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The Influence of Education Level on Community Migration Patterns in Border Areas

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Abstract. *Inequalities in access to education in border regions remain a challenge that can affect population mobility and regional development dynamics. Limited infrastructure, a shortage of teaching staff, and the uneven distribution of learning facilities make it difficult for communities to obtain adequate educational services in their home regions. This study aims to identify the relationship between educational attainment and population mobility in border regions, analyze the educational factors driving migration, and explain the mobility patterns resulting from disparities in educational access across regions. The method employed is a literature review of seven primary sources selected based on publication period, credibility, and topic relevance. The analysis was conducted thematically and descriptively. The results indicate that limited access to education serves as a push factor, while the availability of facilities and social support in the destination region act as pull factors, with mobility patterns that can be either internal or cross-border. The study recommends strengthening educational facilities, scholarships, and cross-border partnerships as strategies for managing mobility.*

Keywords: *Educational inequality; Population mobility; Border regions; Education migration*

Abstrak. *Ketimpangan akses pendidikan di wilayah perbatasan masih menjadi persoalan yang dapat memengaruhi mobilitas penduduk dan dinamika pembangunan wilayah. Keterbatasan infrastruktur, minimnya tenaga pendidik, serta belum meratanya fasilitas pembelajaran menyebabkan masyarakat kesulitan memperoleh layanan pendidikan yang memadai di daerah asal. Penelitian ini bertujuan untuk mengidentifikasi hubungan antara tingkat pendidikan dan mobilitas penduduk di wilayah perbatasan, menganalisis faktor pendidikan yang mendorong migrasi, serta menjelaskan pola mobilitas yang terbentuk akibat ketimpangan akses pendidikan antarwilayah. Metode yang digunakan berupa studi literatur terhadap tujuh sumber utama yang diseleksi berdasarkan rentang publikasi, kredibilitas, dan relevansi topik. Analisis dilakukan secara tematik dan deskriptif. Hasil menunjukkan bahwa keterbatasan akses pendidikan menjadi faktor pendorong, sedangkan kelengkapan fasilitas dan dukungan sosial di wilayah tujuan menjadi faktor penarik, dengan pola mobilitas yang dapat bersifat internal maupun lintas batas. Penelitian merekomendasikan penguatan fasilitas pendidikan, beasiswa, dan kemitraan lintas batas sebagai strategi pengelolaan mobilitas.*

Kata Kunci: *Ketimpangan pendidikan; Mobilitas penduduk; Wilayah perbatasan; Migrasi pendidikan*

INTRODUCTION

Educational inequality remains a fundamental issue in many developing countries because it is closely linked to the quality of human resources and opportunities for social mobility. The uneven availability of educational services means that disparities in educational attainment between regions remain quite evident, particularly between rapidly developing areas and relatively underdeveloped regions. Limited educational infrastructure, a shortage of qualified educators, and a lack of learning facilities in remote areas further widen this gap. This situation limits people's opportunities to obtain

adequate education, thereby affecting individuals' ability to improve their quality of life. Education fundamentally serves not only as a means of knowledge enhancement but also as a critical factor determining economic, social, and social mobility opportunities. Regional disparities in educational access also influence population migration dynamics. Social mobility often occurs as a response to limited opportunities available in one's region of origin. Data released by the National Research and Innovation Agency (2025) indicates that approximately 40% of Indonesian youth have migrated between districts or cities at least once between the ages of 15 and 34, with an average of 0.86 migrations. Educational attainment also influences this mobility trend, as individuals with higher education generally have greater opportunities to seek self-development opportunities in other regions. The findings of Wanner et al. (2021) also indicate a fairly strong correlation between educational attainment and migration tendencies. This phenomenon suggests that educational inequality not only reflects development disparities but can also trigger population movement from regions with limited educational services toward areas with more adequate facilities.

Border regions in Indonesia are areas that share a direct border with other countries and are generally located far from development hubs. These geographical conditions mean that some border regions still face various limitations in infrastructure and public services, including the provision of educational facilities. The availability of educational facilities in some border regions still faces various challenges, both in terms of infrastructure and the number of educators. Public perception of these conditions falls into the moderate to concerning category, with an average score of 2.55 on a five-point scale. This situation indicates that access to education in border regions is not yet fully adequate, prompting some residents to seek alternative educational options or better opportunities in other areas. Thus, limited access to education not only impacts the quality of human resources but may also influence population mobility trends. Educational attainment is known to have a fairly strong relationship with migration tendencies, where individuals with higher education have greater migration opportunities compared to those with lower education (Sanis 2010). The lack of educational facilities in border regions often drives people to seek educational alternatives in other areas with more comprehensive resources. In some cases, geographical proximity to neighboring countries even makes it easier for communities to access educational facilities abroad compared to other regions within the country. Previous research indicates that some students from Indonesia's border regions choose to attend school in neighboring countries due to the availability of more adequate educational facilities, as well as support for transportation and educational costs (Agung, 2012; Yosada, 2017). This phenomenon demonstrates that education can be one of the factors influencing the direction of population mobility in border regions.

Theoretically, the relationship between education and population mobility can be explained through the social mobility approach and several migration theories. The push-pull theory proposed by Lee (in Mantra, 2000) states that the decision to migrate is influenced by four factors: factors in the area of origin that encourage departure (such as limited job opportunities and educational facilities), factors in the destination area that attract people (such as the availability of more comprehensive educational facilities), barrier factors (cost, distance, transportation), and individual factors that influence how these conditions are assessed (Haryono, 2017). In the context of education, limited infrastructure and a lack of higher education opportunities in border regions act as push factors, while the availability of more adequate educational facilities in other regions or even in neighboring countries serves as a pull factor. Furthermore, the human capital theory developed by Becker (1993) views education and training as investments that enhance individual productivity and open access to better economic and social opportunities (Octaviani et al., 2024). Individuals with higher levels of education tend to possess greater human capital, making them better prepared to make migration decisions to secure commensurate rewards in the destination region.

The new economics of migration offers a different perspective from the neoclassical approach. As explained by Marta (2020), this approach views migration decisions as being made not by isolated individuals, but by families or households acting collectively to maximize expected income and minimize risks associated with various market failures. In developing countries,

institutional mechanisms such as private insurance markets or government programs are often imperfect or inaccessible to low-income families. This condition creates incentives for households to diversify risks through migration. From this perspective, migration is not solely driven by wage differentials, but is also influenced by households' need to manage risks and address constraints on access to capital. Thus, households in border regions may send one of their members to pursue education elsewhere as a form of long-term investment or as a strategy to reduce vulnerability to various economic and social shocks that may occur in their home region. These three theoretical frameworks provide a strong foundation for analyzing how disparities in educational access in border regions drive migration and shape patterns of social mobility.

Various studies have examined the relationship between educational attainment and migration. However, most have focused on urban areas or regions with relatively better access to education, leaving the dynamics in border regions largely unexplored. Border regions possess distinct characteristics, particularly regarding limited educational infrastructure and geographical conditions that are remote from development hubs. These characteristics have the potential to shape unique migration patterns, including a tendency toward mobility to neighboring countries, a phenomenon rarely explored in the literature. These conditions indicate a research gap characterized by a lack of discussions specifically highlighting migration through education in border regions using an integrated theoretical approach, encompassing push-pull theory, human capital theory, and new migration economics theory. This study aims to address this gap by identifying the relationship between educational attainment and population mobility in border regions, analyzing the educational factors driving migration, and explaining the mobility patterns resulting from disparities in educational access across regions. It is hoped that this research will contribute to enriching academic understanding and serve as a foundation for formulating policies regarding equitable access to education and the management of population mobility in border regions.

METHODS

The following is a research flowchart illustrating the stages of the research process in analyzing the relationship between educational attainment and population mobility in border regions :

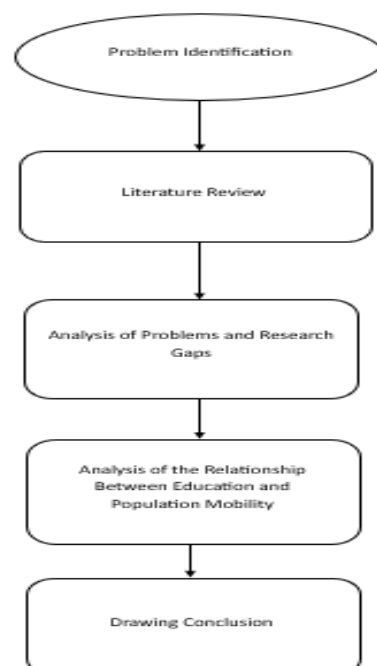


Figure 1. Research Flowchart

This study employed a literature review method, compiling written sources such as journal articles, books, research reports, and relevant policy documents. Source selection was based on several criteria. Publications from the past 15 years (2010-2025) were prioritized, excluding classical literature. Sources were required to come from accredited journals, conference proceedings, or reputable publishers. The focus was specifically on educational inequality, migration, or border characteristics (Adawiyah et al., 2024). Searches via Google Scholar, ResearchGate, and SINTA using relevant keywords yielded 7 primary sources. These sources were analyzed using a thematic approach to identify themes such as push factors, pull factors, and mobility patterns (Heriyanto, 2018). Descriptive analysis was then used to explain the relationship between limited access to education, push factors for migration, and trends in community mobility patterns in border regions.

RESULTS AND DISCUSSION

Results

Various previous studies have shown a similar trend regarding the relationship between access to education and social mobility in border regions, as summarized in **Table 1**.

Table 1. Literature Review

No	Author	Title	Method	Research Findings
1	Arifin (2009)	Migrasi penduduk dan implikasinya terhadap hankam di wilayah perbatasan kalbar-serawak, malaysia	Qualitative – In-Depth Interviews	Population migration in border regions occurs through marriage, childbirth, and economic factors. Education is also a driving factor behind migration, particularly for young people who lack access to higher education in their home regions. Young people tend to migrate after completing elementary or junior high school due to limited access to higher levels of education.
2	Rusli (2022)	Konsep dan Karakteristik Borderscapes Migrasi dan Perbatasan di Indonesia : Tantangan dan Peluang	Qualitative – Document Analysis	Migration patterns in Indonesia's border regions are influenced by economic and educational factors. In Krayan (North Kalimantan), limited infrastructure and access to education have driven many residents to migrate to Sarawak, Malaysia. Conversely, in the Atambua and East Amfoang regions (East Nusa Tenggara), the availability of educational facilities in

				Indonesia has actually attracted residents of East Timor to pursue their education in those areas.
3	Syawaluddin & Abdullah (2022)	Faktor Pendapatan dan Pendidikan Sebagai Pencetus Migrasi di Kabupaten Jeneponto Sulawesi Selatan Serta Dampaknya terhadap Perekonomian	Quantitative – Multiple Linear Regression	Education has a significant influence on migration decisions in Jeneponto Regency. The results of the statistical analysis show a regression coefficient for education of -0.208 with a significance level of 0.002. These findings indicate that higher levels of education tend to reduce the propensity to migrate due to better local employment opportunities. The results of this study indicate that education plays a dual role in determining migration decisions.
4	Abao (2019)	Pola Migrasi dan Integrasi Penduduk di Wilayah Perbatasan Indonesia - Malaysia	Qualitative – In-Depth Interviews	Migration flows from Indonesia to Malaysia in the Jagoi Babang border region are driven by economic and cultural factors. Easy access to educational facilities and health services in Malaysia is a major draw for border communities. Some school-age children choose to attend school in Malaysia because of free education, boarding facilities, and financial support for living expenses. Nevertheless, border communities continue to maintain their identity and sense of nationalism as Indonesian citizens.
5	Robot et al. (2023)	Buruh Migran Timor: Sebab,	Qualitative – Ethnography	The main factors driving migration among residents of

		Jejaring dan Risiko (Studi Kasus Desa Silu, Kabupaten Kupang, NTT)		Silu Village, Kupang Regency, are economic needs to sustain their livelihoods, finance their children's education, and fulfill customary obligations. The low level of education among the community, most of whom have only completed elementary school, makes them more vulnerable to exploitation during the migration process. These conditions also lead some residents to choose illegal migration routes through intermediaries or brokers. This study demonstrates a strong correlation between poverty, low educational attainment, and the practice of illegal migration.
6	Deidhae (2024)	Karakteristik Dan Dampak Sosial Perantauan Dan Migrasi Di Provinsi Nusa Tenggara Timur	Qualitative – Literature review	Migration in the East Nusa Tenggara region has been occurring for a long time, with numbers fluctuating in response to the social and economic conditions of the community. Migration has positive impacts, such as the transfer of knowledge and skills, as well as the sending of remittances to fund family education in the region of origin. However, migration also has negative impacts, such as the potential spread of infectious diseases and disruptions to family harmony. Education is one of the primary goals of migration, both to gain educational opportunities and to support the financing of family members' education.
7	Komari et al. (2025)	Potret Tantangan Dan Strategi Pengembangan Pendidikan Di Wilayah	Qualitative – Literature Review	Educational infrastructure in border regions remains limited, prompting residents to seek educational alternatives in neighboring countries. The

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phenomenon of Indonesian children attending school in Malaysia reflects a gap in domestic educational services in border regions. Difficult to reach geographical locations, limited transportation, and a lack of educational facilities pose major challenges for local communities. These conditions have led some parents to choose schools abroad as an educational alternative for their children.

Discussion

An analysis of the seven primary literature sources indicates that disparities in access to education in border regions are consistently linked to population mobility, although the patterns and mechanisms vary across regions. The three main themes identified through thematic analysis include push factors stemming from limited educational facilities in the origin areas, pull factors in the form of more comprehensive educational resources in the destination areas, and mobility patterns that are not only internal but also cross national borders. Integrating these three themes with the push-pull framework, human capital theory, and the new migration economics allows for a more comprehensive understanding of the dynamics of migration through education in border regions.

Educational migration is not merely a passive response to limited facilities but a rational strategy calculated by both individuals and households. Young people in the border areas of West Kalimantan choose to migrate after completing primary education due to the lack of secondary education opportunities in their home regions (Arifin, 2009). This phenomenon aligns with push-pull theory, where the absence of access serves as the primary push factor. However, this decision is not solely based on differences in facilities but also reflects the human capital investment made by families to enhance their members' long-term life prospects. On the other hand, a study in Jeneponto Regency indicates that higher educational attainment reduces migration tendencies due to the opening of local employment opportunities. This contrast suggests that the relationship between education and migration is not linear. This relationship is highly dependent on the context of interregional disparities and the availability of opportunities in the place of origin. In border regions with structural limitations, education acts as a trigger for migration. Conversely, in areas with better access, education functions as a retaining factor. These findings challenge the assumption that education always drives migration. Rather, education can serve as a binding force when local opportunity structures are adequate. This distinction underscores the need to analyze migration phenomena not only from an individual perspective but also through the lens of the opportunity structures available in each region.

Comparisons across border regions reveal two primary, opposing patterns. In Krayan, North Kalimantan, limited educational infrastructure drives residents to migrate to Sarawak, Malaysia (Rusli, 2022). Conversely, in Atambua and East Amfoang, East Nusa Tenggara, the presence of educational facilities in Indonesia actually serves as a draw for East Timorese residents to pursue education in those areas. This pattern indicates that border regions are not always the origin of migrants but can also function as destinations when they possess superior facilities compared to neighboring regions. Another dimension of migration patterns in the Jagoi Babang border area reveals that easy access to free educational facilities, dormitories, and living expense support in

Malaysia serves as a strong pull factor for Indonesian school-age children. This phenomenon demonstrates that pull factors are not merely physical, such as the availability of schools, but also encompass cost-related aspects and social security provisions unavailable domestically. Gaps in domestic educational services along the border drive parents to choose schools abroad as an alternative. This comparison enriches the understanding that the direction of mobility is determined by the balance between push factors in the origin area and pull factors in the destination area. When these interact, national administrative borders no longer serve as the primary barrier, especially where there is geographical proximity and ease of access to transportation and affordability.

Educational attainment not only determines the decision to migrate but also shapes the quality and sustainability of mobility. The low educational attainment of communities in the border regions of East Nusa Tenggara, where the majority have only completed elementary school, leaves them vulnerable to exploitation and makes them more likely to choose illegal migration routes. Conversely, individuals with higher education possess the ability to assess risks, access information, and make more planned migration decisions that lead to sustainable improvements in living conditions. Migration from these regions yields positive impacts in the form of knowledge transfer, skills, and remittances used to fund family education in the home region. This creates a cycle where migration serves as a tool to enhance the human capital of the next generation, while reinforcing the argument of the new migration economics theory that migration decisions are household strategies for risk diversification and long-term investment. Education also plays a role in determining whether migration is temporary or permanent. Experiences in regions with more comprehensive educational facilities shape new perspectives on life opportunities. An environment that provides access to education, employment opportunities, and more open social networks reinforces individuals' decisions to settle in the destination region. Thus, education is not only the initial reason for relocation but also a factor influencing the sustainability of mobility, and can even transform circular migration patterns into permanent ones.

The integration of the three theoretical frameworks used in this study demonstrates that educational migration in border regions cannot be explained by a single theory. The push-pull theory provides insight into the structural factors shaping the direction of migration. The human capital theory explains how educational investment enhances individuals' capacity to make more rational and beneficial migration decisions. The New Economics of Migration theory positions migration as a collective household strategy to address market failures and reduce risk. All three theories complement one another and demonstrate that education serves as a link between regional constraints, individual capacity, and household dynamics. Efforts to ensure equitable access to education in border regions are not only crucial for improving human capital quality but also for reducing mobility pressures arising from interregional disparities. Policies that strengthen educational facilities in border regions, provide scholarships, and establish partnerships with educational institutions in neighboring areas should be considered as part of a more targeted strategy for managing population mobility.

CONCLUSION

Inequalities in access to education in border regions show a strong correlation with population mobility, as limited facilities in areas of origin drive people to seek educational opportunities in other regions with better resources. The relationship between education and migration is not linear, as it depends heavily on the context of interregional inequalities. Education acts as a trigger for migration in areas with structural limitations, but functions as a restraining factor when local opportunities are sufficient. Educational factors driving migration include a lack of higher education opportunities and infrastructure limitations, while the availability of more comprehensive facilities and social security in destination areas serve as strong pull factors. Further research is recommended to validate these findings through field data collection and to conduct a more comprehensive analysis of the relationship between educational factors and regional dynamics, thereby supporting the improvement of social welfare for communities in border regions.

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