



EXPLORING DETERMINANTS OF ACCESS TO HIGHER EDUCATION: A STUDY OF GRADUATE STUDENTS IN JAMMU DISTRICT"

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Received: 05 October 2024; Revised: 03 November 2024;

Accepted 07 November 2024; Publication: 15 November 2024

Abstract: Education is widely acknowledged as a foundational element in the progress of human resources, playing a crucial participation in navigating social, technological, economic, and national progress. Higher education, in particular, holds immense significance in shaping individuals and societies, equipping students with specialized knowledge, critical thinking skills, and the ability to drive innovation. It fosters personal growth while contributing to societal advancement, providing opportunities for economic mobility and reducing inequalities. This study explores the factors influencing access to higher education among graduate students in the Jammu district. It investigates the causes of inequality in higher education participation, shedding light on the barriers that hinder students from accessing educational opportunities. The research employs a stratified sampling method to select a sample of 395 students from various educational streams, including science, arts, commerce/management, and medical/engineering. Data was collected using a structured survey questionnaire that addressed factors such as socio-economic background, educational preparedness, availability of financial support, and government policies. The data was analyzed using chi-square tests and logistic regression. The findings aim to guide policymakers and educators in understanding the obstacles students encounter and provide suggestions to improve higher education accessibility in the region. By tackling the inequalities in access, this study seeks to promote a more inclusive and fair educational system in the Jammu district, ensuring that every student, no matter their background, has the chance to pursue higher studies.

Keywords: socioeconomic status, higher education, economic inequalities, occupation, income level.

To cite this paper:

Preeti Devi & Falendra Kumar Sudan (2024). Exploring Determinants of Access to Higher Education: A Study of Graduate Students in Jammu District. *Indian Journal of Applied Business and Economic Research*. 5(2), 311-338.

I. INTRODUCTION

Education serves as a fundamental pillar of human resource development, shaping societal, technological, economic, and national advancement (Upadhyay, 2022). Education is widely recognized as a critical factor influencing an individual's social and economic success, as it provides a pathway to improved opportunities and a better quality of life (OECD, 2020). Although global initiatives have made significant strides in promoting literacy and universal primary education (Kilag *et al.*, 2023; Reddy, 2023), the crucial importance of higher education has often been marginalized, particularly in developing countries such as India (Mishra & Aithal, 2023). Tertiary education holds a crucial influence in molding an individual's career and socioeconomic mobility. Higher education is important in today's world through its contribution to well-qualified graduates, personal development, and economic, and technological advancements (Nguyen, 2011). Higher education has important implications for nations' economic, political, and social-cultural development, sustainability, and global competitiveness (Eggins, 2010).

Access is defined as a phase wherein a student can register for the program and pay the initial fee (Walker, 2019). Walker emphasized that access to education is not merely a personal requirement but is also determined by external realities—like financial circumstances and governmental decisions—as well as internal influences such as individual determination or motivation from family members. Numerous factors, including demographic background, socio-economic status, and educational policies, play a significant role in shaping students' educational experiences and their academic outcomes.

Socioeconomic status refers to a person's relative position in society in terms of family income and wealth, political power, educational background, occupational prestige (Hossain *et al.*, 2022) access to resources and opportunities (Mistry, Benner, Biesanz, Clark, & Howes, 2010). However, numerous studies have consistently demonstrated that socioeconomic status plays a significant role in shaping academic achievement and outcomes (Reardon, 2011; Sirin, 2005). Socioeconomic factors play an evident role in creating educational inequities (Cruz and Firestone, 2022). According to **Rahman *et al.*, (2023)**, certain factors are identified as significant influences on academic performance i.e. **gender, occupational status, choice of education field, family background, and family income**. Socioeconomic status is a multifaceted construct that shows both social advantages and disadvantages (Duncan & Magnuson, 2012).

Academic success is also heavily influenced by personal motivation, determination, and the presence of supportive networks. Students from higher-income families typically have greater access to quality education, attending well-resourced schools that offer skilled teachers, up-to-date facilities, and a wide array of academic and extracurricular programs. In contrast, students from low-income households often attend poorly funded schools that lack essential resources, have inadequate infrastructure, and offer limited academic support—contributing to educational inequality.

Additionally, a family's economic status shapes how involved parents can be in their child's education. Wealthier parents are more likely to hold college degrees, which can positively impact their children's academic journey. They often have the financial means and available time to offer additional educational assistance, such as tutoring or enrolling their children in enrichment programs. On the other hand, parents with lower incomes may have had limited access to education themselves and may struggle to support their children academically due to financial pressures or demanding work schedules.

The importance of higher education in shaping individuals' future opportunities and contributing to societal development cannot be overstated. However, access to higher education remains unequal across various groups, with multiple factors influencing who gets to attend and succeed. This study aims to explore the role of **socioeconomic** conditions, **demographic variables** (such as gender, caste, and location), and **institutional policies** in determining access to higher education. This paper examines the key factors that determine access to higher education, focusing on the challenges and opportunities for promoting greater educational equity. Despite ongoing efforts to improve access, significant barriers such as limited resources, inadequate infrastructure, and the disparity between urban and rural areas continue to hinder equal opportunities for all. To effectively tackle these issues, it is crucial to implement policies and interventions that ensure every individual, irrespective of their socioeconomic class, has the chance to do well in higher education.

In conclusion, a collective effort from policymakers, educators, communities, and individuals is necessary to overcome the educational gaps created by socioeconomic factors and ensure fair access to higher education for all (OECD, 2018; Singh & Narayanan, 2023). In particular, the following research question was used to guide the process: What factors influence educational inequality in higher education? What are the key socioeconomic

factors that influence access to higher education? How do demographic variables such as gender, caste, and location affect access to higher education? What role do institutional policies and practices play in shaping access to higher education? The structure of the paper is outlined as follows: Section I presents the introduction, followed by Section II, which reviews the relevant literature and identifies research gaps. Section III outlines the research methodology, detailing the design, data collection methods, and analysis techniques. Sections IV present the analysis, findings, and discussion of the results. Section V concludes the paper by summarizing key insights, Section VI offers policy recommendations, Section VII discusses limitations and Section VIII suggests areas for future research.

II. LITERATURE REVIEW

A review of existing literature on factors influencing access to higher education will provide context to the study. This section should explore existing research on the topic. This study extends the attempts to identify the inequality in access to higher education and the factors causing it at the sub-national level (Khan, 2023). Inequality at broader societal and structural levels can contribute to disparities in higher education. The professional background of a family greatly impacts the selection of higher education pathways, with students from affluent households being more capable of sustaining long-term education financially. Students from low socioeconomic strata remain at a marked disadvantage in access to post-secondary education, and this disadvantage increases with college selectivity (Alon, 2009). Studies suggest that higher education in India has been exclusive on these lines and has not percolated to the weaker section of society (Deshpande and Yadav, 2006).

Empirical studies based on national sample survey data suggest that inequality in higher education has reduced (Desai and Kulkarni, 2008; Khan, 2015) but it is still high (Dubey, 2008, Srivastava, and Sinha, 2008). Students' socio-religious background, eligibility and economic status are important factors in determining access to higher education (Barooah, 2017; Basant and Sen, 2014). Education is widely considered one of the most powerful instruments for breaking down economic inequality and fostering nations' sustainable development (Alam *et al*, 2020). Moreover, many studies have consistently shown that socioeconomic status is a significant predictor of academic performance (Lawson and Farah, 2017; Davis, 2019) (Sirin, 2000; Schneider & Preckel, 2017; Rodríguez-Hernández *et al.*, 2020). Students from

high socio-economic backgrounds face challenges in their educational journey (Erdem and Kaya, 2023; Poon, 2020).

The correlation between education and socioeconomic status is bidirectional, with each influencing the other (Ware, 2019). Access to higher education is determined by unequal access to social standing and economic resources and is commonly evaluated by family income, parent's education level and occupation (Kincaid *et al.*, 2017). The success rate of low-income students in science, technology, engineering, and mathematics disciplines is much lower than that of students who do not come from underrepresented backgrounds (Doerschuk *et al.*, 2016). Factors like mothers' education, access to technology, in-person education, and attending high-quality accredited universities positively impacted performance (Mena and Bulla, 2022). Parents from economically disadvantaged families tend to place less emphasis on their children's education. College students from these backgrounds also tend to have fewer informational resources about higher education (Brown, Wohn, & Ellison, 2016).

In addition, it has been found that parents with low socioeconomic backgrounds were less interested in educating their children (Vadivel *et al.*, 2023). Fitzgerald's (2024) study has reviewed the interconnectedness of the most common influencing factors, such as socioeconomic status, parental education, previous school education, gender, and geographical location, which have cumulative impacts on higher education inequality over the years. Despite the widespread access to higher education, evidence suggests the existence of barriers and obstacles to participation, often deeply rooted in individuals' socioeconomic backgrounds (Herbaut and Koen, 2019; Mishra, Gupta, and Shree, 2020) in the global context. Czarnecki (2018) identified that differences based on socioeconomic background remained a decisive factor in determining access. Santelices and Horn (2022) highlighted family background and high school academic performance are significantly related. For Jao and McKeever (2006), parental education, especially the father's level of education attainment and social caste, significantly influenced educational attainment, particularly at the secondary and postsecondary levels.

Chan and Ngok (2011) identified geographical location as a factor that influenced educational equality in higher education. Witenstein and Palmer (2013) highlighted the influence of structural, as well as cultural factors, impacting equitable access to higher education. Gui and Alam (2024) reveal that higher education is accessible to students from different socioeconomic status backgrounds, but enrollment disparities persist based on socioeconomic

status. Tomaszewski (2022) stated that individuals from poorer socioeconomic backgrounds tend to encounter evident setbacks, delays, and economic inequalities. Those hailing from higher socioeconomic backgrounds generally enjoy greater access to education opportunities and resources, such as better school choices, homeschooling and academic assistance (Alam, 2021). Conversely, individuals from low family socioeconomic circumstances often lack the proper resources, potentially hindering their participation and what they can achieve (Tompsett and Knoester, 2023; Farooqi, 2019).

Research demonstrated that socioeconomic status continues to be a significant determinant of education equality, enduring through China's reforms and opening up to the world economy, and this influence remains undiminished despite increased enrollment (Wu, 2017). Higher education is also a well-recognized mechanism for promoting intra-generational mobility since university qualifications open the path to the most lucrative positions within the occupation structure (Desjardins & Lee, 2016; Heckman et al., 2016). Gender, caste, and geographic location also play crucial roles. For instance, research has shown that women and students from marginalized castes may face more barriers to access to higher education (Gibson & McKenzie, 2015; Desai, 2018). Persistent unequal access to education opportunities is evident between rural and urban areas (Borer and Fonseca, 2019). Rural students often lack access to educational resources and face logistical barriers (Jha, 2019). Various studies have highlighted the role of institutional policies such as affirmative action, scholarships, and diversity programs in promoting access for disadvantaged groups (Morrow, 2016). However, the effectiveness of these policies is often debated.

Although there has been extensive research on access to higher education globally and within India, a distinct gap remains in understanding the **specific factors influencing access to higher education** in Jammu district, particularly for **graduate students** from different educational streams (science, arts, commerce, medical and engineering). Previous studies have predominantly focused on broader, nationwide trends or particular demographic groups but have often overlooked regional disparities and the unique challenges faced by students in Jammu district. Most studies that analyze access to higher education group students together without differentiating based on educational streams (science, arts, commerce, medical and engineering).

While the role of socioeconomic status in educational access has been well documented, there is limited research that comprehensively explores how social

factors, family background, and peer influences interact with socioeconomic status to shape access to higher education, particularly in regions like Jammu, where cultural and societal norms might have a stronger influence. By addressing these gaps, this research seeks to offer an in-depth analysis of the elements that shape higher education access specifically for graduate students in the Jammu district, contributing valuable insights to policy and educational reforms in the region.

III. OBJECTIVES AND METHODOLOGY

Keeping the above background and theoretical and empirical review of literature in view, the study will be an attempt to analyze the following objectives:

- To analyze the primary socioeconomic elements that impact access to higher education.
- To examine the impact of demographic variables (gender, caste and location) on access to higher education.
- To evaluate the influence of institutional policies and practices on access to higher education.

III.1. Hypotheses

In consonance with the objectives of the study, this study verified the following hypotheses:

- Socioeconomic factors (e.g., income level, and family background) are significant determinants of access to higher education.
- Demographic variables such as gender, caste, and geographic location significantly impact access to higher education,

III.2. Sampling techniques

This section outlines the approach and techniques employed in this study to explore the factors predicting access to higher education in the Jammu district. The research adopts a **quantitative approach** with **stratified sampling** to collect data from graduate students across different educational streams. The target population for this study consists of **graduate students** currently enrolled in higher education institutions in Jammu district. Students are from **different educational streams** such as science, arts, commerce, and others, to ensure a diverse representation of the graduate students. A total of **395 graduate students** will be selected through stratified sampling. The size of each stratum

is proportional to its representation in the overall graduate population in the Jammu district. The study aimed to identify predictors of higher education using several demographics, socioeconomic, and spatial variables that were informed by previous literature (Jha & Kumar, 2017; Khan, 2022).

III.3 Data Collection

A structured **survey questionnaire** will be used as the primary tool for data collection. The survey will include closed-ended questions aimed at gathering quantitative information about various factors influencing access to higher education, such as:

- Socio-economic background (family income, parental education)
- Educational stream and preparedness
- Geographical location (urban or rural)
- Availability of financial support (scholarships, loans)
- Government policies and their impact
- Peer and family influences
- Cultural factors

III.4. Data Analysis

After data collection, the responses will be coded and entered into statistical software, such as SPSS or Excel. Statistical methods, including descriptive statistics and inferential techniques like Chi-square tests and logistic regression, will be utilized to test the relationships between factors (socioeconomic background, educational stream) and access to higher education.

To frame the equation for the Multinomial Logistic Regression (MNLR) model based on the factors influencing the choice of professional courses (commerce and management vs medical and engineering), let's start with the basics of the Multinomial Logistic Regression (MNLR) formulation. Multinomial Logistic Regression (MNLR) is applied when the dependent variable consists of more than two distinct categories, which in this case would be the choice of professional course (commerce and management, medical and engineering, and possibly other courses).

The general form of the Multinomial Logistic Regression Model

Let the dependent variable Y represent the course choice, where:

- $Y=1$ represents choosing commerce and management,
- $Y=2$ represents choosing medical and engineering,

- $Y=3$ represents choosing other courses (baseline category).

The General Equation

In multinomial logistic regression, the log odds for each possible outcome are calculated in relation to a designated baseline category (in this case, **other professional courses**). This is done by comparing each course (commerce and management and medical and engineering) to the baseline category.

The equation for **each outcome** (1 for commerce and management, and 2 for medical and engineering) is:

$$\log\left(\frac{P(Y=j)}{P(Y=3)}\right) = \beta_j0 + \beta_j1 \text{ Father's Education} + \beta_j2 \text{ Father's Occupation} + \beta_j3 \text{ Mother's Education} + \beta_j4 \text{ Mother's Occupation} + \beta_j5 \text{ Parental Income} + \beta_j6 \text{ Sibling Size} + \beta_j7 \text{ Type of School} + \beta_j8 \text{ Career Guidance Programme} + \beta_j$$

Where:

- $j \in \{1,2\}$ represents the two outcomes being modelled (commerce and management and medical and engineering).
- $P(Y=j)$ is the probability of choosing a particular professional course ($j=1$) for commerce and management and ($j=2$) for medical and engineering).
- $P(Y=3)$ is the probability of choosing the baseline category (other professional courses).
- $\beta_j0, \beta_j1, \dots, \beta_j8$ are the regression coefficients for each category j (commerce and management or medical and engineering).
- ϵ_j is the error term for each category.

III.5. Overview of the study area

Jammu is a district located in the Jammu and Kashmir Union Territory of India. It is one of the most significant districts in the region, both historically and culturally, and serves as an administrative and educational hub. The district encompasses a diverse population, rich cultural traditions, and a blend of both urban and rural characteristics. Understanding Jammu's unique demographic, socioeconomic, and geographic conditions is essential to the study of access to higher education in the region. Jammu city has higher per capita income due to its urban status and proximity to administrative centres, while rural areas lag economically, affecting families' ability to support higher education for their

children. In terms of education, the Jammu district has several universities, colleges, and institutions offering higher education, but most of these are concentrated in the city, making it difficult for students from rural areas to access them.

The socio-economic landscape of Jammu district is marked by a significant gap between urban and rural populations. Urban areas, particularly Jammu city, offer more employment opportunities, better access to healthcare, and a higher standard of living. However, rural areas are often economically dependent on agriculture, which is subject to unexpected changes in climate and market fluctuations. Many rural families struggle to afford the cost of higher education, which includes tuition fees, transportation, and other associated expenses. This economic barrier disproportionately affects rural students, hindering their ability to access quality higher education. This disparity contributes to the lower enrollment rates for higher education among rural students, particularly those from marginalized groups such as girls, lower caste populations, and economically disadvantaged communities. The government of Jammu and Kashmir has made significant strides in providing scholarships, and financial aid, and establishing institutions in rural areas. However, there is still room for improvement in terms of creating a more inclusive system that addresses the specific needs of disadvantaged groups.



Source: www.mapsofworld.com

IV. FINDINGS AND DISCUSSION

Table 1: Distribution by the respondent by an educational stream

<i>Education stream</i>	<i>Frequency</i>	<i>Per cent</i>
Arts	202	51.13
Science	99	25.06
Commerce and Management	51	12.91
Medical and Engineering	43	10.9
Total	395	100

Source: Field survey

The table depicts the classification of respondents based on their education courses. The education of the respondent has a significant impact on their attitude and knowledge level. Out of the total respondents, 51.13 opted arts stream followed by the science stream at 25.06 per cent, the commerce and management stream at 12.91 per cent and the medical and engineering stream at 10.9 per cent.

IV.1. Social inequalities in access to higher education

The literature review indicates that historically marginalized communities still face limited access to higher education. At the same time, regional disparities have grown, and social inequalities persist. Economically disadvantaged groups, socially excluded populations, and those in certain areas of the country encounter inequitable access to education. It becomes essential to examine which sectors of higher education are accessible and to which groups, even when overall access appears broad. Social inequalities in educational opportunities are evident through the under-representation of learners from lower socio-economic backgrounds in various fields of study, particularly reflecting a gender and societal divide.

Table 2: Distribution of respondents by gender

<i>Educational stream</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
Arts	129 (32.65)	73 (18.48)	202 (51.13)
Science	62 (15.7)	37 (9.36)	99 (25.06)
Commerce/Management	27 (6.83)	24 (6.08)	51 (12.91)
Medical/Engineering	29 (7.35)	14 (3.55)	43 (10.9)
Total	247 (62.53)	148 (37.47)	395 (100.00)

Source: Field survey

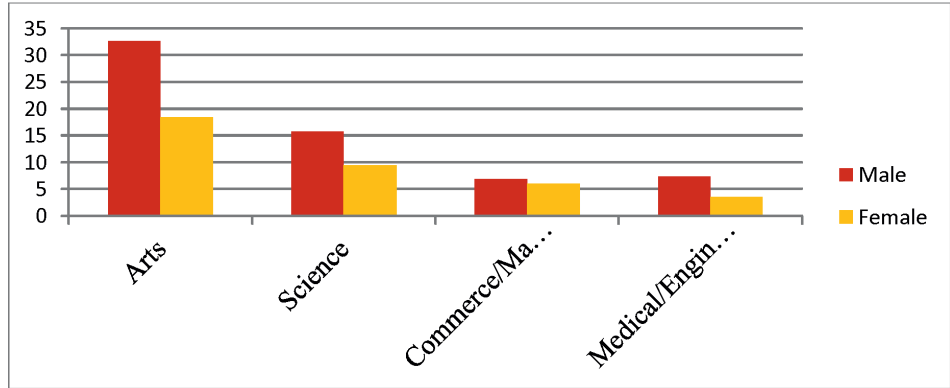


Fig. 1: Distribution of respondents by gender

Source: Field survey

The table's data clearly illustrates the trend of unequal access to higher education opportunities based on social class, gender, and individuals' geographical locations. In all the educational streams women were under-represented. The number of males was higher than that of the number of females in each educational stream. The results are also supported by (Sarma and Daimary, 2024) enrollment of females specifically in high-skilled courses is less than that of the male population.

Table 3: Distribution of respondents by social caste

Educational stream	SC	ST	OBC	General	Total
Arts	47 (11.89)	15 (3.79)	50 (12.65)	90 (22.8)	202 (51.13)
Science	20 (5.06)	4 (1.01)	14 (3.54)	61 (15.45)	99 (25.06)
Commerce/ Management	6 (1.51)	-	9 (2.27)	36 (9.13)	51 (12.91)
Medical/Engineering	5 (1.26)	2 (0.50)	8 (2.02)	28 (7.12)	43 (10.9)
Total	78 (19.72)	21 (5.3)	81 (20.48)	215 (54.5)	395 (100.00)

Source: Field survey, 2022

Similarly, underprivileged social groups encounter barriers to accessing prestigious fields of study such as medicine, engineering, commerce, and management. Studies reveal that these professional disciplines are predominantly pursued by students from higher caste backgrounds. Respondents from SCs

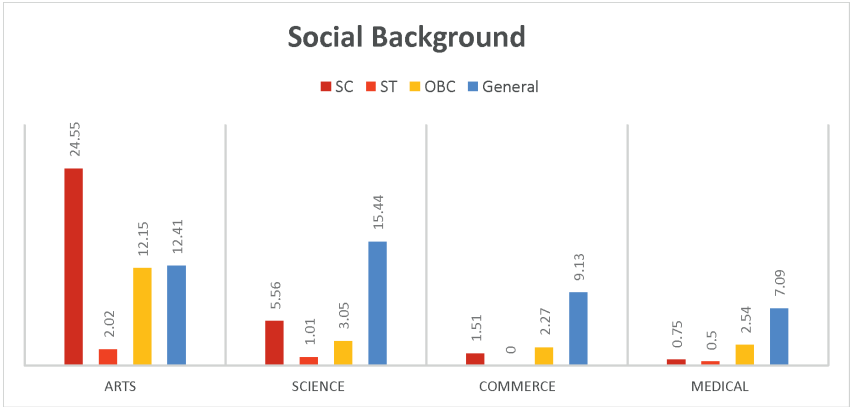


Fig. 2: Social background of respondents

Source: Field survey

and STs category mostly studied the arts and science subjects. Moreover, studies (Sabharwal and Malish, 2016) have also shown that socioeconomically advantaged students are over-represented in professional courses whereas the students belonging to the lower caste opted the less skilled courses. The another study by (Choudhry and Kumar, 2024) youth belonging to scheduled caste and scheduled tribe backgrounds are less likely to access professional courses in higher education than their upper caste counterparts. These results are also important for the recently adopted National Education Policy 2020, which aims to make the education system more inclusive.

IV.2. Impact of Family Background Across Urban and Rural Divides

Regional factors, such as urban or rural settings, are increasingly crucial in shaping educational outcomes. Educational resources are distributed unevenly

Table 4: Distribution of respondents based on location

Educational stream	Rural	Urban	Total
Arts	119 (30.12)	83 (21.01)	202 (51.13)
Science	41 (10.37)	58 (14.69)	99 (25.06)
Commerce	20 (5.06)	31 (7.85)	51 (12.91)
Medical	15 (3.8)	28 (7.1)	43 (10.9)
Total	209 (49.35)	186 (50.65)	395 (100.00)

Source: Field survey

between urban and rural areas, and households in these regions differ significantly in socioeconomic conditions, living standards, and educational practices. The analysis presented in the table illustrates how regional factor affects the inequalities in access to higher education.

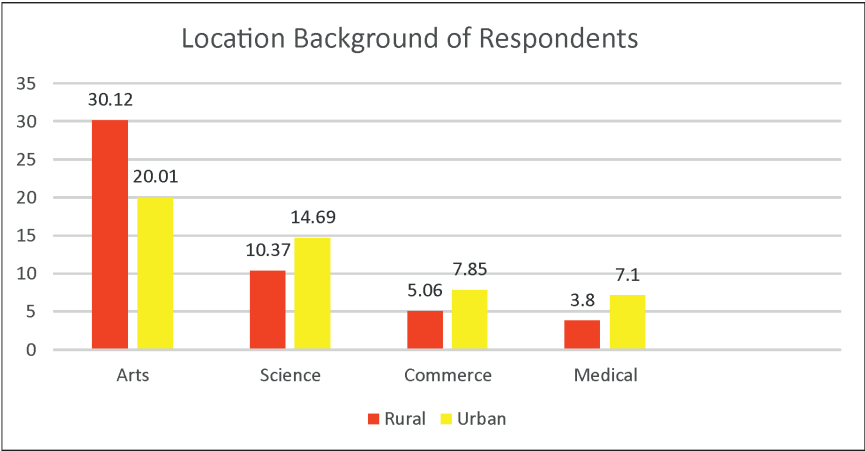


Fig. 3: Location background of respondents

Source: Field survey

This table presents the distribution of individuals across different educational streams based on their rural or urban residence. Science, commerce and management, and medical and engineering streams have a larger proportion of individuals from urban areas. However, the arts stream shows a greater representation of individuals from rural areas than from urban areas. This pattern reflects that individuals from rural areas are more likely to pursue arts education, while science, commerce and management, and medical and engineering fields tend to attract a larger urban population.

Individuals from rural areas face limited educational choices, whereas those in urban areas typically have moderate access to a wider variety of courses. This allows urban residents to pursue education that aligns more closely with their preferences. Additionally, the participation rate in professional courses among respondents from urban areas exceeds that of those from rural regions. It has been found that professional streams were studied by the respondents residing in the urban areas whereas respondents from rural locations studied streams such as arts and sciences. The data is also supported by (Ntshoe, 2003) beyond access, people in the rural area are disadvantaged in the higher education resources available to them and they experience lower rates of return than individuals in urban areas.

IV. 3. Key Determinants of Access to Higher Education

Multinomial Logistic Regression (MNLR) is a statistical technique used when the dependent variable consists of more than two categories. It serves as a predictive tool to interpret data and examine the relationships between categories of the dependent variable and various independent variables, which can be continuous or categorical. The analysis involves breaking the dependent variable into paired comparisons across categories (Field, 2009). In this research, the dependent variable—access to higher education—is divided into three categories: (a) access to professional courses such as medicine and engineering, (b) access to professional courses in commerce and management, and (c) access to general higher education courses. Independent variables analyzed include (a) parental income, (b) father’s level of education, (c) mother’s level of education, (d) father’s occupation, (e) mother’s occupation, (f) type of school attended during high school, (g) availability of career guidance programs, and (h) number of siblings in the family. These variables were analyzed using the stepwise logistic regression method, and the findings are presented below.

Table 5: Model Summary and Fit Statistics for Multinomial Logistic Model

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	Df	Sig.
Intercept	774.751			
Final	655.316	119.435	66	.000

The model-chi-square value of 283.31 is statistically significant at the 1% level, indicating that the model effectively predicts the outcome variables.

Table 6: Multinomial Logistic Regression Goodness-of-Fit

	Chi-Square	Df	Sig.
Pearson	691.338	390	.014
Deviance	563.895	390	.859

Goodness of fit measures how well the model aligns with the data. The Pearson and deviance statistics assess whether the predicted values differ significantly from the observed ones. When these statistics are not significant, it indicates that the predicted values closely match the observed data, signifying a good model fit. In this case, the deviance statistic suggests the model fits well ($p = 0.85$, much higher than 0.05). However, the Pearson test shows that the predicted values differ significantly from the observed values ($p < 0.05$).

Table 7: Multinomial Logistic Regression Pseudo R-Square

Cox and Snell	.264
Nagelkerke	.291
McFadden	.129

Cox and Snell's Pseudo R-square value is 0.264, while Nagelkerke's is 0.291. These values are quite comparable and indicate effects of a relatively moderate size.

Table 8: Multinomial Logistic Regression Likelihood Ratio Test

Effect		Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	655.316 ^a	.00	0	.
Father education	678.906	23.590	9	.005
Father occupation	664.867	59.551	9	.004
Mother education	668.533	10.217	12	.003
Mother Occupation	673.223	17.907	12	.001
Parental income	656.642	28.326	3	.000
Sibling size	667.567	12.252	12	.000
Type of School	669.514	14.198	6	.027
Attending a career guidance programme	660.336	41.020	2	.017

The chi-square statistic represents the difference between the -2 log-likelihoods of the final model and a reduced model. The reduced model is created by excluding a specific effect from the final model. The null hypothesis assumes that all parameters related to the excluded effect are equal to zero. Since omitting the effect does not change the degrees of freedom, the reduced model is equivalent to the final model. The likelihood ratio tests indicate the significance levels of the predictor variables included in the final model. Of the eight predictor variables analyzed, six are found to significantly predict the outcome variable.

Table 9: Analysis of Multinomial Logistic Regression Parameters

<i>Higher Education Courses</i>		<i>B (SE)</i>	<i>95% Confidence Interval for Odds Ratio</i>		
			<i>Lower</i>	<i>Odds Ratio</i>	<i>Upper Bound</i>
Professional course (Commerce and Management)	Intercept	-1.116 (.821)			
	Father Education	1.583 (.311)***	2.648	4.868	8.947
	Father occupation	3.521(.132)***	4.475	3.804	10.599
	Mother education	.626 (.216)**	1.225	1.870	2.855
	Mother Occupation	-.193(.670)	.222	.824	3.063
	Parental income	.759 (.154)***	1.578	2.135	2.889
	Sibling size	-1.353 (.238)***	.161	.257	.411
	Type of School	.826 (.211)***	1.512	2.285	3.453
	Attending a career guidance programme	-1.569 (.307)***	.114	.208	.380
Professional course (Medical and Engineering)	Intercept	.049 (.690)			
	Father education	.662(.724)*	.469	1.939	8.021
	Father occupation	-.140(1.219)**	.080	.869	9.474
	Mother education	.565 (.200)**	1.188	1.759	2.605
	Mother Occupation	-.166 (.301)	.470	.847	1.528
	Parental income	.197 (.041)	.923	1.218	1.608
	Sibling size	-1.056 (.177)***	.246	.348	.493
	Type of School	.392 (.191)*	1.018	1.479	2.150
	Attending a career guidance programme	-.604 (.234)*.547	.346	.547	.864

Note: R2 = .315 (Cox or Snell), .357 (Nagelkerke). Model χ^2 (10) = 197.411, $p < .001$. * $p < .05$, ** $p < .01$, ***

Comparing Access to Professional Courses in Commerce and Management with General Higher Education

Access to Professional Courses (Commerce and Management) Relative to General Courses: Mother's Education: The Wald test statistic for mother's education was 8.420 ($p < 0.05$), indicating a significant influence on children's access to professional courses (commerce and management) compared to general courses. The odds ratio suggests that with each unit increase in mother's education, the likelihood of children enrolling in professional courses rises by a factor of 1.87, assuming other variables remain constant.

Type of School: The type of school attended significantly predicted access to professional courses. The Wald $\chi^2 (1) = 15.398$ ($p < 0.001$) and odds ratio of 2.285 indicate that shifting from government to private schools increases the likelihood of enrolling in commerce and management courses compared to general ones.

Father's Education: Father's education was a significant predictor, with $b = 1.583$, Wald $\chi^2 (1) = 25.969$ ($p < 0.001$). The odds ratio of 4.868 means that higher father education substantially increases the likelihood of accessing professional courses.

Father's Occupation: The prestige of the father's occupation significantly influenced enrollment in professional courses. With $b = 3.521$, Wald $\chi^2 (1) = 15.969$ ($p < 0.001$), the odds ratio suggests a 3.584-fold increase in likelihood for children accessing professional courses.

Mother's Occupation: The mother's occupation was not a significant predictor ($b = -0.193$, Wald $\chi^2 (1) = 0.305$, $p > 0.05$).

Parental Income: Parental income was a significant predictor, with $b = 0.759$, Wald $\chi^2 (1) = 24.209$ ($p < 0.001$). The odds ratio of 2.135 shows that as income rises, access to professional courses also increases.

Career Guidance Programs: Students who attended career guidance programs were more likely to enroll in professional courses. The odds ratio of 0.208 ($b = -1.569$, Wald $\chi^2 (1) = 26.057$, $p < 0.001$) indicates the absence of such programs significantly reduces access.

Sibling Size: Larger sibling sizes negatively impacted access to professional courses. With $b = -1.353$, Wald $\chi^2 (1) = 32.262$ ($p < 0.001$), the odds ratio of 0.258 suggests access decreases as sibling count rises.

Access to Medical and Engineering Courses Compared to General Courses: Father's Education: Father's education significantly predicted access, with Wald = 0.835 ($p < 0.05$). The odds ratio of 1.939 indicates a positive correlation between father's education and enrollment in medical and engineering courses.

Father's Occupation: Father's occupation was a significant factor ($b = -0.140$, Wald $\chi^2 (1) = 24.969$, $p < 0.01$), with an odds ratio of 0.869 showing that children of highly educated fathers are more likely to enroll in professional courses.

Mother's Education: Mother's education significantly influenced access, with Wald = 7.960 ($p < 0.05$). The odds ratio of 1.759 shows that higher maternal education boosts chances of enrolling in medical and engineering courses.

Type of School: Schools attended significantly predicted access to medical and engineering courses, with $b = 0.392$, Wald $\chi^2 (1) = 4.211$ ($p < 0.05$). The odds ratio of 1.479 indicates private schools positively impact access.

Mother's Occupation: Mother's occupation was not a significant predictor ($b = -0.166$, Wald $\chi^2 (1) = 0.305$, $p > 0.05$).

Parental Income: Parental income significantly predicted access ($b = 0.197$, Wald $\chi^2 (1) = 1.945$, $p < 0.05$), indicating a positive correlation between higher income and enrollment in medical and engineering courses.

Career Guidance Programs: Career guidance programs significantly impacted enrollment, with $b = -0.604$, Wald $\chi^2 (1) = 6.674$ ($p < 0.05$). An odds ratio of 0.547 suggests a lack of such programs lowers access.

Sibling Size: Larger sibling sizes negatively affected access to medical and engineering courses, with $b = -1.056$, Wald $\chi^2 (1) = 35.390$ ($p < 0.001$). The odds ratio of 0.348 highlights decreasing chances with increasing siblings.

IV.4. What are some steps the government could take to reduce economic inequality and give people the opportunity to improve their chances of moving up the income ladder?

Economic mobility depends on various factors, including family background, environment, social networks, and personal attitudes. Government initiatives,

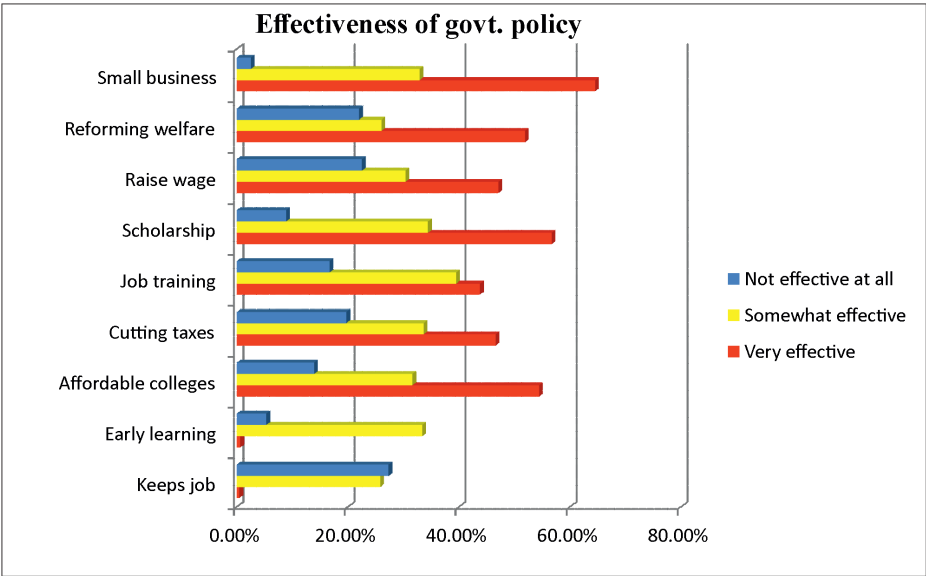


Fig. 4: Effectiveness of government policy to reduce economic inequality

Source: Field survey

especially in education, play a crucial role in offering opportunities. Additionally, tax policies and welfare programs can contribute significantly to helping individuals achieve a higher socioeconomic status compared to their parents.

Inequality restricts access to education and limits choices for marginalized groups. Tackling inequality requires investments in infrastructure, financial support, and efforts to promote diversity and inclusion. A fair education system ensures that everyone receives the resources needed to succeed, breaking the persistent cycle of poverty. Marginalized individuals often require additional resources and opportunities to realize their full potential. Therefore, comprehensive changes must focus on empowering individuals to achieve upward mobility rather than merely providing temporary assistance. When asked about government measures to prevent economic setbacks, most respondents highlighted strategies like improving education, early learning programs, affordable higher education, scholarships, welfare reforms, and job preservation. Some also considered policies like increasing wages, offering job training, and reducing taxes as moderately effective.

Education, particularly early education, is closely tied to economic mobility. High-quality early childhood education equips children with critical skills necessary for success at every stage of life. Respondents emphasized the importance of early learning, as children from low-income families face disadvantages from the outset, making it challenging for them to recover. Expanding early education opportunities for these children could result in better economic outcomes for society as a whole.

Additionally, some respondents prioritized rural infrastructure projects, recognizing their potential to boost productivity, create better jobs, raise incomes, and encourage savings—ultimately supporting economic mobility. Meanwhile, access to elite universities remains limited for low-income students, preventing them from benefiting equally from resource-rich environments and undermining the ideal of equality.

V. CONCLUSION

This research concludes that socioeconomic and demographic factors significantly affect access to higher education. The findings indicate **gender, caste, and regional disparities** in access to higher education. Males and students from **higher caste** and **urban backgrounds** are more likely to pursue **professional courses** like **engineering, medicine, and commerce**, while

females, SC/ST students, and those from **rural areas** are underrepresented in these fields. Although more females are opting for the arts stream, there is a gendered divide in professional courses. Males dominate in technical and medical fields, while females are more likely to pursue arts and some science subjects. This suggests that societal norms may still influence career choices based on gender.

The data reflects the over-representation of general caste students in professional fields, while SC/ST students continue to be over-represented in arts and science streams. The socioeconomic barriers faced by these groups limit their access to fields with better career prospects, reinforcing structural inequalities. Urban students have more access to professional courses, while rural students are more concentrated in arts. This demonstrates that students from rural areas face multiple disadvantages, including limited resources, fewer educational institutions offering professional courses, and lower availability of career guidance.

The study highlights the significant role of socioeconomic, social, and institutional factors in determining access to higher education, particularly professional courses like commerce, management, and medical and engineering programs. Key determinants such as parental education, occupation, income, and the type of school attended were found to significantly influence whether students pursue professional or general courses. Additionally, attending career guidance programs and having fewer siblings also positively impacted students' chances of accessing higher education. However, factors like the mother's occupation did not show a significant effect. Economic inequality remains a critical barrier, and addressing these disparities is essential to providing equal opportunities for all students to access higher education and improve their socio-economic status.

VI. RECOMMENDATIONS

There is a pressing need for educational reforms that focus on creating equal opportunities for all students, irrespective of gender, caste, and location. This could involve incentivizing higher participation from disadvantaged groups in high-value professional courses, improving access to career guidance, and enhancing the quality of education in rural areas.

Governments should prioritize high-quality early childhood education to equip children from disadvantaged backgrounds with the foundational skills needed for future academic success. Making higher education more accessible

and affordable can help bridge the gap for students from low-income families. By implementing measures such as scholarships, grants, and low-interest loans, financial barriers can be reduced, ensuring equal opportunities for all students to pursue their academic aspirations.

Schools should provide comprehensive career counselling to help students make informed decisions about their educational and career life, particularly in fields with higher earning potential.

Investment in infrastructure, especially in rural areas, can create more job opportunities and improve access to education, which in turn enhances upward economic mobility.

Encourage rural students to pursue higher education by making it more financially viable, addressing the cost of education and the economic disparity between rural and urban areas. Implement **outreach programs** and **career counselling** services in rural areas to increase awareness about professional courses and provide guidance on how to pursue them.

The government should implement policies that reduce income inequality, such as increasing wages, providing job training, and reforming welfare systems to better support low-income families.

By addressing these recommendations, governments can work toward reducing educational disparities and enabling more individuals to climb the economic ladder, thereby promoting greater social mobility and equality.

VII. LIMITATIONS

While this study provides meaningful insights, certain limitations should be noted. Primarily, the research was confined to graduate students within the Jammu district, which restricts the applicability of the findings to other regions or educational levels. Second, while a stratified sampling approach was used to ensure diversity across different academic streams, the sample size and selection may not fully capture the nuances of every subgroup within the broader student population. Finally, the study employs a cross-sectional design, which collects data at a single point in time. This approach restricts the ability to determine causal relationships between predictors, such as parental education and income, and access to higher education. Longitudinal studies would be more effective in examining how these factors influence educational outcomes over time. If the sample is not representative of the broader population, the findings may not generalize well.

VIII. FUTURE RESEARCH DIRECTION

Future research could explore the long-term effects of socio-economic factors, such as parental education and income, on students' educational attainment and career success. Longitudinal studies would allow researchers to track the impact of these factors over time, providing a deeper understanding of how early education, family background, and economic support influence upward mobility. The rise of online learning and educational technology offers new avenues for increasing access to higher education. Future research could investigate how these innovations impact students from disadvantaged backgrounds, particularly in terms of affordability, flexibility, and the quality of education received.

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