (77)	266 (173)	199 (160)	73.61	84.69	54.92	76.24	65.04	80.40
Salaried Households	124 (94)	86 (77)	99 (58)	90 (74)	223 (152)	176) 151	75.81	89.53	58.59	82.22	68.16	85.80
Total	709 (497)	522 (443)	669 (345)	483 (354)	1378 (842)	1005 (797)	70.10	84.87	51.57	73.29	61.10	79.30

Source: Field Survey (2017)

Category exhibits the lowest literacy rates overall, with a stark difference between males (59.49 percent in Saleh Chak) and females (41.55 percent in Saleh Chak), reflecting significant barriers for women. In the case of Self-employed and Salaried workers, these categories have the highest literacy rates across both regions, with the Salaried category achieving the highest literacy rate for both males and females in Katt. This underscores the positive association between stable employment and increased literacy levels. In gender disparities across all categories, males consistently outpace females in literacy, with the largest gaps observed in Labor Households and Marginal Farmer Households. The data indicate a strong correlation between economic status and literacy rates, with higher-income groups demonstrating significantly better literacy outcomes. Regional differences highlight the impact of local resources and educational opportunities, as evidenced by Katt's overall higher literacy rates compared to Saleh Chak.

Education Attainment across Socio-economic Category and Gender

Table 4 presents data on the education levels among social categories across four categories: Primary, Middle, High, and Senior Secondary (Senior Secondary). The data is further broken down into three social categories: Forward Category, Backward Category, and Scheduled Category, with the percent reflecting the distribution of educational attainment among these groups.

Table 4: Pattern of School Education Levels by Social Category (Number and percent)

Social Category	*Primary Level*	*Primary Level*	*Middle Level*	*Middle Level*	*High School Level*	*High School Level*	*Senior Secondary Level*	*Senior Secondary Level*
Social Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Forward Caste	46.24 (43)	39.44 (28)	53.66 (44)	52.54 (31)	47.06 (16)	46.88 (15)	52 (13)	47.06 (16)
Backward Caste	41.94 (39)	12.68 (9)	39.02 (32)	16.95 (10)	41.18 (14)	18.75 (6)	40 (10)	5.88 (2)
Schedule Caste	11.83 (11)	47.89 (34)	7.32 (6)	30.51 (18)	11.76 (4)	34.38 (11)	8 (2)	47.06 (16)
Total	100 (93)	100 (71)	100 (82)	100 (59)	100 (34)	100 (32)	100 (25)	100 (34)

Source: Field Survey 2017 and *Number of students is in brackets.

Table 4 reveals the fact that in the case of the forward caste, it shows relatively high educational attainment across all levels. The percent for this category was notably above 40 percent, indicating that members of the Forward Category had better access to education. The highest percent (53.66 percent) was in the middle education level, while the lowest (46.24 percent) was at the primary level. The Backward Category exhibited significantly lower percentages in most education levels, particularly at the Senior Secondary level, with only 5.88 percent. The percentage for Primary education was also low (41.94 percent), suggesting limited access to education in this group. The transition from primary to higher education levels showed a drastic drop, indicating systemic barriers that hinder educational progression. The Scheduled Caste category had a varied educational distribution. The primary education level showed a higher percentage (11.83%) than the Backward Category but still lagged behind the Forward Category. The senior secondary percent (8 percent) was notably low, reminiscent of the backward Category's challenges. The forward Category consistently performed better than the other two across all education levels. The Backward Category's education levels were consistently lower, especially in higher education, and the Scheduled Category had moderate scores but did not reach the levels of the forward Category.

There is a clear disparity in educational attainment based on Social Category, with the Forward Caste Category benefiting from better educational opportunities than the Backward and Scheduled Caste Categories. The data indicated that members of the Backward Category faced significant educational barriers, highlighting the need for targeted interventions to improve educational access and attainment in this demographic. The Scheduled Caste Category, while showing slightly better performance than the Backward Category, still required additional support to advance educational outcomes. Overall, the findings suggested that Social Category plays a critical role in determining educational access and success. Addressing these disparities is crucial for promoting equity in education.

Table 5 presents the distribution of higher education levels by social Category, comparing the percentages of individuals in each educational attainment level (Degree - Professional, Degree - General, Diploma, and IELTS) across three social categories. Below are an analysis and key observations drawn from the data:

Table 5 shows that 57.14 percent of the total in the forward Category has attained a professional degree, whereas only 42.86 percent have in the backward Category. There was no individual from the scheduled Category with a professional degree (0

Table 5: Pattern of Higher Education Levels by Social Category (Number and percent)

Social Category	*Degree (Professional)*	*Degree (Professional)*	*Degree (General)*	*Degree (General)*	*Diploma*	*Diploma*	*ILETS*	*ILETS*	*Total*	*Total*
Social Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	katt	Saleh Chak	Katt	Saleh Chak	Katt
Forward Caste	57.14 (8)	44.44 (4)	50 (4)	27.27 (3)	40 (8)	45 (9)	60.87 (14)	52.38 (11)	52.31 (34)	44.26 (27)
Backward Caste	42.86 (6)	22.22 (2)	37.50 (3)	18.18 (2)	55 (11)	20 (4)	30.43 (7)	14.29 (3)	41.54 (27)	18.03 (11)
Scheduled Caste	0	33.33 (3)	12.50 (1)	54.55 (6)	5 (1)	35 (7)	8.70 (2)	33.33 (7)	6.15 (4)	37.70 (23)
Total	100 (14)	100 (9)	100 (8)	100 (11)	100 (20)	100 (20)	100 (23)	100 (21)	100 (65)	100 (61)

Source: Field Survey 2017

percent). This indicated that individuals in the forward Category had significantly higher attainment of professional degrees than those in the backward and schedule categories. Regarding degree (General), 50 percent of the individuals had a general degree from the forward Category, 37.50 percent from the backward Category, and only 12.50 percent from the scheduled Category. Again, the forward Category outperformed the backward and schedule categories, though the gap was slightly less pronounced than in the professional degrees. In the case of diploma courses, 40 percent, 55 percent, and 5 percent of individuals obtained a diploma from the general, backward, and scheduled Categories, respectively. This trend showed that the backward Category surpassed the forward Category in diploma attainment, suggesting that while fewer individuals in the backward group achieved higher degrees, more attained diplomas. For IELTS preparation, 60.87 percent had taken IELTS training from the forward Category, whereas 30.43 percent participated in the IELTS, and notably low at 8.70 percent from the backward Category and the scheduled Category, respectively. The substantially higher figure in the forward Category indicated greater engagement in international English proficiency, driven by better emigration opportunities for those from the privileged Social Category. Regarding educational attainment disparities, the forward Category consistently showed higher educational attainment, particularly in professional degrees and IELTS participation, due to disparities in educational opportunities across social categories. While the Backward Category did not represent higher diploma attainment, they lagged significantly behind the forward Category in professional degrees and international exams. The Schedule Category performed overall poorly, with very low percentages across all educational levels. The findings suggest a need for targeted educational policies or programs to enhance access and support for the Backward and Scheduled categories. Improving educational resources and opportunities in these areas could help to bridge the gap in educational attainment. Overall, the data highlights significant differences in educational outcomes across social categories, playing a crucial role in the ongoing debate over educational equity and social mobility.

Enrollment Levels: The Case of Low Retention

The parents' preferences regarding the school enrollment of their wards have been changing over time due to the opening of private schools. Table 3 presents inter-village, inter-category comparisons of school enrollment by social category for 2017 and breaks down enrollment by government and private schools.

Table 6: Share of Enrollment in Government and Private Schools by Social Category (Inter-Category Comparison) of both villages, 2017)

Social Category	*Number and Percentage*	*Number and Percentage*	*Number and Percentage*	*Number and Percentage*	*Number and Percentage*	*Number and Percentage*
Social Category	Government School	Government School	Private School	Private School	Total	Total
Social Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Forward Caste	30 (12.82)	11(5.61)	86 (36.75)	79 (40.31)	116 (49.57)	90 (45.92)
Backward Caste	69 (29.49)	21(10.71)	26 (11.11)	6 (3.06)	95 (40.60)	27 (13.78)
Scheduled Caste	21(8.97)	62(31.63)	2 (0.85)	17 (8.67)	23 (9.83)	79 (40.31)
Total	120(51.28)	94(47.96)	114 (48.72)	102(52.04)	234 (100)	196 (100)

Source: Field Survey 2017.

In the case of overall enrollment, in both villages, a majority of students were enrolled in government schools, with Saleh Chak enrolling 51.28 percent and Katt enrolling 47.96 percent. This indicated a slight preference for government schools in Saleh Chak compared to Katt. The Forward Category showed high enrollment in private schools, with Saleh Chak at 36.75% and Katt at 40.31%. This reflected a greater ability or willingness of families in this Category to invest in private education. In contrast, the Backward Category had a significant enrollment in government schools (29.49 percent in Saleh Chak and 10.71 percent in Katt) but a very small presence in private schools (11.11 percent in Saleh Chak and 3.06 percent in Katt). This demonstrated that families in this Category lacked the economic capacity to pay the private school fee. The Scheduled Category showed a notable trend in Katt, where 31.63 percent were enrolled in government schools, compared to only 8.97 percent in Saleh Chak. However, enrollment in private schools was almost nonexistent in both villages. This suggested a significant disparity in educational access and possibly socioeconomic challenges faced by this Category. The data highlighted educational disparities based on Social Category. The forward Category had a clear advantage in private school enrollment, due to higher socioeconomic status and greater access to resources. Both Backward and Scheduled Categories exhibited a higher reliance on government schools due to low family income. The significant differences between the two villages indicated variability in educational opportunities. Katt showed a stronger inclination toward

government school enrollment in the scheduled Category, which could be further explored to understand the underlying factors.

Table 7: Share of Enrollment in Government and Private Schools by Social Category (Intra- Category Comparison, 2017)

Social Category	*Number and percent*	*Number and percent*	*Number and percent*	*Number and percent*	*Number and percent*	*Number and percent*
Social Category	Government School	Government School	Private School	Private School	Total	Total
Social Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Forward Caste	30 (25.86)	11(12.22)	86(74.14)	79(87.78)	116(100)	90 (100)
Backward Caste	69(72.63)	21(77.78)	26(27.37)	6(22.22)	95(100)	27(100)
Scheduled Caste	21(91.30)	62(78.48)	2(8.70)	17(21.52)	23(100)	79(100)
Total	120(51.28)	94(47.96)	114(48.72)	102(52.04)	234(100)	196(100)

Source: Field Survey

Table 7 reveals the fact that in the case of the Forward Category, 25.86 percent of students were enrolled in government schools while 74.14 percent were in private schools in Saleh Chak village, whereas in Katt, the figures were significantly more skewed towards private schools, with 12.22 percent in government schools and 87.78 percent in private schools. This highlighted a strong preference for private education among the Forward Category in both villages. The enrollment distribution for the Backward Category indicated a considerable majority in government schools: 72.63 percent in Saleh Chak and 77.78 percent in Katt. In contrast, private school enrollment was markedly lower at 27.37 percent in Saleh Chak and 22.22 percent in Katt. This indicated reliance on government school education among the Backward Category due to economic constraints. The scheduled Category pointed the highest reliance on government schools, with 91.30 percent in Saleh Chak and 78.48 percent in Katt. Private school enrollment among the Scheduled Category was notably low, with only 8.70 percent in Saleh Chak and 21.52 percent in Katt, suggesting significant barriers to accessing private education due to low income. The data revealed that more parents in both Saleh Chak and Katt preferred private schools overall, with 51.28 percent and 47.96 percent in government schools, respectively, for Saleh

Chak, and 48.72 percent and 52.04 percent in Katt. Nevertheless, a substantial proportion of students from lower social categories (backward and scheduled) were enrolled in government schools. There is a clear socio-economic divide in school enrollment across the forward, backward, and scheduled categories. The Forward Category predominantly chose private schools that reflect poor infrastructure at the school level. The Backward and Scheduled Categories showed greater reliance on government schooling, indicating systemic issues in school education. These disparities in enrollment patterns highlighted the need for targeted educational policies that enhance access to quality education for marginalised groups. Improving infrastructure, scholarships, and support for government schools could help to increase enrollment across different social categories.

Table 8: Enrollment Rate by Gender and Social Category at Different Levels of School Education

Education Level	*Gender*	*Village*	*Number of Students and Percent*	*Number of Students and Percent*	*Number of Students and Percent*	*Number of Students and Percent*
Education Level	Gender	Village	Forward Caste	Backward Caste	Schedule Caste	Total
Primary School Level	Male	Saleh Chak	24(48.98)	21(42.86)	4(8.16)	49(100)
Primary School Level	Male	Katt	16(41.03)	5(12.82)	18(46.15)	39(100)
Primary School Level	Female	Saleh Chak	19(43.18)	18(40.91)	7(15.91)	44(100)
Primary School Level	Female	Katt	12(37.50)	4(12.50)	16(50.00)	32(100)
Middle School Level	Male	Saleh Chak	21(48.84)	19(44.19)	3(6.98)	43(100)
Middle School Level	Male	Katt	14(60.87)	4(17.39)	5(21.74)	23(100)
Middle School Level	Female	Saleh Chak	23(58.97)	13(33.33)	3(7.69)	39(100)
Middle School Level	Female	Katt	17(47.22)	6(16.67)	13(36.11)	36(100)
High School Level	Male	Saleh Chak	7(41.18)	6(35.29)	4(23.53)	17(100)
High School Level	Male	Katt	8(44.44)	4(22.22)	6(33.33)	18(100)
High School Level	Female	Saleh Chak	9(52.94)	8(47.06)	0(0.00)	17(100)
High School Level	Female	Katt	7(50.00)	2(14.29)	5(35.71)	14(100)

Education Level	*Gender*	*Village*	*Number of Students and Percent*	*Number of Students and Percent*	*Number of Students and Percent*	*Number of Students and Percent*
Senior Secondary School Level	Male	Saleh Chak	4(36.36)	7(63.64)	0(0.00)	11(100)
Senior Secondary School Level	Male	Katt	5(27.78)	2(11.11)	11(61.11)	18(100)
Senior Secondary School Level	Female	Saleh Chak	9(64.29)	3(21.43)	2(14.29)	14(100)
Senior Secondary School Level	Female	Katt	11(68.75)	0(0.00)	5(31.25)	16(100)
Total	Male	Saleh Chak	56(46.67)	53(44.17)	11(9.17)	120(100)
Total	Male	Katt	43(43.88)	15(15.31)	40(40.82)	98(100)
Total	Female	Saleh Chak	60(52.63)	42(36.84)	12(10.53)	114(100)
Total	Female	Katt	47(47.96)	12(12.24)	39(39.80)	98(100)

Source: Field Survey

Regarding primary education, in Saleh Chak, male enrollment rates were relatively high in the Forward Category (49 percent) compared to the Backward Category (48.98 percent) and the Scheduled Category (42.86 percent). Female enrollment also indicated a preference towards the Forward Category (44 percent). Katt showed lower male enrollment in the Forward Category (39 percent) compared to the Scheduled Category (46.15 percent), indicating a disparity favoring Scheduled Category students. Female enrollment in Katt was evenly distributed across categories, with 50 percent of Scheduled Category students enrolled. In the case of Middle Education, Enrollment rates for male students remained strong in Saleh Chak, with 43 percent in the Forward Category. Katt has shown a notable increase in male enrollment within the Forward Category (60.87 percent). Female students in Saleh Chak indicated a favorable enrollment in the Forward Category (58.97 percent), though a significant proportion was from the Backward Category (33.33 percent). Regarding High School Education, the enrollment rates for male students declined across categories, particularly in Saleh Chak, where the highest was only 41.18 percent in the Forward Category. Female students had a higher enrollment rate, particularly at Saleh Chak, at 52.94 percent in the Forward Category, albeit with

low representation from the Scheduled Category. In Senior Secondary Education, Male enrollment rates dropped significantly, particularly in Katt (27.78 percent in the Forward Category), suggesting potential challenges in retaining male students at higher education levels. The Scheduled Category represented a higher percentage. Female students had strong enrollment in both villages, particularly in Saleh Chak (64.29 percent in the Forward Category), suggesting better retention rates at higher education levels.

Overall, female students appeared to have slightly higher enrollment rates at higher education levels than males, particularly in the Forward Category, highlighting a positive trend in girls' education. It appeared to be a notable influence from the social category on enrollment rates, particularly in Katt, where Scheduled Category students availed post matric scholarship scheme. Regarding progression challenges, there was a notable decline in enrollment rates at higher education levels, especially for male students, because they preferred to work to support their families financially. This trend suggested that there are barriers affecting progression to secondary and higher secondary education.

Table 9: Enrollment Rate in Higher Education by Social Category and Gender

Education	*Gender*	*Village*	*Number and percent of Students by Social Category*	*Number and percent of Students by Social Category*	*Number and percent of Students by Social Category*	*Number and percent of Students by Social Category*
Education	Gender	Village	Forward Caste	Backward Caste	Schedule Caste	Total
Degree (Professional)	Male	Saleh Chak	3(60)	2(40)	0(0.00)	5(100)
Degree (Professional)	Male	Katt	1(25)	2(50)	1(25)	4(100)
Degree (Professional)	Female	Saleh Chak	5(55.56)	4(44.44)	0(0.00)	9(100)
Degree (Professional)	Female	Katt	3(60)	0(0)	2(40)	5(100)
Degree (General)	Male	Saleh Chak	1(50)	1(50)	0(0)	2(100)
Degree (General)	Male	Katt	1(33.33)	0(0)	2(66.67)	3(100)
Degree (General)	Female	Saleh Chak	3(50)	2(33.33)	1(16.67)	6(100)

Education	*Gender*	*Village*	*Number and percent of Students by Social Category*	*Number and percent of Students by Social Category*	*Number and percent of Students by Social Category*	*Number and percent of Students by Social Category*
Degree (General)	Female	Katt	2(25)	2(25)	4(50)	8(100)
Diploma	Male	Saleh Chak	5(50)	5(50)	0(0)	10(100)
Diploma	Male	Katt	5(41.67)	3(25)	4(33.33)	12(100)
Diploma	Female	Saleh Chak	3(30)	6(60)	1(10)	10(100)
Diploma	Female	Katt	4(50)	1(12.50)	3(37.50)	8(100)
ILETS	Male	Saleh Chak	5(71.43)	2(28.57)	0(0)	7(100)
ILETS	Male	Katt	3(42.86)	1(14.29)	3(42.86)	7(100)
ILETS	Female	Saleh Chak	9(56.25)	5(31.25)	2(12.50)	16(100)
ILETS	Female	Katt	8(57.14)	2(14.29)	4(28.57)	14(100)
Total	Male	Saleh Chak	14(58.33)	10(41.67)	0(0)	24(100)
Total	Male	Katt	10(38.46)	6(23.08)	10(38.46)	26(100)
Total	Female	Saleh Chak	20(48.78)	17(41.46)	4(9.76)	41(100)
Total	Female	Katt	17(48.57)	5(14.29)	13(37.14)	35(100)

Source: Field Survey

Table 9 shows that in the professional degree category, a significant number of male students from Saleh Chak (60 percent) belonged to the forward category, whereas in Katt, the distribution was more varied, with 25 percent in forward, 50 percent in backward, and 25 percent in scheduled caste groups. For females, Saleh Chak had a notable 55.56 percent in the Forward Category, while Katt showed a complete shift with 60 percent in Forward and 40 percent in Scheduled. In the case of general degree distribution, males from Saleh Chak had an equal distribution (50 percent each) between the forward and backward caste categories. In contrast, Katt reported a predominance of scheduled category students (66.67%). Female students showed a more balanced distribution across all categories in Saleh Chak, whereas in Katt 50 percent were in the scheduled category. In the case of Diploma Programs, Male students in Saleh Chak were evenly split between the forward and Backward categories (50 percent each). In Katt, the distribution was slightly less favorable for the Forward Category (41.67 percent). Female students in Saleh Chak showed a shift with higher enrollment in the Backward Category (60 percent). Katt showed balanced numbers, but with a notable 37.50 percent in Scheduled. For IELTS Preparation, Males from Saleh Chak had a relatively higher percentage

(71.43 percent) in the forward category, which was significant. However, Katt identified a more equal distribution, with 42.86% in the Forward Category and 42.86% in the Scheduled Category. Female students in both villages demonstrated a fairly balanced distribution, with Saleh Chak showing substantial participation in the forward category (56.25 percent). While analysing the overall trend, in Saleh Chak, the Forward Category generally showed the highest percentage for males in most educational qualifications. The Katt village generally exhibited a more diverse distribution across social categories, especially in the General Degree and Diploma programs, indicating differing access or educational preferences.

In the context of social category influence, there appears to be a significant influence of Forward Category students, tending to have higher representation in professional fields, especially among males. Regarding gender disparity, while female students were making strides in education, disparities remained. For gender and social equity, it is essential to implement strategies that expand educational opportunities for people from backward and scheduled castes, particularly women, to promote greater equity in educational achievement.

Table 10 presents the enrollment rates of male and female students across different educational levels-Primary, Middle, High, Senior Secondary, and Higher Education-within two villages. The figures are classified into three categories: Forward Class, Backward Class, and Scheduled Class, providing a comprehensive view of gender and class disparities in education.

Table 10 Enrollment Rate from Primary Level to Higher Education Level (in percent)

	Gender	*Village*	*Forward Caste*	*Backward Caste*	*Scheduled Caste*
Primary	Male	Saleh Chak	100	95.45	100
Primary	Male	Katt	100	100	100
Primary	Female	Saleh Chak	100	100	100
Primary	Female	Katt	100	100	100
Middle	Male	Saleh Chak	100	100	75
Middle	Male	Katt	100	100	100
Middle	Female	Saleh Chak	100	81.25	100
Middle	Female	Katt	100	100	100
High	Male	Saleh Chak	87.5	85.71	100
High	Male	Katt	100	100	100
High	Female	Saleh Chak	87.5	75	66.66
High	Female	Katt	84.61	100	71.42

	Gender	*Village*	*Forward Caste*	*Backward Caste*	*Scheduled Caste*
Senior Secondary	Male	Saleh Chak	66.66	87.5	0
Senior Secondary	Male	Katt	71.42	100	78.57
Senior Secondary	Female	Saleh	100	75	66.66
Senior Secondary	Female	Katt	85.61	0	71.42
Higher Education	Male	Saleh Chak	73.68	62.5	0
Higher Education	Male	Katt	62.5	66.66	58.82
Higher Education	Female	Saleh Chak	76.92	58.62	36.36
Higher Education	Female	Katt	73.91	55.55	61.9

Source: Field Survey

Enrollment rates at the primary level for both male and female students in Saleh Chak and Katt were exceptionally high, generally at 100 percent. This indicated a strong foundation of primary education for both genders in these villages. Enrollment rates in Middle education for males remained perfect (100 percent) in both villages, while female enrollment declined, especially in Saleh Chak (81.25 percent among backward class students). Katt showed higher enrollment (100 percent) due to a strong commitment to middle education for girls. A noticeable drop in high school education enrolment was observed for both genders in Saleh Chak. Males had a rate of 87.5 percent (forward class) and 85.71 percent (backward class), while females fared worse, especially those in backward and scheduled classes, with rates dropping to 66.66 percent in the scheduled Category. Katt showed better overall retention rates, especially among males, who maintained 100 percent enrollment. There was a significant decline in enrollment rates at senior secondary education, especially among male students in Saleh Chak, where the scheduled class rate was 0 percent. This indicated a substantial drop-off in educational continuation at this stage. Females also struggled, with only 66.66 percent attendance in Saleh Chak for the scheduled class and a significant drop-out rate in Katt, suggesting systemic issues affecting higher education access. In higher education, Male students in Saleh Chak showed alarming statistics, with a 0% enrollment rate in scheduled classes. The

backward class also saw a decline, indicating barriers to accessing further education. Female students showed slightly better rates in Saleh Chak but also struggled significantly, particularly in the Scheduled Caste (36.36 percent). The figures for the backward class and Katt also showed concern about retention in higher education.

There is a clear gender disparity in enrollment rates, particularly as educational levels increase. Female students showed a more pronounced drop in enrollment as they progressed through the educational system. For both males and females, the backward and scheduled castes showed the highest levels of dropout rates, due to socio-economic barriers that impede educational continuity.

The primary education enrollment rates were encouraging and suggested successful initiatives, but the subsequent declines indicated systemic issues that need to be addressed to ensure both genders can continue their education effectively. The data indicated the need for targeted interventions to improve retention and enrollment in higher education settings, especially for students from backward and scheduled classes. Policies could focus on financial support, awareness programs, and infrastructure improvements to motivate and enable continuous education. In summary, while the high primary enrollment rates were promising, action is needed to address gaps in middle, high, and higher education to foster a more equitable education system for all genders and classes.

Table 11: Comparison Based on Enrollment in School and Higher Education

Education	Gender	Village	Forward Caste	Backward Caste	Scheduled Caste	Total
School Level	Male	Saleh Chak	94.91	94.64	91.66	94.48
School Level	Male	Katt	95.55	100	93.02	95.14
School Level	Female	Saleh	98.36	89.36	92.3	94.21
School Level	Female	Katt	96	100	95.12	95.14
Higher Education	Male	Saleh Chak	66.66	62.5	0	55.81
Higher Education	Male	Katt	62.5	54.54	58.83	59.09
Higher Education	Female	Saleh	68.96	58.62	36.36	59.42
Higher Education	Female	Katt	73.91	45.45	50	58.33
	Total	Saleh Chak	96.66	92.23	92	94.35
	Total	Katt	95.78	100	94.04	95.14

Source: Field Survey (2017)

Among male students in Saleh Chak, the highest enrollment was in the forward Category (94.91 percent), followed closely by the backward Category (94.64 percent). Female enrollment in Saleh showed a notable statistic, with forward females at 98.36 percent, the highest overall enrollment across all categories. In Katt, male enrollment in the forward Category (95.55 percent) remained the highest, while the backward and scheduled categories were slightly lower, with 93.02 percent for scheduled. Female enrollment was equally impressive, with the forward Category at 96 percent and consistently high figures across all categories. There was a significant drop in male higher education enrollment, particularly in the scheduled Category for Saleh Chak, where the percentage was 0 percent, indicating a lack of representation in higher education. The higher percentage was in the forward Category (66.66%). Saleh presented a better scenario for female higher education, with enrollment peaking at 68.96 percent in the forward Category and a concerning drop to 36.36 percent in the scheduled Category. Katt showed a modest range in male higher education enrollment, peaking at 62.5 percent in the forward Category, but still relatively low overall. The forward Category again showed the highest female enrollment (73.91 percent), but a notable decline for the backward and scheduled categories registered.

Across both villages, the total enrollment at the school level in Saleh Chak was 96.66 percent, while in Katt it was slightly lower at 95.78 percent. In higher education, the totals showed a stark contrast: Saleh Chak averaged 94.35 percent in school but a much lower average in higher education due to a significant drop in enrollment in the scheduled Category. Male enrollment at the school level was generally strong, but the transition to higher education revealed significant gaps, especially among scheduled categories. Female enrollment was notably higher at the school level but declined in higher education, particularly among underrepresented groups**.** The data showed that individuals from the forward category generally had better access to education than those from the backward and scheduled caste categories. This disparity was particularly evident in higher education, where the scheduled caste category had strikingly low participation.

The findings suggested a critical need for interventions to improve access to higher education for both genders, particularly for marginalised communities. Policies aimed at enhancing support systems, scholarships, and community awareness initiatives could be vital in bridging these gaps. The significant drop in enrollment percentage from school to higher education indicates systemic barriers that prevent students from continuing their education.

Funding Futures: Household Expenditure on Education Attainment:

The private spending on education attainment has been on the rise over time. The household expenditure on education raises concerns about affordability and access for economically disadvantaged households. Table 12 presents average education expenditure by gender and social Category in the villages of Saleh Chak and Katt. Each Category exhibits different expenditure patterns.

Table 12: Average Education Expenditure on Gender by Social Category (in Rs.)

Social Category	*Male*	*Male*	*Female*	*Female*	*Total*	*Total*
Social Category	Saleh Chak	Katt	Saleh chak	Katt	Saleh chak	Katt
Forward Caste	15316.91 (78.10) [35.16]	21225.47 (78.93) [36.21]	17834.5 (85.09) [46.78]	22922.66 (87.25) [47.22]	16659.65 (81.94) [81.94]	22153.85 (83.43) [83.43]
Backward Caste	4529.37 (20.78) [9.35]	2892.85 (4.26) [1.95]	3960.5 (13.93) [7.66]	3026.47 (3.06) [1.65]	4254.26 (17.03) [17.02]	2952.63 (3.61) [3.61]
Schedule Caste	1381.82 (1.10) [3.77]	4789.2 (16.80) [7.70]	1016.25 (0.96) [0.53]	3130.76 (9.68) [5.24]	1165.19 (1.03) [1.03]	3943.72 (12.94) [12.94]
Total (Average)	9532.85 [45.01]	11493.2 [45.87]	10817.4 [54.98]	12641.4 [54.12]	10198.75 [100]	12087.4 [100]

Source: Field Survey (2017), Male-female expenditure by each Category, () expenditure by all three categories on each gender (column-wise)

In the case of gender comparison, in the backward Category, males (₹4529.37 in Saleh Chak and ₹2892.85 in Katt) tended to spend more on education than females (₹3960.5 in Saleh Chak and ₹3026.47 in Katt). The Scheduled Category showed a reverse trend, with females (₹1016.25 in Saleh Chak and ₹3130.76 in Katt) spending more than males (₹1381.82 in Saleh Chak and ₹4789.2 in Katt). Data for the Forward Category showed comparatively higher expenditure on females than on males. Total expenditure data showed that the average for males in Saleh Chak was significantly higher than in Katt, suggesting potential disparities in economic status or in resource allocation for education between the two villages. There was a notable disparity in educational expenditure between genders across social categories, indicating that cultural and socio-economic factors significantly influence educational investment. The higher expenditure by males in the Backward Category may suggest a continued

preference for male education in certain communities, while the higher spending by females in the Scheduled Category may reflect an improvement in the valuation of female education or targeted interventions. Overall, the data call for further exploration of the factors affecting educational expenditure across gender and social categories to promote equitable access to education.

The table presents a comparison of education expenditure across different social categories (Forward, Backward, and Scheduled) in two villages, Saleh Chak and Katt. The figures are divided by gender (Male and Female) and are represented as a percentage of total education expenditure for each Category.

Table 13: Education Expenditure across Category and Gender

Social Category	Male	Male	Female	Female	Total	Total
Social Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Forward Caste	78.10	78.93	85.09	87.25	81.94	83.43
Backward Caste	20.78	4.26	13.93	3.06	17.03	3.61
Scheduled Caste	1.10	16.80	0.96	9.68	1.03	12.94
Total	100	100	100	100	100	100

Source: Field Survey 2017

Both villages, Saleh Chak and Katt, showed significant expenditure in the Forward Category. Males in Saleh Chak (78.10 percent) and Katt (78.93 percent) had expenditures that were slightly similar. Female expenditures were higher than male expenditures in both villages, with Saleh Chak at 85.09 percent and Katt at 87.25 percent. The total expenditure for the Forward Category was substantially higher than for the other categories in both villages, indicating a prioritisation for education among this category. Saleh Chak showed higher male expenditure (20.78 percent) than Katt (4.26 percent), suggesting a disparity in funding and prioritisation between the villages. Female expenditures were also relatively low in both areas, with Saleh Chak at 13.93 percent and Katt at 3.06 percent. The Scheduled Category had the lowest expenditure in both villages, suggesting possible social and economic inequalities. Males in Katt exhibited significantly higher spending (16.80 percent) than in Saleh Chak (1.10 percent). The Forward Category consistently received the highest funding, followed by the Backward and then the Scheduled Categories. There was a notable gender gap, especially in favour of females within the Forward Category, which may indicate efforts to empower women's education

in those cohorts. In contrast, the Backward and Scheduled categories did not receive proportionate investments, which might require targeted policy interventions.

The table presents data on education expenditure shares across social categories and genders, highlighting disparities in household educational spending.

Table 14: Education Expenditure Share across Social Category and Gender

Social Category	*Male*	*Male*	*Female*	*Female*	*Total*	*Total*
Social Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Forward Caste	35.16	36.21	46.78	47.22	81.94	83.43
Backward Caste	9.35	1.95	7.66	1.65	17.02	3.61
Scheduled Caste	3.77	7.70	0.53	5.24	1.03	12.94
Total	45.01	45.87	54.98	54.12	100	100

Source: Field Survey

The education expenditure for males in the Forward Category was 35.16 percent (Saleh Chak) and 36.21 percent (Katt). Females in the same Category received a higher share of the expenditure at 46.78 percent (Saleh Chak) and 47.22 percent (Katt). The total for this Category was 81.94 percent (Saleh Chak) and 83.43 percent (Katt), indicating a significant investment in education by the households in this social Category, especially for females. Males in the Backward Category received 9.35 percent (Saleh Chak) and 1.95 percent (Katt) of the funds, indicating a disproportionate allocation. Females received slightly better shares at 7.66 percent (Saleh Chak) and 1.65 percent (Katt). The total for this Category was quite low at 17.02 percent (Saleh Chak) and 3.61 percent (Katt), showcasing a concerning trend of neglect regarding educational funding in this Category. In the scheduled Category households, males received 3.77 percent (Saleh Chak) and 7.70 percent (Katt), while females received even lower funding at 0.53 percent (Saleh Chak) and 5.24 percent (Katt). The overall total of 1.03 percent (Saleh Chak) and 12.94 percent (Katt) suggested that this social Category receives the least investment in education compared to others. In the case of overall expenditure for both Saleh Chak and Katt, the totals indicate that males account for 45.01 percent and 45.87 percent, respectively, while females account for 54.98 percent and 54.12 percent, respectively. This demonstrates a slight gender bias, favoring females in overall educational expenditure across the surveyed categories.

The data indicated a noteworthy trend: females, particularly in the forward Category, receive a higher share of education expenditure than their male

counterparts. This might signal progressive attitudes towards female education in those areas. The backward and scheduled categories showed disproportionately low shares of educational funding due to systemic inequalities in access to education based on socio-economic status.

Table 15: Average Education Expenditure by Gender and Economic Category (in Rs. /annum)

Economic Category	*Male*	*Male*	*Female*	*Female*	*Total*	*Total*
Economic Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Marginal Farmers Households	3981.579 (5.51)	12220 (12.00)	4015.882 (4.07)	8310 (9.39)	3997.778 (4.72)	9968.79 (10.59)
Small Farmers Households	4689.52 (7.17)	9195 (10.32)	7341.87 (7.01)	14347.31 (11.09)	5836.49 7.08	11504.66 (10.74)
Medium Farmers Households	13371.88 (15.59)	10939.09 (8.44)	16517.89 (18.72)	9678.53 (9.79)	15079.71 (17.31)	10173.75 (9.17)
Large Farmers Households	15164.29 (15.47)	12880 (6.33)	14238.89 (15.29)	17270 (8.22)	14643.75 (15.37)	15221.33 (7.35)
Landless Labour Households	2075.94 (4.84)	3656.67 (6.16)	2400.65 (4.44)	3220 (4.98)	2235.72 (4.62)	3429.6 (5.52)
Self Employed Households	14767.86 (3.12)	18729.78 (30.23)	16565.16 (30.63)	16102.93 (27.78)	15712.2 (30.40)	17264.81 (28.90)
Salaried Households	20887.14 (21.30)	13465.86 (27.40)	14472.61 (19.85)	22424.29 (28.01)	16899.73 (20.51)	17228.40 (27.73)
Total	9532.85 (100)	11493.23 (100)	10817.35 (100)	12641.35 (100)	10198.73 (100)	12087.39 (100)

Source: Field Survey

Table 15 shows differing expenditure patterns between males and females across various economic categories. For example, in the Marginal Farmers Category, males had a higher average expenditure (3981.579) than females (4015.882) in Saleh Chak. Education expenditure was notably higher for categories involving larger agricultural operations (such as Large and Medium Farmers) compared to Labour and Self-Employed categories. This suggested that those with more resources tended to invest more in education. The total expenditure across all categories indicated significant private investment in education, suggesting a commitment to education, particularly among wealthier agricultural groups. This could correlate with better educational outcomes and build a more skilled workforce over time. The

differences in expenditure could reflect underlying societal norms that prioritize education differently by gender, suggesting a potential policy intervention to promote gender equity in educational spending. The table also highlighted how different economic groups allocate their expenditures by gender in two villages. The data showed that marginal farmer households had a higher share of expenditure on Male education in the Katt region (12.00) than in Saleh Chak (5.51), and showed a similar trend, spending more on female education in Katt (9.39) than in Saleh Chak (4.07). The total average expenditure of marginal farmer households was higher in Katt (10.59) than in Saleh Chak (4.72). Household spending on females showed a slight increase in Katt (11.09) compared to Saleh Chak (7.01). The overall contribution from small farmers' households was closely aligned across the two regions, totaling 10.74. Medium farmers' households exhibited a noticeable gender disparity, with spending on male education being higher in Saleh Chak (15.59) than in Katt (18.72).

Overall, medium farmer households had varying total expenditures, with Saleh Chak showing higher expenditure on male education and Katt showing higher expenditure on female education. For large farmer households, expenditure was relatively consistent, with slight variations. Male expenditures in Saleh Chak (15.47) and female expenditures in Katt (8.22) showed a trend of males spending more in Saleh Chak, while females contributed more in Katt. Expenditures among labour households were modest, with both males (6.16 in Katt) and females (4.44 in Saleh Chak) showing similar levels of spending across regions. The overall average (4.62) indicated lower expenditure for this group, regardless of gender or region. The self-employed Category had significant expenditure contributions from both males (30.12 in Saleh Chak) and females (30.63 in Katt), indicating a close balance in this economic group. Salaried households exhibited higher average expenditure in Katt for both males (27.40) and females (28.01), suggesting that salaried households in Katt may have higher disposable income or a higher cost of living. The table illustrated distinct patterns in expenditure across economic groups and regions. Generally, males in the Saleh Chak region tend to spend more than females, while females in the Katt region show higher expenditures in several categories. The data suggest that economic status significantly influences spending behavior between villages and genders. Specifically, self-employed households and salaried households appeared as a high percentage of expenditure on education across both villages that indicates entrepreneurial activity.

Table 16: Education Expenditure shares across Economic Category and Gender

Economic Category	*Male*	*Male*	*Female*	*Female*	*Total*	*Total*
Economic Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Marginal Farmer Households	2.48	5.51	2.24	5.08	4.72	0.59
Small Farmer Households	3.23	4.74	3.85	6.00	7.08	10.74
Medium Farmer Households	7.02	3.87	10.29	5.30	17.31	9.17
Large Farmer Households	6.96	2.90	8.40	4.45	15.37	7.35
Landless Labour Households	2.18	2.83	2.44	2.70	4.62	5.52
Self Employed Households	13.56	13.87	16.84	15.03	30.40	28.90
Salaried Households	9.59	12.57	10.92	15.16	20.51	27.73
Total	45.02	45.88	54.98	54.12	100.00	100.00

Source: Field Data (2017)

The total education expenditure was evenly divided between males (45.02 percent, 45.88 percent) and females (54.98 percent, 54.12 percent) in Saleh Chak and Katt, respectively, which indicates a slightly higher expenditure by females overall when combining both regions. Males in marginal farmer households allocated a higher expenditure share (2.48 percent in Saleh Chak and 5.51 percent in Katt) than females (2.24 percent in Saleh Chak and 5.08 percent in Katt). The total spending by the marginal farmer households in Katt was significantly higher than in Saleh Chak, indicating that this category prioritised education expenditure more in Katt. Small farmer households spent more on female education than their male counterparts across both villages, particularly in Katt (6.00 percent for females vs. 4.74 percent for males), reversing the trend observed among marginal farmers. In the case of medium- and large-sized farmer households, both categories showed clear engagement in education, especially among females. The expenditure for medium farmer households was high on female education (10.29 percent in Saleh Chak), which was notably high, indicating a strong investment in education. Large farmer households also showed this trend, but the expenditure share for both genders was more balanced, with males spending slightly less than females. The education expenditure share by the labour households was relatively low for both genders, with females slightly outpacing males. This data suggested that labourers had limited income and found it difficult to shift resources to education. The other two categories, such as self-employed and salaried, displayed significant expenditure shares, with males (13.56 percent and 13.87 percent for Katt) leading slightly over females,

while the trend was reversed in salaried individuals, with females (15.16 percent in Katt) spending more than males (12.57 percent in Katt). The data highlighted distinct patterns in education expenditure across various economic categories and genders. Notably, there was a significant investment in education among medium- and large-scale farmers, particularly among females, indicating a shift towards prioritising education to improve livelihoods. The expenditure shares revealed that while males tend to outspend females in some agricultural categories, females were more likely to prioritize education in the self-employed and salaried sectors. At the village level, Katt demonstrated a stronger relative investment in education across various categories than Saleh Chak, potentially due to socioeconomic differences in attitudes toward education or access to resources.

Overall, these patterns suggest growing recognition of the importance of education in improving economic status and quality of life, particularly among women across different economic sectors. Second, due to the privatisation of education, out-of-pocket expenditure across households has been increasing and is highly correlated with household income.

Tracing Human Development Index (HDI) across Social Categories

As outlined in the introductory section, the human resource development of any region, state, or country is fundamentally linked to the long-term economic development process. Punjab has closely aligned itself with the broader national development trajectory. Following 1947, the country's development initiatives unfolded in two distinct phases: the first, a centralised planning system characterised by a structural adjustment program and the liberalisation, privatisation, and globalisation (LPG) policy regime; and the second, a non-planning system administered by NITI Aayog. The table below illustrates the MYS, EYS, and HDI for three identified social categories across two villages.

Examining the case of MYS and EYS, the disparities existed across two sample villages and social categories. It is considered the representative case of educational deprivation. A country or region with an HDI of 0.50 is generally considered to be in the "low human development" category. The HDI values across the Social Category have been the lowest, with 0.49 in the forward caste Category and 0.23 in the Scheduled Caste Category. Regions with an HDI below 0.50 often face significant social, economic, and political challenges, and they may require concerted efforts to improve health services, educational opportunities, and economic conditions

Table 17: Mean Years of Schooling (MYS), Expected Year of Schooling (EYS), and Human Development Index (HDI) among the social classes of Villages

Social Category	MYS	MYS	EYS	EYS	HDI	HDI
Social Category	Saleh Chak	Katt	Saleh Chak	Katt	Saleh Chak	Katt
Forward Caste	5.6	6.3	4.0	3.7	0.37	0.49
Backward Caste	4.5	5.9	3.8	3.7	0.28	0.45
Scheduled Caste	4.4	4.6	3.0	3.9	0.23	0.39
Total	5.3	5.6	3.8	3.8	0.34	0.46

Source: Calculations based on the Field Data

to enhance human development. Low human development index pose question regarding the development process of the region after the nation's reorganisation of states in 1966 to the present times.

A low Human Development Index (HDI) score clearly reflects economic challenges that contribute to low income levels and inadequate access to essential health and education-related resources for a decent standard of living. As livelihood strategies evolved among low-income households, many youths were compelled to participate in various economic activities during and after their schooling to support their families. Field observations revealed that the primary reason for students leaving school was financial constraints, alongside other socio-cultural factors. The village's educational system is a stark example of significant educational deprivation. This situation is not only unsustainable but also poses a serious threat to the village's overall societal and economic stability.

Conclusions

The data indicate a marked uptick in primary education enrollment rates, yet a notable decline at subsequent educational levels, due to systemic issues that require urgent intervention. While encouraging primary enrollment figures suggested the efficacy of certain initiatives, significant gaps persist in middle, high, and higher education that should be addressed to create a more equitable educational landscape for all genders and socio-economic groups. Targeted interventions are essential to enhance retention and enrollment in tertiary educational settings, particularly for students hailing from backward and scheduled caste households. Policies should prioritise financial assistance, awareness campaigns, and infrastructure enhancements to incentivise and facilitate sustained educational engagement. To bolster enrollment, particularly among girls and those from lower socio-economic strata, strategic

initiatives such as including scholarships, community engagement, and outreach programs are imperative. Increased awareness and resource allocation may serve to elevate educational prospects within these communities. While examining out-of-pocket expenditure on educational attainment, significant disparities manifested across social categories and genders. The prioritisation of the forward-caste category reflected prevailing socio-economic realities, while the backward and scheduled categories attracted substantially less attention. Overall expenditure patterns exposed profound inequalities that necessitate redress to cultivate a more balanced educational ecosystem for all concerned categories. Despite observable investments in female education, stark disparities across social categories call for greater focus to secure equitable educational opportunities for all genders and social groups.

Retention rates remained disconcertingly low, with pronounced social and economic variations evident across villages. Both male and female students from backward and scheduled categories experienced the highest dropout rates, indicative of socio-economic barriers that obstruct educational continuity. Disadvantaged groups, particularly those from manual labour and lower agricultural households, including small and marginal farmers, attained significantly lower educational attainment than their salaried and self-employed counterparts. Here, both social and economic factors served as determinants of disparities in educational outcomes. This discourse underscores the need to improve educational conditions in rural settings by addressing school infrastructure, enhancing e-learning capabilities, elevating educational quality, and promoting parental involvement. The study examined disparities in Mean Years of Schooling (MYS), Expected Years of Schooling (EYS), and Human Development Index (HDI) across social categories, revealing a concerning underperformance in HDI, particularly pronounced in village contexts.

Field surveys suggested that high-income and forward-caste categories have been increasingly capitalising on the education system due to their ability to afford the associated costs, while Scheduled Caste and Backward Caste Households derived fewer benefits. Government schools have played a pivotal role in educating low-income households, yet the prevailing education structure perpetuated unequal benefits across both economic and social categories, as well as gender. The article emphasised the tension between the constitutional mandate of equality of opportunity and the stark reality observed in the inter-village and socio-economic categories. The study highlights the gap between the constitutional promise of equality of opportunity and the reality observed in village settings. Structural

inequalities embedded within village economies further exacerbate educational disparities. The census survey indicates that inequalities along economic, caste, and gender lines persist and manifest notably in the educational domain. While India's national literacy rate has improved, entrenched inequalities spanning generations have endured due to the state education policies enacted post-Independence, perpetuating class, caste, and gender disparities from primary to higher education. This skewed educational development, along with significant disparities, poses a challenge that leads to greater inequity and injustice within both the economic and social fabric of these communities. The effectiveness of existing policies remains to be determined in addressing these enduring issues.

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