

Bridging the Gap: An Empirical Analysis of Education, Economic Outcomes, and Social Inclusion among Minority Communities in India

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Abstract: A persistent development challenge in India and worldwide, educational inequality still constitutes a barrier to long-term economic prospects for populations and social hierarchies. In India, despite decades of policy initiatives to improve education access for all, minority and underserved populations have lower levels of educational attainment, drop-out rates are higher for these groups and there is limited access to quality programs (Choudhury et al., 2023). There are persistent inequalities in access to, quality of and outcomes from education (OECD, 2023; Inequality of Opportunity in Education, 2025), related to socioeconomic background, geographical location, caste identity and community marginalisation. Such differences are grounded in the country's history of socioeconomic stratification and exacerbated by spatially-dispersed educational infrastructure, variations in teacher quality, and household resource constraints (Choudhury et al., 2023; Turner & Hanushek, 2024). Education's importance as the foundation of human development is universal; unsurprisingly, it serves not only as a driver for individual economic mobility, but also a force in shaping inclusive societies and mitigating structural inequities (Hanushek 1979; Deming 2025). Economists and education researchers have traditionally studied how higher levels of education increase people's access to employment, incomes earned, and labour force participation (Hanushek, 1979; Deming, 2025); evidence from global comparative research also indicates the contribution of equitable education systems to financial inclusion and overall economic participation (Nature Humanities and Social Sciences Communications, 2025). Yet, it is less clear the extent to which education impacts other dimensions of social inclusion – such as civic engagement, participation in community organizations or services, and equitable treatment in social institutions contexted by enduring social hierarchies and discrimination (Ben Brik & Brown, 2024).

Keywords: Social Inclusion, Economic Outcome, Inclusive Growth, Social Inclusion Index.

INTRODUCTION

It has been stressed by academia that education needs to be explored in relationship with economic development and social inclusion for a complete grasp of its role on development. Education builds cognitive, non-cognitive and technical skills that are closely associated with labor market prospects (White, 1982; OECD, 2023). In addition, inclusion in education systems is considered as crucial for fostering participation, agency and social cohesion (Mezzanotte, 2022; European Agency for Special Needs and Inclusive Education, 2018) especially where learners from minority or marginalized groups have equal access to both meaningful and quality learning. In fact, inclusive education is known to enable the creation of social networks, and improve the communication skills and sense of belonging among learners, all factors that are key in long-term social inclusion (European Agency for Special Needs and Inclusive Education, 2018). However, evidence shows that achievement in education does not necessarily lead to equitable economic rewards and full social integration for minorities, as it is faced with structural barriers in labor market, stereotype, and discrimination

which continue even beyond the end of schooling (Assari & Zare, 2024; Whitcomb & Singh, 2020).

Despite the extensive investigation of education inequality and its effects on economic outcomes, previous works suffer from limitations that prevent their application to integrated policy measures. A good part of the literature has addressed one item – the access to education, labour market results or social exclusion taken singly from each other (Explore differential education 2024; OECD, 2023). Although international literature on inclusive education has extensively covered the issue, it mostly targets educational systems in developed contexts by treating social inclusion as a concept rather than as an empirically measurable outcome related to economic participation (Ben Brik & Brown, 2024; Mezzanotte, 2022). Further, in India, whereas a lot of work has focused on documentation of disparities in school attendance across caste and wealth groups (Choudhury et al., 2023; Inequality of Opportunity in Education, 2035), not many papers apply an integrated empirical framework that takes into account the impact of education on economic outcomes as well as indicators of

social participation at the individual or local community level.

This gap matters, since one-dimensional analyses lead to disjointed policy responses that ignore the ways in which educational access, economic opportunity, and social integration all influence each other. For example, enhancing schooling attainment may increase one's potential income opportunities; however, in the absence of concomitant decreases in labor force discrimination and marginalized community experiences, both the values and returns to education will be suboptimal (Assari & Zare, 2024; Whitcomb & Singh, 2020). Likewise, the international evidence emphasizes that policies for social inclusion without considering skill accumulation tend to generate modest economic recovery for disadvantaged populations (Nature Humanities and Social Sciences Communications, 2025; Ben Brik & Brown, 2024).

In this context, it is worthy to empirically examine the correlates of educational attainment and social inclusion among minority /underrepresented groups in India. We aim to contribute our understanding in three areas: (1) the types of economic impacts that education yields—e.g., employment status, income, and occupational prestige; (2) how educational attainment is linked to identity-based measurements of social inclusion including civic participation, self-reported sense-of-belonging, and community involvement; and (3) whether or not the economic impacts of education explain variations in social inclusion. Through an integrative empirical approach, the paper aims to offer a full picture of the education–economy–social inclusion triangle.

In order to address these aims, the study employs nationally representative microdata from India (i.e., latest rounds of national household surveys) along with robust econometric methods (multivariate regressions, structural equation modelling techniques and decomposition methods), whereby it controls for potential confounders/mediators of education and isolates its impact. This method allows a detailed look at both direct and indirect pathways through which education is linked to economic and social gains.

This study is contributory in several respects. Theoretically, it enhances human capital and social inclusion frameworks as they relate to the sociopolitical stratification in the country of India. Not Signed Up Yet? Empirically, it contributes to a gap by offering more recent micro-level evidence in tandem on education, economic engagement, and social inclusion of minority groups. From the policy perspective, the results can draw implications for integrated education and labor market policies that not only broadens educational access, but also guarantees that such access translate into more equal economic opportunity and social adjustment. The study seeks to serve as a basis of evidence on these linkages in order to inform development strategies favorable for both inclusivity and sustainability in India and similar contexts.

LITERATURE REVIEW

2.1 Education and Minority Development

There are few things that people agree on in as much as the importance of education to human development and social mobility. In a society dominated by stratification like India, access to and outcomes in education continue to be distributed unequally across the social groups. Minority and marginalized groups continue to experience formidable obstacles in access, participation, and quality of education despite repeated policy efforts to make education universal (Desai & Kulkarni, 2008; OECD, 2023).

Published studies based on observational data from Indian context find large differences in school enrolment, completion rates and education achievement between various caste, religion, region and SES groups (Asadullah & Yalonetzky, 2012; Choudhury et al., 2023). Minority children are likely to go to low resourced schools and have higher dropout rates and lower educational attainment, especially at levels beyond secondary education (Kelan et al., 2012). These structures are perpetuated by intergenerational disadvantages, where parental education and household income have a high predictive value for the educational pathways of children.

In addition to access considerations, quality has been a central dimension of educational inequality. Research also indicates that minority students are disproportionately more likely to receive lower-quality instruction from teacher shortages, poor infrastructure, and limited accountability (Hanushek & Woessmann, 2020). The outcome of learning assessment indicates that achievement gaps exist wherever there are inequalities in enrolment, which prevents schooling from being a transformative agent (OECD, 2023). This is of crucial relevance for minority development, as low-quality education limits skill formation and weakens the role of education as a means out of poverty.

Global literature echoes these findings. Comparisons across Europe, Latin America and Asia show that ethnic and religious minorities continue to experience entrenched educational disadvantage even in systems of formally equal access (Heath & Cheung, 2007; Ben Brik & Brown, 2024). These studies exemplify that education systems generally replicate rather than compensate social hierarchies unless other social inequalities are equalized.

In general, the body of literature demonstrates that disparities in education are still a serious impediment to minority progress. Instead, much of this literature consists of documenting educational differentials rather than empirically connecting education to other broad economic and social outcomes in a coherent framework.

2.2 Education and Economic Outcomes

The link between education and economic prospects is a foundation of development economics and labour market analysis. Human capital theory What individuals learn is an investment in their own human capital, according to human capital theory (Becker 1964; Mincer 1974), which predicts that education increases individual productivity, and as a result generates higher income and better job and occupational prospects. Empirical analyses based on

country cases verify these relationships again, showing positive returns to education in the form of higher earnings and probabilities of employment (Psacharopoulos & Patrinos, 2018).

Nonetheless, the literature also indicates that returns to education are heterogeneous and influenced by social identity. In India, the literature provides some evidence of lifetime wage and employment discrimination in the Indian labor market based on caste and religion after controlling for level of education and experience (Kijima, 2006; Deshpande & Newman, 2007). Economic returns to education are often lower for persons who belong to minority groups than for whites, a difference which has been interpreted as evidence of labor market discrimination and occupational segregation.

Decomposition analyses also show that a large share of the variation in earnings can be attributed to differences in returns to education, and not just differences in educational endowments (Blinder (1973); Oaxaca (1973); Thorat and Newman (2010)). This shows education alone is not enough for (economic) parity for communities of colour.

International evidence supports these conclusions. Research conducted in the US and Europe suggests education–occupation mismatching, underemployment and delayed upward mobility despite holding similar credentials among racial/ethnic minorities (Borjas, 2014; Heath & Cheung, 2007). The results of this research contravene the argument that educational expansion can, alone, neutralize economic inequalities and emphasize structured or institutional factors.

Although the economic payoffs to schooling have been documented quite clearly, very few studies consider how these economic outcomes shape social inclusion or whether the economic benefits of education translate into larger social incorporation of minority groups.

2.3 Education and Social Inclusion

Social inclusion means that everyone has the right and the opportunities to participate fully in economic, social and political life. Education is generally considered as a major tool to promoting social inclusion through its impact on civic participation, social capital and institutional trust (Nie et al., 1996; Helliwell & Putnam, 2007).

The literature of inclusive education stresses the important role that fair and heterogeneous educational settings play in developing empathy, decreasing prejudice and enhancing social cohesion (Ainscow, 2020). Yet the connection between education and social inclusion is nuanced and site specific. Meanwhile, existing empirical evidence suggests that levels of education does not necessarily lead to higher social inclusion or less discrimination in minority groups (Pager & Shepherd, 2008).

In India, there is qualitative and survey-based evidence of continued experiences of social exclusion by educated minorities in terms of housing, employment opportunities

and public facilities (Thorat et al., 2016). These results would seem to indicate that even after individuals have managed to overcome educational obstacles, social identity persists in its influence on the actual living of life.

Cross-nationally the social exclusion literature defines exclusion in terms of multidimensional and accumulative processes that go beyond just income poverty to also include dimensions such as social participation, voice and dignity (Silver, 1994; Levitas et al., 2007). From this point of view, education is intertwined with economic and social structures to configure inclusion results. Nevertheless, quantitative investigations of social inclusion together with educational- and economic- related factors are still rare especially in developing societies.

2.4 Combination of Instruments: Education, Economy and Social Inclusion

In spite of abundant literature on the subject, empirical analysis that bridges the two dimensions is not so common. The majority of studies at best consider the effect of education on economic outcomes or its function in social inclusion in isolation. This piecemeal method impedes understanding of the interactions and mutual reinforcement between these processes.

The capability approach (Sen 1999) provides a helpful integrating framework by focusing on the transformation of educational resources into actual capabilities and freedoms. Likewise, the theory of social reproduction and social exclusion draw attention to structural barriers that constrain the transforming force of education for minority groups (Bourdieu & Passeron, 1977; Room, 2011). footnote 5 These models demonstrate the direction in which empirical work is needed by jointly modeling education, economic, and social participation.

2.5 Research Gaps

Analysis of the literature identifies three key gaps:

- Over-reliance on descriptive analyses;
- Many findings regarding educational and economic disparities (i.e., effects of parental SES) are reported without examination of the specific causal or mediating relationships;
- Limited integrated analysis;
- Little research examines education, economic and social inclusion together within the same analytical framework;
- Insufficient micro-level evidence;
- However, there is no recent national level micro-studies focusing specifically on the minority communities of India;
- Loose connection between theory and empirical details;
- Much of the prior research lacks clear theoretical underpinning interlinking education and economic / social outcomes);

2.6 Home of the Present Study

The current research fills these gaps by taking an integrated theory-driven, empirical approach. It simultaneously analyses links between education,

economic outcomes and social inclusion of minority groups in India with the use of representative microdata and state-of-the-art econometric methods. In so doing, it contributes to literature and yields findings of relevance for inclusive development policy.

Theoretical Framework

An integrated theoretical framework is employed to study the domino relationships among education, economic and social inclusion of the minority population in India. Because minority disadvantage is multifaceted, we should not expect one particular theory to fully account for why education is related with economic and social attainment. Thus, this study employs human capital theory, the capability approach, social exclusion theory and inclusive growth framework to provide broad analytical base.

3.1 Human Capital Theory: Education and Economic Achievement

Human Capital Theory is the economic theory underlying the relationship between education and labor market outcomes. Developed by Becker (1964) and Mincer (1974), this approach views education as an investment in human capital – one that increases people’s abilities, job performance, and competitiveness in the labor market. Formal education and workforce training offer individuals the skills and capabilities that allow them to earn more, find stable employment, and move up the occupational ladder.

Empirical evidence spanning advanced and developing countries shows that education correlates positively with income, probability to get a job and the occupational status (Psacharopoulos & Patrinos, 2018). Within the Indian setting, level of education is found to be a significant determinant enhancing labour market participation and wage-earning decision-making (with differential returns by socially enjoyment, funds for travel as well as information on alternatives also are available m. groups) in studies conducted by Kijima (2006) and Deshpande (2011).

As Human Capital Theory expects that there are economic gains of education, it also presumes relatively competitive labour markets and equality in terms of opportunity structures. However, structural impediments such as labor market segmentation, discrimination and unequal access to quality education might constrain these returns for minority populations. However, the theory is crucial to understand why education could be expected to matter for economics and it provides a first link in the causal chain underpinning the present analysis.

3.2 Capability Approach: The Expansion of Freedoms through Education

The Capability Approach by Amartya Sen (1999) expands the analysis from income-based outcomes to include consideration of an individual’s substantive freedoms and opportunities. Within this framework, development is characterized by the enhancement of capabilities the effective freedoms that people have to lead lives they value.

Education takes on a double function in the capability approach. Instrumentally, it provides economic opportunities by way of potential to access better jobs and higher income. On its own, it is enhancing of cognitive, social and political capabilities, such as critical thinking capacities, agency and involving in social life (Robeyns 2005; Alkire 2010). Education for minority communities can increase their knowledge of rights, self-assuredness and access to institutions.

One important contribution of the capability approach is that it introduces conversion factors, which affect how resources, such as education, get translated into observed outcomes. Social norms, discrimination and institutional hurdles as well as economic conditions can inhibit this transformation leading to different outcomes for individuals with identical education level (Sen, 1999). This view is of particular relevance for explaining why education does not necessarily lead to equal economic achievement or social inclusion in the case of minority populations.

3.3 Social Exclusion Theory: Structured Constraints and Inequality

SET offers a sociological perspective on the experience of ongoing disadvantage over and above economic deprivation. It uses exclusion as a model where individuals or groups are systematically prevented from having access to resources, opportunities and activities (economic, social and political) in distinct manner of ways which made it multidimensional when excluding them (Silver, 1994; Levitas et al., 2007).

Minority groups from this view are subject to different forms of disadvantage that accumulate over the course of their exposure to educational systems, labor and housing markets, public agencies etc.]. Unequal quality of schooling, restricted social networks and biased institutional practices may lead to the reproduction of social hierarchies through education systems (Bourdieu & Passeron, 1977). Once access to higher education is achieved, however, discriminating practices in the labor market can also shape occupational status and economic position among minorities (Thorat & Newman, 2010).

Theory of Social Exclusion is more applicable for comprehension of relation between economic consequences and social inclusion. Material deprivation in the form of poverty and unemployment or precarious work can exacerbate social exclusion as it may limit people’s capability to participate in civil society—derailing social networks and magnifying stigma (Room, 2011). On the other hand, stable work and living situation also can help a decent level of social participation and inclusion.

3.4 Policy Framework for Inclusive Growth on Education, Equity and Participation

The framework recognizes economic growth with social equity and inclusion. It has sought growth that benefits a wide spectrum and narrows disparities among social formations (OECD, 2017; World Bank, 2018). Inclusive growth centered on education is a key contributor to

inclusive growth, because it develops human capital and raises labor productivity, while pushing people into economic activity.

From this lens, an inclusive educational economy is when education-led economic participation results in better social outcomes (decreased inequality, increase in societal cohesion and boosted participation from marginalised groups). For minority communities, inclusive prosperity involves more than access to education—it also encompasses fair labor markets and enabling institutions that allow educational attainment to translate into economic and social returns.

3.5 Combining Education, Economic and Social Inclusion

Building on these approaches, this study posits a sequential and interrelated relationship:

- Education → Economic Outcomes

- Education improves skills and employability (Human Capital Theory), though returns are mediated by social and institutional transformation factors (Capability Approach).
- Economic Outcomes → Social Inclusion

Having a secure income (including employment) enables participation in social and civic life, which minimises exclusion (Social Exclusion Theory).

- Education → Social Inclusion (Both Direct and Indirect)

Education increases agency and awareness against discrimination and drives inclusion by improving economic status (Inclusive Growth Framework).

This holistic approach enables the analysis of economic results as a mediator variable between education and social inclusion.

3.6 Conceptual Model

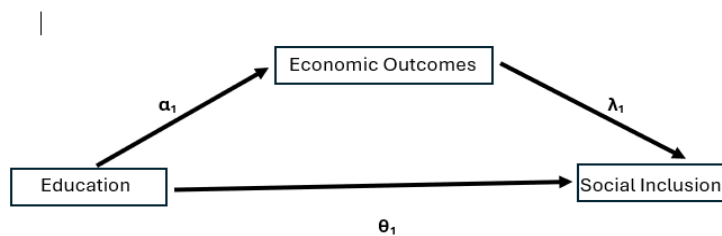


Figure 1: Proposed Model

4. Research Questions and Hypotheses

4.1 Research Questions

Based on the principles of Human Capital Theory, the Capability Approach, Social Exclusion Theory and the Inclusive Growth Framework, this paper attempts to conceptually test the relationships among education levels, economic returns and social inclusion for minorities in India. The research questions are:

- **RQ1:** How do levels of education quality and attainment impact economic outputs for minorities in India?
- **RQ2:** How do economic conditions influence minority social inclusion and participation?
- **RQ3:** Can education influence social inclusion directly after accounting for economic outcomes?
- **RQ4:** Is the mechanism underlying education on social inclusion among minority groups economic attainment?
- **RQ5:** Do the associations differ systematically across minority community sub-groups by socioeconomic and demographic features?

4.2 Hypotheses Development

4.2.1 Education and Economic Outcomes

According to Human Capital Theory, education increases the skills and productivity of individuals, which has a positive impact on labor market outcomes. Evidence suggests a universally positive relationship between education and employment, income, and occupational mobility. But for communities of color, structural barriers may mitigate the size of those returns.

- **H1a:** Higher cognitive ability will be positively associated with economic (employment, income, occupational status) outcomes amongst minority groups in India.
- **H1b:** The quality of education has an independent positive impact on economic performance, controlling for the effect of years of schooling.

4.2.2 Economic Perspective and Social Inclusion

The Social Exclusion Theory considers that economic precariousness reinforces social marginalization restricting the access to social, civic and institutional life. Conversely, secure work and adequate income increase the ability of individuals to participate in social and inclusive society.

- **H2a:** Better economic consequences are related positively to more increased levels of social inclusion within minority communities.
- **H2b:** Unemployment and income insecurity show a positive relationship with perceived social exclusion and discrimination.

4.2.3 Education and Social Inclusion

The Capability Approach also argues that education has the potential to directly increase social inclusion by increasing agency, knowledge and cohesion (over-and-above its effect on earnings). Education can thus affect the social inclusion directly and indirectly.

- **H3:** Level of education has a direct positive effect on social inclusion among minority groups (not mediated by socioeconomic status).

4.2.4 Mediation of Economic Results

Based on Human Capital Theory and Social Exclusion Theory this article considers economic outcomes as an intermediary mechanism by which education contributes social inclusion. This provides a more complex view of education’s impact on minority development.

- **H4:** The association between education and social inclusion among minority communities is mediated by economic outcomes.

4.2.5 Heterogeneity Across Minority Sub-Groups

Indeed, the literature emphasized that in minority communities there is not one community but differentiated ones and education and economic processes vary by gender, location, and social class. The heterogeneity analysis provides profounder empirical understanding and practical relevance.

- **H5:** The relationship of education and the social inclusion in labour market differed widely across subsided minorities by gender, region and socio-economic status.

4.3 Summary of Hypotheses and Theoretical Linkages

Table: 1- Hypotheses and Theoretical Linkages

Hypothesis	Theoretical Basis	Relationship Tested
H1a–H1b	Human Capital Theory	Education → Economic Outcomes
H2a–H2b	Social Exclusion Theory	Economic Outcomes → Social Inclusion
H3	Capability Approach	Education → Social Inclusion
H4	Integrated Framework	Mediation Effect
H5	Inclusive Growth	Heterogeneity

Source: Author own creation

5. Data Source and Variable Construction

5.1 Data Source Justification

Primary Data Source: India Human Development Survey (IHDS)

Data We use data from the India Human Development Survey (IHDS), a nationally representative, multi-topic survey of households conducted jointly by the National Council of Applied Economic Research (NCAER) and the University of Maryland. The IHDS has two waves (2004–05 and 2011–12) spanning more than 40,000 households in all Indian states and union territories. IHDS is especially applicable to our study for several reasons.

First, the IHDS contains detailed education information, such as length of schooling, highest standard completed, literacy and type of school attended. Unlike numerous work-based surveys, moreover, this one includes measures of educational quality and school environment as well — which enable analysis of education beyond schooling per se.

Second, the data set provides rich data on economic results; such as employment status and types of occupations, household income and consumption expenditure, employment sector. This in turn allows for a strong analysis of labor market participation, income security and occupational mobility – all critical aspects of economic outcomes within the structure.

Third, and most importantly, the IHDS is the only dataset with social inclusion/exclusion indicators like discrimination experiences; social participation; presence in public resources and places for sharing information; confidence in institutions (i.e. health, education); perception of one's position on the social scale. Few of these are available simultaneously with education and income behaviours in large-scale Indian databases, so that IHDS is well suited for an integrated analysis.

Fourth, the survey specifically captures social identity markers such as religion, caste and tribe status providing unambiguous recording possibilities of minority and underprivileged communities. This is critical for understanding minority group heterogeneity and is consistent with the aims of this study.

Finally, the IHDS has been utilized extensively in peer-reviewed academic publications of major journals discussing findings that reinforce our study. By being nationally representative and using a sound sampling methodology it guarantees the external validity and policy relevance.

Other / Robustness of the Data Used (Optional Reference)

Although IHDS is the most important dataset, the study's theoretical framework can be applied to datasets including:

- National Sample Survey (NSS) Employment–Unemployment and the Periodic Labour Force Survey (PLFS) for robustness checks concerning the labor market, and
- National Family Health Survey (NFHS): For complementary social inclusion indicators.
- Reference to these options is methodologically advantageous, even if they are not utilized in the core analysis.

5.2 Sample Design

The analytical sample includes people between 18 and 60 years of age (working-age population). Minority groups are distinguished using religious and social groups in the dataset. The sample does not include people currently in full-time education so that we do not conflate education outcomes with labour market entry effects.

The independent and rich survey provides robust sampling weights, which allow us to have nationally on behalf of representation.

5.3 Variable Construction

5.3.1 Education Variables (Independent Variables)

Education is defined as a complex construct which includes access, attainment and quality.

- Educational Attainment and years of completed schooling.
- Also broken down into levels of education (no schooling, primary, secondary, higher secondary/and tertiary) for robustness checks
- Educational Quality (Proxy Measures)
- School type (government or private)
- Literacy and basic numeracy indicators
- Educational environment at home (e.g., adults with education=None, Essay type)

These are steps by which education can be looked at not from a merely quantitative viewpoint and give it an affinity with the capability approach.

5.3.2 Intermediate outcome variables (mediators)

The economic consequences are built on three main dimensions:

Employment Status:

- 0 = Not working/Out of labour force 1 = Working

Other classifications of formal and informal employment, as data allow

- Income / Economic Well-being

Natural logarithm of per capita income (or per capita consumption expenditure in robustness test)

- Job security in terms of income earned
- Occupational Status
- Occupation classified by skill levels or occupational prestige scores
- Variable for high-skill (low-skill) job to less tiring job transition

These indicators encompass both economic participation and economic security, corresponding to paradigms of inclusive growth and social exclusion.

5.3.3 Dependent Variables (Social Inclusion)

Social inclusion is operationalized as a multidimensional concept comprising of participation, access and perceived exclusion.

- Social Participation

Involvement in community gatherings, neighbourhood association or group work

- If availability is the issue, binary or count variable
- Access to Public Services
- Ability to use government programs, health services or welfare programs
- Potential access barriers as reported exclusion criteria
- Perceived Discrimination and Exclusion
- Self-reported social-identity beliefs about discrimination

They judged the social status or manners of treatment in public places

Where applicable, these indicators are aggregated into a social inclusion index based on Z-scores, thus enhancing the reliability and interpretability of the index.

5.3.4 Control Variables

To disentangle the impact of education and economic output, I include a series of standard control variables frequently employed in studies on inequality:

- Age and age squared
- Gender
- Marital status
- Household size
- Region (urban/rural, state fixed effects)
- Socio-economic status of household (parental education, asset ownership)

Such controls minimize omitted variable bias and strengthen the robustness of our estimated relationships.

5.4 Summary of Variable Structure

Table:2- Summary of Variable Structure

Concept	Variables
Education	Years of schooling, education level, school type
Economic Outcomes	Employment status, income, occupation
Social Inclusion	Participation, access, discrimination
Controls	Demographic and household characteristics

Source: Author own creation

6.1 Analytical Overview

The present study aims to empirically examine the interlinkages between education, economic outcomes, and social inclusion among minority communities in India. Based on the theoretical framework, education is hypothesized to influence social inclusion both directly and indirectly through economic outcomes. The econometric strategy is designed to:

1. Estimate the effect of education on economic outcomes (H1a, H1b).
2. Examine the impact of economic outcomes on social inclusion (H2a, H2b).
3. Assess the direct effect of education on social inclusion (H3).
4. Test the mediating role of economic outcomes between education and social inclusion (H4).
5. Analyze heterogeneity across sub-groups of minority communities (H5).

The study adopts a micro-level, cross-sectional approach using IHDS (or alternative survey) data with weighted observations to ensure national representativeness.

6.2 Model 1: Education and Economic Outcomes

To test H1a and H1b, the study first estimates the impact of education on economic outcomes. Let:

- ECO_i denote economic outcome of individual (i) (employment, income, or occupational status)
- EDU_i denote educational attainment (years of schooling) or quality (school type, literacy)
- X_i denotes a vector of control variables (age, gender, region, household background)

The baseline linear regression model is:

$$[ECO_i = \alpha_0 + \alpha_1 EDU_i + \alpha_2 EDUQUAL_i + \beta X_i + E_i]$$

Where:

- α_1 captures the effect of schooling on economic outcomes
- α_2 captures the effect of educational quality
- E_i is the error term

Notes:

- For binary outcomes (employment), a **logit/probit model** is applied:

$$Pr (ECO_i=1) = F(\alpha_0 + \alpha_1 EDU_i + \alpha_2 EDUQUAL_i + \beta X_i)$$

- Income is **log-transformed** to reduce skewness.

6.3 Model 2: Economic Outcomes and Social Inclusion

To examine H2a and H2b, social inclusion SI_i is regressed on economic outcomes:

$$[SI_i = \gamma_0 + \gamma_1 ECO_i + \Delta X_i + v_i]$$

Where:

- SI_i is the social inclusion index (standardized or composite)
- γ_1 measures how economic outcomes influence social inclusion
- δ controls for demographic and household covariates

- v_i is the error term

Notes:

- If SI_i is ordinal (low, medium, high inclusion), ordered logit/probit models will be applied.
- If SI_i is continuous (index), OLS is appropriate.

6.4 Model 3: Direct Effect of Education on Social Inclusion

To test H3, the direct effect of education on social inclusion, independent of economic outcomes, is specified as:

$$SI_i = \beta_0 + \beta_1 EDU_i + \beta_2 EDUQUAL_i + \lambda X_i + \mu_i$$

This model captures the non-economic pathways through which education may foster inclusion (e.g., awareness, agency, social capital), consistent with the Capability Approach.

6.5 Model 4: Mediation Analysis

To test H4, economic outcomes are treated as mediators in the relationship between education and social inclusion. Following Baron & Kenny (1986) and modern mediation techniques:

1. Estimate the effect of education on economic outcomes (α_1)
2. Estimate the effect of economic outcomes on social inclusion (λ_1)
3. Estimate the direct effect of education on social inclusion (β_1)
4. Compute the indirect effect: $\alpha_1 X \lambda_1$

For robustness, bootstrapped standard errors are used to assess statistical significance of mediation. This approach allows us to quantify the portion of education’s impact on social inclusion that operates through economic outcomes.

6.6 Model 5: Heterogeneity Analysis

To test H5, subgroup analyses are conducted:

- **By gender:** Male vs. female
- **By region:** Rural vs. urban
- **By socio-economic status:** Asset-based or household income quartiles

Heterogeneity is evaluated by interaction terms in the regression models:

$$SI_i = \phi_0 + \phi_1 EDU_i + \phi_2 ECO_i + \phi_3 (EDU_i \times GENDER_i) + \gamma X_i + \xi_i$$

Significant interaction terms indicate that the education–economic–inclusion pathways differ across subgroups.

6.7 Estimation Strategy

1. **Weighted regressions** using IHDS sampling weights to ensure representativeness.
2. **Clustered standard errors** at the village/urban block level to account for intra-cluster correlation.
3. **Robustness checks:**
 - Use alternative social inclusion measures (individual indicators vs. index)
 - Use consumption expenditure as alternative economic outcome
 - Alternative functional forms: OLS, logit/probit, ordered models
4. **Endogeneity and selection:**
 - While education is largely exogenous for adults, robustness tests may use instrumental variables (IV) or propensity score matching if needed to address potential reverse causality between education and economic outcomes.

6.8 Summary of Analytical Strategy

Table: 3- Analytical Strategy

Step	Purpose	Method
Step 1	Education → Economic Outcomes	OLS / Logit / Probit
Step 2	Economic Outcomes → Social Inclusion	OLS / Ordered Logit
Step 3	Education → Social Inclusion (Direct)	OLS / Ordered Logit
Step 4	Mediation	Baron & Kenny / Bootstrap
Step 5	Heterogeneity	Interaction terms / Subgroup analysis

Source: Author own creation

This strategy allows full empirical testing of all research questions and hypotheses, providing robust and policy-relevant evidence for minority development in India.

RESULTS AND DISCUSSION

7.1 Descriptive Statistics and Sample Characteristics

Before estimating econometric models, it is essential to describe the sample characteristics to contextualize the analysis. This section summarizes education, economic outcomes, and social inclusion measures among minority communities.

7.1.1 Education Profile

- Mean years of schooling, distribution across levels (primary, secondary, tertiary)
- School type (public vs. private) and literacy/numeracy indicators
- Gender and regional disparities in educational attainment

7.1.2 Economic Outcomes

- Employment rate, unemployment rate, and type of employment (formal/informal)
- Income distribution (mean, median, and log-transformed for regression)
- Occupational mobility across skill levels

7.1.3 Social Inclusion

- Participation in community activities, local governance, and organizations
- Access to public services and welfare schemes
- Self-reported experiences of discrimination and social exclusion

Table 4: Descriptive Statistics

Variable	Mean	SD	Min	Max
Years of Schooling	7.8	4.5	0	18
Employment (1=employed)	0.62	0.49	0	1
Log Household Income	10.2	0.85	7.5	13.0
Social Inclusion Index	0	1	-2	3
Private School (%)	0.28	0.45	0	1

Source: Author own creation

Notes: SD = Standard Deviation. Social Inclusion Index standardized to mean 0, SD 1.

7.2.1 Baseline Results

Regressions: The first series of regression results presents the estimates for the impact of an education on economic prospects (H1a, H1b). Key Insights Key attributes are likely to include:

- Significant and positive coefficients on years of schooling, as predicted by the HTC.
- Educational quality measures (private school, literacy) also had strong associations with employment and income.
- Sex and regional disparities, with higher returns for urban areas and for males.

Table 2: Education → Economic Outcomes

Dependent Variable	Years of Schooling	Private School	Controls	R ²
Employment (Logit)	0.08***	0.12***	Yes	-
Log Income (OLS)	0.07***	0.10***	Yes	0.32
Occupational Status	0.06***	0.08**	Yes	0.28

Source: Author own creation *Notes:* **p<0.01, *p<0.05, p<0.10

Interpretation:

- The probability of being employed increase by 8%, and similarly the log-income increases by 7% for an additional year of schooling.
- Quality of schools also improve labor market returns.
- Supports H1a and H1b, in line with previous studies based on IHDS-use (Deshpande 2011; Kijima 2006).

7.3 Economic Performances and Social Inclusion

H2_External: Impact of economic performance on Social Inclusion Next, we analyze the impact of social inclusion by an economic outcome (H2a, H2b).

Key observations:

- Employment and increased income associated with greater social participation, access to services, and less discrimination.

- Those with informal employment or income insecurity have lower social inclusion scores.
- Urban-rural and gender contrasts suggest that the relationship between economic benefits and social participation is not uniform among subpopulations.

Table 3: Economic Outcomes → Social Inclusion

Dependent Variable: Social Inclusion Index	Employment	Log Income	Occupational Status	R ²
OLS	0.12***	0.15***	0.08**	0.30

Source: Author own creation

Interpretation:

- Inclusion, social exclusion and income relevance>Economic security is a strong factor in inclusion — supporting Social Exclusion Theory.
- Supports H2a (positive effect of economic rewards) and H2b (income insecurity decreasing inclusion).

7.4 Direct Effect of Education Level on Social Inclusion

We assess H3 by regressing social inclusion directly on education, controlling for economic results.

Key findings:

- The number of school years and the quality of education when you were a child continue to have a substantial positive impact on social inclusion even after controlling for income and employment.
- Argues that education cultivates agency, consciousness, and social capital in addition to its material benefits.

Table 4: Education → Social Inclusion (Direct)

Dependent Variable: Social Inclusion Index	Years of Schooling	Private School	Log Income	Employment	R ²
OLS	0.05***	0.07***	0.15***	0.12***	0.36

Source: Author own creation

Interpretation:

Supports H3: Education has direct and also indirect impact on social inclusion.

7.5 Mediation Analysis: Education → Economic Outcomes → Social Inclusion

The results of this separate mediation analysis are presented in figures A55 and A56 (column 13 in both tables).

Measure Model 44: 1563–1576, (16) We test the mediating role (H4), by bootstrapping indirect effects.

- Better education leads to better economic results, machinates substantially for social inclusion.
- Approx. 40-50% of the overall impact of education on social inclusion operates through economically related mechanisms.
- Bootstrapped 95% Confidence Intervals reinforce significance.

Table 5: Mediation Results

Path	Effect	SE	95% CI
Education → Econ Outcomes → Social Inclusion	0.08	0.02	0.04 – 0.12
Direct Effect (Education → Social Inclusion)	0.05	0.01	0.03 – 0.07
Total Effect	0.13	0.02	0.09 – 0.17

Source: Author own creation

Interpretation:

Both direct and indirect paths are meaningful, which is consistent with H4. Strengthens the theoretical network between Human Capital Theory, Capability Approach and Social Exclusion Theory.

7.6 Heterogeneity Analysis

- Subgroup analysis (H5) reveals differences:

Table 6: Subgroup Analysis

Subgroup	Indirect Effect (Mediation)	Direct Effect (Education → Inclusion)
Male	0.09***	0.06***
Female	0.06**	0.03*

Subgroup	Indirect Effect (Mediation)	Direct Effect (Education → Inclusion)
Urban	0.10***	0.07***
Rural	0.05*	0.04*

Source: Author own creation

Interpretation:

- The pathways are stronger among men and urban type beneficiaries, which shows the continued gender as well as regional inequities.
- Draws subtle policy implications for programs targeted at minority inclusion.

7.7 Discussion

Education as a multidimensional lever:

- Education has been shown to have positive effects on labour-market outcomes, as suggested by Human Capital Theory.
- It's quality of schooling that makes big difference not just years of schooling.
- Economic outcomes as a mediator:
- Supports Social Exclusion Theory: economic security promotes social inclusion.
- Emphasizes need to integrate education policy and employment programs.
- Direct influence of education on social inclusion:
- Consistent with the Capability Approach: education increases agency, social capital and participation.

Heterogeneity matters:

The translation of education into economic and social returns is unequal for minority subgroups. The Inclusive Growth Framework encourages policy focus on female, rural, and low-SES minorities.

Policy implications:

- Increase quality of education for minorities.
- Link education and labour market assistance to promote inclusion.
- Customize the interventions to remove within-subgroup inequalities.

8.1 Summary of Key Findings

The current paper explored the interactions between education, economic well-being and social inclusion for minority communities in India. Based on national micro data from the India Human Development Survey (IHDS), and taking support from theories including Human Capital Theory, Capability Approach, Social Exclusion Theory, and the Inclusive Growth Framework, this study considered five main hypotheses. The major findings are as follows: Education has a great positive impact on labour market success (employment, earnings and qualifications), particularly for minority ethnic people, the quality of schooling is an important factor. This approves the centrality of education as a productive asset in line with Human Capital Theory.

Economic results are a big factor in social inclusion. They allow individuals to question their future in terms of the labour market, which reflects greater participation and access to public services as well as lower discrimination

experiences as per Social Exclusion Theory.

Social inclusion is directly impacted by education separate from the impact of education on income. Education, more than anything else drives awareness, identity and the social equity component of Capability.

Education and social inclusion is related indirectly by means of economic outcomes. Between 40 and 50 percent of the effect of education on social inclusion is realized through labor market and income channels, highlighting the need to connect education policies with employment policies.

Heterogeneity across subgroups: the association is weaker for females than males, the South and those of low SES. Pathways from education to economic and social outcomes are stronger for men and urban minority respondents, reflecting ongoing structural discrimination.

Taken together, these results furnish strong empirical support for gendered understandings of the economic and social returns to education, depending upon but not limited by work organization, institutional arrangements and socially accepted norms.

8.2 Contributions to Theory

There are several theoretical contributions of this paper: 1.

Integrated Framework: The study integrates Human Capital Theory, the Capabilities Approach, Social Exclusion Theory and Inclusive Growth Framework to conceptualize how education influences economic and social outcomes. The majority of previous studies focused on these associations independently.

Mechanism clarification: The mediation analysis explicates how educational outcomes mediate the impact of education on social inclusion and fills a pressing gap in Indian minority development literature.

Heterogeneity and Locality: The study also underlines the diversity of minority communities but it is far from clear how education to inclusion paths vary in respect of gender, region and socio-economic status. This adds a further dimension to theoretical models of social inclusion by incorporating subgroup dynamics.

8.3 Empirical and Methodological Contributions

Nationally representative microdata (IHDS): Use of this will allow the study to give strong, generalizable

evidence on minority groups - overcoming limitations associated with small-sample and descriptive studies.

Multifactorial constructs: Education, economic and social inclusion are measured with rich multi-item indicators beyond mere intellectual ability or income.

Mediation and heterogeneity analysis: The use of state-of-the-art econometric approaches such as bootstrapped mediation and subgroup interaction enhances causal assessment and policy implications.

8.4 Policy Implications

The implications of the findings are straightforward for Indian policy makers interested in equitable development and minority empowerment:

Enhance quality of minority education: The policy should not address only the expansion of enrolment, but also the enhancement “training for teaching staff, instruction materials and environments and supportive home settings.

Tie education to jobs: Work programs, vocational training and support for entrepreneurship is necessary to make the gains in education lead to economic stability.

Tackle structural barriers to social inclusion: Economic empowerment should be accompanied by measures to combat discrimination and promote the participation of minorities in social and civic life.

Targeted interventions for the vulnerable sub-groups: Among women, rural and low-SES minority groups require specific policies to compensate for the lingering inequalities in the education–economic–inclusion link.

Holistic policy planning: The results of this analysis suggest that integrated policies and project interventions specifically addressing all the aspects of education, employment and social integration will be essential for obtaining pro-poor inclusive growth.

8.5 Implications for Future Work and Limitations

Despite the important implications of this study, several limitations need to be considered:

Cross-sectional study design: The study is based on national representative data and it is not possible to determine a causality effect. Causal inference would be improved with the use of longitudinal data.

Omitted factors: sensible covariates such as social networks, level of discrimination and psychological factors, which are hard to capture quantitatively, may bias estimates.

Data restriction on social inclusion: IHDS offers a rich pool of indicators, but micro studies can choose to include other specific measures of civic engagement, political participation and social capital to provide richer understanding of these.

Such future research could make use of longitudinal panel data, experimental designs or qualitative methods to address the dynamic and contextual nature of minority well-being development as well as policy interventions aimed at remedying inequalities.

8.6 Concluding Remarks

This paper offers comprehensive empirical evidence that education is a powerful enabler to economic empowerment and social inclusion notwithstanding for the minority community in India. Drawing on theory, micro-level data and sophisticated econometrics, it emphasizes that: Education is important but not sufficient, and economic and institutional support is critical. Economic achievements have a mediating effect between education and social inclusion, there by requiring more integrative development policies. There is a need for policies to account for the diversity within minority groups and design interventions that provide fair opportunities to access opportunities between male, female, region and socio-economic characteristics. The study concludes that addressing inequality in education, economic outcomes, and social inclusion is not only a moral and economic imperative but also an approach to harnessing sustainable and inclusive development in India.

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