

Education and Regional Development: Overcoming Barriers to Human Development

Educación y desarrollo regional: superando las barreras al desarrollo humano

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Resumen: La educación es un motor fundamental del desarrollo regional; sin embargo, persisten importantes disparidades en el desarrollo humano en el este de Indonesia, en particular en Nusa Tenggara Oriental (NTT). Este estudio examina las barreras estructurales, socioeconómicas e institucionales que obstaculizan el desarrollo humano y explora cómo el sistema educativo y las prácticas de gobernanza contribuyen a abordar estos desafíos. Mediante un enfoque de métodos mixtos, la investigación integra datos cuantitativos de una encuesta a 540 participantes, el Modelo de Ecuaciones Estructurales por Mínimos Cuadrados Parciales (PLS-SEM) y un análisis temático cualitativo de entrevistas con las partes interesadas para evaluar el desempeño institucional en tres dimensiones: difusión de políticas, promoción de valores y capacitación. Los hallazgos indican que el acceso desigual a una educación de calidad, la infraestructura limitada y la vulnerabilidad económica siguen siendo importantes limitaciones para el desarrollo humano. Las debilidades institucionales, como la implementación inconsistente de políticas, la débil coordinación interorganizacional y la limitada capacidad profesional, socavan aún más la eficacia del desarrollo. No obstante, las reformas educativas emergentes y las iniciativas de aprendizaje comunitario demuestran impactos positivos en la alfabetización, el desarrollo de habilidades locales y la participación socioeconómica. Estos resultados subrayan el papel fundamental que desempeñan un sistema educativo sólido, una gobernanza coherente y una inversión equitativa para acelerar el desarrollo humano en Nusa Tenggara Oriental (NTT) y contribuyen a debates más amplios sobre el desarrollo regional impulsado por la educación en contextos con recursos limitados.

Palabras clave: Educación; Desarrollo Regional; Desarrollo Humano; Nusa Tenggara Oriental.

Abstract: Education is a primary driver of regional development; however, significant disparities in human development persist in eastern Indonesia, particularly in East Nusa Tenggara (NTT). This study examines the structural, socioeconomic, and institutional barriers that hinder human development and explores how the education system and governance practices contribute to addressing these challenges. Employing a mixed-methods approach, the research integrates quantitative survey data from 540 respondents, Partial Least Squares Structural Equation Modeling (PLS-SEM), and qualitative thematic analysis of stakeholder interviews to assess institutional performance across three dimensions: policy dissemination, value promotion, and training. The findings indicate that unequal access to quality education, limited infrastructure, and economic vulnerability remain major constraints on human development. Institutional weaknesses, including inconsistent policy implementation, weak inter-organizational coordination, and limited professional capacity, further undermine development effectiveness. Nevertheless, emerging education reforms and community-based learning initiatives demonstrate positive impacts on literacy, local skills development, and socioeconomic participation. These results underscore the critical role of a robust education system, coherent governance, and equitable investment in accelerating human development in East Nusa Tenggara (NTT) and contribute to broader discussions on education-led regional development in resource-constrained contexts.

Keywords: Education; Regional Development; Human Development; East Nusa Tenggara.

1. INTRODUCTION

Human development has become a global agenda, occupying a strategic position within the framework of sustainable development (Agbedahin, 2019; Sheehy & Farneti, 2021). Since the introduction of the Human Development Index

(HDI) by the United Nations Development Programme (UNDP) in 1990, the quality of education, health, and living standards has served as key indicators for assessing a country's development performance (Morse, 2023; Scherbov & Gietel-Basten, 2020; Hussien et al., 2025). In the era of globalization and the knowledge-based economy, education is no longer viewed merely as an instrument for enhancing individual capacity, but rather as a central driver of social transformation, regional economic growth, and global competitiveness. Countries with high HDI scores generally exhibit robust education systems, high literacy rates, intensive innovation, and supportive social infrastructure that underpin sustainable human resource development (Yumashev et al., 2020; Al Dulaimi et al., 2022). Accordingly, the close relationship between education and regional development is no longer a purely local concern but has evolved into a strategic imperative within the global development landscape.

Although the relationship between education and regional development has been extensively examined in the development literature, persistent gaps in human development outcomes continue to reveal significant patterns of inequality, particularly between developed and lagging regions (Guo & Li, 2024; Afolabi & Raifu, 2025). These disparities are not solely attributable to limited economic resources, but also to structural, social, and institutional barriers that constrain the effectiveness of education systems in fostering inclusive human development (Abashidze et al., 2021; McCandless et al., 2022).

According to the latest 2024 report by the United Nations Development Programme (UNDP), Indonesia recorded a Human Development Index (HDI) score of 0.713, ranking 112th out of 191 countries worldwide (Sari & Tiwari, 2024). This achievement reflects an improvement compared to the previous year, although Indonesia remains within the upper-middle human development category. In contrast, Switzerland occupies the top position with an HDI score of 0.967, indicating exceptionally high human development, particularly in terms of vocational education, workforce training, and optimal labor market absorption (Ma, 2022). These data underscore the strategic role of education as a key determinant in enhancing human resource quality and as a critical factor shaping national development outcomes.

The Human Development Index (HDI) is a composite measure summarizing average achievements in key dimensions of development, including a long and healthy life, knowledge acquisition, and a decent standard of living (Lind, 2019). The HDI reflects the overall success of development at both regional and national levels, as higher index scores indicate better human resource quality within a given area. Indonesia's HDI remains relatively low compared to other ASEAN countries, such as Malaysia and Singapore. In many developing regions, including eastern Indonesia, access to quality education remains heavily concentrated in urban centers, while peripheral areas face persistent challenges related to inadequate infrastructure,

unequal distribution of teaching personnel, and limited educational governance capacity (Nurman et al., 2025; Romlah et al., 2023; Kawuryan et al., 2021).

Indonesia's archipelagic geography has contributed to uneven development, resulting in persistently low human resource quality in several regions of the country. East Nusa Tenggara Province, according to Statistics Indonesia (BPS) data for 2024, ranks among the three lowest provinces nationwide in terms of its Human Development Index, with a score of 69.14 (Azizah et al., 2024). This condition undermines the role of education as a mechanism for social mobility and as an instrument for equitable regional development, leading to stagnant or slow progress in HDI attainment. Therefore, a more comprehensive understanding of how education interacts with regional contexts, social structures, and public policy is crucial for formulating sustainable and equitable human development strategies.

Education cannot be understood as a neutral institution; rather, it constitutes a social arena that reflects and reproduces existing power relations, class structures, and social inequalities within society (Ikpuri, 2023). Access to quality education is often shaped by socioeconomic background, cultural capital, and geographic location, thereby trapping marginalized groups in cycles of limited learning opportunities and low social mobility (Kolluri, 2018). Within the context of regional development, this condition reinforces interregional inequalities, as education fails to function as an emancipatory instrument capable of bridging social and structural divides.

From Bourdieu's cultural capital perspective, this condition reflects unequal access to educational resources that are not only material but also symbolic and cultural in nature, and that are systematically reproduced through social structures and public policy (Pitzalis & Porcu, 2024); (MacKenzie et al., 2022). Uneven educational quality, limited infrastructure, and economic vulnerability weaken the function of education as a mechanism for social mobility and as an instrument of equitable regional development, thereby contributing to the stagnation of human development outcomes. In this sense, education does not operate as a neutral institution, but rather as a social arena that reproduces power relations, class stratification, and territorial inequalities, in which groups with limited cultural capital particularly in lagging regions are trapped in cycles of narrow learning opportunities and low social mobility.

Standardized education policies that are insufficiently sensitive to local socio-cultural contexts risk overlooking community-specific needs, weakening the relevance of learning processes, and diminishing their impact on strengthening human capacities. Consequently, analyzing education within a human development framework requires a sociological approach that positions education as a social process shaped by the dynamics of structure, agency, and institutions, as well as a strategic medium for promoting social transformation and more inclusive regional development.

However, despite the extensive body of literature examining the relationship between education and regional development, empirical studies that integrate

structural modeling approaches with sociological perspectives to explain the interaction between educational systems and institutional governance in marginalized regions of Indonesia remain notably limited. Existing research has predominantly focused on macroeconomic indicators, educational attainment, or infrastructure disparities in isolation, thereby providing only partial explanations of the complex mechanisms underlying uneven human development outcomes. In particular, limited attention has been devoted to understanding how educational access, socioeconomic vulnerability, infrastructural inequality, and institutional governance simultaneously interact within structurally disadvantaged regions such as East Nusa Tenggara. This gap is significant because human development disparities in peripheral areas are shaped not merely by economic deprivation, but also by the interplay of institutional capacity, social structures, and unequal distribution of educational opportunities. Therefore, this study seeks to answer the following research questions: how do education, infrastructure, socioeconomic conditions, and institutional governance influence human development outcomes in East Nusa Tenggara, and to what extent do these factors collectively shape regional development disparities?

2. LITERATURE REVIEW

Education has long been recognized as a central pillar of human development and a strategic driver of regional advancement. Both classical and contemporary development theories consistently position education as a key mechanism for enhancing human capital, productivity, and social mobility (Guo & Li, 2024; Nwachukwu, 2024). Regions with higher educational attainment tend to exhibit stronger economic performance, more robust institutional capacity, and greater resilience to social and economic shocks (Afolabi & Raifu, 2025). In this context, education functions not merely as a sectoral investment but as a fundamental component shaping long-term development trajectories across regions.

Despite the widely acknowledged importance of education, substantial disparities in access to and quality of education persist across regions, particularly in developing countries. Peripheral and lagging areas frequently confront structural constraints such as inadequate infrastructure, limited fiscal capacity, and shortages of qualified teachers, which collectively hinder educational outcomes (Zaidi et al., 2024). These spatial inequalities in education directly contribute to uneven human development, reinforcing cycles of poverty and constraining opportunities for upward social mobility (Brown & James, 2020; Tohari, 2025). Consequently, regional development disparities remain closely intertwined with educational inequality.

Education also plays a crucial role in reproducing or transforming social structures within a given region. Bourdieu's concept of cultural capital highlights how unequal access to educational resources perpetuates social stratification and regional disadvantage (Johnstonbaugh, 2018; Bates, 2021). In marginalized regions,

families with limited economic and cultural capital often struggle to sustain educational participation, thereby constraining human development outcomes. As a result, education systems may inadvertently reinforce existing regional hierarchies unless deliberate and targeted interventions are implemented.

Education and regional development are understood as mutually constitutive social processes shaped by power structures, social inequalities, and institutional capacity (Brown & James, 2020). Education functions not only as a means of enhancing individual skills, but also as a mechanism for distributing social opportunities that determine the positioning of groups and regions within development structures (Spiel et al., 2018). Disparities in access to and quality of education across regions both reflect and reproduce broader social inequalities, particularly in marginalized areas characterized by limited economic, cultural, and social capital. Consequently, barriers to human development are not merely technical educational issues, but rather structural problems rooted in social relations, public policy, and institutional governance. Strengthening the role of education in regional development therefore requires transformative, equitable, and context-sensitive interventions, so that education can genuinely function as an instrument of social mobility and inclusive human development.

3. MATERIAL AND METHOD

This study employs a mixed-methods research design to examine how education contributes to regional development and to identify barriers to human development in eastern Indonesia, with a particular focus on East Nusa Tenggara (NTT). The mixed-methods approach enables an integrated analysis of structural inequalities, institutional capacity, and socio-cultural factors that shape educational outcomes and regional human development. This design is widely recognized as appropriate for development studies that require both macro-level measurement and in-depth contextual interpretation (Creswell, J. W., & Creswell, 2017).

A sequential explanatory design was employed, in which quantitative analysis preceded qualitative inquiry (Christodoulou, 2025; Haynes-Brown, 2023). The quantitative phase focused on regional education indicators and the components of the Human Development Index (HDI) namely the education index, health index, and standard of living to identify spatial disparities across districts in East Nusa Tenggara (NTT). The subsequent qualitative phase was designed to explain the structural and institutional factors underlying these disparities. This design is particularly well suited to studies conducted in peripheral regions characterized by geographic constraints, uneven infrastructure, and limited institutional capacity (Oppido et al., 2023; Bernard et al., 2023).

The study population comprised stakeholders involved in education delivery and regional development, including students, teachers, and education personnel from selected urban and rural districts in East Nusa Tenggara (NTT). Quantitative data were collected from 540 respondents selected through stratified random

sampling based on geographic location and educational level to ensure representativeness (Christodoulou, 2025). Qualitative data were obtained from 25 key informants, including school principals, local education officials, and regional development planners, who were selected through purposive sampling due to their strategic roles in policy formulation and implementation.

Data were collected using structured questionnaires, semi-structured interviews, and document analysis (Adeoye-Olatunde & Olenik, 2021). The questionnaires employed five-point Likert scales to measure access to education, learning quality, equity, and perceptions of education's contribution to human development outcomes (Afolabi & Raifu, 2025; Tengecha et al., 2024). Secondary data on the Human Development Index (HDI) and education indicators were obtained from official regional and national statistical reports. Qualitative interviews explored governance capacity, policy coordination, resource distribution, and socio-cultural constraints affecting the effectiveness of education (Yu et al., 2024).

Quantitative data analysis comprised descriptive statistics, reliability testing using Cronbach's alpha, and regression analysis to examine the relationships between educational variables and HDI components (Salameh & Benkohila, 2024). Exploratory factor analysis was conducted to assess construct validity and to identify latent dimensions of educational inequality. Qualitative data were analyzed using thematic analysis following the Braun and Clarke framework, which involved systematic coding, theme development, and interpretative synthesis to uncover recurring institutional and structural barriers to human development (Ahmed et al., 2025).

To ensure methodological rigor, this study applied data triangulation through surveys, interviews, and document analysis. Instrument validity was strengthened through expert review and pilot testing, while qualitative credibility was enhanced through member checking and peer debriefing (Amin et al., 2020; Mikkonen et al., 2022). By integrating HDI-based quantitative evidence with qualitative institutional insights, this methodological framework provides a robust foundation for understanding education as a strategic lever for addressing human development barriers in eastern Indonesia.

This study adopts a rigorous mixed-methods approach with a sequential explanatory design to examine the role of education in addressing human development constraints within the context of regional development in eastern Indonesia, particularly East Nusa Tenggara. By integrating quantitative analyses of education indicators and Human Development Index components with qualitative insights from key institutional stakeholders, the study systematically captures both measurable regional disparities and the underlying structural, governance, and socio-cultural factors that shape them.

4. RESULT AND DISCUSSION

This section is designed to directly address the two research questions of the study: (1) the structural, socioeconomic, and institutional barriers to human development in East Nusa Tenggara, and (2) the role of the education system and institutional governance in promoting inclusive human development and regional development. The presentation of results and discussion is conducted in an integrated manner by combining quantitative and qualitative findings, thereby providing a comprehensive empirical overview as well as in-depth interpretative analysis.

4.1 Structural, Socioeconomic, and Institutional Barriers to Human Development in East Nusa Tenggara

The results of the quantitative analysis indicate that human development in East Nusa Tenggara (NTT) continues to unfold under structurally constrained conditions. Access to quality education is shown to make a positive and statistically significant contribution to improvements in human development outcomes ($\beta = 0.32$; $p < 0.01$). However, this positive potential has not been fully realized due to uneven availability of educational infrastructure and the archipelagic geographic characteristics of the region. The negative and significant effect of infrastructure ($\beta = -0.27$; $p < 0.05$) suggests that spatial inequality remains a major inhibiting factor in the equitable distribution of human development outcomes in the region.

From a socioeconomic perspective, the findings confirm that household economic conditions play a central role in determining the sustainability of educational participation and the quality of learning outcomes. Households with low economic status and a high reliance on the informal sector exhibit a significant negative association with human development outcomes ($\beta = -0.21$; $p < 0.05$). This situation reflects economic pressures that compel families to prioritize short-term survival needs, thereby constraining their capacity to invest in education over the long term and resulting in limited intergenerational social mobility.

Table 1. Descriptive Statistics of Research Variables

Variable	Main Indicators	Mean	SD	Min	Max	Interpretation
Access to education	School availability, travel distance, costs	3,62	0,71	1,80	4,80	Moderate–High
Quality of education	Teacher competence, learning facilities	3,28	0,76	1,60	4,70	Moderate
Socioeconomic conditions	Income, job stability, assets	2,94	0,81	1,50	4,50	Moderate–Low
Basic infrastructure	Roads, transportation, electricity, internet	3,01	0,79	1,40	4,60	Moderate
Institutional performance	Policy implementation, coordination, capacity	3,15	0,73	1,70	4,80	Moderate

Human development	Education, health, well-being	3,34	0,68	1,90	4,70	Moderate
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Source: Primary Research Data, 2025

Table 1 presents the descriptive conditions of the research variables reflecting the dynamics of human development in East Nusa Tenggara. Overall, the mean values of all variables fall within the moderate range, indicating that the key determinants of human development namely access to and quality of education, household socio-economic conditions, availability of basic infrastructure, and institutional performance remain in a developmental phase and have not yet reached optimal levels. Access to education exhibits a relatively higher mean score compared to the other variables, suggesting that educational services are generally available, although their distribution across regions remains uneven. In contrast, household socio-economic conditions display a lower average value accompanied by substantial variability, indicating the presence of economic vulnerability and pronounced welfare disparities among respondents. The observed minimum and maximum values across all variables reveal sharp interregional differences, underscoring that human development in East Nusa Tenggara continues to unfold within a context of significant structural and spatial inequalities. This study subsequently presents a quantitative analysis of the effects of education, socio-economic conditions, infrastructure, and institutional factors on human development. The empirical findings were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the structural relationships among the variables.

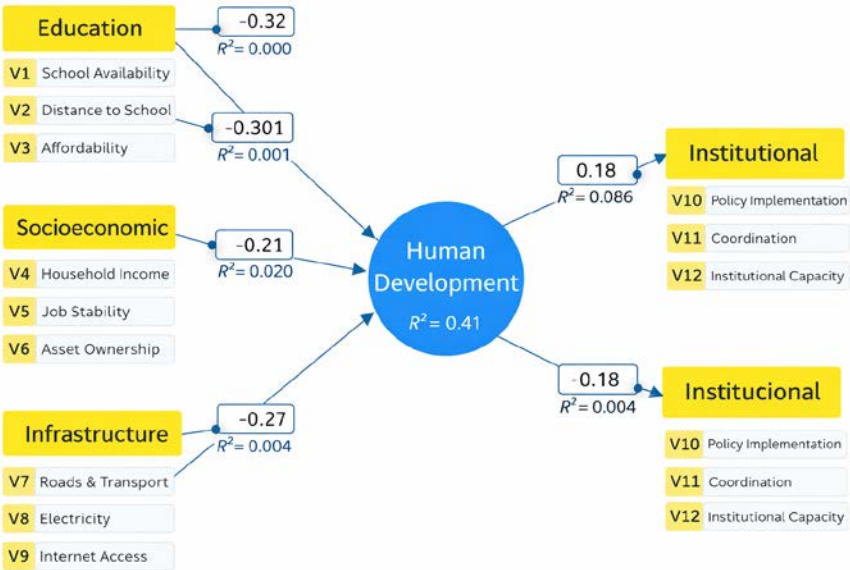


Figure 1. Structural Diagram of the Effects of Education, Socio-Economic Conditions, Infrastructure, and Institutional Factors on Human Development

The model depicted in the figure represents a Partial Least Squares Structural Equation Modeling (PLS-SEM) approach estimated using SmartPLS 4, with human development positioned as the primary endogenous latent construct. The coefficient of determination indicates that variations in human development are adequately explained by a set of integrated exogenous constructs incorporated within the model. The specified causal relationships illustrate the direct linkages among education, socio-economic conditions, infrastructure, and institutional factors in shaping regional human development outcomes.

At the measurement level, each latent construct is operationalized through reflective indicators that represent the substantive dimensions of the respective variables. Education is measured through indicators of the availability and accessibility of educational services; socio-economic conditions through household economic stability; infrastructure through the availability of basic facilities and regional connectivity; and institutional factors through the quality of policy implementation and inter-agency coordination. The relationships between latent constructs and their indicators demonstrate measurement consistency, while also illustrating how these empirical dimensions collectively constitute the analyzed constructs. At the structural level, path estimates indicate that education provides the strongest positive contribution to human development, whereas socio-economic and infrastructural constraints function as significant inhibiting factors (Bambi & Pea-Assounga, 2025). Conversely, institutional governance operates as a reinforcing factor, albeit with a relatively more moderate effect. Overall, the model affirms that human development cannot be understood in a partial or isolated manner, but rather as the outcome of complex interactions among structural, economic, and institutional factors. This finding underscores the necessity for integrated and context-sensitive policy approaches to effectively advance human development at the local and regional levels.

Qualitative findings derived from interviews with educational stakeholders, local government officials, and community leaders reveal that limited access to quality education in East Nusa Tenggara is perceived not merely as a physical or geographical constraint, but also as a deeply rooted social and cultural issue. Informants emphasized that long distances to schools, inadequate learning facilities, and a shortage of qualified teachers directly affect student participation and educational continuity, particularly in rural areas and remote island communities. These insights reinforce the quantitative findings, which indicate that while access to education contributes positively to human development, infrastructural disparities significantly hinder the equitable realization of these benefits. Moreover, the qualitative data highlight household economic pressure as a dominant factor constraining families' ability to view education as a long-term investment. Many parents perceive education as an additional burden when basic needs remain unmet, leading children to be encouraged to contribute to household income at an early age. This narrative aligns closely with the quantitative results demonstrating a

negative relationship between household socio-economic conditions and human development outcomes. At the institutional level, informants also pointed to weak policy implementation consistency and limited inter-agency coordination, resulting in fragmented and insufficiently sustainable education quality improvement programs.

Consistent with Bourdieu's perspective, the effectiveness of education in promoting human development depends on the extent to which supportive structural conditions are present (Leggett, 2025). Educational benefits are often constrained by inadequate infrastructure, economic vulnerability, and weak institutional capacity, which collectively limit the conversion of educational resources into tangible developmental outcomes (Wang et al., 2025). The qualitative evidence further demonstrates that educational inequalities are embedded within broader social realities, where poverty, geographic isolation, and fragmented governance structures restrict participation in and returns from education. These findings reinforce the argument that human development is not solely an outcome of individual educational attainment but rather the product of interactions among educational opportunities, socioeconomic resources, institutional effectiveness, and regional development conditions.

Informants emphasized that inconsistent implementation of education policies, limited inter-agency coordination, and insufficient professional capacity among local government officials create a tangible gap between policy formulation and local-level practice. This condition constrains the effective transformation of educational resources into sustained improvements in community quality of life (Muhammed & Abubakar, 2020). In synthesis, the results presented in this subsection demonstrate that barriers to human development in East Nusa Tenggara are complex, interrelated, and cannot be attributed to a single factor. Although education functions as a key determinant with a significant positive effect, its effectiveness is highly contingent upon the support of economic structures, social conditions, and the quality of institutional governance.

Bourdieu's perspective, education not simply as a mechanism for knowledge acquisition but as a social institution that mediates access to valued resources, opportunities, and forms of recognition within society (Ershadi, 2025). From this perspective, disparities in educational access and quality across regions reflect broader processes of social reproduction rather than merely differences in educational provision. In marginalized areas, infrastructural deficiencies, limited institutional support, and socioeconomic vulnerability reduce students' opportunities to acquire and convert cultural capital into educational and social advantages (Hu & Yin, 2021; Bernard et al., 2023). Consequently, education may be unable to perform its transformative role as a pathway to social mobility, instead reinforcing existing patterns of exclusion and disadvantage. This interpretation suggests that regional inequalities in human development are rooted not only in resource scarcity but also in the unequal capacity of social institutions to distribute opportunities and support

the accumulation of cultural capital. Therefore, efforts to improve human development should focus not only on expanding educational access but also on strengthening the social and institutional conditions that enable education to function as an effective instrument of social inclusion and regional transformation.

Vulnerable household socio-economic conditions further exacerbate the limitations on the accumulation of cultural capital. Economic pressure compels families to prioritize short-term needs, thereby indirectly constraining investments in children's education and capacity development (Harifuddin et al., 2025); (Yoshikawa et al., 2020). From a Bourdieusian perspective, this situation generates a cycle of social reproduction, in which limited economic capital restricts the acquisition of cultural capital, ultimately reducing opportunities for intergenerational social mobility and sustaining disadvantaged social positions.

The institutional dimension plays a critical role in determining whether education functions as an emancipatory instrument or instead serves as a mechanism for the reproduction of inequality (Afolabi & Raifu, 2025); (Zaidi et al., 2024). The study's findings indicate that weak policy coordination and limited institutional capacity undermine the effectiveness of educational interventions, resulting in benefits that are not fully experienced by vulnerable groups. Within the cultural capital framework, educational and governmental institutions should act as transformative agents capable of redistributing symbolic and cultural resources in a more equitable manner.

This study reveals a novel insight that educational inequality in East Nusa Tenggara is not primarily driven by limited educational access alone, but by the interaction of socioeconomic vulnerability, infrastructural constraints, and weak institutional governance that restrict the conversion of educational opportunities into human development gains. Consequently, education functions less as a mechanism of social mobility and more as a channel through which existing regional inequalities are reproduced, highlighting the critical role of institutional and structural conditions in shaping human development outcomes.

4.2 The Role of Education Systems and Institutional Governance in Promoting Inclusive Human and Regional Development

Education systems and institutional governance constitute key elements in determining whether education functions as an instrument of inclusive human development or instead reproduces regional inequalities. Within Pierre Bourdieu's theory of cultural capital, education cannot be understood as a neutral institution; rather, it operates as a social arena that unevenly distributes cultural, symbolic, and institutional capital (Guillory, 2023); (Ershadi, 2025). institutional governance is weak, the distribution of cultural capital through education tends to favor certain social groups and regions, while vulnerable populations remain marginalized.

The quantitative analysis presented in Section 4.1 indicates that the mean value of institutional performance falls within the moderate category (mean = 3.15; SD = 0.73). However, the relatively wide minimum–maximum range (1.70–4.80) reflects substantial disparities in education governance capacity across regions. This finding suggests that the effectiveness of education in enhancing human development is highly contingent upon the quality of the institutional structures that support it. The positive impact of education on human development becomes more pronounced when it is underpinned by institutional arrangements capable of translating policy frameworks into practices that are responsive to local contexts (Bernard et al., 2023); (Sari & Tiwari, 2024). Conversely, weak inter-agency coordination and limited professional capacity among public officials impede the conversion of educational resources into sustainable welfare improvements. From a Bourdieusian perspective, this condition reflects an institutional failure to distribute socially recognized cultural capital, thereby undermining the emancipatory potential of education (Guillory, 2023).

These quantitative results are further reinforced by qualitative findings from in-depth interviews, which reveal that weak policy coordination and inconsistent implementation of education programs at the local level constitute major constraints to achieving inclusive human development. Informants emphasized that many education quality improvement initiatives are often unsustainable and insufficiently aligned with local needs, thereby limiting their impact on literacy enhancement, skills development, and overall community welfare. This context helps explain why the contribution of institutional factors to human development, although statistically significant, has not yet demonstrated optimal strength.

Within Pierre Bourdieu's theory of cultural capital, education cannot be understood as a neutral institution; rather, it functions as a social arena that unevenly distributes cultural, symbolic, and institutional capital (Ershadi, 2025); (Chan, 2025); (Hart, 2019). When institutional governance is weak, the distribution of cultural capital through education tends to favor particular social groups and regions, while vulnerable populations remain marginalized (Reed & Johnson, 2023). The findings of this study extend Bourdieu's discourse in the context of regional development by demonstrating that cultural capital is not only reproduced through micro-level interactions within classrooms, but also through macro-level institutional governance mechanisms.

Institutional governance functions not merely as an administrative support mechanism but as a macro-level mediator in the distribution of cultural capital and human development opportunities (Hu & Yin, 2021). Extending Bourdieu's framework, the findings reveal that weak policy coordination and uneven governance capacity shape educational outcomes by influencing how educational resources are translated into social mobility, thereby reproducing regional inequalities beyond the classroom context.

Educational institutions and local governments function as key agents in determining who gains access to valued knowledge and who is left behind in the development process (Yu et al., 2024; Al Dulaimi et al., 2022). Education policies that are insufficiently sensitive to local social realities tend to reinforce the reproduction of interregional inequalities (Sheehy & Farneti, 2021). Schools in disadvantaged areas not only face limitations in infrastructure and teaching personnel, but also suffer from a lack of symbolic legitimacy compared to educational institutions in more developed regions. As a result, students from disadvantaged areas encounter a double burden: restricted access to high-quality knowledge and limited social recognition of the cultural capital they possess. Strengthening education systems must therefore proceed in tandem with reforms in institutional governance to enable education to function as an instrument of social transformation (Schröder & Krüger, 2019). In the context of East Nusa Tenggara, inclusive human and regional development can only be achieved when education is supported by institutions capable of distributing cultural capital in an equitable, adaptive, and sustainable manner. Under such conditions, education can move beyond serving as a mechanism.

The findings extend the literature on human development and structural inequality by revealing that human development outcomes are not solely determined by educational participation or economic resources, but are also shaped by the interaction of institutional governance, infrastructure, and the distribution of cultural capital. Integrating Bourdieu's cultural capital perspective with the human development framework provides a broader analytical lens for understanding how social and institutional structures influence development trajectories. This perspective advances existing scholarship by demonstrating that regional inequalities are reproduced through interconnected structural mechanisms operating across educational, economic, and governance domains, particularly in marginalized regions.

5. CONCLUSIONS

The findings of this study indicate that human development in East Nusa Tenggara is shaped by a complex interaction of structural constraints, socio-economic conditions, infrastructure quality, and the effectiveness of education systems and institutional governance. Both quantitative and qualitative evidence consistently underscore that education holds significant potential as a primary driver of human development; however, its effectiveness is highly contingent upon institutional capacity and the broader regional social context in which it is embedded. Inequalities in access to and quality of education, household economic pressures, and weak coordination and implementation of institutional policies constrain education's ability to function as an instrument of social mobility and inclusive regional development. From Pierre Bourdieu's cultural capital perspective, these conditions reflect ongoing processes of social and spatial inequality reproduction, whereby the

uneven distribution of cultural capital through education systems reinforces social stratification and regional disadvantage. Accordingly, accelerating equitable human development in disadvantaged regions requires the strengthening of education systems in tandem with institutional governance reforms, cross-sectoral policies that are responsive to local contexts, and affirmative strategies capable of sustainably disrupting cycles of structural inequality reproduction.

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